High consumers of energy and resources and the work of being wealthy: towards a research agenda

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Abstract

High consumers of energy and resources in domestic settings make a disproportionately greater impact in terms of their greenhouse gas (GHG) emissions and resource use, with the richest 10 % being responsible for around 49 % of carbon emissions (Kartha et al, 2020). Moreover, the highest consumers also act as trend-setters and aspirational peers, thus driving high consumption more widely within society. As such, efforts to confine global warming to 1.5 degrees Celsius will be unworkable unless the wealthy change their lifestyles (Gore *et al,* 2021). We know that the rich have caused climate change (Weidmann et al, 2021) yet there have been limited attempts to define high consumption or what constitutes too much. There also appears to be very limited political will to tackle what might be regarded as excessive consumption and we also find limited direct interest in the issue within research and academia, with attention focussed instead on low or under consumers and more abstracted debates about sustainable consumption. Our work seeks to help address the research gap around high consumption chiefly through the development of deep qualitative methodologies that seek to understand the socio-cultural and structural factors that sustain high consumption. Focussing on the question of: 'why is it so hard to consume less?', our paper reports upon a state-of-the-art review of literature, spatial mapping of consumption data and stakeholder interviews (in the UK) which highlight the need for a greater focus on high consuming households. We also discuss how this work has informed the development of an innovative methodology for exploring the lived experiences of this elusive and hard to reach group, which utilises institutional ethnography to explore and explicate the 'work of being wealthy'.

Introduction

In 2010, the 10 % most affluent households emitted 34 % of global C02, while the 50 % of the global population in lower income brackets accounted for just 15 % (Hubacek *et al*., 2017). By 2015 the disparity had stretched to 49 % against 7 % (Kartha *et al*., 2020). Beyond carbon footprints, high consumers pose a second challenge: they also set social and material aspirations within society. The disparity of ecological footprints across wealth brackets is also seen among nations and regions of the world: at all scales, the wealthy generate more negative environmental impacts than lower income groups (Lynch *et al*, 2019), something Lynch et al conceptualise as a 'green crime' in light of impending environmental collapse.

Despite the extent of the inequalities laid bare by these statistics, our literature review on high consuming households finds that they have received insufficient explicit attention in academic studies. There are, however, notable exceptions to this general trend, including the work of Fawcett, (2016) Fawcett and Darby (2019) and Chatterton et al., (2019), who have focussed, respectively, on questions around excessive energy and transport consumption and how much consumption is sufficient in the context of planetary limits (Druckman and Jackson, 2010, Gough 2020). Others have experimented with how

sufficiency or greater simplicity might be achieved in practice (see, for example, Cherrier et al, 2012, McGoran and Prothero, 2016). These contributions have galvanised and informed our research into high consumers, recognising that addressing excessive and unequal consumption is arguably one of the most important things we can do to curb GHG emissions and environmental destruction.

Whilst the academic community is waking up to the significance of high consumption as a key concern, policy communities across the world are yet to recognise the urgent need to understand and address extremes of consumption (Mundaca *et al*, 2019). Beyond fleeting consideration of personal carbon budgets in some countries and emerging ideas about carbon taxes for the wealthy in France, high consumers are not a priority for policy makers (Mundaca *et al*, 2019).

In this paper, we focus on those who might be considered to over consume and who, in doing so, disproportionately contribute to GHG emissions and environmental degradation through excess energy consumption to power large homes and multiple devices, fuel consumption to power multiple vehicles driven more often, frequent flying (Weidmann *et al*, 2020), meat rich diets and the embodied carbon associated with consumer goods (Pieper *et al*, 2020). But because they are not clearly defined and are poorly understood, we do not yet know what contribution it might make to urgent GHG reduction efforts were policy to target high consuming households, their behaviour and influence. Knowledge is also lacking regarding the most effective policy responses and intervention points, a significant research gap that we intend to help address.

This paper is not concerned with households who, due to their health, family structure, location, or the energy performance of their home, are above average consumers. It is also not concerned exclusively with the super-rich, but instead focuses on a broader group of what we have termed 'high consumers' that are consuming resources beyond a level that is sufficient to meet their needs and some of their wants (Fawcett and Darby, 2019). We are also interested in those they influence in their role as aspirational consumers or role models in a world where individuals and states regard wealth and conspicuous consumption as markers of success.

