

Changing our ways?

Behaviour change and the climate crisis

Key findings from the Cambridge Sustainability Commission
on Scaling Behaviour Change





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Can we change the way we live to address the climate crisis?

It is increasingly clear that alongside shifts in policy, service provision and technological innovation, far-reaching changes in lifestyles are also required if we are to avoid dangerous levels of global heating. After a long period of neglect, sustainable behaviour change is now rising up the climate policy agenda. The most recent IPCC and UNEP Emissions Gap reports have begun to devote more attention to the role of behaviour change in reaching ambitious climate goals, and governments increasingly view it as a necessary element of their climate change strategies.¹

Scaling and maintaining sustainable behaviour change at the level and speed now required, however, presents a different order of challenge for those seeking to advance climate action. Views are divided on the significance of behaviour change relative to other drivers of emissions trajectories, and on how best to apportion responsibility for emissions when agency to address them is so unevenly distributed. On the one hand, there are those who see it as a key site of change, both in terms of direct and indirect effects on emissions from households' consumer choices where according to some estimates, households are responsible for 72% of global greenhouse gas emissions as a result of their consumption behaviour.² But the significance of behaviour change is broader in terms of the license voluntary action by citizens gives to governments and businesses to be more ambitious in their climate policies.

On the other hand, there are real concerns about placing the burden for societal change on individual shoulders, where there is often limited agency to change which can lead to a backlash from citizens rather than positive engagement. Seen another way, behaviours will change whether we like it or not; dramatic behaviour change will be brought about by adapting to the effects of climate change in terms of where we live, what we eat and what forms of energy and transport systems are viable in a warming world. The question is then whether we can manage the shift to more sustainable behaviours in a more proactive way that protects the needs of the poorest members of society.

72%



According to some estimates, households are responsible for 72% of global greenhouse gas emissions as a result of their consumption behaviour.²

These were some of the issues addressed by the *Cambridge Sustainability Commission on Scaling Behaviour Change*, an expert panel of 31 individual experts from a variety of disciplines, and a network of practitioners, involved in sustainable behaviour change. This briefing summarises key findings from the report of the Commission³ based on an analysis of existing literature, historical experience and insights from practitioners of social and behaviour change. Rather than promoting one theory of change, it proposes an *ecosystem of transformation* that bridges structural and more 'top-down' approaches to enabling change with more 'bottom-up' and citizen-led initiatives that seek to disrupt business-as-usual by delivering social and cultural change in values, behaviours and politics.

¹UNEP (2020) Emissions Gap report. Nairobi: UNEP. IPCC (2018). Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.*

²Hertwich, E.G. and G. Peters (2009). 'Carbon Footprint of Nations: A Global, Trade-Linked Analysis' *Environmental Science & Technology* 43 (16): 6414-6420.

³Newell, P., F. Daley and M. Twena (2021). *The Cambridge Sustainability Commission on Scaling Behaviour Change.*

The report shows that confronting the climate crisis means facing up to some uncomfortable truths. The first is that the lifestyles of the world's richest citizens are unsustainable and their carbon emissions need to fall dramatically. Recent studies have highlighted the disproportionate responsibility of the world's richest people for driving climate change.

Over the period 1990–2015, nearly half of the total growth in absolute emissions was due to the richest 10%, with the wealthiest 5% alone contributing over a third (37%).⁴ The goals of the Paris Agreement on climate change cannot be achieved without radical changes to lifestyles and shifts in behaviour amongst the world's richer citizens.

This means we need to nuance the debate about individual responsibility because it is a responsibility that is not evenly shared within or between societies. It is also not just about individuals. In contrast to the focus of most discussions about individual and household behaviour, this is about the *collective behaviours* of business, cities and government. It is about re-thinking the fair provision of mobility, housing, energy and food: meeting key needs in ways that lock-in lower carbon pathways while simultaneously enhancing social inclusion. Effective action needs to combine individual and

system change in mutually reinforcing ways that ratchet up ambition. Social mobilisation is key to this.

But are such changes possible? The world is currently living through an unintended and unplanned live experiment in collective behaviour change in the face of a global pandemic. Patterns of work and travel have been forced to change, food systems have had to adapt and whole economic sectors restructured. The state has been stirred into interventions which are unprecedented in peacetime, mobilising resources to secure livelihoods and whole industries. The extent to which this experience sheds light on our ability to tackle the climate crisis is contested - as is the relevance of previous historical examples of rapid behaviour change.⁵ But it does expose some of the opportunities and limits of orchestration, persuasion and enforcement that run through debates on behaviour change, affording the opportunity to observe in real time whether and how mass behaviours can be rapidly transformed, and at what cost.

