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To cite this article: Sarah Irwin & Katy Wright (2024) Acting on climate change concerns: lay perceptions of possibility, complexity and constraint, *Environmental Sociology*, 10:4, 397-407, DOI: [10.1080/23251042.2024.2359765](https://doi.org/10.1080/23251042.2024.2359765)

To link to this article: <https://doi.org/10.1080/23251042.2024.2359765>



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Published online: 03 Jun 2024.



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Acting on climate change concerns: lay perceptions of possibility, complexity and constraint

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ABSTRACT

How citizens think about, and relate to, climate change and possibilities for addressing it are sociologically important questions, sharpened in the current context of extensive climate change concern. Social science approaches generally have shown the profound importance of context and the social embeddedness of lay perceptions. More specifically, theories of social practice focus analytic attention away from individuals and onto the economic, energy and social arrangements which drive people's habituated carbon intensive everyday practices. However, there has been a growing interest in how citizens may, at junctures, be more or less reflexive, evaluative and critical of practices which they carry or adapt. Interested in how citizens engage with possibilities for addressing climate change, we report on new UK-based qualitative research and analyse participants' accounts of (in)efficacy, responsibility, constraint and affect in acting on climate. We explore contextual variation in the meanings participants bring to acting on climate change, and affective aspects of acting, or feeling situated, 'against the grain' of normalised practices. The evidence offers insights into the diverse meanings people bring to the possibility of acting on climate and the ways in which such meanings are enmeshed with, but also often critically evaluative of carbon intensive practices.

ARTICLE HISTORY

Received 1 November 2023
Accepted 22 May 2024

KEYWORDS

Climate change; public views; perceptions; practice; affect

Introduction

In the current context of intensifying climate risks and harms, there is extensive and growing public concern about climate change in the UK (Hinchcliffe 2022; Liu, Shryane, and Elliot 2022; ONS 2021) and internationally (Carrington 2021; Steentjes, Demski, and Poortinga 2021) and ongoing debate over the question of how urgently citizens act or demand political action (Brulle and Norgaard 2019; Henley 2021). How citizens think about climate change and how they see possibilities for addressing it are profoundly interesting and important questions. Whilst psychological and behavioural approaches interrogate the value-action gap (e.g. Marshall 2014) social science research foregrounds the foundational importance of the social, economic and cultural contexts and constraints which shape how people understand climate change, perceive its relevancies and implications and engage with the possibility of acting on it (e.g. Shwom et al. 2015). Practice theoretical perspectives have been especially influential, focusing attention on the carbon intensive energy infrastructures, economic and social arrangements which shape people's everyday practices (Shove and Walker 2014). Here, practices rather than people become the prime focus of analysis which shines light on how carbon intensive arrangements are reproduced as people go about their daily lives. People may express concern about climate change when

prompted by survey questions but this obscures the embedded, routinised and culturally normalised nature of everyday behaviours. Theories of social practice provide a strong critique of agency, reflexivity and values as properties of individuals and situate these as emergent from practices and their configurations and associated norms (Christensen et al. 2024). A number of writers have argued for more research into the question of how people relate to and think evaluatively about the practices in which they are embedded (Schatzki 2017; Welch, Mandich, and Keller 2020) and some analyse how social arrangements and evolving practice configurations can engender space for critical evaluation and 'doing things differently', potentially leading to changes in normal practices (Christensen et al. 2024; Sahakian 2022).

In survey research and linked analyses it is commonly posited that citizens might feel responsibility for acting on their climate concerns and, when asked in this way, they appear to concur (eg. Fisher, Fitzgerald, and Poortinga 2018; ONS 2021). Drawing on qualitative data from a new study we critically examine the underpinning assumptions of this question and examine in-depth the meanings that citizens bring to the possibility of acting on climate. We explore variation across our study sample in how participants evaluated the scope for acting on their climate concerns, with some emphasising the value

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of individual actions and others emphasising a disconnect between acting as an individual and wider societal stasis on climate. Many of the latter grouping, nevertheless, were also motivated to act in various ways and several described emotional aspects of engaging with constraint and with the complexities of acting, or wanting to act, against the grain of everyday practice. We explore examples of these participants' propensity to critically evaluate their everyday climate relevant practices and ways in which expressions of guilt manifested and varied in relation to material circumstances. Accounts of what kinds of action were seen as salient, or felt as manageable, varied by socio-economic circumstances and social commitments, revealing the embeddedness of high carbon practices manifesting in diverse ways across our sample. Our analysis responds to calls for more evidence on the critical evaluation of practices (e.g. Welch, Mandich, and Keller 2020) and reveals ways in which such evaluations are themselves embedded and contingent (e.g. Christensen and Rommes 2019; Christensen et al. 2024).