The ever-widening gulf between rich and poor and levels of consumption that continue to escalate despite widespread warnings of impending climate and ecological breakdown, leaves unanswered questions about whether the highest consuming households either think that these messages do not apply to them; do not judge their behaviour to be problematic and/or are locked into high consuming lifestyles where expectations are always rising. Within this project, we do not seek to make normative judgements of high consumers. Instead, we prioritise the question of why it's so hard to consume less, even when the evidence that we need to do so is so compelling.

This paper is comprised of four sections in addition to this one; a literature review adapted from the more extensive publication (Castano-Garcia et al, 2021); a methodology giving an overview of the four-stage process we are following, a discussion of emerging findings and finally a conclusion outlining the rationale and plans for the next stage of our project.

Literature review

HIGH CONSUMPTION: INVISIBLE RESOURCES AND THE PURSUIT OF HAPPINESS

The difficulty in defining 'high-consumers' or even in determining what constitutes 'too much' may be one of the reasons why there has been insufficient discussion around the role that such households might play in reducing our collective environmental impact.

Brown and Cameron (2000) explored definitions of overconsumption and identified the field of social theory as a key location in the discourse around this topic. Much of this work focuses on critiquing the idea that consumption leads to happiness. From this perspective, overconsumption is the excessive use of goods and services which stems from a belief that owning and using an increasing quantity of a range of goods and services is a normal motivation and an acceptable cultural desire, as a means of achieving personal happiness, status, and national success.

They go on to highlight a problem, which might be termed 'resource invisibility', which they contend must be overcome in order to progress towards sustainable consumption. In this context, they define overconsumption as "a large, unique form of common pool resource dilemma in which: (a) the size of the pool of resources is often unknown; (b) people differ in their access to resources and their preferences for resources; and (c) people must make their decisions about the use of goods and services without a clear under-standing of the types and quantities of the resources used in their production". Although both terms are likely to overlap in many cases, using the term 'high consumers' instead of 'over consumers' enables a focus on impacts of consumption beyond resource depletion, as well as comparing consumption patterns within and between different populations.

CONSUMPTION INEQUALITY

Despite their focus on sustainable consumption and production, the United Nations Sustainable Development Goals do not adequately account for the need to address intra-country differences in consumption, and what it means for the pursuit of sustainable consumption. In relation to this, Anantharaman (2018) draws on critical social theory and argues that questions of power, legitimacy, authority, and justice are underexplored in the context of uneven levels of consumption within society. Di Muzio (2015), similarly contends that the wealthiest people have the greatest ability to act on desires for enhancing their perceived social status through un-equal intraclass consumption. Such actions, he argues, contribute towards the unsustainable quest for perpetual economic growth around the globe. This growth project militates against the pursuit of fairness between humans and threatens vulnerable populations with the worst effects of environmental collapse. De Graaf et al. (2014) adopt a similar position but with a focus on wider social dynamics, identifying cultural changes and technological progress as drivers of increasing demand.

The links between wealth and high consumption seem clear. Income has often been used as a predictor of a household's consumption and environmental impacts (Büchs and Schnepf, 2013; Zang et al., 2015; Wiedenhofer et al., 2017; Hubacek et al., 2017). For example, it has been demonstrated (in the UK)

that CO_2 emissions increase with income (Chatterton, et al., 2019) and this trend resonates internationally (Hubacek et al. 2017). There are some exceptions to this, for example high income households who aspire to reduce their consumption (and therefore, emissions) (Hüttel et al., 2018). Domestic energy use, private transport and food are the main sources of individuals' environmental impact (specifically in developed countries) (Peattie and Peattie, 2009) and high consumption at a household level often appears at the same time across these different domains (Wiedenhofer et al., 2017; Shackleton and Shackleton, 2006; Chatterton et al., 2016). These are also likely to be the domains of consumption where high consumers could achieve more significant reductions.

Therefore, although there might be difficulties in terms of definition and identification, targeting higher consumers with consumption reduction measures should make a more significant contribution towards reducing emissions across multiple consumption domains than focussing on larger groups of lower consumers. More evidence is needed to understand what drives and perpetuates high consumption to ensure these efforts are effective.