Despite a growing academic literature on behaviour change in disciplines as diverse as economics, sociology, psychology, science and technology studies and politics, there has been less attention to the question of *scalability* that we focus on here: key points of leverage and traction that bring about shifts of the scale (as well as speed) now required to tackle the climate emergency.



Photo credit: Edrece Stansberry, 2020.

⁴ Kartha, S., Kemp-Benedict, E., Ghosh, E., Nazareth, A. and Gore, T. (2020). *The Carbon Inequality Era: An assessment of the global distribution of consumption emissions among individuals from 1990 to 2015 and beyond*. Joint Research Report. Stockholm Environment Institute and Oxfam International.
⁵ Simms, A. (2019). *Climate and Rapid Behaviour Change: What do we know so far?* Rapid Transition Alliance.

Key findings from the report:

1. Individual and system change go hand in hand

It is clear we need both individual *and* system change: the key challenge is to ensure that they reinforce one another. By thinking more holistically about 'behaviour', we can move the debate beyond the dominant focus on individual and household decisions. There are many unspoken assumptions about what 'behaviour' is, often reduced to small-scale consumer actions. But personal action can also be linked to other forms of collective action, social and political influence, and engagement with the wider world. This shift in approach allows for a more empowering view of personal agency that is better equipped to drive social and economic change.⁶

However, in order to achieve the required scale and depth of change, we need to intervene at all points within an *ecosystem of transformation* that extends from rewiring the economy, to changes in work, income and infrastructure, as well as shifting patterns of supply and demand, through to protecting and expanding spaces of social and citizen innovation.

2. One planet living: towards 'strong' sustainability

Parameters need to be set to enable society to live within key ecological thresholds, which will require a shift in thinking from *efficient* production and consumption to embracing ideas of *sufficiency*.⁷ Issues of rationing, allowances and quotas increasingly arise when discussing the need to scale behaviour change in line with 1.5 degree trajectories to achieve the goals of the Paris Agreement.⁸ Active citizen engagement about these limits and how they can be fairly enforced is key to their acceptance. Public engagement also needs to be driven by anticipated gains in wellbeing⁹ from a shorter working week, avoiding unnecessary travel, and adopting healthier diets, for example.

This means addressing the sources of over-consumption by revisiting deep-seated ideas about growth and taking a more integrated approach to wellbeing. But it also requires a more sophisticated understanding of the social and cultural drivers of over-consumption: addressing advertising and the media's role in the normalisation and reification of high consumption behaviours. To do this, 'choice editing' needs to take place whereby governments, businesses and those with direct control over production restrict the availability of high carbon products and services. Undoing unsustainable behaviours is a whole lot harder than preventing unsustainable products from coming to market in the first place.

⁶ Capstick, S., Lorenzoni, I., Corner, A., & Whitmarsh, L. (2015). 'Prospects for radical emissions reduction through behavior and lifestyle change'. *Carbon management*, 5(4), 429-445.

⁷ Princen, T. (2005). *The Logic of Sufficiency*, Cambridge: MIT Press; Princen, T., M. Maniates, and K. Conca (2002) (eds) *Confronting Consumption* Cambridge MA: MIT Press.

⁸ Akenji, L., Lettenmeier, M., Koide, R., Toivio, V., & Amellina, A. (2019). *1.5-Degree Lifestyles: Targets and options for reducing lifestyle carbon footprints*. Retrieved from <https://pub.iges.or.jp/pub/15-degrees-lifestyles-2019>

⁹ Jackson, T. (2011). *Prosperity without Growth: Economics for a Finite Planet*, London: Earthscan.

3. Just transitions

To be effective and socially accepted, shifts in behaviour need to address social and economic justice and, at the very least, not further entrench existing inequalities. Placing economic justice at the heart of efforts to scale behaviour change has the advantage of reducing the inequality between the so-called *polluter elite*¹⁰ and the poorest groups in society who lack access to affordable energy, housing, transport and food. There are important racial, class and gender dimensions to access and responsibility, which all interventions need to explicitly address.¹¹ This will be a prerequisite to broadening the conversation about behaviour change beyond silos of privilege and spheres of voluntarism among those already committed to environmental action.

Infrastructures, income, location and social status have a huge bearing on peoples' ability to modify behaviours around transport, energy, housing and food. Key intervention points lie in creating enabling environments that facilitate, incentivise and lock-in more sustainable behaviours among broad sections of society. Examples include low-cost electric vehicle bus provision and properly insulated homes to address energy poverty and reduce emissions. In a global context, 'lifestyle leapfrogging'¹² can support the adoption of more sustainable pathways, avoiding unsustainable lock-in in the first place. From affordable public transport to green tariffs for renewable energy, enormous power resides in governments, corporations and cities to chart new pathways, communicate clearly the need for change and hold themselves accountable for delivering it.



