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# "It feels like a parallel universe." Worldbuilding through climate action

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## ABSTRACT

This study set out to explore the everyday experiences of people engaged in climate action. We focus not on one specific self-defined and bounded social movement, but on individuals engaging in different forms of climate action from protest and direct action to art and social media activism. Data were drawn from focus groups and interviews with 26 UK-based climate actors to explore motivations, experiences, emotions, conflicts and successes. Participants included scientists, artists, civil servants, community organisers, media, school students and teachers. Different ways of doing and experiencing climate action were found. Drawing on literature from science fiction and game studies, we argue that these different approaches to climate action can be conceptualised as worldbuilding. Climate action as worldbuilding consists of three key features: intentionality, separation and creating new norms. We conclude that worldbuilding is an inclusive conceptualisation as it makes space for different approaches to climate action, and allows for tensions within and between climate action movements to be viewed as a resource for learning, imagining and bringing into being preferred futures together. The study demonstrates how social movement research in the context of game design can contribute to the theorisation of activism through the production of a cultural artefact.

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## Introduction

The climate emergency requires human societies to rapidly reduce greenhouse gas emissions to secure a planet viable for human habitation. Evidence suggests that the planetary boundary for climate change has been transgressed, meaning that large, irreversible changes are becoming unavoidable (Stockholm Resilience Centre, [n.d.](#); Richardson et al., [2023](#)). Diverse tactics have been used to mobilise the public to put pressure on governments, industry and the broader systems and structures which

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incentivise the production and use of fossil fuels (de Moor et al., 2021; Delina, 2022). Whilst mass social movements have catalysed action in some regions, and ‘rising public awareness and an increasing diversity of actors, have overall helped accelerate political commitment and global efforts to address climate change’ (IPCC, 2023, p. 52), activism is a contested term (Peterson et al., 2020). Media portrayals of climate activism often delegitimize action (Neas et al., 2022), for example through paternalistic language in the case of youth protests (Bergmann & Ossewaarde, 2020) representing girls as hopeful and heroic yet harmless (Taft, 2020) and framing goals of activism in narrow dehistoricised ways that ignore colonialism and environmental racism (Bowman, 2020). This paper stems from our motivation to understand diverse forms of climate action and the experiences of climate actors in making more desirable worlds a reality. Drawing on empirical data, we argue activism can be conceptualised as worldbuilding to recognise the diverse choices that can be made now about future physical, social and political realities. Worldbuilding is used in two ways. Firstly, to conceptualise climate action as revealed through focus groups and interviews with climate actors from different movements participating in or coordinating climate action. Secondly, it describes the production of an online game world where players decide which climate actions to take, informed by research with climate actors.

Games are emerging as an important method of exploring climate action (Gerber et al., 2021; Germaine & Wake, 2024). CLIMANIA, for example, links climate change, action and the built environment (Shtebunaev & Carter, 2022) and in Daybreak (Leacock & Menapace, 2024), players collaborate to stop climate change. This article reports on a discrete piece of research at the outset of the design of a live action narrative game where players collectively decide the outcome of the story by interacting with the characters in a climate action collective (Megaverse, 2023). The game’s aim was to engage audiences with climate change and climate action. The purpose of the research was to inform the characters, plot and game world, and was therefore conducted at the start of the game design process. The benefit of this approach was that it enabled the game producers to more authentically represent experiences of climate actors, and concomitantly, represent social movement research to a wider, non-academic audience and engage this audience in conversations about climate activism. Research informed game design also enabled designers to highlight issues of concern to climate actors such as the role of the fossil fuel industry, inequitable impacts of climate change, and the different ways in which people can take climate action.

## **Worldbuilding and the motivation for the research**

Worldbuilding is a key concept in speculative fiction (Zaidi, 2019), game studies (Zagal & Deterding, 2018) and design (Hoffman, 2022). It has been described as an approach which provides a nuanced space for exploring the possible consequences of change (Hoffman, 2022) and as a way of imagining projected futures. It features the creation of imaginary worlds with their own geographical, social and cultural features (von Stackelberg & McDowell, 2015) such as laws, taboos, languages and religions. In literature, for example, China Mieville’s *Un Lun Dun* features an alternative London with different geographies, lifeforms, laws and norms which raises questions about agency and environmental action. Worldbuilding can connect real-world problems with varying

narratives to speculate on alternate realities and futures (Cechanowicz et al., 2016). In social and political studies, worldbuilding has been used to describe a practice arising among activists (Bowman & Pickard, 2021). It has been associated with Hannah Arendt's (1958) concept of the world as a space for human togetherness (Singh, 2020) and the idea that action has the potential to interrupt the status quo, and from which something new, boundless, uncontrollable and unpredictable can occur (Gardiner & Fulfer, 2021).

Recognising that everyday life has a role to play in producing activist spaces (Ophélie, 2016), research on climate activism needs to both include and go beyond those involved in specific movements to consider contributions from people who take action in different ways – through protest, community organising, art, storytelling, and scientific research. In this study, we use a phenomenological approach to explore climate action, understand different ways of enacting and experiencing climate action, and to develop the concept of worldbuilding to interpret these experiences.