WHAT DRIVES HIGH CONSUMPTION

Beyond the clear links to wealth and income, the literature offers differing views on drivers of high consumption. We have previously discussed potential links to the pursuit of happiness and a review by Håkansson (2014) linked high consumption to psychological factors and certain personality traits, specifically those with 'psychological weaknesses' regarding consumption. This was echoed by Humphery (2009), who, perhaps controversially, argued that that problematic, or high, consumption is often described as a behaviour of weak individuals rather than being an effect of deeper, underlying structures of society and economic systems. There is also strong allusion to individual choice and responsibility in Chatterton et al.'s (2019) categorisation of different drivers of excess, such as 'ignorance' (a lack of awareness of the energy consequences) or 'accidental' (not planned, unexpected, unintended), 'frivolous' (not having any serious purpose or value) or 'decadent' (luxuriously self-indulgent).

Giddens (1984) charts a middle ground between individual and structural factors, presenting consumption as a set of social practices, influenced by social norms and lifestyle choices, and by the institutions and structures of society. These insights are important to consider when developing interventions or policies to alter habitual behaviours, such as sustained high consumption. Morton et al. (2018) explored this through their application of the Theory of Planned Behaviour to air travel, highlighting the role of attitudes, normative beliefs, and self-identity as predictors of behaviour and therefore factors that could be targeted to help reduce air travel. March and Olsen (2004) provide more of an overview of the multitude of factors that could be shaping our consumption, acknowledging great diversity in human motivations for consumption such as habit, emotion, coercion, and calculated expected utility.

Societal status, and people's perceptions of how they demonstrate this is highly influential for consumption habits (Ramakrishnan et al., 2020; Bronner and de Hoog, 2018]. Kasser & Kanner state that consumerism and the culture that surrounds this promote a set of values that encourages an unsustainable relationship with the rest of nature, and negatively impact personal, social, and ecological well-being (Kasser & Kanner, 2004). Schwartz (2007) lends support to this view by showing how more market driven, competitive societies have a cultural preference for self-assertive, mastery of human and natural resources. Whilst limited attention has been given to this in the literature, the role of the wealthy as aspirational peers and trend-setters is also important to consider. It is suggested that such actors can contribute to the normalisation in society of carbon intensive transport choices and holiday destinations (Cohen et al., 2021).

ENERGY CONSUMPTION

Looking specifically at energy, consumption varies significantly between households, including those of similar demographics, as the physical characteristics of the home, its location and the energy sources available to the household interact with household routines and values to influence consumption. Income inequality is clearly a key factor at work. For example, the lowest earning 50 % of households are responsible for 20 % of the final energy footprints, which is less than the top 5 % earning households (Oswald et al., 2020).

Evidence suggests that factors such as household size and composition, home ownership, education level and rural location also play important roles in determining energy consumption (Büchs and Schnepf, 2013; Frederiks et al., 2015). The situation is more complex, however, when the effects of those factors are mixed. Brounen et al. (2012) analysed a sample of more than 300,000 Dutch homes. Whilst gas consumption was mainly determined by the characteristics of the building, for example, age, building type and materials used, electricity consumption varied more directly in line with household characteristics, in particular income and family composition. It was estimated that an ageing population with increasing wealth was likely to offset any energy-efficient improvements of the building stock (resulting from policy interventions and refurbishments) through increasing electricity demand (Brounen et al., 2012). Chatterton et al. (2019) explored the spatial distribution of domestic energy use combined with demand for energy through vehicle use and showed how households in more rural locations were more likely to be high consumers of both vehicle related and domestic energy. This contrasts with more urban locations where lower levels of combined consumption were found. According to Aune, energy cultures involve everyday practices, but also interpretations of energy, energy-related artifacts, and energy policies (Aune, 2007). Therefore, private energy consumption is a result of a combination of activities, preferences, values, technologies and material structures, with domestication (understood as the conglomeration of the house, its artifacts and activities) at its core. She contends that initiatives to change behaviour and the integration of new technologies, must address the different images and practical constructions of what home is.

Building on Aune's insights, Stephenson et al. (2010) developed the Energy Cultures framework, which states that consumer energy behaviour can be understood by looking at the interactions between cognitive norms, material culture and energy practices. A shift towards a sustainable society will require

significant cultural changes alongside material and behavioural changes at different levels (in households, businesses, etc.) (Stephenson, 2018). Energy policy still relies heavily on a 'top-to-bottom' approach and often understands implementation of technology in a linear way. A different understanding of the interactions which shape consumer behaviour might facilitate a move towards more sustainable practices. For instance, Eksin et al. (2014) developed a simulation which shows that communication about consumption between neighbouring energy users improves welfare and that power providers could lower consumption by adjusting their target profits.

