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Imagining a post-crisis society through generative conversation

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Abstract
Realizing a sustainable and equitable world requires a shared vision of what that world should look like. Given the scale and complexity of the climate crisis, conceptualizing necessary societal transformations can be challenging for individuals, resulting in fatalism and disempowerment. In this work, I look at the ways in which generative conversations that center embodiment may help individuals move through this challenge to reclaim hope and agency around the climate crisis. The goal of this study is to better understand what conceptual and communicative strategies individuals use to imagine transformational change. Using Mental Spaces Theory and conceptual blending, I analyze 11 interviews with climate-concerned adults tasked with imagining a "post-crisis world". Post-crisis world descriptions were assessed for detail and the degree to which their structure diverged from the input space(s). I show that imagined worlds that incorporate diverse embodied experiences are more generative according to these metrics. This work adds a new theoretical approach to our Positive Discourse Analysis toolkit by demonstrating the utility of mental spaces and conceptual blending to critical analysis and the creation of new beneficial narratives.
Keywords: *climate crisis, generative discourse, Positive Discourse Analysis, Mental Spaces, cognitive linguistics*

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Посткризисное общество в генеративном дискурсе

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Аннотация
Для построения устойчивого и справедливого мира необходимо иметь общее видение того, как этот мир должен выглядеть. Учитывая масштаб и сложность климатического кризиса, концептуализация необходимых общественных преобразований может быть сложной задачей для человека и приводить к фатализму и бессилию. В данной работе рассматривается, как генеративный дискурс может помочь преодолеть этот вызов и вернуть надежду и уверенность в борьбе с климатическим кризисом. Цель исследования — определить концептуальные и коммуникативные стратегии, используемые для генерации трансформационных изменений. На основе теории ментальных пространств и концептуального смешения в работе проанализировано 11 интервью с экологическими активистами, которым было предложено представить себе «посткризисный мир». Описания посткризисного мира оценивались на предмет детализации и степени расхождения с исходным пространством. Результаты показали, что в соответствии с этими критериями воображаемый мир, включающий разнообразный опыт, является более генеративным. Данная работа вносит теоретический вклад в существующий инструментарий позитивного дискурс-анализа, демонстрируя полезность ментальных пространств и концептуального смешения для критического анализа и создания новых позитивных нарративов.
Ключевые слова: *климатический кризис, генеративный дискурс, позитивный дискурс-анализ, ментальные пространства, когнитивная лингвистика*

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1. Introduction

As of 2023, we have crossed six of the nine ‘planetary boundaries’ that set the parameters of a safe continued existence on Earth (Richardson et al. 2023). To recover from this overstep and stay within these boundaries would require a fundamental reworking of how we use resources, especially if an equitable distribution of “the good life” is to be realized (O’Neill et al. 2018). In order to meet the challenges of the climate crisis and avoid its most catastrophic effects, transformative coordinated change will have to occur in every sector of society, from how we produce food, to how we power our homes, to how we govern (Beddoe et al. 2009, O’Brien & Sygna 2013), and the available time frame for achieving these changes is quickly diminishing (IPCC 2023). The discipline of ecolinguistics holds that the achievement of such changes is necessarily shaped and bound by the language we use in talking about the climate crisis and in defining our relationship to wider ecological systems (e.g. Couto 2014, Penz & Fill 2022, Steffensen & Fill 2014, Stibbe 2015, Zhou 2022). The growing field of Positive Discourse Analysis then directs us to both critique the discourses that contribute to

perpetuating these crises and identify beneficial alternative narratives (e.g. Ponton 2022, Stibbe 2017).

Through the "crisification" of climate change discourse (Paglia 2018), talk of transformative change has moved from radical activist spaces into the mainstream (O'Brien & Sygna 2013). At first, this discursive shift might appear hopeful — with institutions, governments, and corporations accepting the framing of "crisis" and the urgent transformative change it entails, we may begin seeing change at the scale and speed at which it needs to occur. Instead of increasing hope, however, we see a growing epidemic of eco-anxiety, grief, and hopelessness, especially among children and young adults (Ágoston et al. 2022, Cianconi et al. 2020, Lawrance et al. 2022, Léger-Goodes et al. 2022, Ogunbode et al. 2021, Ojala et al. 2021, Pihkala 2020). As "transformation" shifts from a radical discourse to an institutional one, its definition becomes determined by those in power. Instead of imagining different systems, "transformation" comes to refer to the maintenance of current systems under different, more severe, and more unstable conditions (Anderson 2010, Jeffrey & Dyson 2021). Under this analysis, hopelessness arises not just from an increasing awareness of ecological crises, but also from a decrease in the ability to imagine past those crises to something truly different.

To better understand the relationship between this specialist understanding of "transformation" and everyday folk understanding, I look at how climate-concerned adults reason and talk about the transformational changes that need to take place in order to achieve a "post-crisis" future. Using data from 11 semi-structured interviews, I analyze how participants' descriptions of imagined worlds conform with or diverge from dominant social, political, and economic narratives. Formulated as a research question, this work addresses the following:

What communicative and cognitive strategies do individuals use when imagining new worlds, and how can these imaginings help us to identify and construct new beneficial narratives?

I show that participants tended to organize their descriptions of imagined post-crisis worlds in two ways, which I call *anticipatory* and *prefigurative* strategies in analogy to work on futuring in political geography (Anderson 2010). Using an *anticipatory strategy* resulted in world descriptions structured around one-to-one contrasts between the current world and the new one (e.g. "there will be electric stoves rather than gas stoves"). Using a *prefigurative* strategy resulted in world descriptions embedded in a particular situation. Rather than bouncing between two worlds, as in *anticipatory* descriptions, *prefigurative* descriptions elaborated on the features of one world without repeated reference to another. These prefigurative descriptions tended to be more detailed, more systems-oriented, and more divergent from dominant narratives.

To understand why this is, I use critical variants of mental spaces theory (Fauconnier 1994) and conceptual blending (Fauconnier & Turner 2008). Modelling imagined *worlds* as imagined *mental spaces*, I argue that using embodied experience as the focus of imagining provides access to richer "input spaces", which

can be more creatively reconfigured in the creation of imagined spaces. This work thus suggests that centering embodiment in climate-related conversations should be prioritized at least as much as talking about "the facts" of the crisis. Doing so can increase the ability of individuals to engage in imagining new "stories to live by" (Stibbe 2017) beyond the socio-political conditions in which they find themselves. By doing so, we turn *informative* climate conversations into *generative* ones, allowing knowledge about transformational change to not only be exchanged, but also created.

I begin, somewhat atypically, by introducing my participants and interview procedure in Section 3. To reflect the collaborative meaning-making processes that motivate my methodology, I then incorporate participant responses into my theoretical background (Section 4), which focuses on (i) (not) defining the climate crisis, (ii) re-centering our definitions around individual embodied experience (i.e. semantic *frames*; Fillmore 1976), and (iii) the use of embodied experience in imagining new worlds (i.e. future and hypothetical *mental spaces*; Fauconnier 1994). In my analysis (Section 5), I provide critical mental space analyses of four of my participants' imagined worlds, highlighting the differences between *anticipatory* and *prefigurative* communicative strategies for mental space building and expression. Section 6 concludes.

This work contributes to the critical turn in cognitive linguistics (Hart 2007), first advanced by Critical Metaphor Analysis (Charteris-Black 2004), which calls for cognitive linguistic theories to be applied in better understanding how existing power structures shape both discourse and thought. The work also contributes to a practical and interpersonal turn in ecolinguistics, pointing toward the ways in which ecolinguistic approaches can be used to inform everyday communicative practices by non-experts, in addition to critical textual analysis.

2. Conversational data collection

2.1. Participants

This study reports on 11 recorded climate conversations between the author and climate-concerned adults aged 25–44, where "climate-concerned" refers to a belief that climate change is a real, severe, and immediate threat. All interviews were conducted in English, though English was not the first language of two participants. Five participants self-identified as women, five as men, and one as gender non-conforming. Though 'climate-concerned', none of the participants were practicing radical alternative lifestyles, such as homesteading or squatting, at the time of the interview. These are individuals living within the 'mainstream' as academics, educators, and entrepreneurs, which is to say these individuals are working within the sociopolitical conditions that have thus far prevented meaningful progress in the face of the crisis.

Climate conversations were conducted as semi-structured interviews lasting between 25 and 72 minutes, resulting in just over 8 hours of recordings. Interviews

were conducted via zoom and audio recorded using the computers' internal recording software. Recordings were then transcribed using Microsoft's dictation feature, the output of which was manually checked. Any names of individuals or specific places were changed during this manual checking process to ensure anonymity of the transcripts.

All interviews were 'acquaintance-interviews' (Garton & Copland 2010) in that all participants were known to the author in some capacity prior to interviewing. The nature of existing relationships varied and included close friends and their partners, former mentors, and former students. Acquaintance-interviews were chosen to facilitate an intimate and casual atmosphere similar to that which may occur outside of the research context. This is important because I am primarily interested in the everyday practices of non-experts in talking about the climate crisis and reasoning about their position within it. At least as important, the pre-existing relationships with participants enabled 'check-ins' after what were, at times, difficult and emotional conversations.