Our research also speaks to broader questions of public engagement with climate change. Longstanding suggestions of public unwillingness to change, or buck passing (e.g. Henley 2021), appear to be giving way to wider acknowledgement that citizens want action on climate, seek to act themselves (CAST 2021) and foreground the importance of government leadership and infrastructural changes in support (The Guardian 2022). Our data adds to this growing body of evidence, also shining light on how people relate to, and may be critical of, practices in which they are embedded and how they sometimes seek to act 'against the grain' even whilst aware of the profound limits of doing so. Certainly such individual level actions will be readily accommodated within status quo arrangements if they are neither coordinated nor joined with profound changes in the material drivers of high carbon living. Our data reveals quite widespread reflexivity and critical evaluations of social practices across our participants, yet lay engagement with such complexity is often obscured, both in everyday commentary on citizens' views and in climate relevant policy making. Our analysis therefore supports a case for more sufficiently mobilising citizens' climate concern, their desire for climate friendly societal changes and their engagement with complexity, in progressing policies which effectively tackle the infrastructural drivers of high carbon practices.

Public perceptions and the climate crisis

Survey evidence reveals extensive climate concern across the public (e.g. BEIS 2021; Capstick et al. 2015; Carrington 2021). Expressions of concern have risen in recent years in the UK (Liu, Shryane,

and Elliot 2022) and the Global North more generally (Poushter 2022), likely influenced by the increasing frequency, news coverage and climate framing of extreme weather events around the world, the impact of social movements such as Fridays for Future and XR and city and national declarations of climate emergency. Over the last decade or so commentators have asked why, despite their expressions of climate concern, people do not more significantly change their behaviours or more generally push for urgent political change (e.g. Howlett and Rawat 2019; Marshall 2014). Positing a value-action gap conventional psychological analyses provide a decontextualised framing of individuals as the locus of responses to the climate crisis (Butler, Parkhill, and Pidgeon 2016). In contrast social science writing and research interrogates the embeddedness of perceptions of climate change, its felt saliences and prospects for acting to address it. There is a significant body of evidence on citizens' understandings of climate change, their environmental values, their propensity to act and their support for policies and how all these are patterned in relation to socio-demographic predictors and shaped by social, cultural, environmental and political economy contexts (e.g. Dietz, Shwom, and Whitley 2020; Shwom et al. 2015). Such contexts help to explain diverse climate saliences and linked propensities to act on climate or environmental concerns (Crawley, Coffee, and Chapman 2020; Gunderson, Stuart, and Houser 2020; Norgaard 2006). For Norgaard (2006) and for Gunderson et al. (2020), the felt relevancies of climate change are socially shaped and capitalist political economy and cultural drivers influence '*what receives attention, what seems rational and what seems possible in response to climate change*' (Gunderson, Stuart, and Houser 2020, 58). Other researchers, too, have emphasised how individualising discourses of late modern societies obfuscate the systemic nature of climate change (Webb 2012) and responsabilise people for making climate friendly choices even though in practice they may partly recognise contradiction (Butler 2010).

The above approaches interrogate the contextual embeddedness of thought, value and action as relevant to climate change. Practice theoretical approaches provide a linked body of work but one which takes social practices as the appropriate unit of analysis (eg. Southerton, Warde, and Hand 2004). Practice theory has been influential in sociological climate relevant research and is especially well established within consumption, sustainability and energy use studies (Shove, Pantzar, and Watson 2012; Southerton, Warde, and Hand 2004). Theories of social practice are diverse but a '*family resemblance ... lies in the shared contention that individuals' behavior*

primarily takes place through the medium of social practices' (Welch 2017, 242). These approaches situate individuals not as autonomous agents but as carriers of practice, reproducing carbon intensive arrangements by going about their everyday lives within extant social, infrastructural and energy arrangements (e.g. Shove 2014; Shove and Walker 2014). Important here are the routine, habituated ways in which people carry or perform practices thereby reproducing them. However, this does not render them automatons. Reckwitz holds that: '*[a]s carriers of a practice [people] are neither autonomous nor the judgmental dopes who conform to norms: They understand the world and themselves, and use know-how and motivational knowledge, according to the particular practice*' (Reckwitz 2002, 256). Recently a number of writers have advocated for more research into how people themselves engage with or seek to desist from certain practices and into linked affective aspects of dissonance and dissent (Bottero 2023; Welch, Mandich, and Keller 2020). These questions of evaluation and affect in how people experience and relate to the (im)possibilities of acting on climate are important to our own analysis. There are some extant examples of research in this area, interrogating reflexivity and evaluation as integral to social practices, to which we now turn.