### **Climate activism and communication**

Activism can be considered collective action directed toward or against a ruling regime (Weiss & Aspinall, 2012) or behaviour performed with political intent (Hart & Gullan, 2010). It can be described as extra-parliamentary participation and can be individual (e.g. signing petitions, political consumption) or collective (e.g. participation in movements, festivals, demonstrations) (Ekman & Aman, 2012). Referring specifically to youth activism, Walker (2017) describes activism as including 'actions less overtly targeted at political change, but which nevertheless aim for positive change, as a phenomenological – or lived – form of activism motivated by relationships of concern and materialised through emotions and practices in private as well as public spaces' (Walker, 2017, p. 17). This can be considered action in what Capstick and Whitmarch (2022) describe as 'the vast territory in between' (p. 328) the individual and the systemic. Relatedly, Mansbridge (2022) describes everyday activism as action in everyday life which may or may not be coordinated with others but is to some extent caused, inspired or encouraged by a social movement and deliberately intended to change people's ideas and/or behaviour in aligned ways (Mansbridge, 2022). Nevertheless, the 'activism' label is often rejected by those who might be perceived by others as activists. Perfect standards or expectations to 'live the issue' means that the characterisation as 'activist' can feel out of reach (Bobel, 2007; McCalman, 2023). Furthermore, in the context of climate change 'activism' suggests the possibility of inaction on climate change. However, action or inaction has consequences for all: maintaining the status quo of high-consumption lifestyles and the systems and structures that support them can be described as action for a world with an average temperature >1.5°C above pre-industrial temperatures. For these reasons, we refer to participants as 'climate actors' to include those who identified as activists as well as those who did not. In common with McCalman (2023), we have taken an inclusive approach to understanding experiences of climate action, including a broad spectrum of climate actors from those who are involved in 'practical stewardship' – 'emphasising the practical, do-able things within reach as individuals embedded in an environmentally exploitative society' (McCalman, 2023, p. 544) – to those who identify as activists and who are involved in, or who coordinate, organisations and movements.

Challenges for climate actors include how best to communicate climate change such that it brings about large-scale changes needed to tackle the crisis, and how to confront negative narratives of climate activism. Whilst de Moor et al. (2021) have argued that movements such as Fridays for Future (FFF) and Extinction Rebellion have used more politically 'neutral' framings of climate change, directing action more at state actors with calls to 'listen to the science', mobilising large numbers of people (de Moor et al., 2021), these movements also call for climate justice and equity (FFF, 2019). Within movements, disagreements over tactics have been identified, for example tensions amongst Fridays For Future protesters between those calling for system change and those calling for system development, and the direction of change (top-down or bottom-up) (Svensson & Wahlström, 2023). These disagreements however point to more fundamental tensions between mainstream 'default white' environmentalism and activism focused on environmental justice, often by racialised and Indigenous actors (Curnow & Helferty, 2018). In this study, we were interested in finding out the motivations and experiences of climate actors in order to identify commonalities between and tensions within movements and to work towards a more open conceptualisation of activism. The study had a practical purpose: to inform the production of 'GAME CHANGERS', a live interactive online game in order to generate conversations and encourage discussions about climate change and climate action.

Games can engage the emotions and offer experiences and decision-making in simulated situations, building capacity to envision consequences over time (Wu & Lee, 2015). To date, the majority of climate change games have been designed for learning (Gerber et al., 2021) and focus on conveying knowledge (Eisenack & Reckien, 2013). However, a well-established knowledge – action gap exists in relation to climate change (Knutti, 2019). Changes in feelings rather than knowledge are associated with gains in players' intention to act on climate change (Rooney-Varga et al., 2018). Whilst few games draw on climate fiction ('cli-fi') to examine human-nature relationships (Abraham & Jayemanne, 2017), there is potential value in games which activate emotions, involve collaboration, and feature 'realistically optimistic' visions of the future, the use of game mechanics and content to build a 'storytelling empathy machine' and the use of real-world data for in-game narratives (Mensah-Bonsu et al., 2023). The aim of the present study was to inform the design of a game by understanding how and why different climate actors participated in climate action, and their experiences of climate action. The guiding question is: how do different climate actors experience climate action?

## Methods

### *Participants*

A purposive approach was used to identify research participants. Rather than focus on a specific environmental group or movement, we issued an open call through professional and social media networks for people involved in climate action – deliberately chosen to include those who might not identify as a 'climate activist'. A total of 26 individuals consented to participate, all over 16 years old and located in the UK. Participants were involved in movements such as Extinction Rebellion and related

groups, Teach the Future, and other community organising networks, grassroots direct action groups, and in taking other forms of action. Climate actors included scientists, artists, social media activists, journalists, teachers and school students. We provide limited information about participants as details may be identifying given the profile and nature of their activism. Participants were self-selected so generalizability is likely to be limited.

### **Research design**

An exploratory qualitative design was used to understand climate actors' experiences. In common with McCalman (2023), an inclusive definition of climate action and activism was used, focusing on process rather than identity: a distinction between 'doing activism' and 'being activist' (Bobel, 2007). An interpretive phenomenological analysis approach was used to understand how climate actors make sense of, and meaning from, their experiences (Emery & Anderman, 2020). This research design centres on the lived experiences of participants and involves a close analytic reading of similarities and differences across accounts (Nizza et al., 2021). Through this phenomenological approach, it is possible to find the 'essence' of a phenomenon grounded in lived space, time, body and human relations (Larsson & Holmström, 2007). In terms of our own positionality, as a team, we were interested in understanding collective action and the tensions that exist within social movements and representing the opportunities and tensions that arise from collective action through the production of GAME CHANGERS.

### **Procedures**

Ethical approval was obtained from Author 1's institutional ethics committee. Voluntary informed consent was obtained from all participants, on the condition that participants, and some organisations, would not be identifiable. We asked participants to avoid describing any illegal action which might require such disclosures to be reported to relevant authorities. No such activities were disclosed. This represents a limitation of the research, but as this study is a phenomenological study, our aim is to illuminate the lived experiences of climate actors rather than claim generalisability (Frechette et al., 2020). Data was collected online on the Zoom platform to allow us to reach and bring together climate actors working in different localities in the UK.

Whilst in-depth interviews are often used in phenomenological studies, we wanted to create space to share experience, explore disagreement, and for community building. Therefore, we offered a choice of participation in a focus group or interview, accepting that having more participants present at the same time might sacrifice depth of response. We reduced the impact by integrating use of the Zoom chat function. For example, we asked people to initially respond in writing to a question, and the responses were then discussed as a group, so that individual and collective experiences were explored. A total of 20 climate actors participated in four focus groups (with up to six people in each) and 6 in interviews. The same questions were used in interviews and focus groups. We offered the opportunity to follow up with further comments. Three responses were received in this way. Focus

groups and interviews were held between December 2022 and January 2023, the design phase of game production. Each lasted approximately an hour each and were recorded, transcribed and anonymised. It was not possible to record one of the focus groups, and in this instance notes were kept instead. Quotes are attributed to pseudonymised individuals. We did not request or hold any demographic data on participants and any such details are mentioned only where relevant (e.g. in the case of youth activism).