Because of the proximity of the author to participants, as well as the political sensitivity of the data, extra care is given to maintain anonymity. Participants are thus given gender-neutral pseudonyms and no demographic information is provided for individual participants. I refer to participants by pseudonyms rather than, say, participant number, as a reminder to the reader that the answers given are by individuals with unique histories, motivations, and desires that shape their responses.

2.2. Interview procedure

Interviews were 'semi-structured' into three main phases. The first dealt with habits of participants in regard to talking and thinking about the climate crisis in their daily lives. The second phase targeted individual lived experiences of the climate crisis. The third, which is the primary focus of the present work, consisted of two imaginative exercises and one reflection. In the first exercise, participants were asked to describe what a "post-crisis" world would look like in general. In the second exercise, participants were asked to imagine what a day in their personal life would be like were a post-crisis world achieved. Finally, participants were asked to reflect on challenges preventing their imagined world from being realized. Once the main interview questions had been completed, participants were invited to share any additional thoughts they had related to the climate crisis.

The general structure and central topics were kept consistent across all participants but room was given for divergences from pre-planned questions. This increased the conversational validity of the interactions, allowing the participant to collaboratively determine with me, the interviewer, what topics were most interesting and constructive to focus on. Written consent was given by participants prior to starting the interview. Follow-up verbal consent was also elicited when starting, stopping, and storing the recording. All participants consented to the

sharing of anonymized transcripts in a semi-private archive for research purposes. As such, access to full interview transcripts can be granted upon request.

2.3. Data presentation

The main analysis consists of four close readings of participants' imagined post-crisis futures, modeling each as a process of mental space creation. After providing a mental space analysis of each, I reflect on the degree to which the future space aligns with or challenges existing power structures, borrowing from critical pedagogy (Shudak et al. 2015) and work on prefigurative politics (Jeffrey & Dyson 2021) to do so. In the spirit of *co-creating* meaning and democratizing climate discourse (Yusoff & Gabrys 2011), I also incorporate participant responses into the (co-)articulation of my arguments throughout the background and discussion sections. This serves to use 'everyday' voices not only as data to be analyzed, but also as direct contributions to academic discourse.

3. Navigating a complex crisis

3.1. Understanding the problem

In order to imagine a "post-crisis" future, we must first understand the nature of the "crisis" we intend to move past. Dominant approaches to climate discourse (and, as a result, climate policy) center a 'science-first' understanding of *climate change* as a precondition for understanding the *climate crisis* and possible solutions to it (Szerszynski & Urry 2010). The sociopolitical conditions underlying the crisis are peripheralized, even when the very same science recognizes human behavior as the driver of the crisis. As an illustration of this, consider the opening of Chapter 1 'What is climate change' from Oxford's 'very short introduction' of climate change.

> Future climate change is one of the defining challenges of the 21st century, along with global inequality, environmental degradation, and global insecurity. The problem is that 'climate change' is *no longer just a scientific concern*, but encompasses economics, sociology, geopolitics, national and local politics, law, and health, just to name a few. (Maslin 2014: 1; emphasis added)

Climate change is framed here as *first* being a scientific problem that then *became* a socio-economic and geopolitical problem. The centrality of scientific processes is reinforced by the structure of the book, which begins by focusing on greenhouse gases, proceeds through a science-oriented history of climate change, and only gets to the 'politics' in chapter 7 (the third to last chapter). This pattern is echoed throughout institutional climate communication material (i.e. in formal education, governmental campaigns, and the press), as *climate* literacy is framed as a type of *science* literacy (Azevedo & Marques 2017).

The effect of this framing is a "deficit" approach to climate communication and education (Hanson-Easey et al. 2015), such that people outside of immediate climate science and policy making circles are perceived as lacking the expertise to actively participate in climate discourse. This effect was apparent in my conversations, as participants cited a lack of knowledge as limiting their ability to imagine a post-crisis world. Jamie, for example, despite having academic training, cited a lack of "science-y" knowledge as preventing a full understanding of climate change.

> I studied sociology. I was not like a science-y person. And so there's some aspects of it that are like- like ≪*silly voice*> greenhouse gas emission> like, it gets very big, and I don't fully understand. (Jamie)

This points to a perception of "science-y" people as having epistemic authority in climate discourse, to the exclusion of other modes of thought, including socially-oriented ones. Importantly, I do not mean to deny the scientific relationship between climate change and greenhouse gases. Indeed, Jamie cannot *fully* understand climate change without understanding this relationship. What is lost in a science-first approach to climate communication is the realization that climate change also cannot be *fully* understood without understanding underlying sociological conditions. And still, because of the dominance of the science-first framing, Jamie does not seem to take ownership of this expertise, an expertise that many "science-y" people may very well lack.

The science-first framing of climate change has been extensively critiqued in environmental humanities literature, not only for excluding voices from decision-making processes, but also for distracting from the underlying socio-political causes of the crisis (e.g. Crist 2007, Hanson-Easey et al. 2015, Jasanoff 2010, Kahn 2008, Pepermans & Maeseele 2016, Szerszynski & Urry 2010, Urry 2011, Wright et al. 2013, Yusoff & Gabrys 2011). 'Democratizing' climate discourse addresses both critiques by recognizing the importance of different forms of expertise for understanding climate change and the approaches we take in addressing it (Yusoff & Gabrys 2011). As argued by Gladwin & Ellis (2024), reframing climate literacy as a type of *systems* literacy, enables individuals to discover and engage their existing expertise — as 'systems-beings' existing *with* and *in* the crisis, we all have intimate knowledge of the crisis and the sociopolitical systems that underlie it. Jamie, despite voicing insecurity about not knowing the *science* of climate change, ended our conversation by highlighting the importance of including diverse voices in climate discourse:

> it's just interesting because your, yeah, your project is really important, because we all have a lot to say about it, whether we have expertise or not, and there's not a lot of, like, there's not a lot of room to really really talk about it. (Jamie)

The remaining challenge then, identified both by my participants and academic critiques, is to empower individuals outside of current decision-making circles to

recognize both their *right* and their *ability* to contribute meaningfully to climate discourse, especially in discussions of transformational change. This requires recognizing the climate crisis an essentially contested concept (Gallie 1955), meaning that a central feature of "the" crisis is that it is defined differently at different times depending on the interests and experiences of the people involved, and that all of these definitions are in some way or another legitimate. As I discuss in the next section, this can be effectively achieved by centering lived experiences in climate conversations in line with embodied approaches to meaning-making.

3.2. Embodied complexity

We make meaning through our interactions with the world. We know what a chair is by sitting on one, we know what a pencil is by using one to write, and we know what a conversation is by having one with another person. A cognitive *frame semantic* approach to meaning holds that concepts, and their linguistic expression, are built from experience in this way (Fillmore 1976). That meaning is *experiential* also makes meaning informationally dense — a chair is not *just* something you sit on, it is also something that gives you reprieve when you're tired; it is something you use when having dinner, playing a board game, or writing a paper; it is something that can come in a variety of shapes, sizes, and colors, some of which are more comfortable, or ergonomic, or stylish than others; it is your favorite chair that you bought from an antique store, as well as your friend's chair that you accidentally spilled wine on. The concept *chair* is a bundle of all of your experiences with things that resemble the things we call "chairs". From this perspective, the meaning of "climate change" or "climate crisis" is determined by our experiences of it.

There is significant concern that, especially in the Global North, individuals lack sufficient first-hand experience of the crisis to understand and relate to the crisis in ways that would motivate meaningful behavioral and social change (Keller et al. 2022, Maiella et al. 2020, McDonald et al. 2015, Spence et al. 2012, Van Lange & Huckelba 2021). Rather than experiencing it first hand, we, in the Global North, experience climate change by reading and hearing *about* climate-related crises. This makes our concept of climate change relatively informationally poor — we may know facts and hear stories, but we lack the psychological, social, and sensorial richness that comes with direct embodied experience.

These concerns, however, emerge from a science-first understanding of climate change which centers the immediate physical causes and effects of the crisis (i.e. accumulation of greenhouse gases and the resulting destabilization of Earth's weather systems). Under this framing, what is considered a 'direct' experience of the climate crisis is restricted to direct experiences of physical climatic events. A more systems-oriented understanding of climate change which values understanding underlying sociopolitical causes and wider sociopolitical effects leads to a contestation of the distinction between 'direct' and 'indirect' experiences.

To illustrate this tension, consider Alex's reflection on climate discourse at the end of our conversation:

> I think it's hard to know exactly what climate change is and isn't. Um, besides, y'know, global warming, rising tides, hot days. Um, so yeah, so then, y'know the- how- the way that we filter down that meta-narrative to the finite narrative is where I lose some kind of comprehension of is this something that's about climate change? Is it about something else? Like, I'm not sure that a bike lane is exactly about climate change. Maybe. (Alex)

Alex spent a lot of time during our conversation discussing the ideological divides in their city that prevented even relatively small improvements to the city's 'green' infrastructure, such as adding bike lanes to help reduce car traffic. However, they still question whether or not that discussion was really about climate change as such. As prescribed by the science-first understanding of climate change, they list climatic events as definitely being about climate change, but question the relevance of the issue that they felt most driven to discuss. For Alex, their climate expertise lies in their lived experience of a lack of green infrastructure and hostility toward its development. Under an open and contested definition of climate change, this expertise emerges from a 'direct' experience of the sociopolitical conditions that contribute to the perpetuation of the crisis.

