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Saglietti, C., Holmén, J., Holmberg, J. (2026). Walking together by asking questions: Combining backcasting and prefiguration to invite a hopeful approach to desirable futures. *Futures*, 180. <http://dx.doi.org/10.1016/j.futures.2026.103832>

N.B. When citing this work, cite the original published paper.



# Walking together by asking questions: Combining backcasting and prefiguration to invite a hopeful approach to desirable futures

Clara Saglietti <sup>a,\*</sup> , Johan Holmén <sup>a,b</sup> , John Holmberg <sup>a</sup>

<sup>a</sup> Division Physical Resource Theory, Chalmers University of Technology, Gothenburg SE-412 96, Sweden

<sup>b</sup> Division Industrial Engineering, University West, Trollhättan SE-461 32, Sweden

## ARTICLE INFO

### Keywords:

Prefiguration  
Backcasting  
Futures  
Hope  
Transformation  
Prefigurative backcasting

## ABSTRACT

Offering alternative ways to approach futures beyond catastrophic and apocalyptic scenarios with varying degrees of likelihood, this research focuses on prefiguration and backcasting as hopeful approaches towards desirable futures. Through a comparative analysis based on an integrative literature review, we put in conversation prefiguration and backcasting by surfacing their similarities and differences and analysing their compatibility across the respective approaches to futures and directionality; enactment of desired changes; and relation between means and ends. In the analysis, we elaborate on how backcasting and prefiguration both work with futures in experimental and purposeful ways, exploring plural directions through various practices, strategies, or methodologies, which characterise different tendencies to “walk the talk” with action-oriented embodiment of the desired ends or “talk the walk” with more reflexivity in planning and learning. Considering how they can complement each other or “walk together by asking questions”, we open a dialogical space to speculate on whether and how actors engaging in prefiguration could benefit from using more systemic perspectives and structured methods to connect ends and means. Similarly, we inquire into how backcasting researchers and practitioners could handle the role and positioning of change agents, and consider more embodied, relational, and affective practices to bridge gaps between knowing and doing. We propose a framework for prefigurative backcasting by conceptualising three spaces key to enact transformative processes: (i) “desirable futures” to hold a common directionality; (ii) “lived reality” to engage areas with transformative potential in the thick now; and (iii) “prefigurative being” to experiment with prefigurative invitations.

## 1. Introduction

With interlinked environmental, social, political, and economic crises arising or worsening (Lawrence et al., 2024; Morin et al., 1999; Rakowski et al., 2025; Ripple et al., 2024), catastrophic and apocalyptic scenarios are increasingly characterising the ways futures are portrayed in a broad set of mainstream and alternative discourses worldwide (Cassegård, 2023; Finnerty et al., 2025; Meissner & Smith, 2024; Swyngedouw, 2013). While acknowledging the seriousness of the situation, the influence of path dependencies, and the unfair distribution of risks and capabilities to cope with the polycrisis, futures are not only a matter of likelihood but also a matter of choice (Meadows, 1999; Robinson, 1988). Since futures are open-ended, uncertain, and essentially unknown, not

\* Corresponding author.

E-mail address: [clara.saglietti@chalmers.se](mailto:clara.saglietti@chalmers.se) (C. Saglietti).

knowing what will happen creates space for active hope to start experimenting with deliberate and purposeful transformations towards just and sustainable futures (Holmén, 2020; Macy & Johnstone, 2012; Solnit, 2005; Strazds, 2019).

Two inspiring examples of hopeful and proactive approaches to transformations are given by prefiguration and backcasting. Although they differ, to some extent, when it comes to their origins, theories of change, and practices, they both share a transformative orientation that is quite unique in the fields of futures and anticipation studies. In fact, they flip conventional ways of prioritising feasibility over desirability, by focusing on what futures we would like to happen even if they do not seem so likely in the present (Robinson, 1990; Sareen & Juhola, 2026). Furthermore, they also flip conventional temporal sequencing in change processes that tend to start from problematic situations in presents or pasts before considering how (radically different) futures could be (Holmén, 2020; Jeffrey & Dyson, 2021). On the contrary, backcasting and prefiguration try to go beyond the constraints of the present by first exploring what futures would be truly just and sustainable and then walking backwards from there (Holmberg, 1998; Raekstad & Gradin, 2020). Specifically, by respectively embodying desired ends in the here and now (Monticelli & Escobar, 2024; Van de Sande, 2023), or planning how to reach envisioned goals via strategic interventions (Dreborg, 1996; Quist & Vergragt, 2006), prefiguration and backcasting offer actionable ways to enact desirable futures in the present.

Motivated by an interest in forwarding these hopeful approaches to desirable futures, which are still unrepresented in the literature and could play a key role in navigating contemporary challenges (Juri et al., 2025), we aim to contribute to a better understanding of how they can not only inform and enrich each other (e.g., by helping prefiguration adopt more structured methods, and backcasting more relational and agential approaches), but crucially support and further develop theories and processes for transformative change. In this paper, we review and integrate prefiguration and backcasting in the pursuit of transformations, guided by the following questions:

1. *What are the similarities and differences between backcasting and prefiguration?*
2. *How can they enhance each other to help navigate sustainability transformations?*

To answer the research questions, we juxtapose the two approaches by analysing their shared characteristics or unique specificities, strengths, and limitations, on the basis of an integrative scoping review of the literature on different types of backcasting, future scenarios, prefigurative politics, and more broadly critical, experimental, or experiential futures studies. As researchers, practitioners, and activists working with backcasting or prefiguration might have different levels of knowledge or interest in the topics, we provide some background and introductory information around how futures can be approached in the next section, and more in-depth knowledge in the analysis, for readers to freely select and focus on what might be more relevant for them. After this comparison, we open for reflexive questions to foster cross-pollination and mutual learning across the two communities, for those who might be curious to question and potentially adapt their practices. Lastly, looking at potential for integration, we suggest and discuss a new concept and methodological framework of “prefigurative backcasting”, hoping that it can inspire experimentation and further developments across the transformative efforts of different communities.

## 2. Approaching futures

Although climate change and other sustainability challenges are already a problem of the present and the past in different parts of the planet, they are often presented as a problem of the future (Paprocki, 2022; Swyngedouw, 2013). The concerns are characterised by a sense of immediacy and urgency for the dread that futures would be significantly worse than certain presents, exacerbate current problems, and/or perpetuate historical injustices (Adam & Groves, 2007; Altstaedt, 2024; Jeffrey & Dyson, 2021; Swilling et al., 2018). Thus, motivated by fear of predicted crises and/or hope for something different, transformative and deliberate change is increasingly called for to address contemporary challenges and transition towards just and sustainable futures (Friedrich & Hendriks, 2024; O'Brien, 2012; Ripple et al., 2024; Scoones et al., 2020; Stirling, 2015). Across different conceptualisations, transformations can be understood as fundamental changes in existing structures and systems at different scales, from the societal level to the relational and cognitive ones (Feola, 2015; Ketonen-Oksi & Vigren, 2024; Patterson et al., 2017). To transcend the status quo, transformative approaches need to move beyond incremental improvements, and embrace the uncertainty and open-endedness of futures with a critical lens, e.g., with attention to colonial legacies and uneven distribution of possibilities to influence futures at different scales (Horst & Gladwin, 2024; Sokolova, 2023).