Schmidt (2017, 149) argues that '*[W]hen "the subject" occupies the centre of attention, it blocks analytic access to collective structures of meaning, shared implicit knowledge systems [and] public patterns of meaning.*' However, practice theory does not '*negate mental states of affairs*' (Schmidt 2017, 151) as reflection and evaluation themselves link to and emerge from practice. Christensen et al. (2024) argue that reflexivity arises in specific conditions, for example it is contingent on degrees of variation both in how practices are performed and in linked discourses, or 'structural stories', that is shared accounts of why practices are performed in given ways (Christensen et al. 2024). In their study of environmental ethics, Askholm and Gram-Hansen (2022, 295) interrogate '*tensions arising between what is established and considered normal, and the knowledge, perceptions and emotions that contradict this*' and examine how people's environmental ethics may align with, or cut across, normalised practices. These examples position people's accounts as linked to practices and their configurations and are revealing of evaluative as well as routinised engagements in the performance of practices (Welch 2017).

Our research study grew from interest in how citizens engage with climate change and relate to the possibility of acting on it. We focus on the meanings that study participants accorded to climate relevant (in)action, contextual contingency and constraint. Addressing calls for more evidence (e.g. Welch, Mandich, and Keller 2020) we explore how participants

reflected on, evaluated, felt about and, on occasion, dissented from practices which many of them identified as troubling. The analysis shines light on the meanings and nuance which participants brought to bear in 'acting on climate' and on their critical evaluations of practices and linked affective dimensions of experience, particularly when they sought to act, or felt they were positioned, against the grain of normalised practices.

Research design and methods

This paper focuses on qualitative research but we first contextualise how we drew up our qualitative research sample. We ran an online survey ($N = 1676$) in the autumn of 2020 distributed to people who lived, worked or studied in Leeds, England. The survey link was distributed through an array of networks including a Leeds City Council opt-in list from previous climate survey research and their Citizens Panel list, multiple and diverse educational, third sector and community networks across the city and neighbourhood Facebook page networks. The achieved survey sample over-represented degree-qualified and 'climate concerned' citizens compared to city and national averages and it is likely that it over-represented more climate engaged citizens even within the 'concern' categories. Approximately two thirds of respondents shared contact details for a follow-on qualitative study. In recruiting qualitative study participants from this survey population we sought to ensure the research would appeal to a broad range of participants, referring in recruitment materials to climate change but also local issues like transport and wider issues about fairness and what matters. We also ensured that the qualitative sample profile of participants was comparable to UK wide patterns of climate concern (BEIS 2021). In our achieved sample, 20 participants had identified themselves as 'very concerned' about climate change in the survey questionnaire, 15 as 'fairly concerned' and 7 as 'not very' or 'not at all' concerned (so 48% were very concerned as compared to 44% at a national level (BEIS 2021). Within the 'concern' groupings we sought a spread by gender, age, parenting status, education level and political leaning. We ran semi-structured interviews with 42 participants from May to July 2021.^{1,2} Interviews were conducted online and lasted around one hour. At the start of the interviews we asked a question about government priorities to gauge participants ranking of climate relative to other issues. Interview topic areas included understandings of climate change, if and how it mattered to participants, their views on local policy issues (especially relating to transport), if they thought about emissions in their day

to day lives or ever made lifestyle changes because of environmental or climate issues, the role and meaning of individual actions and responsibility and whether wider changes would lead them to do more. In order to analyse the interview data we engaged in a close reading of the transcripts and coded the data before organising it thematically. The relationship between expressions of climate concern, views about responsibility and varying meanings attributed to climate relevant action, possibility and constraint emerged as important analytic themes which we interrogated through constant comparison within our sample, providing insights which we could critically compare with extant literature.