TRANSPORT PATTERNS

In terms of transport, evidence from the UK has shown that households with high incomes, higher educational attainment, and with children are more likely to have higher levels of CO_2 emissions (Büchs and Schnepf, 2013). Furthermore, areas where the higher levels of consumption of gas and electricity occurred, also saw the highest levels of private transport use (Chatterton et al., 2016). Chatterton et al. (2019) also showed a clear positive correlation with domestic energy use and energy consumed through use of private vehicles.

A US study showed that the top 10 % earning households in the US are responsible for approximately 12 metric tons of CO_2 per year from fuel. This compares to the bottom 10 % earning households emitting 3.6 metric tons of CO_2 per year from their private transport (Sager, 2019). Addressing such inequalities is challenging, however. In Sweden, Andersson (2020) examined moral factors that might influence motives to reduce private car use and showed that males, those in middle-age, people with lower educational attainment, and rural residents are less open to decreasing private car use.

Flying is an area where particular tensions can exist, particularly as flying is the most polluting mode by passenger kilometres (DfT, 2021). Cohen et al. (2011) explored binge flying as a behavioural addiction, although they did not focus on income as a predictor. The role of high-profile (and high consuming) individuals in influencing the intentions and attitudes of others was examined by Westlake (2017). He concluded that leading by example, these individuals could contribute to a shift away from excessive flying. In the last few decades UK air travel has become more affordable but this has not resulted in a higher proportion of the population flying (Banister, 2018). Instead, lower fares have enabled those who were already flying to fly more frequently. The suggestion that a small proportion of consumers are responsible for much of the demand for aviation (and therefore the environmental impacts of this) is also supported by recent evidence (Gössling and Humpe, 2020; Hopkinson and Cairns, 2020) showing that, globally (prior to Covid-19), the proportion of the population flying at least once a year in most countries is less than 50 %, and, in many cases, much lower than this. The 1 % of the world's population who flies most often accounted for more than half of the emissions from passenger aviation (Gössling and Humpe, 2020).

RESPONDING TO THE LITERATURE

Overall, this literature review demonstrates that although the issue of high consumption (and allied issues of over consumption, excess and inequality) and those responsible for it are engaged with at a philosophical level within social and psychological theory and energy studies, the debate across forums concerned with sustainability (including within the energy and transport fields) has struggled to move beyond rhetoric. Whilst conceptual consideration of what constitutes 'enough', 'too much' or a 'safe' level of consumption has provided useful frameworks through which to define and consider high consumption, explicit empirical investigation into why it is difficult to consumer less has been more limited, appearing more as a sub-theme within experiments relating to the implementation of sufficiency practices or confined to a single domain of consumption (i.e. flying, fast fashion, transport). However, the potential for escalating consumption and deepening resource inequality to thwart urgent GHG reduction efforts mean that empirical investigation into why it is hard to consume less now requires deep and explicit empirical investigation, utilising the concept of sufficiency to frame our understanding of how much is too much and to encourage a critical view of the concept of 'need' (Cherrier et al, 2012). The next section of this paper sets out the practical steps we have taken and plan to take to better understand the factors underlying high consumption.

Methods

This paper discusses an ongoing four-stage research project, three stages of which have been completed and the fourth is in development.

LITERATURE REVIEW

We carried out a targeted literature review to identify empirical and theoretical studies using the terms "high consumers", "high consumption" and "overconsumption". The purpose of the literature review was to assess the breadth and depth of research into the phenomenon and identify key gaps for further investigation. The review found a contradiction between the impact of high consumption lifestyles and the limited coverage of this group within research and policy initiatives, making a strong case for further research and the mainstreaming of this agenda (Castano-Garcia et al, 2021).