Formal or informal processes that try to make sense of uncertain futures and navigate transformations can be considered forms of anticipation (Poli, 2019; Vervoort & Gupta, 2018). From the first half of the 20th century, anticipation and futures studies have been developing by exploring various directions to work with multiple futures characterised varying degrees of likelihoods or preference (Amara, 1974; Dator, 2019; Gall et al., 2022; Inayatullah, 2013; Muiderman et al., 2022; Polak et al., 1973). Futures have been classified as e.g. probable, plausible, possible, preposterous, or preferable, and various approaches have been outlined based on their root questions to ask what will happen, what could happen, or what should happen (Vergragt & Quist, 2011). Mangnus et al. (2021) classified the different approaches to futures as “predictive”, focused on assessing the likelihood of future eventualities; “plausible”, developing different future scenarios; “experimental”, aiming to co-create shared realities with mobilizing power in the present; and “critical”, reflecting on and, if necessary, deconstructing future imaginaries and their plausibility, desirability, or probability. The first approaches are more common in the literature landscape, and only a small fraction of experimental anticipatory studies with a focus on desirable futures offer actual alternatives to the status quo (Juri et al., 2025). Addressing this gap, there has been a growing interest in and experimentation with transformative approaches to futures that are hopeful, purposeful, and proactive, such as backcasting and prefiguration.

In the last two decades, many social movements and community projects around the world have increasingly sought to prefigure a radically different social or political order within their own practices and organisational structures (Monticelli, 2021; Van de Sande, 2024; Yates, 2015). Examples include various eco-villages and intentional communities or specific cases like the Arab Spring, the Spanish Indignados movement, the Rojava movement in Kurdistan, or the Zapatista movement in Chiapas. At the same time, there has been renovated academic interest in prefiguration with a growing number of studies and publications (Clarke & Drury, 2025; Sareen & Juhola, 2026). The concept and practice of prefiguration existed for long time, with roots in anarchist, syndicalist, and eco-feminist theories of change (Monticelli, 2021; Monticelli & Escobar, 2024; Van de Sande, 2023). The term comes from *praefigurare*, which in Latin means to anticipate something that will happen in the future (Monticelli, 2021; Monticelli & Escobar, 2024), and it started to be used in the 1960s by leftist theorists like Guérin and Gorz (Gordon, 2018; Raekstad & Gradin, 2020; Van de Sande, 2024, 2023; Yates, 2015). The first theoretical conceptualisation is attributed to Boggs, who used prefiguration to depict how council communist workers' movements from the 19th and 20th century, and the "New Left" movements sought to be "*the embodiment, within the ongoing political practice of a movement, of those forms of social relations, decision-making, culture and human experience that are the ultimate goal*" (Boggs, 1977; Van de Sande, 2024). Since then, several definitions have been developed, seeing it as an attempt to act coherently with one's ends at the individual or collective level; an approach to political strategy offering hope, political efficacy and moral legitimacy; and/or a part of transformative processes to construct and enact desired social structures, practices, or relations in the present (Avelino et al., 2024; Chertkovskaya et al., 2024; Dinerstein, 2016; Raekstad & Gradin, 2020; Schwittay, 2025; Van de Sande, 2013). In the evolution of its applications, prefiguration has been employed as a strategy, practice, or form of experimentation by parties, governments, and a variety of social movements, becoming more and more intersectional within pluriversal struggles (Mayo, 2021; Schwittay, 2025; Yates, 2021).

Similarly, backcasting is also increasingly used in a variety of ways as versatile problem- and systems-oriented futuring approach, concept, framework, method, specific step in a method, tool, or interaction process that is used to guide processes of transformative change (Dreborg, 1996; Holmberg & and Robert, 2000; Holmén, 2020; Quist & Vergragt, 2006). Literally, it means looking back from the future and, according to Robinson (1990), it considers how or what it would take for desirable futures to become real, rather than what futures are likely to happen or are straightforward to realise in practice. Although backcasting is described differently in various studies or projects, it can be broadly defined as "*generating a desirable future, and then looking backwards from that future to the present in order to strategize and to plan how it could be achieved*" (Vergragt & Quist, 2011, p.1). It emerged in the 1970s among scientists and strategic planners looking for alternative to traditional futuring approaches such as forecasting and planning based on trends extrapolation (Quist & Vergragt, 2006), but still taking inspiration from a tradition of normative forecasting and its "transformationist" current, which advocated for a historical "Great Transition" focused on values-led shifts towards a sustainable civilisation striving for peace, freedom, wellbeing, and environmental health (Raskin et al., 2002). Another key contribution to the development of backcasting is attributed to Lovins (1977) and Lönnroth et al. (1980) work on "backwards-looking analysis" for preferable energy futures that could go beyond reliance on fossil fuels and nuclear power, as well as questioning the assumption of the need for perpetual growth in energy (Holmén, 2020; Quist & Vergragt, 2006). Backcasting was then developed as a concept by Robinson (1982) who presented energy backcasting as a policy analysis method. After this first phase where backcasting was employed for energy planning, it started exploring sustainable futures (e.g., with the Sustainable Development Goals part of Agenda 2030) and expanding participation to various stakeholder to address issues like housing, land use, or mobility (Holmberg, 1998; Kishita et al., 2024; Quist & Vergragt, 2006; Robinson, 2003; Vergragt & Jansen, 1993).

### 3. Methodology

With the dual aim of comparing and combining backcasting and prefiguration, we conducted a qualitative comparative analysis based on an integrative literature review. We first collected representative data from the literature to examine patterns of similarities and differences between prefiguration and backcasting across different approaches and perspectives. Then, on the basis of intensive and extensive comparative analyses, we used induction and abduction to develop both in-depth knowledge about backcasting and prefiguration and boundary-crossing knowledge among them.