In addition to being *embodied*, semantic frames are also *embedded* in relevant linguistic, psychological, and cultural contexts. This embeddedness leads to one concept *evoking* related ones. For instance, the concept of *coffee* likely evokes the concept of *work* for many people, as the embodied experience of preparing and drinking coffee is embedded in morning routines and preparing for the workday. This aligns with the calls discussed above to center the sociopolitical, ideological, and ecological systems intertwined with narrow conceptions of climate change (Crist 2007, Manuel-Navarrete et al. 2012, Urry 2011). All aspects of lived experience become analyzable as embedded within the crisis (Gladwin & Ellis 2024), and thus become relevant to climate discourse once the connection is recognized. As an illustration, consider how another participant, Dylan, discusses the ways in which growing up within the climate crisis has directly shaped their psychological experience of the world, as well as their social practices:

> I don't have an option to opt out of uncertainty. Like, I just like- it's with me always in every-. And like, I think that that's informed, and like made possible, by the fact that like I'm living- I'm like coming of age at a time when like everything is changing around us. And like, so, like, I have no experience of the world other than like random shit happening. [...] that reality that I just like happened to be alive in, and happened to have, y'know, like become an adult in, is something that has informed the way that I navigate like mundane things, which is like, "oh, yeah! Like, I would love to see you this weekend. Like let's make- Let's have dinner on Friday or whatever, like OK, like let's y'know, like let's confirm on Thursday. And then like on Friday afternoon, like let's confirm again". And like, "oh, actually", y'know, and- and then also,

> like, something happens, and, y'know, like plans change. I'm like, "yeah, I thought that they would". <*laughs*> Y'know, like I'm not like, "oh no, this didn't happen". I'm like, "yeah, okay. Like we'll find another way". (Dylan)

Here, Dylan expresses a psychological and social expertise of the climate crisis by recognizing the effects that living in an unstable and rapidly changing environment has on their daily lives. This expertise is not directly related to particular events or particular scientific facts, but rather to how being embedded in the crisis entails a particular *way of being* in our social world.

Even when participants did reflect on particular climatic events, the emerging expertise pointed to the value of an embedded conception of climate change. A particularly good example of this was expressed by Cameron while telling a story of when the climate crisis felt particularly immediate to them. In their retelling, they noted the interactions between different effects and causes of climate disasters, as well as experiencing these disasters in the context of a larger polycrisis.

> We were contending with like the perfect storm of, um, among the worst droughts that we've experienced for a long time, which is climate change related. And also one of the worst heat waves we've experienced in a long time, which is climate change related. And then also, um, y'know, subsequently terrible wildfires, which are climate change and also like human mismanagement related. And yeah, we were trapped inside because it was smoky for five days straight. And it was also like the pandemic. So it was like you're literally just inside your own house. Like you can't go anywhere. [...] I had my birthday, tha- like during that time, and my friend and I- I went to my friend's house who, she had like a backyard with a pool, and we sat 6 feet apart and each ate like a piece of cake that I had bought like 6 feet apart. But it was like, the sky was still orange, and it was like raining ash into the pool, like the pool was turning black. And I was just like "happy birthday to me". (Cameron)

The richness of this lived experience does not only reflect Cameron's particular scientific expertise, in knowing the connection between individual climate related disasters and climate change more generally, but also their lived psychological and social expertise of the crisis. Their birthday as a social and cultural practice became inseparable from the crises in which it was embedded.

Both examples demonstrate how experiences of "climate change" can be re-centered around everyday lived social practices that are inherently embedded within the crisis. Climate communication literature may be right in pointing out that many of us lack rich embodied experiences of "climate change" when it is narrowly defined as a scientific ecological phenomenon. However, we all have rich embodied experiences of the social, economic, and political systems that interface with "climate change". Rather than thinking of climate change as, say, increasing the severity of storms, which *is* relatively abstract and removed from lived experience, we can think about it very concretely as decreasing out ability to plan, travel, and celebrate.

3.3. Embodied imagining

Frame Semantics (Fillmore 1976) gives us a way to think about abstract conceptual knowledge as being grounded in *embodied* physical experience and *embedded* in a social world. Mental Spaces (Fauconnier 1994) then serves to situate those experiences in a time and place. Very simply put, a *mental space* is a representation of the state of a possible world, populated by conceptual frames that represent the information we wish to talk and think about. There is a *base* space, which is the world as it is in the 'here and now'. This space tends to be the focus of conversation when we talk "facts" about the "real world". There are also an indefinite number of *target* spaces, other possible worlds that we can talk about to express, for example, memories of the past, hopes for the future, and hypotheses about alternative presences. To think and talk about these other worlds, we reason outward from our base space, relying on what we know in the here and now to reason about what has been and could be. This process, called *projection*, is mediated by a middle *generic space* which schematizes information. This schematized information is then specified for new features and projected into the other world, or *target space*.

Consider, for example, the statement "the future of cars is electric". Using our world knowledge, we know that the prototypical semantic frame for a *car* in the present day involves a *gas-powered car*. To imagine a "future car", we first reduce the details of the present car frame, projecting it to the generic space, in order to then replace those details with new desired ones. This process can be represented as the diagram in Figure 1.

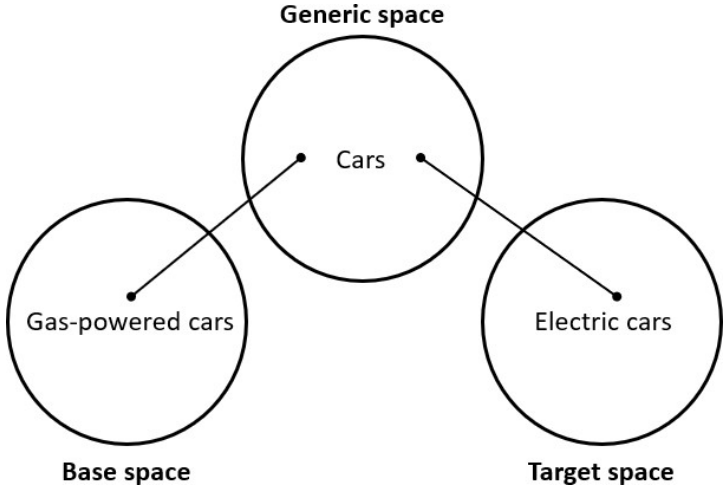

Figure 1. Basic projection from Base space to Target space

Once all elements have been projected into the target space, there is then a process of *completion*, in which details that were not specified during projection are "filled in" based on our world knowledge (Fauconnier & Turner 1994). This process

is inherently conservative; by default, we assume things do not change between the base space and the new space. In the car example above, only the car's power system is directly at issue. During the process of completion, the frame of a *future* car is filled in, likely maintaining the other features of a present day car and associated infrastructure (e.g. a driver, four wheels, paved roads).

The process of mental space creation and navigation is signaled linguistically via *space-builders*. These include obvious references to alternative worlds, such as the "future" in the example above, but also more subtle cues such as tense-shifting (Cutrer 1994) to signal navigation between a *base* space and *past* and *future* spaces, and negation to signal navigation between *alternative* spaces (Sweetser 2006).

It is also possible, if not the default, for a target space to inherit elements from multiple input spaces, creating a *blended space* (Fauconnier & Turner 2008). This is often associated with metaphor (Brandt & Brandt 2005, Dancygier 2016, Fauconnier & Lakoff 2009), but can be considered more broadly applicable to different varieties of analogical reasoning (Fauconnier & Turner 1994). In this work, I present several *non*-metaphoric blends, in which a future space is constructed by integrating conceptual structure and frame elements from different input spaces in a literal, but nonetheless highly creative, way.

3.4. A critical approach to mental spaces

The conservation of elements from the base space through *completion* offers a particularly helpful mechanism for thinking about generativity. The more the process of completion is disrupted or questioned, the more room is given for genuinely new structure in the imagined space. To integrate *criticality* into this mental space approach, I employ the concept of 'limit-situations' from critical pedagogy, as introduced by Paulo Freire (1970a, 1970b) and elaborated on through critical and emancipatory pedagogical traditions (Giroux 1997, Nouri & Sajjadi 2014, Shudak et al. 2015).

Freire (1970b) introduces the notion of a *limit-situation* to understand the ways in which existing power structures and dominant cultural narratives interfere with the knowledge-creation process. The limit-situation in of a given problem, like the climate crisis, is the sociopolitical conditions that mediate an individual's interaction with the problem. When individuals fail to confront the limit-situation, they are prevented from realizing their full potential as creative agents (Shudak et al. 2015). A focus on limit-situations redirects attention from a surface level problem, such as the presence of gas-powered cars, to underlying causes of the problem, such as car-centric infrastructure and an over-emphasis on private ownership.