CONSUMPTION DATA: MAPPING AND ANALYSIS

The second stage of the project involved analysing existing datasets to better understand the nature and extent of high consumption, using the UK as a case study. Secondary data sources linked to the three key domains of consumption (energy, transport, food) were explored to examine existing patterns of high consumption. The scope was limited to the UK to enable easier comparison across datasets, while offering an illustrative example of the nature and dynamics of high consumption. Six geographical areas were chosen as case studies: Sheffield, London, Edinburgh, County Durham in England, and Powys in Wales. These were selected because preliminary analysis of gas and electricity consumption pointed to notably high levels of consumption. These areas also provide a diverse geographical spread. Data examined included domestic energy (gas and electricity) consumption, residual fuel, road transport, household expenditure, and the National Travel Survey.

Descriptive analysis was performed to establish consumption patterns, including mean consumption, and to identify any spatial patterns of consumption. Following this, geographical

mapping was undertaken where possible (using QGIS) to explore differences in the selected areas of interest. These maps were compared with maps of the Index of Multiple Deprivation (IMD) to look for correlations.

A limitation of using secondary data is that the data collection was not designed to answer the specific research questions of this study, although it did include indicators directly related to the research questions. The geographic areas for which consumption data is available is offers insufficient granularity to provide detailed insights in terms of where high consumers are located or how high consumption is distributed. This conditioned the analysis, as the data available in some cases does not account for consumption differences within regions, LSOAs or local authorities. As such, the transport and food analysis are unable to address the five geographical case studies nor speak to spatial patterns of consumption beyond the regional level. However, this analysis provided valuable exploratory insights to help guide the next stages of data collection.

INTERVIEWS

We conducted interviews with seven academic and NGO practitioners who work in the field of resource consumption. The interviews took place via secure video link and were semi-structured to retain a focus on a consistent set of themes whilst also allowing for new and unanticipated themes to emerge (King et al, 2019) Detailed notes were taken during in interviews which were then analysed thematically.

We explored the ways in which problematic consumption was characterised and quantified in the working practices of participants, how their work addressed consumption behaviour, their suggestions for targeting high consumption, and whether they had any working definitions or suggestions for how sustainable and desirable levels of consumption could be described and attained.

Participants were selected purposively due to their known interest in the field of sustainable and equitable consumption. There was some snowball sampling where participants suggested other people to interview. Participants' views were anonymised.

INSTITUTIONAL ETHNOGRAPHY

To address the identified gap in the qualitative understanding of high-consumption lifestyles, we intend to carry out an Institutional Ethnography into the lived experiences of high consumers and the 'work' of maintaining a high-consumption lifestyle. Institutional Ethnography (IE) is a qualitative research approach developed by Sociologist Dorothy Smith that uses ethnographic research tools such as observation and interviews to explore working and social practices to reveal the hidden power dynamics and socio-structural forces that shape those practices (Smith, 2005). It is useful in situations where an established way of doing things is poorly understood, and where the status quo is seen as problematic or unsustainable (Campbell & Gregor 2008). The methodology has recently been adapted to explore opportunities for changing consumption practices by mapping the findings from ethnographic research to show the practice as a complex system and identifying potential intervention points within that system.

One of the strengths of IE is the deep qualitative focus on lived experience, but this also represents a challenge in terms of identifying participants who self-identify as high-consumers and are willing to welcome researchers into their homes and social settings and are comfortable discussing their consumption behaviours. To mitigate this challenge the research design will take a non-judgemental approach to exploring consumption lock-in, focussing on the challenges of consuming less.

Findings

EXPLORATORY SECONDARY DATA ANALYSIS OF CONSUMPTION DATA

Analysis of the secondary data linked to energy consumption showed that in 2019, 15 % of LSOAs (Lower-layer Super Output Areas) in Great Britain, which have an average of 650 households each, had an above average consumption of gas. In contrast, just 0.5 % of LSOAs exhibited above average electricity consumption.

The spatial analysis of the selected case-study locations, outlined above, allowed for contextual and place-specific differences in energy consumption to be explored. This analysis included cross-referencing with the IMD to establish any links to levels of deprivation. In Sheffield, a city often described as one of two halves, the South-West area of the city – where deprivation is considerably lower than the North-East side of the city – has significantly higher levels of gas consumption. Electricity consumption was also much higher on the wealthier side of the city and within the city centre. Inner London, with the exception of some areas including the City, the South-West and part of the North-West, has higher levels of gas and electricity consumption compared to Outer London. Consumption appears to be negatively correlated with deprivation.