Undertaking a scoping rather than systematic review to explore and map the existing literature (Munn et al., 2018), we collected data from a relevant representative sample of articles on the topics of interest. The choice of scoping review was considered adequate given the aim of the study to capture the theoretical and historical roots, conceptual positionings around transformations, and examples of practical application areas. To identify relevant publications, we first searched in Scopus for articles containing the words prefiguration, prefigurative politics, and backcasting in the title, abstract, or keywords, resulting in 90 articles or books of which 78 were evaluated suitable and selected on the basis of the following inclusion criteria: (i) pertinence to the scope of the study; (ii) belonging to the fields of sustainability science or futures studies; (iii) published in a peer-reviewed journal. Systematically scanning citations and reference lists of these publications, to find further relevant studies we added 40 more to the list (e.g., including articles about scenarios planning to better unpack and position backcasting among other futuring methods). Although we tried to get an even share of articles about backcasting and prefiguration, it must be noted that we worked with slightly more data about the former due to its prevalence in the literature. Furthermore, not all the papers reviewed are referenced in this research, but we rather used them to exemplify while maintaining focus on the most representative texts and key insights that can better answer our research questions.

We analysed these 118 articles to gain a deeper understanding of backcasting and prefiguration, focusing on their similarities and differences across three categories of interest (i.e., theoretical and historical roots, conceptual positionings around transformations, and practical application areas). Remaining open for emergent themes beyond these initial categories, we read the literature in an open-ended manner and identified recurrent topics and themes that were inductively clustered, iteratively refined, and organised in

the final categories presented in the results of the comparative analysis, such as approach to futures and directionality, enactment of change, and relation between means and ends.

We acknowledge that the resulting categorisation is based on conceptual groupings influenced by our positionalities as interdisciplinary researchers based in Europe with prior experience of backcasting experiments and prefigurative practices in various settings and contexts. While trying to be mindful of possible biases, particular experiences and understandings can also contribute to expanding the fields under analysis (cf. Flyvbjerg, 2006). We sought to conduct an integrative review that analyses and synthesises the literature from different communities of practice, as well as generating new knowledge, frameworks, or perspectives on the topic reviewed (Cronin & George, 2023; Torraco, 2016). For this purpose, we combined in-depth intensive examination of prefiguration and backcasting approached separately, with more extensive theoretical comparison across the two (Bergene, 2007). Specifically, this entailed the integration of analytical comparison of similarities and differences that inductively discerns regularities, with illustrative or theoretical comparison that uses abduction to identify and clarify the function of key constituent elements and their contextual relations (Bergene, 2007; Chiasson, 2005; Ragin & Amoroso, 2019).

#### 4. The transformative journeys of backcasting and prefiguration

This section is organised in three parts representing distinct moments in the transformative journeys of backcasting and prefiguration: (i) the encounter between the two; (ii) emergent dialogues around reflexive questions; and (iii) the exploration of possible ways forward inspired by mutual learning. More specifically, in Section 4.1 we analysed the literature to compare how backcasting and prefiguration navigate transformations by envisioning desirable futures, adopting different strategies, and maintaining various types of relations between such ends and means. Then, on the basis of the surfaced commonalities, divergences, and compatibility, in Section 4.2 we opened a space with questions that can inspire researchers, practitioners or activists interested in learning from and being inspired by the other tradition. Lastly, in Section 4.3 we suggested an integration in a framework for prefigurative backcasting.

##### 4.1. Comparative analysis - “the encounter”

From the comparative analysis, we identified similarities and differences between how backcasting and prefiguration work with transformations, depending on (i) how futures and directionality are approached; (ii) how desired changes are enacted in the present through different strategies, methods, and practices; (iii) how these ends and means are connected in transformative efforts. Combining intensive and extensive analysis, for each category we first put prefiguration and backcasting in conversation to see the common and diverging features at a broader level and then dive deeper in the specificities of each, providing practical examples. As summarised in Table 1 below, both prefiguration and backcasting approach futures in experimental and deliberate ways, with increasing openness to exploring plural directions through various strategies or methodologies characterising different relations between means and ends, which are described more in detail in the following sections.

##### 4.1.1. Futures and directionality

Backcasting and prefiguration navigate transformations by approaching futures in hopeful and purposeful ways guided by imaginings, principles, or ideals that would characterise futures as preferable or desirable. Such imaginaries are widely discussed and explored in practice through various experimental futuring techniques (e.g., visioning exercises or storytelling) across both backcasting and prefiguration practices. Similarly, how clearly defined, open, or flexible the desired ends are, or whether they are conceived as future destination or as part of the journey itself differs significantly in diverse traditions and applications. A recent trend in both prefiguration and backcasting involves shifting from directing change by driving processes towards narrow given ends, to steering transformations towards a more openly chosen direction, and to opening up to collectively grasp and negotiate the directionality of plural ends (cf. Schot & Kanger, 2018; Stirling, 2008, 2009, 2024).

Backcasting has been described as a deliberate, purposeful, and visionary mode of thinking about futures that belongs to the normative approaches working with preferable futures (Holmén, 2020; Kishita et al., 2024; Robinson, 1990). Backcasting acknowledges futures not as pre-determined or matter of probability, but as something essentially open and a matter of feasibility and choice, whose realisation is contingent on the interplay of causal and teleological factors (Robinson, 1988). By focusing on desirable futures that try to go beyond path dependence, it complements forecasting and scenario approaches (Dreborg, 1996; Robinson, 1990).

**Table 1**

Summary of the comparative analysis.

	Prefiguration	Backcasting
<b>Futures and directionality</b>	Experiential and experimental approaches to futures as “art of organising hope”, exploring pluriversal directions and negotiating shared ones	Purposeful and visionary approaches to futures as matters of choice, following desirable directions guided by different goals or principles
<b>Enactment of change</b>	“Interstitial” and “erosive” strategies to “build a new society in the shell of the old” by embodying and enacting desired futures in a variety of present practices	Methodologies to bridge gaps between desired futures and present, and drive systemic changes through reformist transitions or more radical transformations
<b>Relation between means and ends</b>	Tendency to “walk the talk” by ensuring compatibility or equivalence between means and ends in practice, or exploring through open-ended experimentation	Inclination to analytically “talk the walk” with a strategic separation of means and ends, reflexivity, and evaluation of the selected processes in relation to the goals

Backcasting is more inclusive than the preferable scenarios of normative forecasting and has a strong connection to hopeful and imaginative practices used to envision, imagine, describe, and negotiate plural desirable futures. Yet, backcasting may still contain elements of prediction or be quite instrumental and might not be fully liberated from imagining futures that end up as mere wishful-thinking, or desirable future imaginaries burdened or coloured by problematic assumptions, present challenges, past grievances, or historical responsibilities (Cobbinah & Addaney, 2021; Kishita et al., 2024). As, according to Polak (1973), societal change can be viewed as a push-pull process where societies are pulled forward by futures' views and pushed from behind by past events, it is important to reflect on the implications and influences of that past push, as well as questioning the purpose and direction of the future pull (Holmberg & Larsson, 2018). Indeed, the emergent directionality in which systems develop is becoming a key focus in backcasting explorations, especially in the case of backcasting from principles or other enabling approaches to sustainability transformations, with attention to what values, aims, and worldviews shape plural directions and related pathways (Holmberg & Larsson, 2018; Holmén, 2020; Scoones et al., 2020).