## **Analysis**

To facilitate collaborative working across different organisations, analysis was conducted in Google Docs and through online and face-to-face discussions. In the analysis phase, we drew on the procedure described by Emery and Anderman (2020). Transcripts were analysed sentence by sentence by Author 1. Notes were made with attention to experiential claims and understandings of climate action. A series of reflective discussions were held between authors 1,2 and 3 to discuss the content of the focus groups and interviews, and to identify key themes, patterns of similarities and distinctions between approaches and experiences. These were shared with authors 4, 5 and 6, who tested the ideas with critical questions.

Further reflection and discussion amongst all authors about the themes identified took place over the course of 1 year. During these discussions, we reflected on what climate actors were trying to achieve, how this relates to research literature, game design and to broader public dialogue on climate change and activism. Authors brought perspectives from different disciplines and practices (social science, creative writing, games research and digital creative experience production) to interpretation. As a result of reflective conversations, we developed the idea of worldbuilding as a conceptual framework for relating and organising the findings. Smith and Osborn (2015) describe IPA as doubly hermeneutic in that ‘participants are trying to make sense of their world, and the researcher is trying to make sense of the participants trying to make sense of their world,’ (p. 53). This work was essentially *triply* hermeneutic in that the game informed by the research was an attempt to make sense of the research which tried to make sense of the participants trying to make sense of their world.

## **Findings**

We identified three ways in which climate actors engaged in worldbuilding: through intentional action, separation of current and desired worlds, and the creation of new norms.

### ***Intentional action***

Intentionality refers to the deliberate aims, purpose or intent of climate actors. Common across all participants was an understanding of climate change and its impacts, and a belief that action can make a difference. First, we discuss climate actors’ motivations, followed by their aims.

Evidence, emotions and alignment with values featured in stated motivations:

We aren't doing nearly enough under the status quo and there is evidence that activism can work to achieve change. *Max*

Fear, grief, sense of responsibility, hope! *Ellie*

Personal and cultural values – eg ensuring everyone (human and nonhuman) have equal opportunities to not only survive but also flourish. *Henry*

Other motivations included a sense of responsibility, care for the world, care for people now and in the future, a desire to tackle injustice related to dominant political systems, coupled with a sense of urgency and efficacy beliefs: the confidence that activism will make a difference and that now is the time to make the biggest difference.

The climate actors had different intentions in relation to climate action and what should be prioritised, where change should come from. For example, Jack speaks about empowering individuals to act, whereas James discussed the importance of community organising against fossil fuel extraction:

For me . . . It's about trying to get people to take action. And we know from psychology that awareness is not enough for that. Information alone, fear, worry, concern alone, is not enough to get people to do things. They need to know what to do and they have to feel that acting would be worthwhile. *Jack*

We tackled the fossil fuel industry, we snipped their nose off . . . I think that was absolutely tackling climate change. And, also it got communities the idea that they could beat stuff that was being imposed upon them. *James*

Ethan, conversely, saw engagement with existing institutional (e.g. financial and COP) processes as vital:

If we are going to make real progress we need to mobilise private sector capital, public sector capital, and that is obviously going to start with obviously responsible governance, but also it is going to come through the private financial sector. *Ethan*

These perspectives demonstrate differences in terms of those who want to work *within* industries and those favouring direct action *against* industries responsible for greenhouse gas emissions.

It was not always easy to take intentional action. Climate action was seen as (unpaid) work, as a sacrifice, and as a learning process. Aiden explained that he was 'still evolving, still learning new things . . . to build something greater.' James described the need for people 'being willing to literally put everything on hold and say this is the thing that we are doing today is to sort this thing out, that is when things change'. At the same time, he felt that there were material differences within activist groups which put extra pressure around unpaid work, calling for actions of solidarity from 'comfortable middle-class people'.

Whilst there was a sense that climate action had, to some extent, been mainstreamed in some countries and companies, there were different levels of scepticism in relation to the extent to which intentions were genuine and how much greenwashing was being used to maintain the status quo.

I have a pretty healthy cynicism about the motivations behind why people in certain countries are making a strong case for certain kinds of action, shall we say. So, getting over that is going to be real tough. *Naren*



To conclude, the varied intentions means that there are a range of ways of positioning climate action that are differently relatable, convincing and inspiring to people who do not consider themselves to be climate actors. These present different potential routes to change. At the same time, the diversity of intention points to a potential source of tension *within* climate action movements in terms of the most effective ways to enact change.

## Separation

Separation refers to a process or result of moving apart and drawing distinctions, here between climate actors and friends, family, peers and colleagues and conventional ways of living and being in the world. This tended to result from the interaction between climate actors' understanding of climate change, action taken and associated responses.

Disconnection and even alienation were common experiences of climate action:

It feels like, almost like a parallel universe that some friends I have are living in, and that feels desperately sad, but ... I find it difficult now to maintain friendships with people who just seemingly don't care ... Yeah. Without compromising my own values.

Similarly, Kate and Ellie described emotionally challenging journeys, feeling as though people did not want to have difficult conversations and disconnection from friends, family and colleagues.