I argue that a useful analogy can be drawn between realizing limit-situations and the process of mental space creation, especially at the completion stage of processing. By antagonizing what information is 'taken for granted' during the imagining process, existing conceptual (and by extension cultural) structures can be more effectively challenged. For example, consider the somewhat humorous

statement “the future of cars is trains”. The projection of *cars* and assumptions that follow from their presence (e.g. drivers, roads) gets disrupted somewhere between the middle space and the future space. There is a forced reassessment of the elements being projected, requiring a late employment of another more schematic frame, *transportation*. The joke arises out of this “lateness”; we thought we would see a restructuring of the frame *car*, but instead had to abandon the frame in favor of another. The presence of drivers and roads is no longer assumed, challenging one to imagine *something else*, and the very existence of cars is brought into question. I will represent this kind of disruption as shown in Figure 2.

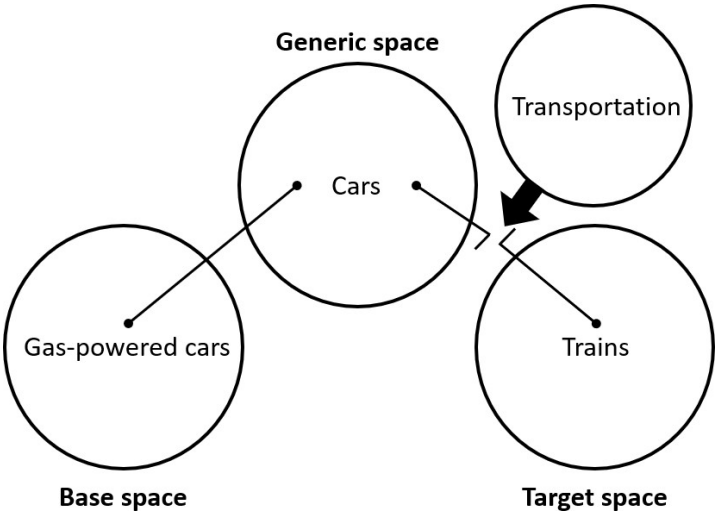

Figure 2. Disrupted projection from Base space to Target space

Because of the complexity of many of the mental spaces discussed in the following two sections, I will not include middle/generic spaces in the diagrams. Instead, projection (and disruption) will be shown directly between input and target spaces. This is for the sake of clarity, but one can assume in all cases that schematization via a middle space does occur.

4. Strategies for imagining new worlds

4.1. Dimensions of generativity

Participants’ imagined worlds will be analyzed for ‘generativity’, that is the degree to which imagined worlds demonstrate *new* conceptual structure. Modeled with mental spaces, this generativity surfaces as structural divergences between the input and target spaces. Generativity can vary along two dimensions: number of input spaces and number of disrupted projections.

When an imagined space can be reasonably constructed from just one input space, I consider the imaginative process ‘anticipatory’. This naming is an analogy to *anticipatory political logics* which construct the future by imagining changes to

elements of the present, and seeking to in some way counteract or avoid change that would fundamentally transform present structures (Anderson 2010). This logic is dominant in policy-making circles in which a complex 'wicked' problem, like the climate crisis (Lazarus 2008, Levin et al. 2012), is broken into discreet smaller problems that can be addressed through independently employable technological solutions (Gilligan & Vandenbergh 2020). I consider this strategy to be relatively *non*-generative as it leads to a replication of the structure of the present. Because an anticipatory strategy involves identifying specific problems in the present and *anticipating* their potential solutions in the future, it is expressed through, for example, comparative syntactic structures and negation, as well as overt references to specific differences between the present and imagined world.

Prefiguration is held as an alternative to this logic, focusing on an explicit imagining of new social structures (Jeffrey & Dyson 2021). I take imagined worlds that diverge in conceptual structure from that of any single input space to employ a *prefigurative* imaginative strategy. A prefigurative strategy is marked by creative and elaborative description from *within* the target space. Instead of iteratively jumping between an input and target space, which encourages a conservation of conceptual structure, prefiguration involves continuous occupation of the target space. This means that prefiguration is marked by a maintenance of grammatical tense and subject as the communicator *narrates* the new world, instead of *deriving* it through one-to-one comparisons with the old.

The second dimension of generativity is the number of disrupted projections that occur while describing the imagined world. A projection from the base space to the imagined future space is considered "disrupted" when there is some overt indication that conceptual structure which may otherwise be taken for granted is, in fact, at issue. In the present data, disrupted projections are communicated through epistemic expressions of *not* knowing.

4.2. Structuring the future from the present

First, I will contrast the imagined *society* and *day* of one participant, Jordan. Though the two worlds differ in expressions of agency and descriptions of embodied experience, there is minimal disruption during the processes of projection and completion. This results in imagined worlds that maintain the overall structure of the base space.

Jordan was first tasked with imagining a post-crisis society. As seen in the text below, Jordan provided a detailed imagining by listing changes that would occur across different sectors of society, including transportation, energy, city planning, work, and economic systems. I consider this imagining to be a prototypical case of *anticipatory* reasoning, as Jordan focuses on individual problems and corresponding individual solutions.

> I think there'll be much more green space and just like focus on integrating plants and trees into the places where humans live. Um, I think there'll be a lot of, um, I mean I think there'll be basically like fully electric mobility. Um.

> Transportation will be quieter and zero emissions. Um. I think that electricity will be, primarily, like solar, wind, and- and maybe nuclear, and some other, um, hydrogen and other, um, kinda energy innovations that are either like regenerative or, uh, zero emissions. So not fossil fuel based I guess. Um, I think people will work less and they'll care more about their community, and will have, yeah, healthier lifestyles. They w- they- I think there'll need to be a transition from like consumerism and like a sense of individuality and wanting to be kinda like better than the next person to more like feeling connected, curious about how you can serve your community and- and be neighborly. Um, I think, um, there'll be a tremendous amount of like respect for nature-based solutions and like the people who understand how to integrate those, whereas today, y'know I think people are mostly interested in kinda like "techy" type like innovation, um, so I would imagine a change there. And, um, I would imagine in our financial systems are like quite different [...] I think we will need to move toward companies not being binded to fiduciary responsibility and having a more wholistic look- outlook on why to exist, as a company, and like what your purpose should be. (Jordan)

There are two particularly important linguistic patterns in Jordan's response. First, comparative structures are frequently used; there will be "*much more* green space", "quiet*er*" transportation, "*less*" work, "*more*" feelings of connection, and "*more* wholistic" approaches to corporate priorities. The second pattern of note is the use of negation; "*not* fossil fuel based" and "*not* being binded to fiduciary responsibility". By negating or changing the degree of elements in the base space, Jordan maintains the overall structure of the base space in the imagined future. Modeled as a mental space diagram, this imagining can be thought of as creating one-to-one mappings between the two spaces, as depicted in Figure 3.

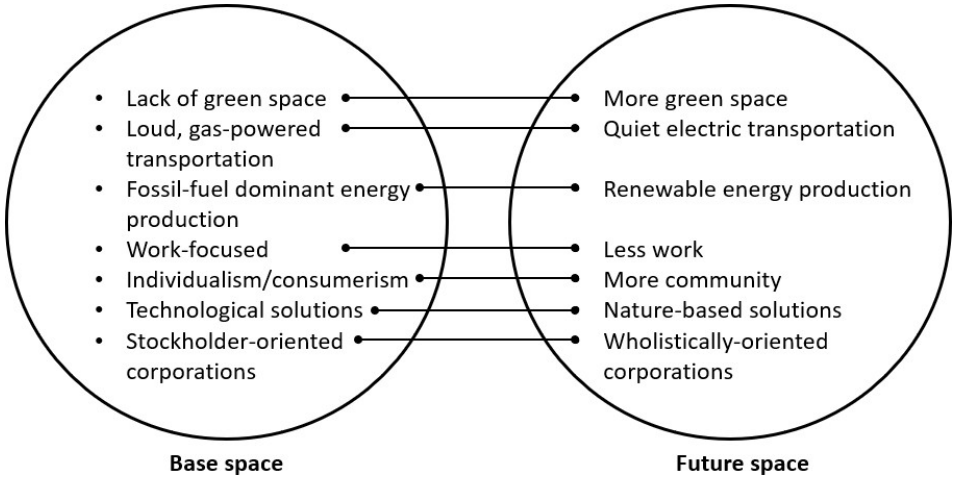

Figure 3.Basic anticipatory mental space building

Jordan is clearly well-informed about the constituent issues of the climate crisis and proposals for resolving them individually, demonstrating a technological

expertise. However, this first imagined future space lacks two important features of an embodied transformative world. First, because the space is structured by iteratively identifying a problem in the base space and projecting it into the future space as fixed or improved, connections between the different issues and different possible solutions are not considered. This limits the ways in which each change can be considered *embedded* in a world of interlocking systems. Second, agents are only mentioned for three of the mappings. Otherwise, changes are presented using existential constructions (e.g. "there will be") or with non-agentive grammatical subjects (e.g. "transportation will be"). This limits the ways in which each change can be *enacted* by embodied agents, including Jordan themselves.

Jordan's imagined future day, on the other hand, incorporates changes that are both *embedded* within lived complex systems and *enacted* by embodied agents. Their imagined future day also incorporates sensorial and psychological features that were largely missing from their previous response.