Prefiguration has a strong focus on developing structures, practices, or initiatives that anticipate alternative desirable futures in the here and now (Skyer et al., 2025; Yates, 2021). According to Dinerstein (2015), contemporary prefigurative practices resonate with Bloch's philosophy in their "*art of organising hope*", seeing hope as an anthropological desire to engage with what is not there yet and navigate the unknown by anticipating concrete utopias. Since prefiguration is explicitly normative and action-oriented, it has similarities with anticipatory approaches and backcasting (Jeffrey & Dyson, 2021; Markussen & Knutz, 2025). Prefigurative practices are indeed guided by hegemony-transcending imaginaries of desired futures, which can be created through futuring techniques that include scenarios, models, or visions, and become socially performative (Oomen et al., 2022; Schwittay, 2025). Hence, prefiguration is characterised by a strongly experimental and experiential approach to futures (Van de Sande, 2015), with potential to develop alternative forms of doing, thinking, and organising for transition and transformation towards just and sustainable futures (Avelino et al., 2024). For example, prefigurative movements' emancipatory orientation tend to be collectively directed towards the establishment of empowering practices and democratic structures for direct participation (Raekstad, 2018; Schwittay, 2025). However, when transformations are directed towards a fixed end, there are risks of projecting present ideals into the future, or limiting future changes to actions and practices that are already possible or feasible (Haugland, 2023). Thus, there are increasing discussions around moving beyond single future directions to opening for the exploration of multiple pluriversal directions and finding a shared directionality (Saglietti et al., 2026; Törnberg, 2021)

#### 4.1.2. Enactment of transformative change

Prefiguration and backcasting have a strong commitment to enacting desired changes through a variety of practices, strategies, and methods. They both share an experimental, experiential, and learning-oriented approach to open for desirable futures in the present by working at the structural and agential levels, but there are significant differences regarding how this is translated into action. Prefiguration has historically a more political approach to the means selected to enact chosen ends, focusing on strategies that build on anarchist and socialist theories of change. Generally, it seeks to bring about change from the cracks of a system or develop alternatives on the side of it. Backcasting offers less politicised practical tools and methodologies to bridge gaps between desired futures and present situations, with a more reformative orientation within transition studies and a possibly more radical one in transformation studies.

When it comes to how desired changes are enacted in the present, prefiguration combines a variety of transformative strategies and practices (Dinerstein, 2016; Firth, 2024; Monticelli & Escobar, 2024). Considering some categories identified in the literature, prefigurative change can manifest through project-based construction of alternatives that open sites for socialisation, learning, formation of a collective identity and shared principles, as in the case of bike kitchens and community gardens, or through forms of resistance developing more spontaneously in the course of a struggle, like in the Zones to Defend (ZADs) (Clarke & Drury, 2025; Yates, 2015). Alternatively, it is possible to distinguish between how prefigurative politics embodies desirable futures in the present by defending subjects and spaces from injustices, restoring spaces and re-empowering subjects, or creating ex novo spaces and subjects through experimentation (Monticelli, 2021). Across these different practices, prefigurative strategies for transformation share a common attempt to "*build a new society in the shell of the old*", alongside or from within it (Graeber, 2013; IWW, 2025; Van de Sande, 2024). Although prefigurative politics have historically been associated with *interstitial* strategies, which create alternatives on the margins or in the cracks of dominant systems (Wright, 2010), some suggest that prefigurative strategies have potential to *erode* hegemonic systems from within and transcend them towards just and sustainable systems (Monticelli & Escobar, 2024; Saglietti et al., 2026; Wright, 2020; Yates, 2015). As Avelino et al. (2024) put it, "*unlike conventional or contentious politics, prefigurative politics focuses on the creation of alternative ontologies: alternative ways of being in the world and, one might even dare to say, 'alternative worlds'*" (Avelino et al., 2024, p.3). This is based not on one-off cumulative events like revolutions, but on longer-term experimentation to cultivate new practices, ethics, and subjectivities with the required powers, drives, and consciousness to embody the desired transformations, while building alternatives that can, in some cases, be institutionalised, stabled and/or scaled (Hurtado Hurtado et al., 2025; Nesterova, 2024; Raekstad & Gradin, 2020; Schwittay, 2025; Törnberg, 2021). Thus, prefigurative strategies look both at the structural and agential levels, proposing participation as a reflexive, empowering, and emancipatory experience with potential for inner transformation and deep socio-cultural transformations at the level of values and believes that influence action (Baker, 2023; Trott, 2016; Van de Sande, 2024).

Backcasting studies and projects focus on how to enact desired changes towards sustainability through systemic societal transitions and transformations (Vergragt & Quist, 2011). Transition management often employs backcasting as a single step linking future vision and problem definition to build a transition agenda for system innovation (Quist et al., 2013). According to Biel (2014), many of these backcasting approaches exhibit a restricted potential for outside-the-box thinking, not acknowledging the need to break with path-dependencies and transcend problematic patterns in the present, or not questioning underlying hegemonic paradigms in

dominant structures. On the other hand, in transformation studies, the iterative and reflexive nature of backcasting makes it a suitable approach to anticipate ‘real utopias’ (Wright, 2010) of desirable yet seemingly implausible futures (Markussen & Knutz, 2025; Vergragt & Quist, 2011). This can be done by strategically engaging in open-ended and experimental processes to navigate uncertainty and test alternatives in collaboration with various social actors, addressing the questions of change by whom and for whom in an explicit way and with attention to the relation between societal structures and agency (Wangel, 2011). In both transition or transformation studies, backcasting projects show a vast heterogeneity, considering factors ranging from who is involved and how, to what issues and scales of the systems are addressed, the desired futures envisioned, and the methods employed (Vergragt & Quist, 2011). For instance, backcasting can be used as a participation-orientated creative workshop technique, as in some citizens’ assemblies, or as a result-orientated research approach with focus on targets, pathways, and actions, as in some studies of smart sustainable cities (Quist et al., 2013; Wangel, 2011). Among the methodologies closer to prefigurative practices and strategies, backcasting from principles enacts change through participatory transformative processes that aim to handle complex challenges in purposeful, systematic, and reflexive ways, guided by shared values and principles (Holmberg, 1998; Holmberg & and Robert, 2000; Holmén, 2020). The latter are procedurally negotiated in transdisciplinary settings by considering ecological, social, and economic dimensions characterising desirable futures as well as human needs and wellbeing (Holmberg & Larsson, 2018). These guiding principles then help develop explicitly normative and ethical frames and coordinate different actors and sectors of society in a shared direction to start constructing concrete futures in the present (Holmberg & and Robert, 2000).