Separation also occurred in working lives. Some participants described 'not fitting in' or not being able to say or do things conflicting with workplace norms and values. For example, Nikolas described news rooms as 'like living in a weird kind of gaslighting cognitive dissonance', referring to the process of being manipulated into questioning the validity of their thoughts or perceptions of the realities of climate change. The antagonistic relationship with workplace values was described as emotionally draining, especially where challenging workplace authority was felt necessary to maintain legitimacy and authenticity:

I really don't want to be working in a role where I'm ... having this antagonistic relationship ... if you're having to follow a code of conduct or you might be fired, then how can you change the system within the system if you're facing these barriers? *Henry*

Separations were also evident in relation to disciplinary norms. Climate actors were here seen to defend their practice and what it can contribute to climate action:

We've had well known artists say, 'You can't possibly work with scientists and do what they tell you.' And then the other way, the fact that policymakers or researchers just quite literally want you to be a communication device which says what they want you to say without looking at what they're doing with the critical lens in relation to representation. *Nora*

Those who engaged in public dialogue about climate change also experienced distancing, for example Jane described a journalist trying to force disagreement between her and an advocate for nuclear power and Jane, when they both wanted to raise objections to fossil fuels. Although there was disagreement about the effectiveness of different forms of climate action, manufactured conflicts were frustrating to climate actors:

The thing with the soup [a Just Stop Oil demonstration that involved throwing soup at van Gogh's *Sunflowers* in the National Gallery, London] was a case in point, right? I mean everybody should know that these artworks are protected by very strong, almost bulletproof glass. You can't damage them. So, why try and say otherwise? They're not damaging a work of art, they knew that. I really resent the sensationalism there." *Jools*

Media and social media discourses were experienced as separations. Ellie and Jane described personal attacks, trolling, and threats and sharing of personal details. James, a teacher, described taunts to 'get a job!' when taking action, suggesting a lack of imagined lifestyles that involve both employment and civic engagement, and the othering of climate actors. Similarly, Ethan observed that during COP, industry representatives described him as 'not one of those annoying activists'. Separation was felt keenly by those who had engaged in action over sustained periods.

Yet separations were resisted, particularly artificial distinctions set up between climate actors and others. Verity noted that such distinctions 'fail to see that activists are actually ordinary people in ordinary communities that actually just want the best for communities.' The false dichotomy between activism and non-activism might contribute to feelings of alienation within social movements.

Separation from friends, family, workplaces and within disciplines and climate movements creates sites of conflict and resistance experienced by climate actors, and of solidarity between actors in climate movements.

### ***Creating new norms***

The final theme relates to the role of climate action in creating new values, habits, expectations and ways of living and being. Climate actors described different ways of creating new norms whilst building solidarity with others.

First, there was a sense that climate impacts need to be made more visible and relatable with connections made with food and energy supply. Luke described the need to imagine the reality of 2050/2070 if we do or do not act. Similarly, Liam described the nature of his work changing:

Looking at this situation of us being very much in between and not really belonging any more to either world but this space has just been created, right ... in 20 or 30 years ... creative practice and probably policy research work will be fundamentally changed by ... tackling global issues.

Visualisation of the future was commonly connected to ideas about relationships between individual and systemic change, and the place for creating new habits which reflect the reality of and responsibility for climate change. New norms were seen to include the mainstreaming of climate action and positive communication about new ways of living, for example describing gains of cleaner air and a healthier commute rather than 'sacrificing' your car for public transport.

Orientation towards learning in uncertain situations was identified as important. Max described navigating difference and diversity of opinions in situations involving many people new to activism, where there might be unanticipated consequences:

There's an understanding that we're necessarily moving very quickly and mistakes are going to be made and no one's quite sure what's going to be right for the best and we talk that through respectfully. *Max*

Similarly, Jane argued that 'we need everyone to be talking about this in different ways in different spaces' and Jools discussed the need for action where there are the biggest levers for change:

The top-down is necessary because as long as we have market economy where essentially the emissions are externalised and not costing the company anything, the companies have absolutely no incentive, apart from a little bit of social responsibility to do something about it ... we need both approaches because the direct action that I take, that really raises the profile, but you also need people working on solutions from the inside *Jools*

Others were troubled by the relationship between individual and systemic change:

As soon as the reality of what a policy change might ultimately end up looking like in individual's lives, it's really uncomfortable ... I sometimes wonder if I'm being honest if I don't reflect the fact in conversation ... that actually on an individual level, our social values have to change ... and assumptions of behaviour have to change. *Kate*

The final theme in relation to creating new social norms involves experiences of building new communities and making a difference. Whilst one climate actor rejected a place for feelings in climate activism, arguing that reason and professionalism are more convincing, others shared feelings about climate action associated with positivity and solidarity: connectedness, creativity, empowerment, exuberance, happiness, hope, inspiration, love, passion, purpose, strength and unity. James said:

We couldn't stop it [fossil fuel extraction] ourselves ... so what we became was community organisers ... we realised it wasn't about us, it wasn't about what we did, it was about our ability to empower other people ... It is when things that you are asking for and the things that you want are the same things that regular people want.

Building allegiance, particularly when place-based action was involved, raised new challenges, for example refusing support from far right groups whilst building broader cross-spectrum opposition to fossil fuel extraction.

With trends to include activists, particularly young people, on boards in business and government, there are new opportunities to engage mainstream organisations with climate action. Aiden, who was newer to activism, favoured using existing mechanisms for engaging with politicians whereas Verity felt conflict between acting authentically and what is seen as acceptable to some organisations:

They go into having young people in their organisations with a predetermined view of what sort of activism they would see as palatable and acceptable ... at times I felt that like my actions were ... sort of seen as problematic to them ... *Verity*

Verity described 'a very controlled and sort of sanitised form of activism which only really fits their criteria and can, in my view, can sometimes be very much performative instead of actually about achieving real change and having meaningful conversations.'