> Yeah, I would wake up to kind of like the room, kind of like glowing with sunshine. Um, and there would be like sounds of nature, like in the distance. Um, yeah, I would live in a place where there was, like, small gardens, and y'know things that we could like harvest for, y'know, meals and, um, the breakfast that I would eat would, y'know I would know kinda like where things came from [...] And then yeah maybe- maybe I'll be able to like walk to work and most of my walk is y'know on like, grass, and, y'know, s- not everything's like paved over. There's not a lot of traffic. Um, I would say I go to work, and there are like colleagues at work. Um, and people, y'know, seem like, at ease, and- and comfortable, and it's like well lit, and there's a lot of, y'know greenery, like in the space. And, um, there's like a- healthy balance of time kind of like spent in front of a screen versus time spent, um, y'know, working with people in person, or, using like other means of, um, yeah capturing ideas or sharing ideas. Um. And yeah, there's like a sense of like both satisfaction of like the work that I did. And I feel fulfilled, um, in terms of also had a- having had an opportunity to like socialize. (Jordan)

For each step in their day, Jordan provides an informationally-dense embodied elaboration. For example, in their description of their workplace, Jordan combines physical descriptions of light and color with psychological descriptions of people "at ease and comfortable" and social descriptions of different work tasks. This detailed and multifaceted description contrasts with the description of work in their first response, in which they only specified that people would "work less". Agentivity is also centered throughout with "I" statements, directly embedding Jordan within a world they both experience and enact. In contrast with their first description, there are no comparative structures and only two instances of negation, which are immediately adjacent to one another ("*not* everything's like paved over. There's *not* a lot of traffic").

Modeling this imagined future requires a more complex mental space network. This can be considered a blend, as elements are projected from two mental spaces (the base day and the previously imagined future space). However, the roles of the

two input spaces are markedly different, as the base day provides the overall structure of the future day, and the previously imagined future space provides elaborative details.

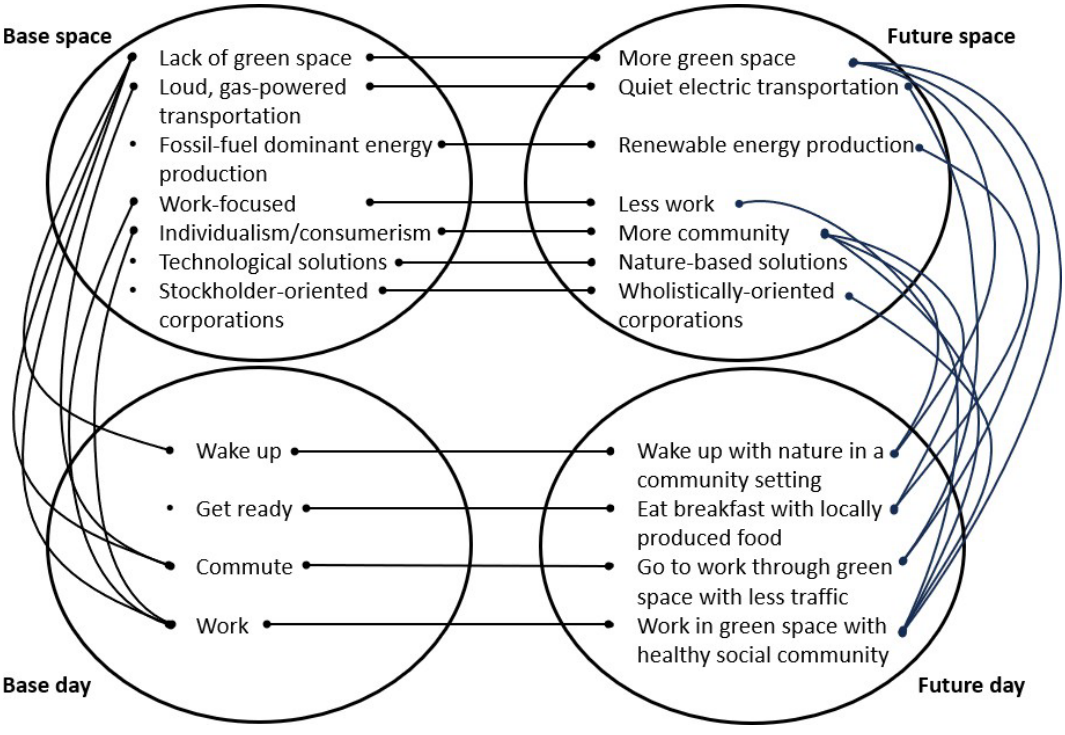

Figure 4. Complex anticipatory mental space building

With two spaces contributing to the articulation of the target space, relatively infrequent markers of mental space switching (i.e. the relative lack of comparative structures and negation), and the maintenance of "I" as subject, this second world description reflects more of a *prefigurative* strategy. However, because both input spaces are based on the structure of the present, the imagined day still lacks generativity — the components of the imagined space are *adjusted* from the present rather than *created anew*. For example, even when a post-crisis job was described as sensorily, socially, and psychologically satisfying, the presence of the job itself went unquestioned. Imagining an embodied *day,* rather than an entire abstract *world,* led to a relatively informationally-dense and systems-oriented description, but it did not lead to a questioning or disruption of the present.

4.3. Prefiguring new futures

In this section, I discuss the description of an imagined post-crisis day that is both *prefigurative,* as it borrows from multiple spaces to create a structurally novel target space, and *disruptive* in that projections from input spaces are brought into question.

Blair's imagined day shares certain themes with Jordan's, such as the presence of gardens near the home and the importance of community. The most important differences arise in the order of described events and in a consistent openness to things "maybe" being different. Relationships are prioritized, as Blair interacts first with human and non-human members of their village and their family *before* engaging in "work". When pressed for more detail on their work, Blair describes something quite different from a typical Western *job* to which you *commute*. Rather, this work seems to be labor within and for their community, incorporating more typical "productive" labor with less typical social activity.

> **Blair:** <*laughs*> Well, in my ideal world I have a donkey. So, I would wake up and say hi to my donkey. <*laughs*> I would grab a cup of coffee <*laughs*> Is this what you want me to tell you?
>
> **Interviewer:** Yeah, exactly
>
> **Blair:** Um, maybe I would either- I would wake up very early in the morning, and I would either go to my own like crop and grab something from there. Um, or, just walk around, uh, my village and, uh, say hi to a couple people. Uh, and maybe have, uh, exchange some vegetables, uh, instead of buying them. Um, and then I would, um, go back to my house and, um, spend some time with my family, whatever my family is, in the morning, and then, uh, maybe, after that, work for about four or five hours, tops.
>
> **Interviewer:** What would your work be?
>
> **Blair:** I think my work would entail a mix of, um, physical active work in, um, y'know, either, um, producing something that I, y'know, uh, have in my own, um, community or house or whatever that is, um, environment. Um. And, uh, a mix of, um, either sharing something with somebody else, uh, whether that is like teaching or, um, uh, just- just having a conversation or, um, or having like a moment of like, I don't know, meaningful discussion.

It is not possible to model Blair's imagined day as a product of mental space projection from a typical Western workday. Some events appear to be out of order, such as work and leisure time. Other events, like a commute, do not appear at all. There are two contextual cues that point toward additional input spaces that Blair may be employing. First, though Blair currently lives in an urban setting, they also have lived experience in rural communities. Second, Blair previously mentioned Sultana's Dream (1905), an early eco-feminist short story by Bengali writer Rokeya Sakhawat Hossain, as one of the first things that comes to mind when trying to imagine a post-crisis world. Though we cannot know what, if anything, is being projected from these spaces into Blair's imagined day, we do know they are at least available to them for projection and completion processes. Blair also marks two disruptions with the construction "whatever X is", bringing the nature of *family* and the relationship between *work* and *home* directly into question, and one disruption by saying "I don't know" regarding what activities they may consider work.