There were high levels of total energy consumption across County Durham, with the highest consumption within the city of Durham and in the North-West of the region. Lower average consumption exists in Spennymoor and Bishop Auckland, to the south of Durham. The patterns observed showed similar links to deprivation, with more deprived areas consuming less. In Edinburgh, higher levels of gas consumption exist in the North and South of the city, and to a lesser degree in the West. A band of lower gas consumption splits the city in two; electricity consumption follows a similar pattern but is less spatially correlated. This area of lower consumption correlates with higher levels of deprivation.

Exploratory analysis of transport consumption data also shows links between household income and both car ownership and air travel. Higher levels of multiple car ownership are concentrated in London and the South-East of England. Numbers of vehicles are also correlated with higher incomes. Around two-thirds of households in the highest income bracket (over £50,000) have two or more vehicles. This compares to only 15 % of those in the lowest income bracket (less than £25,000). Furthermore, households with two or more vehicles travel on average more miles per person per year (8507 miles) than those with one vehicle (5866 miles). They also spend more time travelling and make more trips. The frequency of flying also increases with income. Those in the lowest income quintiles averaged fewer than one flight annually. Those in the third and fourth quintiles on average take more flights (1 and 1.6 flights annually). The highest earners take far more flights however, with those in the fifth quintile flying on average 3.3 flights per year.

PRACTITIONER INTERVIEWS

We interviewed seven academics and NGO practitioners who work in the field of resource consumption, it is notable, and anticipated, that the majority of practitioners' work focused on energy poverty or what might be termed under-consumers rather than addressing high consumption. Academic participants' work was drawn more broadly from the fields of sustainable consumption and environmental philosophy.

There was broad consensus amongst participants that high consumption is linked to high levels of personal wealth whilst recognising that there are also socio-structural factors that lock people of more modest incomes into patterns of higher consumption such as transport infrastructure that prioritises car ownership and poorly insulated homes.

DEFINITIONS OF HIGH CONSUMPTION

Participants were not able to offer any quantitative definitions of high or excessive consumption from their working knowledge and this in itself is crucial to understanding why high consumption remains low profile within academic research and policy. Caution was expressed in relation to the use of average consumption data to identify high consumers, on the basis that this may involve problematising those, who due to their location, the energy efficiency of their dwelling, their family structure or health status, are above average consumers of resources. In light of this, some participants felt that high consumption was defined by choosing high energy options when low energy options are accessible and available, and some normative descriptions of problematic high consumption that emerged from interviews included frequent flying (this was set at more than 5 flights per year) and the ownership of large and second homes.

There was a strong belief that definitions of high consumption needed to be nuanced and contextually specific, and to enable differentiation between consumption that was driven by poor infrastructure, consumption that was driven by necessity or limited choice, and consumption that was driven by choice and lifestyles that might be considered luxurious and considerably beyond sufficient and sustainable levels. It was agreed that any definition of high consumption should consider the difference between elite and more common forms of high consumption: collective subscription to wasteful but not elitist practices (culture of car driving) vs elite consumption that takes up a lot more emissions per person (private jets, second homes).

Participants also suggested that future research on high consumption needed to think about the appropriate unit of measurement for different types of consumption as there is inconsistency in the way that current consumption research quantifies and reports on consumption levels (e.g. number of flights taken rather than carbon emissions from flights taken, energy units consumed rather than warmth levels in the home).

A lot of the discussion focused on the concept of need or necessity, and how this could be equitably calculated to take into consideration the range of socio-cultural normative factors that shape what consumers consider necessary for a good life.

TACKLING HIGH CONSUMPTION

Four distinct approaches to tackling high consumption were suggested by research participants: tax; regulation; cultural change, and political change. Some of these framed consumption as individual choice and others as more socio-structural in nature, and all participants felt that consumption reduction should be a just process that reduces inequality, rather than being dominated by financial mechanisms that would disproportionately affect lower income groups.

It was suggested that taxation and regulation approaches should be progressive and accompanied by measures to improve access to more sustainable technologies and infrastructure for lower income groups. It was acknowledged that taxation is unlikely to deter very high-income groups and would not challenge the ideological status quo. Legal limits on consumption rather than regulation by price was seen as a more progressive and effective approach, recognising that a just transition to regulated consumption would require significant infrastructural investment as well as a radical shift in political ideology and social norms. Cultural change was recognised as fundamental to long-term consumption reduction, but it wasn't clear whether participants saw cultural change as a driver of consumption reduction approaches, or an outcome of them.