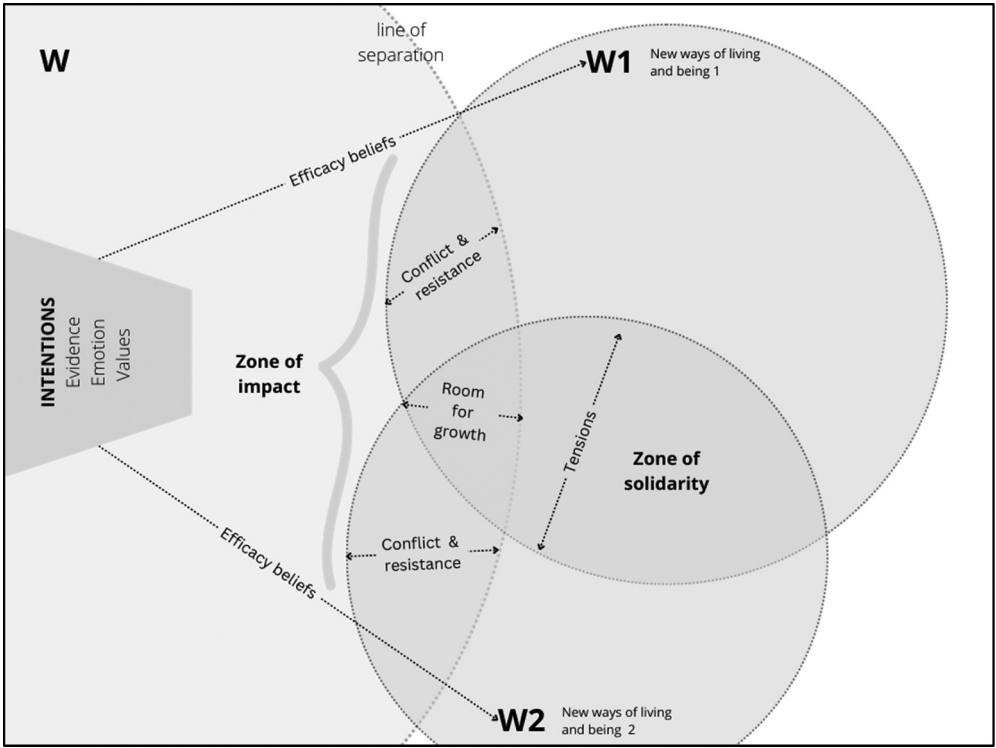
To summarise, participants described the need to create new norms by valuing diversity of opinion and collective problem solving, changing the way people work and live, and presenting changes positively in terms of what is gained, for example in relation to improved health and community.

In the following section, we integrate these findings with social movement and climate change literature to outline a conceptual framework for understanding climate action.

**Discussion: divergent worlds and policy paradoxes**

In this study, we have looked at different ways in which climate actors work to respond to this reality through climate action. We present the experiences of climate actors conceptualised as worldbuilding (Figure 1).

Figure 1 presents different intention pathways resulting from evidence, emotions and values, with belief that action will be effective. These result in a multiplicity of new ways of living and being brought into existence (we show only two), depending on what sort of change is perceived to be needed, the action that follows and how that is received, consistent with the dilemmas identified by Jasper (2004): how to organise, how to grow, how to maintain goals, adapt to changing situations, what strategy to use, and how to communicate.



**Figure 1.** Representing climate action as worldbuilding.

Climate actors can be considered to exist in the space where the current world and their desired worlds intersect: the zone of impact. Here, they can experience conflict and resistance, but also room to build and grow new worlds. There exists a line of separation (experienced as alienation and disconnection) between the world and imagined world. [Figure 1](#) represents intersecting space between two desired worlds of climate actors existing as a zone of solidarity. Here, climate actors experience a sense of unity and shared purpose with others, and also tension in how best to take, talk about and engage others in climate action. The different strategic choices taken in the intersecting zones represent the agency of climate actors where they might share intentions, deal with Jasper's (2004) dilemmas and other separating processes, and create new norms.

This conceptualisation presents climate action as an inclusive process. It identifies sources of tension (and ways to diffuse it and build solidarity) and conflict and resistance (where there is potential for growth of the movement). In common with Singh (2020) we argue that worldbuilding results from the juxtaposition of human activities, from everyday work, life and human relations to direct action. We now interpret these findings by discussing the divergent worlds resulting from climate action and the policy paradoxes that climate action as worldbuilding exposes.

## Divergent worlds

First, we saw divergence in relation to language and labels around climate action. In common with Bobel (2007) we saw some resistance to the 'activist' label. Reasons included the 'perfect standard' feeling out of reach, a desire to distance oneself from ways in which 'activism' has been appropriated by corporations and media organisations, and objections to negative connotations. Some climate actors were focused on everyday practices (both individual and systemic) that they did not consider activism, although others might. Craddock (2019) and Fenney (2017) have argued that 'ideal' forms of activism (such as direct action) are more easily achieved by able-bodied males, and that this can result in guilt about not performing adequately as an activist. Focusing on the identity term 'activist' may lock in certain types of thinking, rather than highlighting one's agency in the world. Bobel (2007) argues against the notion of movement action as mobilised solidarity, instead describing a movement as 'the convergence of individuals in struggle'. We saw evidence of both mobilised solidarity through involvement in campaign, direct action and community organisation groups, but also evidence of climate actors working in much more loose association with others. In climate action movements, this diversity of approaches to worldbuilding is a strength because some actions and movements are more accessible, whilst others might present more aspirational ways of taking climate action. All resonate around the need for climate action.

Secondly, we found ways in which alienation – from other actors, friends, colleagues and society more broadly – occurs. Halstead et al. (2021) discussed psychological distancing as a form of fear control, and climate activism as a way of managing fear and anxiety. Whilst we found some similar expressions of emotions in statements of motivation or intention in common with others (Kleres & Wettergren, 2017), we also found rejections of emotion, and calls to knowledge, evidence, experience in nature and ethics as motivators, indicating that appeals to evidence, values and responsibilities are important in addition to emotional appeals. As climate action becomes more widespread,

it will be important to mitigate feelings of alienation and separation by supporting collaboration through social networks, embracing nuance and disagreement, developing strategies for negotiation and advocacy and reframing the changes needed. Driscoll (2018) recommends looking beyond organisational ties to pinpoint specific mechanisms that produce and sustain commitment to causes.