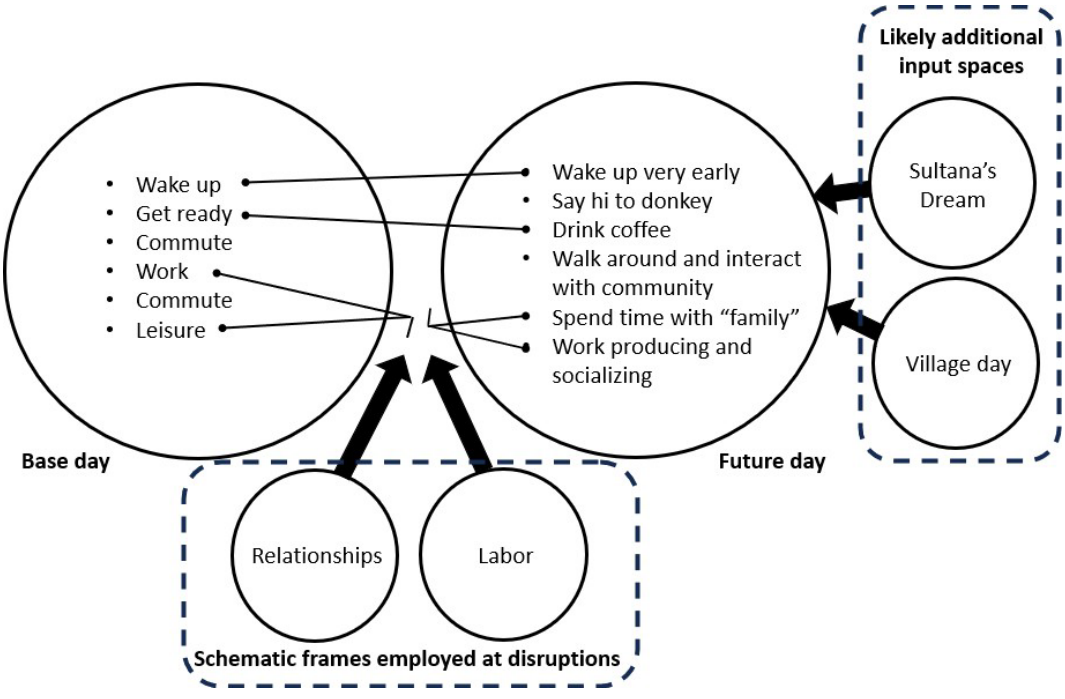

Figure 5. Disrupted and incomplete projection in prefiguration

Blair's response demonstrates a high degree of generativity by diverging from the structure of the base space, overtly disrupting projection and completion processes, and indicating a flexibility for current 'unknowns' (e.g. what a family might look like). This is in line with the 'trying out' of futures and 'openness to experimentation' that is associated with prefigurative political practice (Maeckelbergh 2011). It also shows how these imaginings may provide opportunities for exposing and analyzing limit situations, as the moments of Blair's disruption could become the topic of further conversation.

4.4. Blending presents into new futures

In the final analysis, I consider an imagined world that is very consciously created from multiple input spaces. The two input spaces, the *Isle of Eigg* and a present-day *university*, are described overtly and in detail by the participant, Hayden, who then uses the structural differences between them to construct an entirely new space — a future *distributed university*. Given the complexity of this mental space construction, I will discuss it in three parts.

When asked to describe a post-crisis world, Hayden decided to focus on a particular part of the world, the university, which they know well. After identifying perceived issues with the university as it is, summarized as "basically everything", Hayden offers an extended description of a recent trip to an island community which they found "quite provocative, but also quite reasonable". Their initial description frames Eigg as an exemplar of a sustainable community.

> I was on, um, an island off the West coast of Scotland called Eigg, um, a month ago. And Eigg has a population of about a hundred. And, um, it's traditionally a crofting community- a series of crofting communities, so, small scale, kind of, semi-subsistence farming kind of thing. Um, but, um, it's got- it's been transformed over the past kind of thirty years or so, twenty-five years, because, firstly, they bought the island. So, the people- the residents now own their own island which is very un-Scottish thing to do, where, y'know, so much land is concentrated in the hands of so few people in Scotland. And then they, um, installed, um, a series of, kind of, sustainable, y'know, renewable electricity generation devices. So they have, um, thanks to PV cells, and wind turbines, and they're looking at wave turbines now, and, um, they've gone from like every house having a diesel generator to, y'know, have a really reliable, y'know, electricity grid, which, y'know, is almost completely sustainable and so on. And the third thing is that they got really good broadband. And so, now, the kinds of job you can do on Eigg, uh, like people run a record label from Eigg, people do all sorts of like, y'know, very, kind of intensive creative things, which are about as far from crofting as you can get in the grand scheme of things. (Hayden)

This initial description can be modeled as two mental spaces, Eigg as Hayden experienced it and Eigg as it was in the past.

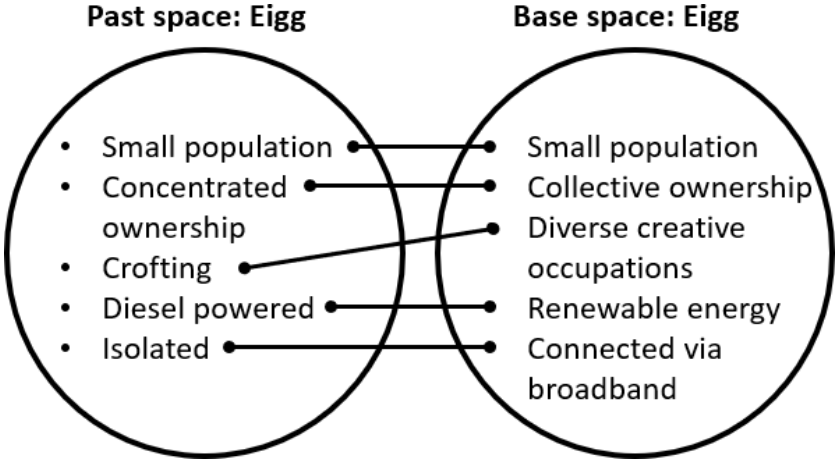

Figure 6. Eigg now and in the past

Hayden then focuses on a single character on the island, a council worker, who serves as an exemplar of how communities can be served both locally and at a distance.

> And one of the people who lives on Eigg, um, works in some kind of managerial r-role for Perth and Kinross council. And Perth and Kinross council is in central Scotland, and has no coastline, and definitely doesn't have Eigg in it. And, y'know, it turns out that this is now absolutely fine for, y'know, sort of working in a council to be in a region where it's not only like

> you're not in the council region, but it would take you a day to get there. Like it's absolutely impractical to commute there for one meeting, or anything like that, and that seems to be fine. (Hayden)

This introduces a second pair of mental spaces detailing council work as it is made possible by the Eigg community and council work as traditionally conceived. The dotted lines in the diagram below indicate that the description of the council worker is embedded *within* the Eigg base space.

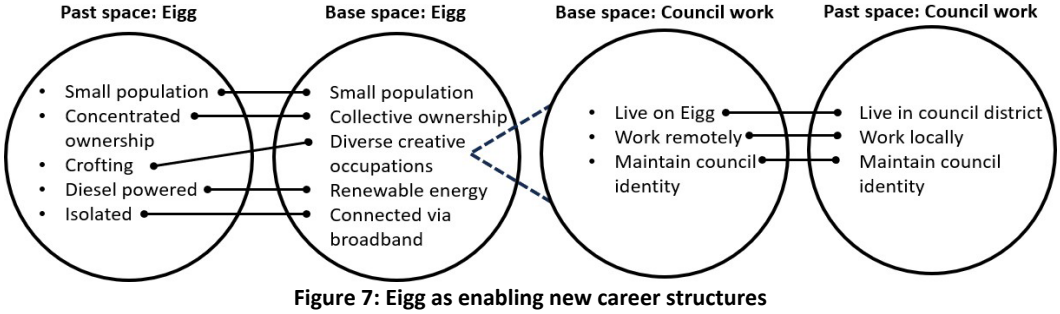

Figure 7: Eigg as enabling new career structures

After this, Hayden returns to the issue at hand and suggests how the community structure of Eigg can be used to re-imagine the centralized structure of the university.

> Um, so, one kind of infrastructural change would have to be that the idea that the university is the center of gravity for university business would have to change, y'know. We'd have to get used to this idea that, y'know, we can be much more distributed as a organization, and still have some kind of identity, and some kind of um, uh, common purpose. (Hayden)

Modeled as a mental space network, Hayden's new distributed university structure is a blended space, inheriting structure and elements from both the Isle of Eigg and the university as it is in the present day. The council worker on Eigg serves as the immediate legitimizing analogy — if a council can maintain its identity despite its members being in different places, so too can a university. The structure of the distributed university more broadly is then 'completed' using the conceptual structure of Eigg.

Hayden's process incorporates both *anticipatory* and *prefigurative* strategies. An anticipatory strategy is especially apparent in Hayden's initial description of Eigg where they highlight particular individually achievable changes that occurred on the island (e.g. switching from diesel generators to local renewable energy). The ultimate imagined university, however, employs a more prefigurative strategy as some elements of the university (e.g. a "common purpose") are maintained, while others, like a single centralized campus, are not.