#### 4.1.3. Relation between means and ends

How means, strategies, or methodologies are connected to ends, desired futures, or guiding principles are central questions in both backcasting and prefiguration. When discussing the balance between preaching and practicing, a tendency in prefiguration is to “walk the talk” through praxis-oriented experimentation. Backcasting, on the other hand, has a stronger analytical tendency, with preference towards “talking the walk” by stimulating reflection and identifying ways to further transformations in rounds of agenda setting, practical intervention, and evaluation. Beyond internal variations, prefigurative politics in general attempts to select means coherent with shared ends set beforehand or emerging from the process. Backcasting often separates means and ends, and offers a variety of approaches and tools to bridge gaps between desired futures and present situations. What brings together prefiguration and backcasting over these differences is their increasing focus on open-ended, learning-oriented experimentation, and in cultivating collective agency to enact deep systemic change.

Across different methodologies, backcasting in general connects the desired ends with the selected means via thorough processes that focus on (a) envisioning sustainable futures in the form of goals, principles, or visions (b) analysing the present situation and the influence of past events; and (c) developing strategies and pathways for how to get to the desirable futures (Vergragt & Quist, 2011). Across the three steps, the ends envisioned do not only describe desired futures in terms of ultimate destination but are also reflected in processes and practices (Quist & Vergragt, 2006). However, a separation of means and ends can be considered a procedural recommendation to enquire deeply on a level of direction and purpose, and make explicit what motivates and drives the direction of exploration, before considering what it would take and how work towards the desired ends. For example, when backcasting from principles is adopted in energy transition projects, it is important to not conflate ends (e.g., no fossil carbon emissions) with means (e.g., shifting from oil to biofuels). Participatory forms of backcasting, in particular, embrace an experimental orientation based on social learning, which focus on developing transformative visions (cf. Wiek & Iwaniec, 2014) and strategies with potential for systemic change through higher order learning (i.e., a type of learning that occurs when participants or social units change their interpretive frame and/or problem definition after interacting with other participants or developing a better understanding of the issue(s) at hand) (Dreborg, 1996; Quist & Vergragt, 2006; Reed et al., 2010; Vergragt & Quist, 2011). Thus, learning and unlearning can help reflect on, connect, or go beyond a myopic focus on discrete means and ends by promoting changes in attitudes and values among participants, as well as broader changes in norms and goals within organisations, or a redefinition of objectives, problem definition, and strategies in policy making (Quist & Vergragt, 2006; Robinson, 1988; Vergragt & Quist, 2011).

The relation between means and ends is at the core of prefigurative practices. For instance, the general aim of building a more equitable, radically democratic, and sustainable society in the present has often translated in practice into horizontal organisational structures, non-hierarchical consensus-based decision-making processes (Firth, 2024; Raekstad & Gradin, 2020). However, such relation can take many different forms and is widely debated in the literature. Some (e.g., Yates, 2015) talk about consistency or homology between means and ends, while others (e.g., Landauer, 2010) believe that means and ends can be treated as equivalent (Asara & Kallis, 2023; Wagner-Pacifci & Ruggero, 2020). The distinction gives origin to different approaches to prefiguration. In “ends-guided”, “recursive”, or “future-oriented” prefiguration, present actions aim to match long-term and specific future ends set beforehand (Klein Schaarsberg, 2025; Swain, 2019). Conversely, “ends-effacing”, “generative” or “present-oriented” prefiguration collapses the future into the present by not holding means and ends apart, and by considering ends as emerging from context-specific practices and potentially subject to revision in the process of their enactment (ibidem). The latter approach can help better describe the experiences of contemporary protest movements that engage with prefigurative politics through experimental approaches to find out in practice what radical alternatives might look like (Van de Sande, 2023). Contemplating various open-ended interpretations of the relation between means and ends in prefigurative politics, Van de Sande (2023) suggests understanding prefiguration as: (a) a rehearsal, where people act ‘as if’ the future is already there; (b) an attempt to act in coherence with a plurality of individually-held ends; or (c) an Arendtian and non-instrumental conception of prefiguration as a “beginning without ends”, exemplified by the Zapatista slogan “*preguntando caminamos*” (asking questions, we walk). Providing an example aligned with more open-ended approaches, the flight-free movement engages in prefigurative attempts to reduce flying by experimenting with alternative practices to embody a commitment to more sustainable traveling, while reconsidering and modelling what a good life beyond flying in a carbon-constrained

world is or can be (Ullström, 2024).

4.2. Dialogical questions for mutual learning - “preguntando...”

From the comparative analysis of backcasting and prefiguration, the identified similarities and differences indicate a potential for integration among the two. In this section we highlight their compatibility and suggest possible ways of cross-pollinating by asking reflexive questions that might open for dialogical reflections around how each approach could address some limitations or enhance certain strengths of the other one. As represented in Fig. 1, we suggest that people using backcasting could consider enriching it by adopting more embodied approaches, with a focus on the agency, role, and positioning of change agents, and the possibility to transform systems in the here and now without waiting for the production and/or adoption of transition agendas by other actors not part of the system. Conversely, we encourage those using prefiguration to reflect on whether and how the deliberate selection of more structured methods could help drive more transformative changes based on a deeper understanding of systems and reflexive evaluation of the experimental practices in the making.

4.2.1. Prefiguration: Talk more the walk?

Starting from the differences in the practices and strategies of prefiguration compared to backcasting, a broad question involves the balance between improvisation and creativity versus methodological rigour and more codified procedures. Activists, practitioners, and researchers working with prefiguration might consider whether prefigurative practices would benefit, in some settings, from more structured methods to work with means and ends beyond the alleged immediacy of embodying desired futures in the here and now. If so, what aspects of backcasting could be useful for inspiration? Could it be used quite instrumentally as a methodological device and set of tools to help prefigure processes in practice and go beyond existing system by discussing different dimensions of desired futures (cf. Holmberg & Larsson, 2018)? Could it be used to promote agency for future choices by developing a deeper and more systemic understanding of the current reality and its structures? Would this help overcome present assumptions or constraints to imagination, while opening up for radically different futures? This becomes especially interesting in most recent forms and conceptualisations of prefiguration that suggest moving beyond the categorisation of means and ends and shifting to open-ended, experimental, or contemplative approaches (cf. Klein Schaarsberg, 2025; Van de Sande, 2023). How to navigate such process in practice beyond case-by-case performative approaches? Could backcasting from principles offer valuable insights by focusing not on a fixed vision or endpoint but on shared principles and values to ask and revise important questions along the way? By creating spaces and times for systemic and structural reflection, evaluation and planning guided by these and following questions or dialogical exchanges, we hope that prefiguration could get a better balance between walking and talking not only by talking more the walk, but also developing ways of walking more the walk by walking it further, in new ways, or directions.