Finally, we found different orientations towards action, including top-down and bottom-up orientations, and identified tensions between remaining authentic when working for systemic change that will necessarily call into question ways of life in the UK. This is an example of an intra-movement tension which Svensson and Wahlström's (2023) have indicated is likely to surface with the growing urgency of response to the climate crisis. Nevertheless, climate actors shared experiences of addressing tensions, real or fabricated, productively by finding common ground and using deliberative and democratic decision-making within organisations. The conceptualisation of climate action as worldbuilding creates space for diverse types of legitimate climate response, accepting that action happens between people, is directed towards them, and generates relationships which might be met by forgiveness or promises to mitigate the unpredictability of action (Arendt, 1958). In the following section, we contrast this with the broader policy context in relation to some forms of climate action.

### Policy paradoxes

Climate actors described varied experiences of democratic processes, and the importance of diversity of opinion and approach because the future is uncertain and the solutions are not yet known. Discussion and disagreement between climate actors, climate movements and broader society is an expression of healthy democracy. It is therefore ironic that government policy in the UK is shutting down expressions of democratic participation. The CIVICUS Monitor (2023) recently downgraded civic space in the UK and described it as 'obstructed' due to threats to human rights legislation, freedom of association and peaceful assembly and protest. The Public Order Act includes measures to curb environmental protests, with imposition of conditions on peaceful protests and introduction of new police powers, for example, to place conditions on public assemblies and single-person protests – with climate activist groups named as the reason for introduction of the new powers (Home Office, 2023). The United Nations has described the Act as 'deeply troubling legislation that is incompatible with the UK's international human rights obligations' (United Nations [UN], 2023). A recent analysis of policing of protest based on Armed Conflict Location & Event Data Project (ACLED) data reported in Energy Monitor found an increase in police intervention at climate protests in the UK (Bindman & van Halm, 2023). In law courts, climate protests are subject to increased restrictions through rulings preventing climate actors from presenting reasons for protest during trial (Cammiss & Hayes, 2023). This indicates a worrying move to separate climate actors from society, increased conflict and resistance and obstruction of climate action. With a new, recently elected government, it will be interesting to see if the restrictions remain in place. As we pointed out in the introduction, everyone has an impact on climate change, whether deliberate or not. This study has identified the role of intentionality when it comes to taking climate action. Whether convinced by evidence, feeling an emotional impulse or seeking to live in alignment with values, belief that everyone can

make a change and then setting out to make that change can help bring desired futures into existence.

## Conclusions and implications

Climate change catalyses activists to imagine future geographies, societies and cultures, transformed by a hotter planet. We have argued that people engaged in climate action – in multiple ways – are participating in a process of worldbuilding to respond to and minimise new unpleasant realities brought about by a changing climate. Worldbuilding is an inclusive conceptualisation as it makes space for different approaches to climate action and allows for differences within and between climate action movements to be understood and viewed as a resource for learning and more effective action.

Processes involved in worldbuilding include clear articulations of purpose, a process of separation between existing worlds and desired worlds, the creation of new norms, values and attitudes, and active processes of construction interacting between the existing and desired worlds. Climate change demands action, in particular where there are levers for the greatest possible influence. The challenging political context indicates that solidarity across climate actors and movements will be increasingly important.

We conclude by inviting you reflect on, and discuss with others, the following questions, posed by climate actors who participated in this study:

- How do we bring people from a place of powerlessness and hopelessness to a place of empowerment and wanting to do that together?
- What sort of social contract do we need going forward?
- How do we make sure that communities are centred in our response to the climate crisis?
- How do you get the people at the top to make things change?
- How do we reach people who know but who aren't doing anything?

New worlds are already here and in-the-making as a result of climate change and wider environmental crises. Climate action means imagining what a new world could or should look like, and behaving with intention to create new ways of living and being. For that reason, climate activism can be conceived of as a process of worldbuilding that engages the creative imagination.

This study demonstrates how social movement research in the context of game design can contribute to the theorisation of activism through the production of a cultural artefact. The creative process of game design enabled the team to interpret themes arising from the research, explore the meaning in context and devise different ways of representing concepts around activism. Future research might focus on the ways in which games may contribute to action on climate change through play.

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## References

- Abraham, B., & Jayemanne, D. (2017). Where are all the climate change games? Locating digital games' response to climate change. *Transformations*, 30. [http://www.transformationsjournal.org/wp-content/uploads/2017/11/Trans30\\_05\\_abraham\\_jayemanne.pdf](http://www.transformationsjournal.org/wp-content/uploads/2017/11/Trans30_05_abraham_jayemanne.pdf)
- Arendt, H. (1958). *The human condition/Hannah Arendt*. University of Chicago Press.
- Bergmann, Z., & Ossewaarde, R. (2020). Youth climate activists meet environmental governance: Ageist depictions of the FFF movement and Greta Thunberg in German newspaper coverage. *Journal of Multicultural Discourses*, 15(3), 267–290. <https://doi.org/10.1080/17447143.2020.1745211>
- Bindman, & van Halm. (2023). *Exclusive: Police forces across Europe are increasingly cracking down on climate protesters*. <https://www.energymonitor.ai/just-transition/exclusive-police-forces-across-europe-are-increasingly-cracking-down-on-climate-change-protests/?cf-view>
- Bobel, C. (2007). 'I'm not an activist, though I've done a lot of it': Doing activism, being activist and the 'perfect standard' in a contemporary movement. *Social Movement Studies*, 6(2), 147–159. <https://doi.org/10.1080/14742830701497277>
- Bowman, B. (2020). 'They don't quite understand the importance of what we're doing today': The young people's climate strikes as subaltern activism. *Sustainable Earth*, 3(1), 1–13. <https://doi.org/10.1186/s42055-020-00038-x>