The potential for cultural change was linked to a shift in political ideology away from a free-market capitalist approach to resource consumption, recognising that voluntary approaches from either producers or consumers would be unlikely to succeed at the scales required to reduce consumption in line with natural resource availability (Brown & Cameron, 2000).

BECOMING THE 'IDEAL' CONSUMER

The majority of conceptual discussions with participants focused upon the complexities of quantifying acceptable and unacceptable levels of consumption. Interestingly none of these discussions explored an approach set by planetary limits on production, but instead considered how to benchmark sufficiency and excess from a human needs perspective. Several interviewees referred to Max-Neef's Fundamental Human Needs theory (Max-Neef, 1982), arguing that high consumption is using material satisfiers where social ones would be better and more sustainable. Interviewees suggested that satisfaction analysis should not focus on subjective happiness measurements but on universal needs, such as participation in society and maintaining good levels of physical and mental health, recognising that while these needs are universal, the way to satisfy them is culturally specific.

It was recognised that the individualistic and moralising discourse surrounding the 'ideal consumer' can be problematic and limiting where it fails to acknowledge the structural barriers to becoming 'ideal'. Consumption reduction approaches that fail to differentiate between the very distinct circumstances of high and low consumers also have the undesirable effect of encouraging some people to consume less than they need to maintain health, wellbeing and social inclusion.

Whilst some participants saw education and awareness raising as important in the move towards more sustainable levels of consumption, others were more sceptical about this approach and referenced research critiquing approaches based upon individualising behavioural models which neglect the normative/social-environmental context in which consumption takes place (Giddens, 1984).

Discussion

The academics and practitioners interviewed were evidently grappling with the many tensions and potential pitfalls that arise when attempting to identify groups that do harm. Research that seeks to understand the plight of vulnerable under-consumers and improve their circumstances is common and morally safe territory, but rarely do such studies seek to understand the counterpoint to the perspective of the under consumer by engaging with those who benefit from the conditions created by dominant regimes and are therefore tacitly incentivised to sustain and reproduce them. There is a perception that to do so would be to blame not just big business and policy regimes but could involve problematising conventions and ways of life that are widely considered not only acceptable, but aspirational. This is difficult territory for the researcher philosophically and practically. Not only is it difficult to know where the line should be drawn between acceptable/necessary/sufficient consumption required for health, wellbeing and social inclusion, and that which is problematic and threatens survival, but researchers must also be transparent and the mere suggestion that someone is being invited to participate in research because their way of life could be considered damaging risks alienating potential participants and blurs the distinction between research and intervention.

We know who we need to speak to in order to build a fuller and more nuanced picture of the forces shaping rising levels of consumption which over-use natural resources and set unsustainable expectations of consumption in wider society. Our secondary data analysis and other sources make clear that consumption (certainly of energy and transport) rises with income, so it is the wealthy that we need to target and those with sufficient incomes to follow or partially follow the standards and expectations they set. But we need to go deeper still and seek to understand the normative conditions which reproduce inequality and the socio-structural forces which lock high consumers into these lifestyles. Framing high consumption in this way brings it into line with the conceptual framing of consumption as driven by structures and norms and not just individuals making bad or immoral choices (Giddens, 1984).

A further reason why the study of high consumers is relatively underdeveloped may stem from the sense of hopelessness that arises when attempting to challenge the fundamental principles by which the world is organised, i.e. the pursuit of perpetual economic growth. We choose, therefore, to frame our onward research as a deep and probing investigation of why it is so difficult to consume less, thus avoiding alienating the people we need to speak to in order to disentangle the complex dynamics of unsustainable levels of consumption. This focus also acknowledges the more fundamental structural and cultural factors almost certainly at play that make high levels of consumption or an aspiration to achieve them almost inevitable and not entirely a matter of choice.