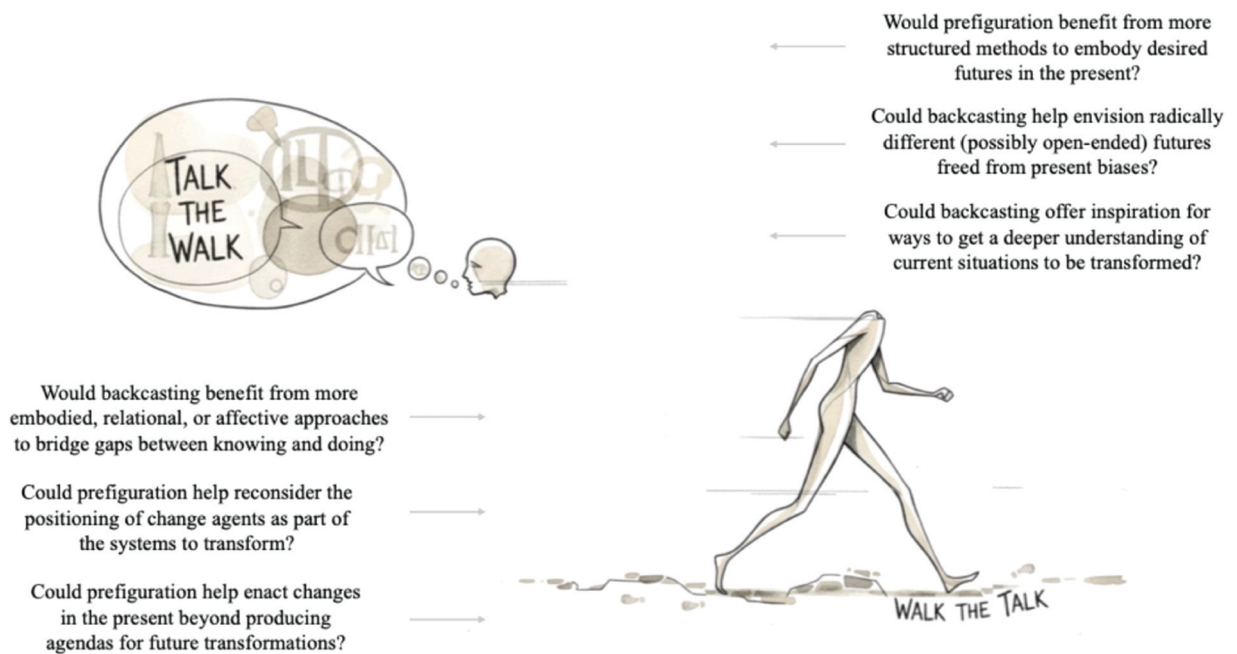


Fig. 1. Dialogical questions for mutual learning between prefiguration and backcasting. Illustration of key reflexive questions to possibly inspire prefiguration to talk more the walk and backcasting to walk more the talk.

#### 4.2.2. Backcasting: Walk more the talk?

Similarly, reasoning around what backcasting researchers and practitioners could learn from prefiguration, several questions can be asked to inspire reflections around practical approaches to change, transformative strategies, and positioning in systems. The sustainability challenges addressed by backcasting require systemic and reflexive responses that go beyond analytical approaches to navigate open-ended complexity and unknown futures. Could a more explicit focus on embodied, relational, and affective dimensions help bridge gaps between knowing and doing and possible misalignments across desirability, reality, achievability, and viability in backcasting? In the case of backcasting from principles, could this focus guide the exploration of the prefigurative character of values, desires, or emotions, as well as the performative character of practices in the experimentation with strategic interventions? Furthermore, in backcasting studies there is a growing attention to issues of agency, governance, and implementation at different spatial and temporal scales. Could prefiguration offer useful perspectives when it comes to processes that look at the experiential aspects of experimental futures for the empowerment of participants and the translation of ideas into action? When the system is not too broad and the time horizon not too far, could this help move beyond the production of transformative agendas with external acupuncture interventions and enable participants to start enacting their desired change(s) in practice? Could prefigurative lenses question the positioning of change agents with respect to systems and suggest a reconsideration of the possibility and desirability to start more transformative processes in the here and now with exploratory and reflexive approaches? If, inspired by prefiguration, backcasting could focus on more actionable and embodied dimensions of change and rediscuss the balance between preaching and practicing by walking more the talk, we also hope that the encounter can stimulate additional reflexivity on the possibly problematic assumptions or power dynamics mentioned in 4.1.1 and 4.1.2 to better talk the talk and promote higher order learning.

#### 4.3. Towards an integrative synthesis - "...caminamos"

Trying to bridge and integrate backcasting, especially backcasting from principles, and prefiguration, we outline a framework for prefigurative backcasting (Fig. 2), which does not outline a strict procedure, but might rather guide and support transformative processes with an anticipatory orientation. We propose a conceptualisation based on three spaces: (i) desirable futures, (ii) lived reality, and (iii) prefigurative being. Rather than offering a list of steps to be followed in a linear way, each space holds room where attention is paid to various actions, reflections, and integrative iterations across temporal dimensions, which can be useful in different moments when designing, carrying out, or evaluating experiments of prefigurative backcasting.

##### 4.3.1. The space of desirable futures

The first space helps reflect on what motivates and guides transformative processes, with attention to ethical implications about what kind of ideas are held around futures and change (i.e., what future considerations or concerns become part of the present(s)), and to what extents these ideas are influenced by past experiences and problematic patterns, or present assumptions and biases (i.e., what present considerations or concerns become part of futures) (cf. Adam & Groves, 2007; Biel, 2014). This space provides room for envisioning what guiding principles might characterise and guide meaningful progression towards a plurality of desirable futures and