- Bowman, B., & Pickard, S. (2021). Peace, protest and precarity: Making conceptual sense of young people's non-violent dissent in a period of intersecting crises. *Journal of Applied Youth Studies*, 4(5), 493–510. <https://doi.org/10.1007/s43151-021-00067-z>
- Cammiss, S., & Hayes, G. (2023). *Environmental activists on trial barred from citing climate crisis in their defence*. <https://theconversation.com/environmental-activists-on-trial-barred-from-citing-climate-crisis-in-their-defence-200018>
- Capstick, C., & Whitmarch, L. (2022). Individual action, social transformation. In G. Thunberg (Ed.), *The climate book* (pp. 328–330). Allen Lane.
- Cechanowicz, L., Cantrell, B., & McDowell, A. (2016). World building and the future of media: A case study-Makoko 2036. *IEEE Technology and Society Magazine*, 35(4), 28–38. <https://doi.org/10.1109/MTS.2016.2618678>
- CIVICUS. (2023). *United Kingdom*. <https://monitor.civicus.org/country/united-kingdom/>
- Craddock, E. (2019). Doing 'enough' of the 'right' thing: The gendered dimension of the 'ideal activist' identity and its negative emotional consequences. *Social Movement Studies*, 18(2), 137–153. <https://doi.org/10.1080/14742837.2018.1555457>
- Curnow, J., & Helferty, A. (2018). Contradictions of solidarity: Whiteness, settler coloniality, and the mainstream environmental movement. *Environment and Society*, 9(1), 145–163. <https://doi.org/10.3167/ares.2018.090110>
- Delina, L. L. (2022). Moving people from the balcony to the trenches: Time to adopt "climatage" in climate activism? *Energy Research & Social Science*, 90, 102586. <https://doi.org/10.1016/j.erss.2022.102586>
- de Moor, J., De Vydt, M., Uba, K., & Wahlström, M. (2021). New kids on the block: Taking stock of the recent cycle of climate activism. *Social Movement Studies*, 20(5), 619–625. <https://doi.org/10.1080/14742837.2020.1836617>
- Driscoll, D. (2018). Beyond organizational ties: Foundations of persistent commitment in environmental activism. *Social Movement Studies*, 17(6), 697–715. <https://doi.org/10.1080/14742837.2018.1519412>
- Eisenack, K., & Reckien, D. (2013). Climate change and simulation/gaming. *Simulation & Gaming*, 44(2–3), 245–252. <https://doi.org/10.1177/1046878113490568>
- Ekman, J., & Aman, E. (2012). Political participation and civic engagement: Towards a new typology. *Human Affairs*, 22(3), 283–300. <https://doi.org/10.2478/s13374-012-0024-1>
- Emery, A., & Anderman, L. H. (2020). Using interpretive phenomenological analysis to advance theory and research in educational psychology. *Educational Psychologist*, 55(4), 220–231. <https://doi.org/10.1080/00461520.2020.1787170>
- Fenney, D. (2017). Ableism and disablism in the UK environmental movement. *Environmental Values*, 26(4), 503–522. <https://doi.org/10.3197/096327117X14976900137377>
- Frechette, J., Bitzas, V., Aubry, M., Kilpatrick, K., & Lavoie-Tremblay, M. (2020). Capturing lived experience: Methodological considerations for interpretive phenomenological inquiry. *International Journal of Qualitative Methods*, 19, 1609406920907254. <https://doi.org/10.1177/1609406920907254>
- Gardiner, R. A., & Fulfer, K. (2021). Virus interruptus: An Arendtian exploration of political world building in pandemic times. *Gender, Work, & Organization*, 28(S1), 151–162. <https://doi.org/10.1111/gwao.12510>
- Gerber, A., Ulrich, M., Wäger, F. X., Roca-Puigròs, M., Gonçalves, J. S., & Wäger, P. (2021). Games on climate change: Identifying development potentials through advanced classification and game characteristics mapping. *Sustainability*, 13(4), 1997. <https://doi.org/10.3390/su13041997>
- Germaine, C., & Wake P. (2024). Imagining the future: Game hacking and youth climate action. *Playful Perspectives on the Climate Crisis*, 483. <https://library.oapen.org/bitstream/handle/20.500.12657/86369/1/9789048557219.pdf#page=484>
- Halstead, F., Parsons, L. R., Dunhill, A., & Parsons, K. (2021). A journey of emotions from a young environmental activist. *Area*, 53(4), 708–717. <https://doi.org/10.1111/area.12745>
- Hart, D., & Gullan, R. L. (2010). The sources of adolescent activism: Historical and contemporary findings. In L. R. Sherrod, J. Torney-Purta, & C. A. Flanagan (Eds.), *Handbook of research on*