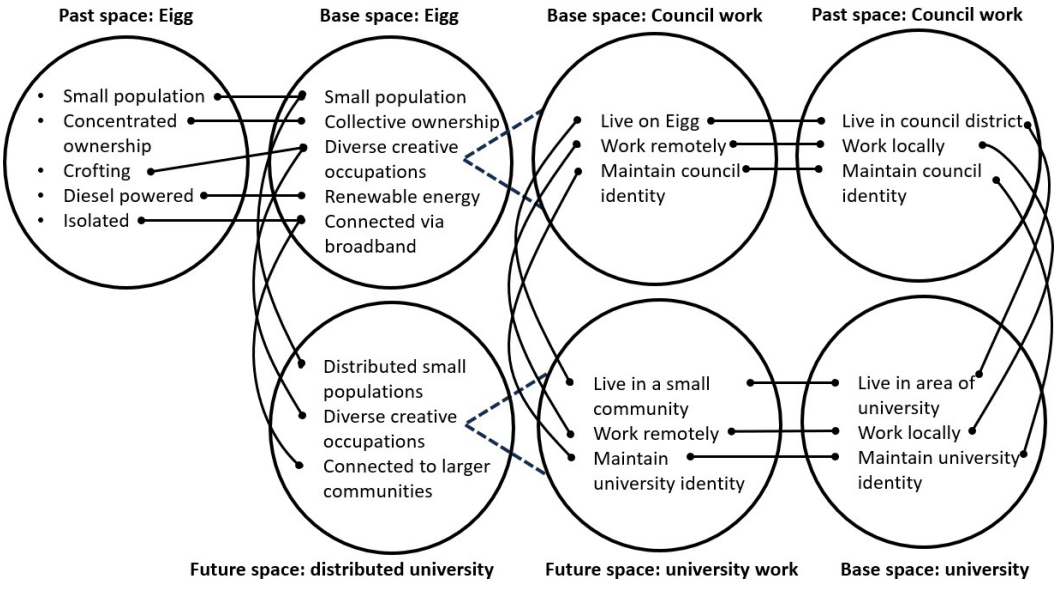

Figure 8. A distributed university as a blended space

5. Discussion

This paper has used a critical approach to mental spaces and conceptual blending to consider how the descriptions of imagined post-crisis worlds expose different imaginative strategies that disrupt and transform the present to different degrees. I identified two primary strategies which I analogized to *anticipatory* and *prefigurative* political logics (Jeffrey & Dyson 2021). Anticipatory strategies are relatively non-generative; by negating and changing the degree of individual elements of the present, the underlying sociopolitical structures of the present are maintained in the imagined world. Prefigurative strategies are more generative, as individuals embed themselves in the future space, offering extended multisensory descriptions of a world. These detailed elaborations provide more opportunities for divergences from the structures of the present. I also discussed how disruption at the point of projection and completion can further structural divergence from the present (e.g. by questioning the nature of "family") and facilitates reflections on possible limit-situations underlying the crisis.

In all cases, embodied experience seemed to aid in imaginative and descriptive processes. Imagining an embodied day, full of sensorial and psychological detail, led to a more interconnected future space for Jordan, where economic structures of their job were overtly connected to spatial configurations (e.g. the incorporation of greenery in the workspace) and social relations. A particularly moving vacation provided Hayden with the input spaces for a re-imagined university structure. The generative potential of embodied experience was demonstrated throughout my climate conversations, as participants drew from memories of their "best days" (Dylan), favorite places (e.g. the Conservatory of Flowers in San Francisco for Jamie), games played with friends (Cameron), and different texts (e.g. *Sultana's*

Dream for Blair and *Ministry for the Future* for Rowan) to imagine otherwise unimaginable post-crisis worlds. This highlights how focusing not just on scientific facts but also on informationally-dense and personally important embodied experience can empower individuals to engage in discussions of what the future should look like.

6. Conclusion

Contrary to common concerns about the abstractness and psychological distance of climate change (Keller et al. 2022), every individual has direct embodied experience of the climate crisis, as long as we admit contestation of what constitutes the crisis. Specializing in climate science and directly experiencing acute climate-related disasters (e.g. unprecedented wild fires and floods) grant individuals "expertise" in the climate crisis as popularly understood. Once we open up "the" crisis to also include the underlying conditions that cause and perpetuate it (Crist 2007), we begin to see more diverse forms of climate expertise. The family who has experienced water scarcity for generations has expertise in alternative human-nature relations that could aid in resolving the climate crisis; the young writer has expertise in the challenges of socializing within the crisis; and the worker, who is too exhausted to think about climate change, has expertise in the socioeconomic conditions that prevent us from addressing it.

The approach laid out in this work is not only helpful for comparing the relative generativity of responses during *analysis*, it also points toward a way to move theory into practice. Through an analytical understanding of the process of imagining and expressing possible futures, we can identify communicative strategies to encourage more disruptive and generative imaginings. In climate conversations with friends and in the classroom, we can facilitate more generative conversation by encouraging a focus on embodied experience and the individual expertise it grants. In the resulting detailed imaginings, we then have more opportunities to identify and push-back on the limit-situations that may prevent the creation of new narratives to live by; when people describe going to a job in their imagined world, we can encourage reflection on what that job should look like.

There is growing interest in ecolinguistic work to move past *critical* discourse analysis, which focuses on the critique of dominant narratives, in order to also include *positive* discourse analysis, which can be used to identify and uplift beneficial alternative framings (e.g. Ponton 2022, Stibbe 2017). I advocate moving further still, past the critical discourse analysis and positive discourse analysis of existing texts, to develop and explore *generative* discourse *practices*, new ways to talk and think about ecological crises and post-crisis futures. Doing so will be a fundamentally interdisciplinary endeavor, requiring insights from scholarship on radical pedagogical and political practices in addition to those from analytical linguistic traditions. This work has offered a modest contribution to this endeavor.

Conflicts of interest

The author declares no conflict of interest.

Ethical review

The study was conducted in accordance with Dutch regulations, and was approved by the Research Ethics and Data Management Committee of Tilburg School of Humanities and Digital Sciences (protocol code REDC 2023.18, approved 24 April 2023). Informed consent was obtained from all participants involved in the study. Participants were asked to approve both the storage of the anonymized data in a semi-public archive and the publication of conversation excepts for research purposes.

Data availability

At the time of writing, transcripts of interviews are available via direct request to the author.

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References

Ágoston, Csilla, Róbert Urbán, Bence Nagy, Benedek Csaba, Zoltán Kőváry, Kristóf Kovács, Attila Varga, Andrea Dúll, Ferenc Mónus, Carrie A. Shaw & Zsolt Demetrovics. 2022. The psychological consequences of the ecological crisis: Three new questionnaires to assess eco-anxiety, eco-guilt, and ecological grief. *Climate Risk Management* 37. 100441.

Anderson, Ben. 2010. Preemption, precaution, preparedness: Anticipatory action and future geographies. *Progress in Human Geography* 34 (6). 777–798.

Azevedo, José & Margarida Marques. 2017. Climate literacy: A systematic review and model integration. *International Journal of Global Warming* 12 (3–4). 414–430.

Beddoe, Rachel, Robert Costanza, Joshua Farley, Eric Garza, Jennifer Kent, Ida Kubiszewski, Luz Martinez, Tracy McCowen, Kathleen Murphy, Norman Myers, Zach Ogden, Kevin Stapleton & John Woodward. 2009. Overcoming systemic roadblocks to sustainability: The evolutionary redesign of worldviews, institutions, and technologies. *Proceedings of the National Academy of Sciences* 106 (8). 2483– 2489.

Brandt, Line & Per A. Brandt. 2005. Making sense of a blend: A cognitive-semiotic approach to metaphor. *Annual Review of Cognitive Linguistics* 3 (1). 216–249.

Charteris-Black, Jonathan. 2004. *Corpus Approaches to Critical Metaphor Analysis*. Springer.

Cianconi, Paulo, Sophia Betrò & Luigi Janiri. 2020. The impact of climate change on mental health: A systematic descriptive review. *Frontiers in Psychiatry* 11. 74.

Couto, Hildo H. d. 2014. Ecological approaches in linguistics: A historical overview. *Language Sciences* 41. 122–128.

Crist, Eileen. 2007. Beyond the climate crisis: A critique of climate change discourse. *Telos* 141 (Winter). 29–55.

Cutrer, L. Michelle. 1994. *Time and Tense in Narrative and in Everyday Language*. University of California, San Diego.

Dancygier, Barbara. 2016. Figurativeness, conceptual metaphor, and blending. In Elena Semino & Zsófia Demjén (eds.), *The Routledge handbook of metaphor and language,* 46–59. Routledge.