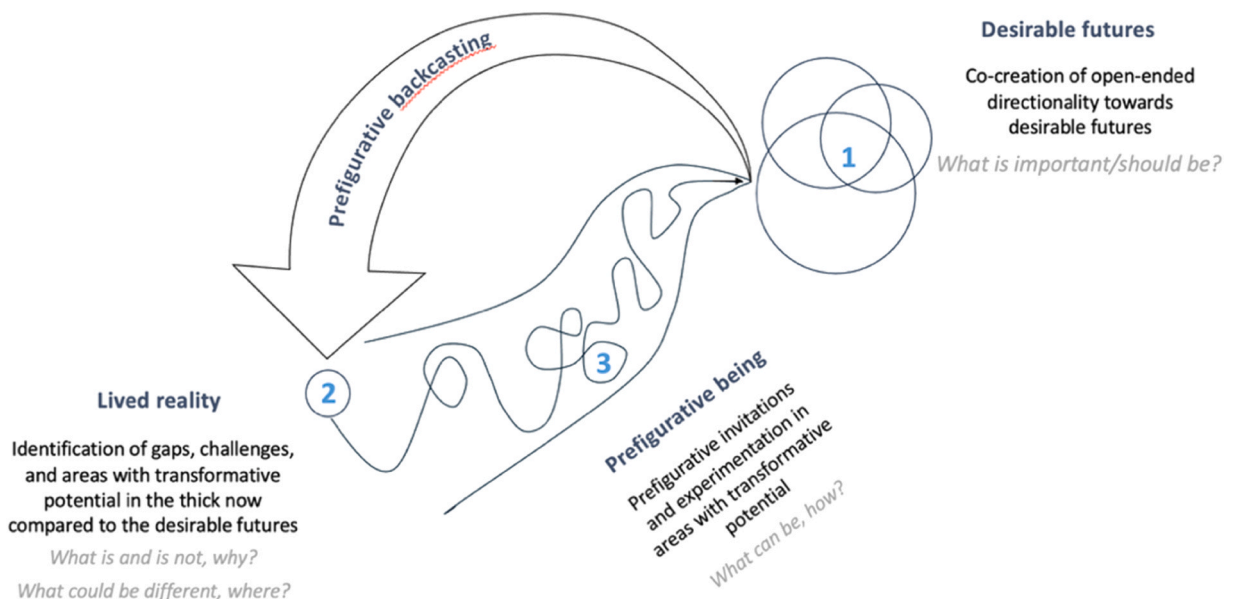


Fig. 2. Framework for prefigurative backcasting. Conceptualisation of three spaces to support transformative processes: (i) "desirable futures" to hold a common directionality; (ii) "lived reality" to identify areas with transformative potential in the thick now; and (iii) "prefigurative being" to experiment with prefigurative invitations.

selecting the principles shared across them. The latter do not provide definitive answers but rather help pose questions to think beyond present systems, think broader about sustainability, and think together to create common meanings (cf. [Holmberg & Larsson, 2018](#)). Guiding principles can support the process of exploring and negotiating a plurality of ends and a shared open-ended directionality (cf. [Stirling, 2009, 2024](#)). Moving beyond the traditional separation of means and ends in backcasting and the coherence between them in prefiguration, prefigurative backcasting resonates with [Van de Sande \(2023\)](#)'s proposition of thinking in terms of "beginnings without ends". Seeing transformative efforts as such encourages to deliberately and repeatedly discuss the directionality of change along the way, while integrating means (i.e., the actual solutions) and manners (i.e., the ways of acting, based on values and principles) (cf. [Bentz et al., 2022](#)). Those in the space of desirable futures have the possibility not only to discuss what matters to them and why, but also to start embodying the selected values. Performative practices within the field of experiential futures like pre-hearsals or pre-enactments of the future ([Kuzmanovic & Gaffney, 2013, 2014, 2017](#)), might be useful to create interactive situations. In these situations, participants can experience desirable futures in the present by exploring the principles that guide their individual and collective ways of thinking, doing, and relating, as well as experimenting with affective responses that can complement learning based on abstract thinking.

#### 4.3.2. *The space of lived reality*

The second space offers the possibility to enquire deeply into what characterises the present situation in processes of prefigurative backcasting. With a system thinking perspective and frameworks like iceberg models (e.g., [Bosch et al., 2007](#); [Inayatullah, 1998](#); [Kim, 1999](#); [Sweeney & Meadows, 2010](#)), the present situation can be understood as a laminated, layered, or nested 'thick present' ([Haraway, 2016](#); [Poli, 2017](#)) or "thick now" ([Barad, 2017](#)). The latter is influenced by a multiplicity of pasts and intertwined with a plurality of futures anticipated in the present through inter-acting, entangled, and non-linear causal relations characterising the "richness of the meanwhile" ([Facer, 2016](#)). To explore this thick now, the space of lived reality encourages trying to collectively unpack "what is and is not, and why?" as well as inquiring into "what could be different and where?". This can help get a better understanding of the structures that create possibilities or limitations and enable or constrain agency, as well as identifying gaps and challenges between what characterises desirable futures and the here and now. A focus on embodied practices (e.g., multi-modal approaches borrowed from theatre, design, or psychology, from grounding techniques to serious games) can be useful in experiencing the thick present through the lenses of the principles formulated, in addition to the analytical lenses provided by more traditional tools from complexity theory or transformation and transition studies (e.g., rich pictures, multi-level perspective frameworks, or causal loop diagrams). The combination of the approaches mentioned above can help navigate uncertainties and bridge the 'experiential gulf' ([Candy, 2010](#)) between representations of future possibilities and the way events actually feel when they unfold. From the gaps and challenges identified and experienced, metaphorical concepts like leverage points or "cracks" (cf. [Kahane, 2025](#)) can be helpful to identify areas within systems with transformative potential, where experimentation with change processes can start as described in the next space.

#### 4.3.3. *The space of prefigurative being*

The last space focuses on strategies, means, manners, and praxis for transformative processes guided by the question "what can be and how?". This space creates room for experimentation, embodied experiences of being otherwise (cf. [Klein Schaarsberg, 2025](#)), and practical action in the form of "invitations" (cf. [Ison, 2017](#)) rather than traditional "interventions" in the areas with transformative potential identified in the previous space. We suggest understanding prefigurative invitations as actions opening for participation in purposeful transformations that aim to change systems from within by exploring and enacting desirable futures in the here and now ([Varela et al., 1974](#)). Iterative and reflexive experimentation with prefigurative practices that are complexity-oriented and normatively committed can help move beyond shallow or top-down interventions and collaboratively work at deeper levels in the system (cf. [Liang & Segalas, 2025](#); [West et al., 2019](#)). Through generative and learning-oriented approaches focused on experiential and affective dimensions, those participating in such practices are invited to see themselves and act as intrinsic parts of the system they try to change (cf. [Senge, 1990](#)). This perspective and positioning can encourage the co-creation of new possibilities, understandings, and relations via lived experiences of prefigurative performativity (cf. [Deschner, 2021](#)), which has potential to open processes of becoming and bring into existence what could be or is desired based on the directionality agreed upon (in time and space) in the space of desirable futures. Crucially, when embodying such futures, it is important to remain critical and coherent with creating what is truly desired, being aware of system's structures that might foster or constrain action, and avoid to invertedly replicate problematic patterns and assumptions from the past or present (cf. [Yumukov, 2025](#)). At the same time, prefigurative being can be seen as a manifestation of radical hope as it embraces uncertainty about invitations' outcomes and futures' open-endedness, while remaining committed to guiding values and directionality in transformative efforts (cf. [Malboeuf-Hurtubise et al., 2024](#)).