- civic engagement in youth* (pp. 67–90). John Wiley & Sons, Inc. <https://doi.org/10.1002/9780470767603.ch3>
- Hoffman, J. (2022). Toward civic co-production: Using worldbuilding to go beyond participation in urban planning and enact more equitable cities. *Frontiers in Sustainable Cities*, 4, 4. <https://doi.org/10.3389/frsc.2022.907541>
- Home Office. (2023). *Public order bill: Factsheet*. <https://www.gov.uk/government/publications/public-order-bill-overarching-documents/public-order-bill-factsheet>
- IPCC. (2023). *Climate change 2023: Synthesis report. Contribution of working groups I, II and III to the sixth assessment report of the intergovernmental panel on climate change*. [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf)
- Jasper, J. (2004). A strategic approach to collective action: Looking for agency in social-movement choices. *Mobilization: An International Quarterly*, 9(1), 1–16. <https://doi.org/10.17813/mai.q.9.1.m112677546p63361>
- Kleres, J., & Wettergren, Å. (2017). Fear, hope, anger, and guilt in climate activism. *Social Movement Studies*, 16(5), 507–519. <https://doi.org/10.1080/14742837.2017.1344546>
- Knutti, R. (2019). Closing the knowledge-action gap in climate change. *One Earth*, 1(1), 21–23. <https://doi.org/10.1016/j.oneear.2019.09.001>
- Larsson, J., & Holmström, I. (2007). Phenomenographic or phenomenological analysis: Does it matter? Examples from a study on anaesthesiologists' work. *International Journal of Qualitative Studies on Health and Well-Being*, 2(1), 55–64. <https://doi.org/10.1080/17482620601068105>
- Leacock, M., & Menapace, M. (2024). *Daybreak*. <https://www.daybreakgame.org/>
- Mansbridge, J. (2022). *Everyday activism*. The Wiley-Blackwell Encyclopedia of Social and Political Movements. <https://doi.org/10.1002/9780470674871.wbespm086.pub2>
- McCalman, C. (2023). 'A proper environmentalist wouldn't do that': Discourses of alienation from the environmental periphery. *Social Movement Studies*, 22(4), 530–548. <https://doi.org/10.1080/14742837.2022.2054796>
- Megaverse. (2023). *Game changers*. <https://www.playgamechangers.com/>
- Mensah-Bonsu, D., Psaros, M., Carman, J., & Fiellin, L. E. (2023). *Climate activism and attitudes in videogaming*. Yale Center for Environmental Communication.
- Neas, S., Ward, A., & Bowman, B. (2022). Young people's climate activism: A review of the literature. *Frontiers in Political Science*, 4, 940876. <https://doi.org/10.3389/fpos.2022.940876>
- Nizza, I. E., Farr, J., & Smith, J. A. (2021). Achieving excellence in interpretative phenomenological analysis (IPA): Four markers of high quality. *Qualitative Research in Psychology*, 18(3), 369–386. <https://doi.org/10.1080/14780887.2020.1854404>
- Ophélie, V. (2016). (Extra) ordinary activism: Veganism and the shaping of hemeratomias. *International Journal of Sociology & Social Policy*, 36(11/12), 756–773. <https://doi.org/10.1108/IJSSP-12-2015-0137>
- Peterson, A., Evans, M., Fülöp, M., Kiwan, D., Sim, J. B., & Davies, I. (2020). Youth activism and education across contexts: Towards a framework of critical engagements. *Compare: A Journal of Comparative and International Education*, 52(7), 1088–1106. <https://doi.org/10.1080/03057925.2020.1850237>
- Richardson, K., Steffen, W., Lucht, W., Bendtsen, J., Cornell, S. E., Donges, J. F., Drüke, M., Fetzer, I., Bala, G., von Bloh, W., Feulner, G., Fiedler, S., Gerten, D., Gleeson, T., Hofmann, M., Huiskamp, W., Kummu, M., Mohan, C., Nogués-Bravo, D., & Weber, L. . . Rockström, J. (2023). Earth beyond six of nine planetary boundaries. *Science Advances*, 9(37), eadh2458. <https://doi.org/10.1126/sciadv.adh2458>
- Rooney-Varga, J. N., Stermann, J. D., Fracassi, E., Franck, T., Kapmeier, F., Kurker, V., Jones, A. P., Rath, K., & Johnston, E. (2018). Combining role-play with interactive simulation to motivate informed climate action: Evidence from the world climate simulation. *PLOS ONE*, 13(8), e0202877. <https://doi.org/10.1371/journal.pone.0202877>
- Shtebunaev, S., & Carter, C. (2022). *Are you game for climate action? Lessons for STEAM education from developing the built environment climate literacy board game CLIMANIA through youth-led co-design*. <https://www.open-access.bcu.ac.uk/14282/>

- Singh, A. L. (2020). Arendt in the refugee camp: The political agency of world-building. *Political Geography*, 77, 102149. <https://doi.org/10.1016/j.polgeo.2020.102149>
- Smith, J. A., & Osborn, M. (2015). Interpretive phenomenological analysis. In J. A. Smith (Ed.), *Qualitative Psychology: A Practical Guide to Research Methods* (pp. 25–54). SAGE.
- Stockholm Resilience Centre. (n.d.). *The nine planetary boundaries*. <https://www.stockholmresilience.org/research/planetary-boundaries/the-nine-planetary-boundaries.html>
- Svensson, A., & Wahlström, M. (2023). Climate change or what? Prognostic framing by Fridays for future protesters. *Social Movement Studies*, 22(1), 1–22. <https://doi.org/10.1080/14742837.2021.1988913>
- Taft, J. K. (2020). Hopeful, harmless, and heroic: Figuring the girl activist as global savior. *Girlhood Studies*, 13(2), 1–17. <https://doi.org/10.3167/ghs.2020.130203>
- United Nations. (2023, April 27). *UN human rights chief urges UK to reverse ‘deeply troubling’ public order bill*. <https://www.ohchr.org/en/press-releases/2023/04/un-human-rights-chief-urges-uk-reverse-deeply-troubling-public-order-bill>
- von Stackelberg, P., & McDowell, A. (2015). What in the world? Storyworlds, science fiction, and futures studies. *Journal of Futures Studies*. [https://doi.org/10.6531/JFS.2015.20\(2\).A25](https://doi.org/10.6531/JFS.2015.20(2).A25)
- Walker, C. (2017). Embodying ‘the next generation’: Children’s everyday environmental activism in India and England. *Contemporary Social Science*, 12(1–2), 13–26. <https://doi.org/10.1080/21582041.2017.1325922>
- Weiss, M. L., & Aspinall, E. (2012). *Student activism in Asia: Between protest and powerlessness*. (Meredith L. Weiss and Edward Aspinall, Ed.). University of Minnesota Press.
- Wu, J. S., & Lee, J. J. (2015). Climate change games as tools for education and engagement. *Nature Climate Change*, 5(5), 413–418. <https://doi.org/10.1038/nclimate2566>
- Zagal, J. P., & Deterding, S. (2018). *Role-playing game studies: Transmedia foundations*. Routledge.
- Zaidi, L. (2019). Worldbuilding in science fiction, foresight and design. *Journal of Futures Studies*, 23(4), 15–26. [https://doi.org/10.6531/JFS.201906\\_23\(4\).0003](https://doi.org/10.6531/JFS.201906_23(4).0003)