Evidence suggests that as climate change has become more embedded within everyday discourse so too it features more routinely within people's accounts of why they behave in certain ways (cf. Capstick, Pidgeon, and Henwood 2015). Indeed, nationally over half of those who are somewhat unworried or not at all worried about climate change say they make lifestyle changes to help tackle it (ONS 2021). In our own data, participants who were not especially interested in climate, or partially so, nevertheless said they acted on it in some of what they did. We see in this less social desirability and more a pattern in which climate relevant motivations fold into more general reflections on why we do certain things (e.g. avoid waste, recycle, care about nature) and we remain alert to this through the analysis.

Our qualitative research participants were resident in Leeds, England. Like many other UK local authorities Leeds City Council declared a climate emergency in 2019. One issue relevant to many Leeds citizens is the absence of any light rapid transit or integrated public transport system given the size of the city (c. 800k) but we see no reason to believe that this systematically influenced the accounts reported in this paper. In designing the research we were particularly interested in the question of how citizens perceive the (im)possibility of acting on climate and the meanings they bring to bear and below we explore, in-depth, some of the diverse meanings of acting on climate and linked kinds of engagement within, as well as across, concern groupings. Whilst geographically situated, we hold that our study's analysis of lay accounts of constraint, context and contingency, and affective experiences of anxiety and frustration, have wider theoretical relevancies, shining light on patterned ways in which people attribute meaning to acting on climate change and evidencing examples of critical evaluations of practice. It would be of interest to run comparative studies, for example exploring the meanings people attribute to acting in climate friendly ways in contexts where they newly engage with significant environmentally positive interventions (e.g. Eliasson and Jonsson 2011). We now turn to our data

and first explore how people perceive possibilities for and constraints on meaningful climate relevant action.

Addressing climate change: personal responsibility, context and constraint

In this section we consider responses to a specific question regarding whether, and how much, people feel responsibility to act on climate change. The question of personal responsibility features in some survey research but it obscures respondents' varied interpretations of the meaning of responsibility vis-à-vis climate change. In asking about this within our qualitative research we saw it as a valuable opportunity to explore questions of meaning by giving participants space to reflect on the question itself. For example, would they accept or contest the presumption that personal responsibility is meaningful as a response to climate change? Towards the end of our semi-structured interviews we asked participants a question from the European Social Survey (Fisher, Fitzgerald, and Poortinga 2018): *To what extent do you feel a personal responsibility to try to reduce climate change? (Answer scale from 0 = Not at all, to 10 = A great deal)*. Fisher and his colleagues conducted an analysis of British responses and, noting an overall average score of 6, with scores of 5–8 most common, concluded that: *'people feel only a moderate personal responsibility to help reduce climate change'* (Fisher, Fitzgerald, and Poortinga 2018, 11). This evidence contributed to their conclusion (Fisher et al. 2018, 23) that British people were *'relatively relaxed about climate change'*.

We organise our analysis with reference to how participants placed themselves on the 'felt personal responsibility' scale (after Fisher, Fitzgerald, and Poortinga 2018) and how they discuss the issues raised by the question. We show that the same self assigned 'score' can carry sharply differing meanings. Our qualitative data shines light on the meanings people bring to 'acting on climate change' since, in their accounts of personal responsibility and their reflections on the question framing, participants revealed diverse perspectives on possibilities for acting on climate and on how efficacious change might come about.

Several of our participants (nearly half our sample) described themselves as 8 to 10 on the personal responsibility scale but there were significant differences in the meaning of actions they might take. Some suggested that individual actions might be cumulative in their impact, and ideas about personal responsibility were linked to this. For example Wendy³ (very concerned), who saw herself as a '10', described a city museum exhibit as a metaphor in explaining the cumulative value of individual action:

... they had a big chunk of stone and they were asking people to run their finger along it to cut it in half ... there was nothing but a chalk line and we took our kids and we said rub your finger along there and cut it in half, and ... about two years later when I was in the museum, that thing had a groove through it that was about two inches deep, and it was a demonstration of the effects of doing things communally and collectively.

Nancy (fairly concerned) described herself as a 10 saying *'it's purely just that I get very frustrated that everyone sees it as somebody else's problem'* and referring to a UK supermarket advertising slogan said *'I just think everyone needs to do something, and it's that whole, is it Tesco's, every little helps'*. Angela (fairly concerned) also scored herself 10: *'... we can start by making little steps, and it could have an impact immediately really, just by every little step you take'*. This does not mean such participants do not believe in government action, indeed Angela was scathing of government inaction: *'They're looking to the individual and they are not doing what they need to do. They're not supporting us.'*

We are not arguing that all participants giving these kinds of responses necessarily believe in the cumulative value of individual efforts, however multiplied, since many also saw them to be 'a drop in the ocean' in addressing climate change. Our point is rather that in response to the question of responsibility many participants emphasised its value in quite a straightforward way, described it as corresponding with actions they might routinely take and which felt close to home, and several did foreground the prospects of wider changes stemming from individual level changes.