#### 4.3.4. *Final considerations on the framework*

The three spaces described above provide a preliminary conceptual contribution to integrate backcasting and prefiguration by combining their strengths and trying to address potential shortcomings. We acknowledge that this combination is not a one size fits all solution, but rather a possible manifestation of hopeful and proactive approaches to support transformations towards just and sustainable futures. Trying to open up for and suggest a variety of ways to navigate each space, we hope that our non-prescriptive description can inspire different people to adapt the framework to their needs. We also recognise that different aspects of the framework might be more or less appealing to different researchers, practitioners, or activists in the two communities and that, for example, not all the persons involved in backcasting should focus on creative methods and invitations, or those in prefiguration on structured and systemic change processes. Depending on each situation, it might still be better to keep separate traditional backcasting

and prefigurative approaches, in the spirit of methodological pluralism.

Future empirical and transdisciplinary research could support refining, testing, evaluating, and reflecting upon the conceptual framework in practice and further develop it in experimental and participatory ways. Furthermore, it would be interesting to compare and enrich the framework with other relatable ones, like the transition management cycle (cf. [Loorbach, 2009](#)) and the three horizon approaches (cf. [Curry & Hodgson, 2008](#); [Sharpe et al., 2016](#)). These heuristics resonate with the three spaces of prefigurative backcasting for how they open for new forms of more participatory and polyphonic governance, by focusing on normative futures and pathways towards relatively flexible and adjustable ends, promoting social learning as precondition for change, and steering systems from the inside while creating spaces for agents to create actionable knowledge, develop individual and collective agency, and build alternatives (cf. [Loorbach, 2009](#); [Schaal et al., 2023](#)). However, it could still be explored what could emerge from a cross-pollination between the transition management cycle with prefigurative practices or with less traditional and more embodied and affective forms of backcasting, as in the work by [Avelino et al. \(2019\)](#) which put transformative social innovation in relation to prefiguration. Similarly, it would be interesting to discuss what possibilities might emerge if the three horizons approach started not by analysing the limits of the current system but rather by envisioning plural desirable endpoints and enacting them in the process itself, making the approach more action-oriented and less descriptive. Beyond these examples, there is still a lot to explore around the relation between prefigurative backcasting and other approaches from futures, anticipation, and transformation studies, considering further developments to the understanding of and ways of working with dimensions such as radical imagination, hope, and transformative potential.

Beyond the possibilities for future developments and the limitations mentioned above, this contribution can be considered as a starting point for experimentation in processes that attempt to navigate transformations in open-ended and hopeful ways. Seeing transformations as relational, we hope that prefigurative backcasting can help shape empowering change processes with care and openness towards plural ways of knowing, being, and doing, from which shared meanings and values can emerge (cf. [Pereira et al., 2020](#); [Vogel & O'Brien, 2022](#); [West et al., 2024](#)). This is in line with emergent interpretations of sustainability rooted in pedagogies of radical, active, or critical-transformative hope that can provide a point of departure and a shared directionality to drive deliberate change in a context of complexity and uncertainty through iterative processes of collective reflection, (re-)imagination, and prefiguration (cf. [Macy & Johnstone, 2012](#); [Nickels & Tinnin, 2025](#); [Ojala, 2017](#); [Strazds, 2019](#)). Thus, the various spaces opened by the framework offer an invitation to engage in forms of transformative or expansive learning to explore what is not there yet (cf. [Engeström, 2024](#); [Lotz-Sisitka et al., 2017](#); [Singer-Brodowski, 2023](#)), and develop readiness and transformative capacities like imagination and futures literacies to anticipate desired futures in the here and now, working both at the agential and structural level (cf. [Dinerstein, 2016](#); [Facer & Sriprakash, 2021](#); [Horst & Gladwin, 2024](#); [Miller, 2018](#)).

## 5. Conclusions

In this paper we put in conversation prefiguration and backcasting, aiming to bring forth hopeful, proactive, and purposeful approaches to desirable futures and transformations. Via a comparative analysis, we illuminated their similarities, differences, and complementarities considering their experimental approaches to futures and increasingly plural directionality; the ways in which they enact change through various practices, strategies, and methodologies; and the resulting relation between means and ends. In their transformative efforts, prefiguration tends to focus more on walking the talk, by embodying the desired ends in praxis, and backcasting on talking the walk, with more analytical and systematic approaches to set transition agendas, design and evaluate interventions.

Trying to offer different entry points to researchers, practitioners or activists working with backcasting or prefiguration, we opened a space for different actors to learn from each other and metaphorically ‘walk together’. Inspired by the Zapatista’s approach of ‘walking by asking questions’, we suggested a set of questions that can be asked to stimulate dialogical reflections. Through the lenses of backcasting, prefigurative approaches and practices could benefit from inquiring into the possibilities of using more structured methods to connect means and ends, as well as adopting a systemic perspective to gain a deep understanding of the current situation and develop transformative alternatives. On the other hand, backcasting practitioners and researchers could draw from prefiguration and reflect upon the positioning of change agents with respect to the system to transform and their role in various theories of change, and also whether/how it would be beneficial to consider a focus on more embodied, relational, and affective practices to bridge gaps between knowing and doing.

In an attempt to integrate backcasting from principles and prefiguration, we brought forward a framework for prefigurative backcasting, conceptualising three spaces that might help guide and support transformative processes: (i) ‘desirable futures’ to co-create a shared open-ended directionality by discussing what is important or should be; (ii) ‘lived reality’ to identify gaps, challenges, cracks, and leverage points in the thick now by investigating what is and is not, why, and what could be different and where; and (iii) ‘prefigurative being’ to experiment with prefigurative invitations that explore what can be and how by integrating and embodying present concerns and future desires in practice and praxis.

We hope that the comparison and integration carried out in this study can inspire reflections in the traditions of backcasting and prefiguration towards independent and combined developments. In addition to conceptual or theoretical advances in the fields of futures, anticipation, and transformation studies, we encourage practical experimentation to test these ideas on the ground and further develop the suggested framework of prefigurative backcasting.

## CRedit authorship contribution statement

**Clara Saggiotti:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation,

Conceptualization. **Johan Holmén:** Writing – review & editing, Supervision, Conceptualization. **John Holmberg:** Supervision, Conceptualization.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Acknowledgments

We wish to thank Alexandra Nikoleris, the Interaction and Service Design Research Group at Linköping University, the participants in the Engaging Utopias workshop, the students of the Global Governance BA at Tor Vergata University, and the two anonymous reviewers for the feedback and suggestions that contributed to improving this study.

## Data availability

Data will be made available on request.

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