The literature speculates, *inter alia*, that overconsumption of resources may be driven by the pursuit of happiness, status, power and the drive to assert superiority by displaying the physical symbols of success (Brown and Cameron, 2000). It may offer a material alternative in the absence of socially derived satisfaction (Max-Neef, 1982). Or it may simply result from adherence to the ideal life course mapped out by capitalism, which some will attain at the expense of others and which Giddens (1984) contends infiltrates our discursive consciousness which in turn dictates our practice. Personality traits and emotion may also play a role, with some of us more susceptible to materiality and convention than others (Humphry, 2009; Håkansson, 2014). In this vein, the work of Brown and Cameron (2000) and Kasser and Kanner (2004) prompts us to consider how high consuming households conceptualise of their relationship with nature and how high consumption interacts with their personal, social and ecological wellbeing. All are merely hypotheses but point to useful lines of inquiry to be pursued through further empirical investigation.

The ideas emerging from the Energy Cultures thesis (Stephenson *et al*, 2010) that norms, culture and practice coalesce to determine consumption patterns, perhaps provide the most comprehensive framework through which to understand consumption. This thesis has not yet been expressly applied to the study of high or over consumption and has largely been confined to the energy domain. The testing and elaboration of the Energy Cultures model through the planned research is something we will consider and could be usefully teamed with the concept of sufficiency to guide us through the difficult territory of determining how much is too much, where need ends and want begins and indeed, how want is shaped and constructed.

Conclusions and next steps

Ideas about why it is so hard to consume less are emerging from an increasing corpus of work concerned with sufficiency and excess in consumption across a number of different domains of consumption but there is a no clear thesis. Addressing this question must form a priority for the field of sustainable consumptions and allied fields philosophically, methodologically, and empirically. We will proceed with an open mind into our deep qualitative exploration of the drivers, challenges and practical and emotional work of living beyond planetary limits. The framework initiated by Chatterton *et al* (2019) which categorises different types of high consumer, from the ignorant to the decadent, may provide a useful means of acknowledging and summarising the heterogeneity that exists amongst high consumers and drivers of high consumption, but we plan to approach this in a manner which avoids blame and judgement. Similarly, we will not aim to quantify or even estimate the environmental impact of our respondents, instead focusing on unpicking the psychological, social, cultural and structural drivers of rising consumption and the interrelationships between them. More significantly, such insights have the potential to help inform progressive interventions that don't rely on fiscal measures that the wealthy can withstand and which fail to challenge the dominant ideologies underlying our unsustainable quest for ever greater consumption.

Key research questions, explored initially through UK based case studies, will include why it's hard to consume less across the main domains of consumption (material and experiential) and how much is perceived as necessary for a good life (material versus social satisfiers- this will need to be explored with higher and lower consumers) and why resource intensive options are pursued when lower impact ones are available. In relation to the latter, we will also explore which (ostensibly) low impact choices appeal to high consumers and why, assessing the hypothesis that messages about cli-

mate breakdown may be fuelling compensatory consumption (i.e. purchase of electric vehicles, organic food) amongst high consumers to offset discomfort about carbon fuelled lifestyles whilst unaware of the true scale of their impact. In relation to the notion of a good life, we will aim to re-constitute such debates by tempering a focus on human needs with considerations of planetary limits.

As signalled by our secondary data analysis, a longer-term aspiration is to engage with the spatial dimensions of the problem, seeking to understand where consumption happens and where its impacts are felt and the associated inequities- a line of inquiry that is in its infancy, but which is important in terms of developing the rationale for tackling high consumption.

This will be a challenging programme of research to execute. There is significant scope for skewing of our sample as, while the focus on why it's hard to consume less may help us secure participants, it may also attract higher consumers who are receptive to change. It is likely that this cohort will represent an important 'entry point' into a hard-to-reach cultural space. Such households will provide vital insights into factors that unlock change or a desire for it, and whilst they will not represent the toughest scenarios for policies seeking to reign in unsustainable consumption, snowballing techniques may lead us to such households. We must also be prepared for self-reflection and uncomfortable encounters with the self as we face the reality that as relatively highly paid individuals, we are just as much a part of the problem and display many of the same damaging and contradictory practices as we are likely to identify amongst participants. As such, opportunities for auto-ethnography should be explored. Institutional ethnography treats research informants as the experts in the routinised practices under observation, asking that the researcher confine themselves to explicating why these practices happen as they do, rather than suggesting how they need to change. This approach reduces the risk of negative judgement or alienation. Armed with a deeper socio-structural understanding of high-consumption practices, the hope is that we will be able to make meaningful recommendations for interventions that will reshape consumption practices based on a thorough understanding of the lived experience of a high consuming lifestyle thus improving political acceptability and, ultimately, effectiveness.

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