In contrast, many other participants who scored themselves as 8 to 10 on the personal responsibility scale foregrounded tensions between their sense of personal responsibility and the felt meaninglessness of individual actions vis-à-vis the wider structural changes they saw as necessary to address climate change. They were frequently critical of the prospect of any cumulative efficacy of individual level actions. For example Lindsay (very concerned) described herself as '9 or 10' on the scale and asserted a keen sense of personal responsibility: *'a person can't sit and go oh, this needs fixing. No, you have to be part of fixing it ... you have to try'* but when asked *'Are there ways to make individual actions have a bigger impact?'* she was sceptical:

no, I don't think that there's a way of, if I choose to do this then somehow that can be multiplied, I think that that would be artificial.

Mike (very concerned) scored himself at 10 saying *'I think there's a great personal responsibility'*. Asked how straightforward he found the question he pointed

to his sense of personal inefficacy within current arrangements:

it's not straightforward because while I feel it's my personal responsibility, I don't feel I'm empowered to do so. So there's a great frustration there.

Jess (very concerned) elaborated her sense of personal responsibility at 'about 8 or 9' saying *'I can only change myself, not other people'*. When asked *do you think it's easy to answer [the] question?'* she said:

Its frustrating ... because even if I did absolutely everything that I possibly could. And lived life completely green and supported other organisations and things like that, it still wouldn't really make a mark on things.

These participants described many ways in which they acted on their climate concerns, a theme we take up in the next section. However, their responses to the question about personal responsibility underlined their sense of constraint and of tensions arising from acting or wanting to act 'against the grain' of extant practices. The next two participants additionally reflected on power dynamics which are obscured in closed ended questions about degrees of personal responsibility. Liz wavered between two different responses, revealing her sense of the impossibility of trying to go against the grain of wider high carbon arrangements:

I think my emotional answer is I'd be like nine or ten, like you should do everything you can, but then ... there's only so much an individual can do, even if you .. went totally vegan, totally off grid, you've still got to buy into services and live in the world that doesn't take it. So I'd probably say I do feel that I should be personally responsible, but I also think corporate and political organisations have [to], so I'd say maybe on that balance, six.

Chris described himself as a 10, saying *'its all our responsibility'* whilst also articulating a sense of profound constraint:

the rich think the rules are for everyone else because they can afford to bypass the rules, the industrialists pretend that they're making everyone's life quality better immediately, so will think about the future later, and you go, well, the future's now. And the people at the bottom go, 'well what on earth can I do?'

To summarise, this second significant grouping of participants who described feeling a high level of personal responsibility simultaneously emphasised their extensive scepticism about the wider efficacy of acting as an individual, at least within current high carbon arrangements. Many were politically left leaning. Several spoke of tensions and anxieties in seeking to act against the grain of everyday high carbon practices and engaged in diverse and nuanced ways with the limits and contingencies of 'acting on climate' in the context of current social arrangements, a theme we take up later on. We might describe the above two groupings of

participants as drawing on and foregrounding different kinds of account, which we see as analogous to Christensen et al., (2024) 'structural stories' in their divergent evaluations of individual level actions as valuable and potentially cumulative (cf. Toivonen 2022) or as situated in tension with extant carbon intensive practices.

Another significant cluster of participants (again, nearly half) described themselves as being in the middle of the personal responsibility scale (scoring themselves from 4 to 7). For Fisher and colleagues, an intermediate self assessment points to a relatively relaxed attitude regarding climate issues, echoed in Riviere's (2021) account of the limits people reach in 'doing their bit'. This is exemplified by Joe who described himself as fairly concerned about climate change yet, in his views about government priorities, climate change came low down. He had made some changes in the past, including installing solar panels '*as a gesture, almost like a tick box.*' He described himself as a 7 on the scale of personal responsibility, saying:

I think part of it is because of the amount of work I can do as an individual to affect the whole picture. What I do within my own remit is quite small and I've done quite a lot of things already anyhow.

Similarly for Martin (not very concerned) and also a 7:

I feel a lot better when I recycle something than throwing it in the bin. I'd rather give food away than, than, than waste it. So it's how you feel about what you can do I think that's important.

