

## Progress in understanding and overcoming barriers to public engagement with climate change

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The world is a very different place now than it was in the early 2000s when three of us first studied UK public engagement with climate change (Lorenzoni et al., 2007). We have since seen significant growth in scientific evidence of climate change, and in public visibility of the issue through social and mainstream media, public protests and deliberative events. We have seen people the world over taking to the streets to passionately declare that taking action on climate change is not just important, but urgent, and that they wish their voices to be heard by those in power. Younger generations have been prominent in calling out their leaders on their rhetoric, demanding real commitment through political action. There is also a clear shift in societal language towards that of climate ‘emergency’ and ‘crisis’. The UK and other governments are starting to make bolder commitments to address climate change, although meaningful policy action is lagging. Similarly, even though public awareness and concern about climate change have grown, meaningful behaviour change is less apparent. That is, more widespread ‘cognitive’ and ‘emotional’ engagement are not similarly reflected in relevant ‘behavioural’ engagement (Lorenzoni et al., 2007). Here we reflect on research published over the past decade and a half on engagement with climate change, from diverse disciplines and perspectives.

In our 2007 article, focussed on the UK, we identified broadly two levels of barriers to public engagement with climate change: ‘individual’ barriers such as lack of awareness, competing concerns and psychological distance; and ‘social’ or structural barriers such as perceived inaction by others, social norms encouraging consumption, and lack of enabling infrastructure. Together these factors substantially impede or constrain public engagement with climate change mitigation. Recent research demonstrates that within a UK context, many of these barriers endure despite public discourse about climate change becoming relatively more mainstream. Since 2007, psychological distance appears to have reduced, which could be construed as good news: surveys suggest that the majority of the UK public see climate change as a risk for their own country now, rather than predominantly a threat to other countries and future generations (e.g. BEIS, 2021). Climate scepticism has also declined. Awareness and knowledge have grown, although knowledge gaps remain: specifically, there is low awareness of the role of dietary choices and embedded emissions in products often manufactured abroad (Steentjes et al., 2021). Social-level barriers have, however, changed little: social norms broadly still support high-consumption lifestyles and there are profound economic and physical barriers to changing carbon-intensive behaviours. From a psychological point of view, the ‘attitude-behaviour’ gap we identified in 2007 appears to have *widened* over the last 14 years, and for some this may cause anxiety, paralysis or frustration in the face of social barriers to change. From a sociological perspective, the structural drivers of consumption (that do not separate individuals from their social contexts) *continue* to lock publics into high-carbon routines despite greater awareness of the issue now.

Reflecting on this comparison over time, we return to questioning how these enduring barriers might be overcome and identifying positive shifts that are underway. Reaching ‘net zero’ targets will not be possible without significant societal transformation, which requires profound lifestyle change and public buy-in for wider changes. Encouragingly, policy institutions are starting to recognise the importance of supporting meaningful public engagement with climate change, including providing

opportunities for deliberation of future options. At different scales and in different contexts, citizens assemblies and juries are providing spaces for publics to give substantive input into decision-making. These ‘formal’ engagement processes – along with ‘informal’ types of engagement such as community action, lobbying and protesting, and consumer decisions – are helping provide a mandate for policy-makers to take bolder and fairer climate action, and signalling to industry a growing demand for climate-friendly products. Regulatory, economic, and informational policies are still required, however, to close the stubborn gap between public awareness and concern about climate change, and high-carbon practices and behaviours.

Uncertainty remains in understanding which of the elements hindering public engagement with climate change may be unique to the UK (or to the developed Western) context, and which may be universal. Although there is a paucity in research examining public engagement in developing countries, available evidence suggests the complex interaction of personal, structural and institutional barriers exists no matter in which context studies have originated (e.g. Bollettino et al., 2020). Understanding barriers to engagement with climate change in cross-cultural contexts could also help in the design of innovative and culturally-grounded climate change interventions. For example, highlighting social norms and social responsibility can strongly motivate people from collectivist cultures to engage in more sustainable actions (Aruta, 2021).

Looking forward, more work is needed to identify and operationalise drivers of public engagement and behaviour change across a range of contexts – drivers that capture the multiple and interacting roles, identities and values we each have in our lives (as consumers, citizens, parents, professionals, and so on) as well as the infrastructures and incentives that shape behaviour. This might include communicating the multiple co-benefits of climate action for other policy and societal goals (including the Sustainable Development Goals), such as improved health, wellbeing, equality, environmental resilience, and economic recovery, in order to resonate with public values. Addressing climate change in this more holistic way would also align with how publics conceptualise climate change, as part of a broader set of environmental and social problems (Lorenzoni et al., 2007). Other research needs include identifying when to intervene (e.g., during times of disruption) as well as how to effectively combine infrastructural, economic, educational, social and other measures to maximise behavioural change. More work is also needed to explore how leaders, champions, messengers and media can help reshape social norms towards more sustainable futures. And how younger generations – who as future adults will face the consequences of climate change – understand climate change, deal with climate anxiety and participate in societal transformation. As connectivity across the globe strengthens and diversifies, attention needs to be devoted to understanding and supporting intersections with local traditions and intergenerational values.

As the scientific evidence of the climate crisis grows even stronger, people worldwide are demanding that their voices are heard and translated into committed decision-making to tackle it. Research on public engagement with climate change shows the structural impediments to behavioural and social change endure, but that formal and informal spaces for engagement are opening up and helping provide an impetus for societal transformation. The focus now for researchers should be on testing novel interventions to mobilise society and reshape lifestyles, and for policy-makers to work with publics to apply such interventions in fair and effective ways to tackle climate change while also addressing wider social goals.

## References

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