Fauconnier, Gilles. 1994. *Mental Spaces: Aspects of Meaning Construction in Natural Language*. Cambridge University Press.
Fauconnier, Gilles & George Lakoff. 2009. On metaphor and blending. *Cognitive Semiotics* 5 (1–2). 393–399.
Fauconnier, Gilles & Mark Turner. 2008. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. Basic Books.
Fauconnier, Gilles, & Mark Turner. 1994. *Conceptual Projection and Middle Spaces* (tech. rep. No. 9401). University of California, San Diego.
Fillmore, Charles J. 1976. Frame semantics and the nature of language. *Annals of the New York Academy of Sciences: Conference on the Origin and Development of Language and Speech* 280 (1). 20–32.
Freire, Paulo. 1970a. *Education for Critical Consciousness*. New York: Continuum.
Freire, Paulo. 1970b. *Pedagogy of the Oppressed*. New York: Continuum.
Gallie, Walter B. 1955. Essentially contested concepts. *Proceedings of the Aristotelian Society* 56. 167–198.
Garton, Sue & Fiona Copland. 2010. 'I like this interview; I get cakes and cats!': The effect of prior relationships on interview talk. *Qualitative Research* 10 (5). 533–551.
Gilligan, Jonathan M. & Michael P. Vandenbergh. 2020. Beyond wickedness: Managing complex systems and climate change. *Vanderbilt Law Review* 73 (6). 1777–1810.
Giroux, Henry A. 1997. *Pedagogy and the Politics of Hope: Theory, Culture, and Schooling*. Boulder, CO: Westview.
Gladwin, Derek & Naoko Ellis. 2024. Systems beings: Educating for a complex world. *Educational Philosophy and Theory*. 1–13.
Hanson-Easey, Scott, Susan Williams, Alana Hansen, Kathryn Fogarty, & Peng Bi. 2015. Speaking of climate change: A discursive analysis of lay understandings. *Science Communication* 37 (2). 217–239.
Hart, Christopher J. 2007. Critical discourse analysis and conceptualisation: Mental spaces, blended spaces and discourse spaces. In Christopher Hart & Dominik Lukeš (eds.), *Cognitive linguistics in critical discourse analysis: Application and theory*, 106–130. Cambridge Scholars Publishing.
Hossain, Rokeya S. 1905. Sultana's dream. *Indian Ladies' Magazine*.
IPCC. 2023. Summary for policymakers. In Houesung Lee & José Romero (eds.), *Climate change 2023: Synthesis report,* 1–34.
Jasanoff, Sheila. 2010. A new climate for society. *Theory, Culture & Society* 27 (2–3). 233– 253.
Jeffrey, Craig & Jane Dyson. 2021. Geographies of the future: Prefigurative politics. *Progress in Human Geography* 45 (4). 641–658.
Kahn, Richard. 2008. From education for sustainable development to ecopedagogy: Sustaining capitalism or sustaining life. *Green Theory & Praxis: The Journal of Ecopedagogy* 4 (1).
Keller, Ellis, John E. Marsh, Beth H. Richardson & Linden J. Ball. 2022. A systematic review of the psychological distance of climate change: Towards the development of an evidence-based construct. *Journal of Environmental Psychology* 81. 101822.
Lawrance, Emma L., Rhiannon Thompson, Jessica Newberry, Lisa Page & Neil Jennings. 2022. The impact of climate change on mental health and emotional wellbeing: A narrative review of current evidence, and its implications. *International Review of Psychiatry* 34 (5). 443–498.
Lazarus, Richard J. 2008. Super wicked problems and climate change: Restraining the present to liberate the future. *Cornell Law Review* 94. 1153–1234.
Léger-Goodes, Terra, Catherine Malboeuf-Hurtubise, Trinity Mastine, Mélissa Généreux, Olivier Paradis & Chantal Camden. 2022. Eco-anxiety in children: A scoping review of

the mental health impacts of the awareness of climate change. *Frontiers in Psychology* 13. 872544.

Levin, Kelly, Benjamin Cashore, Steven Bernstein & Graeme Auld. 2012. Overcoming the tragedy of super wicked problems: Constraining our future selves to ameliorate global climate change. *Policy Sciences* 45 (2). 123–152.

Maeckelbergh, Marianne. 2011. Doing is believing: Prefiguration as strategic practice in the alterglobalization movement. *Social Movement Studies* 10 (01). 1–20.

Maiella, Roberta, Pasquale La Malva, Daniela Marchetti, Elena Pomarico, Adolfo Di Crosta, Rocco Palumbo, Luca Cetara, Alberto Di Domenico & Maria Cristina Verrocchio. 2020. The psychological distance and climate change: A systematic review on the mitigation and adaptation behaviors. *Frontiers in Psychology* 11. 568899.

Pelling, Mark, David Manuel-Navarrete & Michael Redclift. 2012. *Climate Change and the Crisis of Capitalism*. Routledge.

Maslin, Mark. 2014. *Climate Change: A Very Short Introduction*. OUP Oxford.

McDonald, Rachel I., Hui Yi Chai & Ben R. Newell. 2015. Personal experience and the 'psychological distance' of climate change: An integrative review. *Journal of Environmental Psychology* 44. 109–118.

Nouri, Ali & Seyed Mehdi Sajjadi. 2014. Emancipatory pedagogy in practice: Aims, principles and curriculum orientation. *The International Journal of Critical Pedagogy* 5 (2).

O'Brien, Karen & Linda Sygna. 2013. Responding to climate change: The three spheres of transformation. *Proceedings of Transformation in a Changing Climate* 16. 16–23.

Ogunbode, Charles Adedayo, Ståle Pallesen, Gisela Böhm, Rouven Doran, Navjot Bhullar, Sibele Aquino, Tiago Marot, Julie Aitken Schermer, Anna Wlodarczyk, Su Lu, Feng Jiang, Katariina Salmela-Aro, Daniel Hanss, Daniela Acquadro Maran, Rahkman Ardi, Razieh Chegeni, Hajra Tahir, Elahe Ghanbarian, Joonha Park, Takashi Tsubakita, Chee-Seng Tan, Karlijn van den Broek, JohnBosco Chika Chukwuorji, Ojewumi Kehinde, Marc Eric Santos Reyes, Samuel Lins, Violeta Enea, Tatiana Volkodav, Tomáš Sollár, Ginés Navarro-Carrillo, Jorge Torres-Marín, Winfred Mbungu, Charles Onyutha & Michael Lomas. 2021. Negative emotions about climate change are related to insomnia symptoms and mental health: Cross- sectional evidence from 25 countries. *Current Psychology*. 1–10.

Ojala, Maria, Ashlee Cunsolo, Charles A. Ogunbode & Jacqueline Middleton. 2021. Anxiety, worry, and grief in a time of environmental and climate crisis: A narrative review. *Annual Review of Environment and Resources* 46 (1). 35–58.

O'Neill, Daniel W., Andrew L. Fanning, William F. Lamb & Julia K. Steinberger. 2018. A good life for all within planetary boundaries. *Nature Sustainability* 1 (2). 88–95.

Paglia, Eric. 2018. The socio-scientific construction of global climate crisis. *Geopolitics* 23 (1). 96–123.

Penz, Hermine & Alwin Fill. 2022. Ecolinguistics: History, today, and tomorrow. *Journal of World Languages* 8 (2). 232–253.

Pepermans, Yves & Pieter Maeseele. 2016. The politicization of climate change: Problem or solution? *Climate Change* 7 (4). 478–485.

Pihkala, Panu. 2020. Anxiety and the ecological crisis: An analysis of eco-anxiety and climate anxiety. *Sustainability* 12 (19). 7836.

Ponton, Douglas M. 2022. Ecolinguistics and positive discourse analysis: Convergent pathways. *MediAzioni* 34. A36–A54.

Richardson, Katherine, Will Steffen, Wolfgang Lucht, Jørgen Bendtsen, Sarah E. Cornell, Jonathan F. Donges, Markus Drüke, Ingo Fetzer, Balasubramanian Govindasamy, Werner Von Bloh, Georg Feulner, Stephanie Fiedler, Dieter Gerten, Tom Gleeson, Matthias Hofmann, Willem Huiskamp, Matti Kummu, Chinchu Mohan, David Nogués-Bravo,

Stefan Petri, Miina Porkka, Stefan Rahmstorf, Sibyll Schaphoff, Kirsten Thonicke, Arne Tobian, Vili Virkki, Lan Wang-Erlandsson, Lisa Weber & Johan Rockström. 2023. Earth beyond six of nine planetary boundaries. *Science advances* 9 (37). eadh2458.

Shor, Ira. 2012. *Empowering Education: Critical Teaching for Social Change*. University of Chicago Press.

Shudak, Nicholas J. & Mejai BM Avoseh. 2015. Freirean-based critical pedagogy: The challenges of limit-situations and critical transitivity. *Creative Education* 6 (4). 463–471.

Spence, Alexa, Wouter Poortinga &Nick Pidgeon. 2012. The psychological distance of climate change. *Risk Analysis: An International Journal* 32 (6). 957–972.

Steffensen, Sune Vork & Alwin Fill. 2014. Ecolinguistics: The state of the art and future horizons. *Language sciences* 41. 6–25.

Stibbe, Arran. 2015. *Ecolinguistics: Language, Ecology and the Stories We Live by*. Routledge.

Stibbe, Arran. 2017. Positive discourse analysis: Rethinking human ecological relationships. In Alwin F. Fill & Hermine Penz (eds.), *The Routledge handbook of ecolinguistics*, 165–178. Routledge.

Sweetser, Eve. 2006. Negative spaces: Levels of negation and kinds of spaces. In Stéphanie Bonnefille & Sébastien Salbayre (eds.), *La négation: Forms, figures, conceptualisation*, 313–332. Presses universitaires François-Rabelais.

Szerszynski, Bronislaw & John Urry. 2010. Changing climates: Introduction. *Theory, Culture & Society* 27 (2–3). 1–8.

Urry, John. 2011. *Climate and Society*. London: Polity.

Van Lange, Paul A. & Anna L. Huckelba. 2021. Psychological distance: How to make climate change less abstract and closer to the self. *Current Opinion in Psychology* 42. 49–53.

Wright, Christopher, Daniel Nyberg, Christian De Cock & Gail Whiteman. 2013. Future imaginings: Organizing in response to climate change. *Organization*, 20 (5). 647–658.

Yusoff, Kathryn & Jennifer Gabrys. 2011. Climate change and the imagination. *Wiley Interdisciplinary Reviews: Climate Change* 2 (4). 516–534.

Zhou, Wenjuan. 2022. Ecolinguistics: A half-century overview. *Journal of World Languages* 7 (3). 461–486.

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