Joe and Martin, like other participants who were less exercised by climate change,⁴ described some of their behaviours as climate friendly but, in their accounts, climate was less clearly relevant as a motivation in their daily lives. In contrast others in this 'mid-responsibility' grouping more explicitly challenged the framing of the question echoing the critical accounts described earlier. For example Valerie (very concerned) placed herself at 4 on the scale:

I think that the biggest problems are the corporations that are the biggest emitters ..Sometimes blaming the individual is just an excuse to drive the responsibility away from the biggest companies that are to blame

Overall the 'middling' scores for personal responsibility contain a spectrum of opinions including those who described the value of acting as contingent, and felt they had 'done what they could', echoing Fisher et al., (2018) account of a relaxed attitude, but there were also participants who foregrounded power inequalities and criticised the individualising framing of the question.

The data reveals diversity but also complexity in how people engage with questions of meaning when it comes to 'acting on climate'. The European Social Survey question individualises parameters of action but it offered a productive prompt for exploring

participants' views on questions of responsibility and efficacy in relation to wider societal contexts. The extent of felt personal responsibility itself is noteworthy and we see this as linked to wider discourses about what it means to care about climate change (cf. Butler 2010; Capstick et al. 2015). Some participants emphasised the value of acting as individuals and often described possibilities for cumulative change whilst others emphasised a disconnect between felt responsibility and felt inefficacy outwith wider system level changes in carbon intensive societal arrangements. It might seem plausible that these latter accounts simply reflect an interest by some participants in intellectualising the question of 'acting on climate' in the interview context when it in fact has little bearing on their everyday practices or experiences. However, we argue that these accounts provide a lens on what matters for participants. We turn to this now by focusing on emotional descriptions of efforts felt to run against the grain of normative practices.

Climate, (in)action and affect

In our interviews, we asked participants whether emissions arising through their own behaviours was something they ever reflected on and if they ever changed how they did things because of environmental issues or climate change. We did not directly ask people about their feelings and emotions about climate change as this is a potentially fraught area to explore, especially in a first interview. However, in response to the question about emissions and at other points in the interview, several participants touched on affective dimensions of trying to act in climate friendly ways. There is an extant literature on eco-anxiety and climate grief (e.g. Coffey et al. 2021; Ojala et al. 2021) but we focus here on affective dimensions of how people do, or do not, act in relation to their climate concerns. We have shown that several climate concerned participants described tensions between felt responsibility and inefficacy. They commonly described a sense of guilt and anxiety in their behaviours and in weighing up what to do or how to act. Interviewees may highlight moral dimensions of their experiences and behaviours when in practice much of what they do is routinised (cf. Irwin 2008) but their accounts suggest that many climate concerned participants were also often reflexive as they described grappling with questions of climate relevant responsibility in their everyday lives. This was in relation to some practices even whilst others remained normalised (cf. Christensen et al. 2024). The evidence below is drawn from those who were very concerned about climate change and we describe how their experiences and accounts were related to practice contexts and material circumstances.

Some participants expressed discomfort and guilt about not being able to effect meaningful change or contributing to harm. Valerie said *'I feel so useless all the time about [climate change]'*. For Frances: *'my generation has had a huge responsibility for creating the world we live in ... I feel terribly responsible'* adding *'I have flown to New Zealand a few times and back and so I am very guilty of that, but I can't take that back'*. Feelings of guilt and worry often overlapped. Jess said that thinking about climate change and worrying about the impact of her actions was woven into her everyday life, relevant to *'so many things that we do'* from making cups of tea to choosing what kinds of nappies to buy and filling up the car (driving being a necessity due to health issues). She referred to tensions between an internalised sense of individual blame and the limits of individual action: *'maybe I'm blaming myself as an individual because obviously I want to feel like I'm doing something'* whilst also voicing her felt inefficacy:

We know the problem, but ... there's no solution, the actual solution is out of our hands ... It's really the industries ... it's the worry and the responsibilities being passed on to the consumer in a lot of the cases, and it's just crushing

Valerie, mentioned earlier, described her own practices and efforts to go against the grain of routine practices, for example changing her diet, reducing plastic use and *'walking everywhere'*. However her family live on the continent and she flew home several times a year since *'obviously I am not going to stop going home'*, illustrating diversity in individuals' orientations regarding which high carbon practices are normal, seen as necessary and less of a focus for reflexivity or evaluation. For others flying was much more of a touchpoint for critical evaluation, in turn linked to efforts to perform practices differently. In the next two examples of (not) flying, feeling guilty characterised managing conflict between environmental and familial commitments. Frances had taken a pledge not to fly despite her children and grandchildren living abroad and her confliction was manifest in her account:

It is hard, because I mean ... you could justify it that I'd need to, I do need to see my grandchildren, I need to see my son. I don't know. It's very hard.