¹⁰ Kenner, D. (2019). *Carbon Inequality: The Role of the Richest in Climate Change* Abingdon: Routledge.

¹¹ T.G. Reames, T.G (2016). 'Targeting energy justice: exploring spatial, racial/ethnic and socioeconomic disparities in urban residential heating energy efficiency', *Energy Policy* 97: 549–558; Patnaik, S., S. Jha (2020). 'Caste, class and gender in determining access to energy: a critical review of LPG adoption in India', *Energy Research and Social Science*. 67; Newell, P. (2021). 'Race and the politics of energy transitions' *Energy Research & Social Science* 71

¹² Schroeder, P., & Anantharaman, M. (2017). "Lifestyle Leapfrogging" in Emerging Economies: Enabling Systemic Shifts to Sustainable Consumption. *Journal of Consumer Policy*, 40(1), 3–23.



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4. Governing change: enabling a power shift

Scaling behaviour change in line with the goals of the Paris Agreement will not come about without shifts in power. Transformational change will only be possible if incumbent power is rolled back, new political spaces are created, and representation is enhanced for those most vulnerable to the effects of climate change who have the greatest stake in effectively tackling the issue. This requires important innovations in governance to deepen participation and representation, and ensure broad social ownership of transition processes, such as citizens' assemblies, to foster dialogue and engagement about the complex trade-offs involved in getting to a zero-carbon economy. The recent report of the UK Climate Assembly, for example, proposed a series of progressive measures targeting carbon-intensive behaviours, such as frequent flyer taxes, support for dietary shifts and bans on SUVs.¹³ But it also requires moves to take money out of politics through controls on party donations and directorships, as well as closing the revolving doors that operate between politicians and corporations, so that democracies are fit for purpose in tackling the climate crisis.¹⁴

Change will of course be achieved in different ways in different places. There is no one theory of change - or behaviour change - that applies to all

settings. The capacity and view of the appropriate role of government, the market and civil society varies hugely around the world. This should make us wary of blanket and universal policy prescriptions for behaviour change. There are also important differences by sector. People have more control over dietary choices, for example, than how they get to work or how their homes are heated and cooled. Yet even with food, there are also deep cultural, identity-based and religious sensitivities at play that need to be engaged with.

It is clear, nevertheless, that social mobilisation is crucial to pressuring governments and businesses to show leadership and accountability for major decisions that lock-in carbon-intensive behaviours. Examples include the divestment movement and community energy programmes, as well as pressure for pedestrianisation and car-free cities, and against airport expansion. Many alternative economies have been built from the bottom-up through proactive design, as well as reactively in the context of crisis, as we have seen with in response to the Covid-19 pandemic. Harnessing this social innovation and mobilisation towards the goal of scaling behaviour change is vital to the success of collective efforts.

¹³ Citizen Assembly UK. (2020). *The Path to Net Zero: Climate Assembly UK Full Report*. Retrieved from <https://www.climateassembly.uk/report/>

¹⁴ Newell, P. and A. Martin (2020). *The role of the state in the politics of disruption & acceleration* London: Climate KIC.

5. Transforming society by 'deep' scaling change

Dominant approaches to scaling behaviour change emphasise numbers of people adopting behaviours in a generic and socially un-differentiated way. This serves to de-contextualise the nature of change and obscures where the predominant responsibility and agency for action lies, as well as overlooks important contextual differences in what works and where. Such approaches often emphasise size, reach and roll-out, and often fall into the scalar trap: the misconception that what works in one place will necessarily work elsewhere, or that small changes can be automatically and unproblematically scaled. What is to be scaled, how and by whom are vital yet neglected questions that need to be a central part of strategies going forward.

Many approaches imply *shallow scaling*: mainstreaming without disrupting key trends around consumption and production, work and growth or what have been called 'plug and play' approaches where new technology is added to the mix but the provision of the service and levels of demand stay the same.¹⁵

Deeper scaling needs to be transformative: from the individual to the systemic level. Because 'shallow' and 'deep' scaling will, in practice, operate concurrently within and across societies over time, *spiral* scaling seeks to enhance the feedbacks between the two: moving from a linear understanding of scaling, towards multiple transformations across diverse contexts in an upward-moving, 'spiral of sustainability'. This involves value shifts and culturing transformation, as well as concerted efforts to 'scale back' existing, unsustainable ways of doing things and incumbent control over systems, infrastructures, finance and production. This is crucial to addressing the root causes of over-consumption. There is a huge amount of work to do in nurturing values and culturing practices of care and community, whereby human needs can be met in sustainable and less materialistic ways, guided by attempts to imagine alternative pathways that reposition today's economy as abnormal, impermanent and unsustainable.¹⁶



Photo Credit: 4 Day Week Campaign, London, UK.