With her broader activist commitment Frances had prioritised not flying rendering her relational caring commitments extremely difficult to fulfil, a case illustrative of emotional as well as practical dilemmas arising from seeking to act against the grain of normal practice. Marcus and his partner both had close family overseas. Very concerned about climate change, and involved in campaigning, he was deeply committed to living in an environmentally friendly way, not flying and routinely

travelling very long distances by train, a pattern which was hard but felt as manageable. A necessary exception due to the problems of travelling through countries with different COVID testing and quarantine requirements meant that he and his partner chose to fly:

(W)e did take a flight to (country in Europe) and you know, it was interesting to see how, how painful it was, like you know, how it felt like it was against our values

In short, several participants offered emotionally animated accounts of acting with and against the grain of normalised practices whilst also, as illustrated in the account of Valerie, revealing some ways in which particular practices are more of a locus for reflexivity and evaluation than others. As exemplified in these reflections on (not) flying and familial commitments, the loci for critical reflexivity and dissent are varied.

There were also many accounts of more routinised kinds of environmentally friendly practices albeit ones where participants strongly emphasised their commitment to behaving in line with their climate concerns. Several participants described practices of thrift and ways they had tried to reduce carbon emissions or minimise their environmental impact (e.g. holidaying in the UK, buying second hand clothes, reducing plastic use, using eco-friendly cleaning products). Notably, across both routine manageable actions and harder, more emotionally costly ones, these participants appeared to have a range of choices available, for example, regarding what to consume, leisure activities and decisions about how to travel.

We have described emotional cadences of acting *'against the grain'* of normal practices or seeking to perform practices in a more climate sensitive way amongst participants in relatively advantaged circumstances where they could make choices. In contrast, others described themselves as having very low emissions or environmental impact due to a lack of resources, and practices of thrift were marked by necessity. Feeling unable to cut personal emissions here participants were less likely to talk about a sense of guilt. Gemma described a range of ways in which she sought to avoid waste (buying second hand clothes, obtaining food through food waste apps, reusing and recycling items) but also how she saw herself as having limited carbon emissions due to her lifestyle:

I walk to the shops, or I walk to work. Very rarely get taxis. Very rarely get buses nowadays either, to be honest, other than work obviously, so for me personally, there isn't a lot of ... emissions that I'm directly linked to

Chris spoke about his own limited use of resources, living in a house with no central heating and not owning a car:

I have a bit of cheese now and again ... I put a, maybe a clothes drier on once a week, a washing machine

once a week. And, so I just have a fridge running really and a radiator in winter, and I go by bus, I just walk places ... I don't feel I could reduce it any more

He said that he had done carbon footprint tests but that *'you don't even come on the radar for emissions, I lead such a stupid, meagre life'*. Nevertheless, he spoke of frustration at material constraints, but ones linked to an absence of choices about how to act:

... if you wanna boycott a certain product, but you can't boycott when you're down to the bare bones of existence, there's nothing left you can boycott

For Lisa, also living in circumstances of material constraint, her routine practices of necessary thrift and re-use are themselves culturally devalued and not recognised as having environmental relevance and she felt them to be situated against the grain of dominant classed norms:

when they [middle class people] think of [a] working class area, say like [mine], and say ... look at them, they're really against blocking off the streets and they won't get on their bikes because they're a bit ignorant and stupid, but you know, people are doing things all the time, like recycling stuff on Facebook groups and stuff, uniforms and football boots and, you know, they are doing all sorts of things

In short, material inequalities across climate concerned participants marked out differences in their accounts of affect and constraint. Guilt and anxiety were often articulated in relation to an ability to make choices. For less advantaged participants material constraint was accompanied by different frustrations linked to efficacy and to a sense that class related practices of thrift, such as re-use and low waste living, are culturally under-valued.

In our first analysis section, we examined participants' varying accounts of (in)efficacy and constraint. Many described disconnect between their own efficacy and their assessment of what needs to be done on climate. In this section we have shown how this subset of participants described quite extensive examples of acting, or seeking to act, 'against the grain' of dominant carbon intensive practices. With reference to calls for more research on routinisation and critical reflexivity (Christensen et al. 2024; Welch, Mandich, and Keller 2020) we have shown participants' evaluations of normalised practices to be socially situated, varying across different areas of practice and across material circumstances. As such our data offers insights into the diverse meanings people bring to the possibility of 'acting on climate' and the ways in which such meanings are enmeshed with, but also often critically evaluative of, carbon intensive social practices.

Conclusion

A wealth of research has examined lay perceptions of climate change and (non-) responses to it. We briefly reviewed social science analyses which show the embeddedness of citizens' perceptions of climate change and theories of social practice. We also examined linked arguments for more in-depth interrogation of the varying ways in which people relate to the practices that they 'carry' through routinised performances, reflexivity and critical evaluation (Bottero 2023; Christensen et al. 2024; Sahakian 2022; Schatzki 2017; Welch, Mandich, and Keller 2020). We have analysed evidence from a new UK based study in which we examined if and how people engage with possibilities for acting on climate change, the meanings that they bring and whether, and how, they evaluate the high carbon practices in which they are imbricated.

We have explored and analysed our study participants' varying accounts of responsibility, (in)efficacy, constraint and affect in acting on climate. We started by focusing on responses to a question about personal responsibility and climate change revealing complex and diverse meanings. Whilst most participants accorded to themselves a significant degree of personal responsibility, some foregrounded the value of acting as an individual whilst others challenged the premise of the question, emphasising that individual actions are disconnected from wider structural changes, an account which was characteristic of around half of our very concerned participants and some of our fairly concerned participants and we suggest that this is likely to be a non-trivial pattern across the wider UK population, especially given the growing prevalence of climate concerned citizens (Liu, Shryane, and Elliot 2022). The critical account of disconnect by these participants did not link to inaction but, rather, to reflexivity and critical evaluations of certain everyday practices, some of which had become loci for doing things differently and were a focus of our second analysis section. Acting against the grain of normalised practices was often expressed in emotional terms (cf. Sahakian 2022). We explored how evaluations and emotional engagements were socially situated, varying both across different areas of practice and across material circumstances. For example, some practices were challenged by climate concerned participants and normalised by others. Expressions of guilt and linked decisions about acting against the grain of normative practices were often linked to an ability to make choices and everyday manageability. Less advantaged participants described material constraints on their ability to act and a sense of misrecognition for not taking up what they saw to be more culturally valued climate friendly practices.

Our analysis offers insights into different meanings which people accord to acting on climate change concerns. The qualitative evidence on the complex ways people understand 'responsibility' and the possibility of acting on climate highlights the risks attached to deducing meanings from summary indices derived from survey research. It also highlights nuance in lay engagement with context and complexity and with the contingent meanings of action. Invocations to behaviour change (e.g. Local Government Association 2021) responsabilise citizens who already commonly feel more responsibility than efficacy. Many of our participants believed that what individuals can do on climate is indivisible from wider societal changes. We have shown diversity in the meanings people bring to the possibility of 'acting on climate' and the ways in which such meanings are enmeshed with, but also often critically evaluative of, carbon intensive social practices. We have also shown that critical and evaluative judgements about such practices are themselves situated, reflecting the negotiation of particular relational commitments and configurations. This was evidenced through divergent accounts of what feels manageable and normal, illustrated in the examples of flying and of class varying parameters of choice. The evidence also reveals some of the ways in which citizens experience and engage with complexity. Many critically reflected on the disconnect between individual action and the possibility of societal change yet recounted ways in which they acted against the grain. Such actions will not engender wider changes unless they are coordinated and integral to sustained infrastructural and societal changes which embed low carbon ways of living (cf. Brand-Correa et al. 2020), in turn demanding determined political and policy leadership as well as careful and inclusive design. Our evidence is also suggestive, therefore, of the value of more sufficient engagement between citizens, policy makers and local, regional and national government bodies building on varied mechanisms for inclusive public deliberation (Howarth et al. 2020). This would be integral to profoundly bolder forms of intervention to enact rapid decarbonisation and normalise low carbon practices.

Notes

1. The interviews were conducted by the authors and Dr Katy Roelich. The research received ethical approval from Research Ethics, University of Leeds, ref: LTSSP-058, May 2021.
2. COVID lockdowns had occurred in 2020–2021 but we think this does not systematically influence the responses reported here.
3. Participants' names have been anonymised.
4. This includes the 'not very concerned' and 'not at all concerned' and, additionally, those 'fairly concerned' participants for whom climate came low down as a government priority.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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