¹⁵ Ibid.

¹⁶ Hopkins, R. (2019). *From What Is to What If: Unleashing the Power of Imagination to Create the Future We Want*. Chelsea Green Publishing.

6. Focusing on behaviour change ‘hotspots’

In the context of climate change, immediate challenges for behaviour change are reducing the lifestyle emissions of the polluter elite and concentrating on the consumption hotspots of aviation, food and housing. The carbon emissions of the average European diet are around 1,070kg CO₂ equivalent per year,¹⁷ but the consumption of meat, eggs and dairy make up 83% of those GHG emissions,¹⁸ indicating the vast scope for more sustainable food practices.

For aviation,¹⁹ recent research estimates that between 2% and 4% of the global population flew internationally in 2018, while just 1% of the world’s population was responsible for 50% of CO₂ from commercial aviation. It is clear that for gains to be protected and scale to be achieved, enabling environments need to support change in a way that recognises the uneven agency people have to meet their basic needs.

7. Amplifying change

Connecting these intervention points through cycles of reciprocity is vital, whereby leadership by individuals, communities and cities is matched by government leadership that opens up space for further bottom-up experimentation. A variety of actors can help to amplify and accelerate the process of change. There is significant scope, for example, to reach out to new allies and those that wield disproportionate influence over everyday consumption choices, especially in wealthier societies. So called ‘intermediary organisations’ such as estate agents and car dealers have a key role to play as shapers of key consumption decisions. Initiatives which seek to work with these groups could have a big impact, but need to challenge the incentive structures within which some intermediaries operate. More broadly schools, community and religious organisations²⁰ and workplaces are also potential sites for accelerating and diffusing positive lifestyle change.

Funders and philanthropists have an important role to play as innovative ‘scalars’ of sustainable behaviour change: namely, as: (1) *incubators* of ideas, inspiration and experimentation; (2) as *connectors* between actors, institutions and arenas (uniting those pursuing similar goals, inside and outside the philanthropic and sustainability communities); and (3) as *mobilisers* of change

- providing flexible, rapid-response funding to facilitate the development and roll-out of innovations and practices into *new spaces* when events present windows of opportunity for rapid behaviour change to take hold.



¹⁷ Sandström, V., Valin, H., Krisztin, T., Havlík, P., Herrero, M., & Kastner, T. (2018). 'The role of trade in the greenhouse gas footprints of EU diets'. *Global Food Security*, 19, 48-55. <https://doi.org/10.1016/j.gfs.2018.08.007>

¹⁸ Ritchie, H. (2020). "Environmental impacts of food production". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/environmental-impacts-of-food' [Online Resource].

¹⁹ Gössling, S., A. Humpe. (2020). 'The global scale, distribution and growth of aviation: Implications for climate change'. *Global Environmental Change*, (65).

²⁰ Sovacool, B., Turnheim, B., Martiskainen, M., Brown, D., & Kivimaa, P. (2020). 'Guides or gatekeepers? Incumbent-oriented transition intermediaries in a low-carbon era'. *Energy Research & Social Science*, 66, 101490. <https://doi.org/10.1016/j.erss.2020.101490>

Key findings from the report

The debate on behaviour change needs to move on. We need an account of the role of behaviour change that is more political and social, that brings questions of power and social justice to the fore in order to appreciate how questions of responsibility and agency are unevenly distributed within and between societies. This leads to a more holistic understanding of behaviour, as just one node within an ecosystem of transformation that bridges the individual and systemic.

Rather than generalizing accounts of the need for behaviour change by all individuals, we have emphasised the role of behaviour change among businesses, cities and states, and of particular influential and high-consuming social groups within societies. We have highlighted key 'hotspots' of behaviour in the realms of travel, diet and housing that need to be given priority. We have also emphasised questions of governance, social mobilisation and the processes of collective steering necessary to facilitate large scale change across a diversity of actors, sectors and regions, in place of the dominant emphasis on individuals and households.

While there is a tendency to talk in terms of 'nudges' and 'tools' for behaviour change,²¹ the challenge is more profound and deeply political. There needs to be a shift of power away from those actors and interests that control the unsustainable economy we have, the institutions that govern it - in which citizens are often poorly represented - and the societies and cultures built around the wasteful use of resources, which leave us on course for climate chaos.

Only when all these behaviours have changed can we say we have been successful. The goals of the Paris Agreement on climate change cannot be achieved without radical changes to lifestyles and shifts in behaviour, especially among the wealthiest members of society, and on the part not just of individuals, but all actors in society.



Further reading

Newell, P., F. Daley and M. Twena (2021).

The Cambridge Sustainability Commission on Scaling Behaviour Change.

²¹ Thaler, R. H., & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness.* Penguin.

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