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Troubling Transitions: Growing Pains in Designing and Researching for Transformation

Femke Coops
Eindhoven University of Technology; Norwich University of the Arts, United Kingdom

Marysol Ortega Pallanez
Arizona State University, United States

Joanna Boehnert
Bath Spa University, United Kingdom

Idil Gaziulusoy
Aalto University, Finland

Silvana Juri
SARAS Institute, Uruguay / Stockholm Resilience Center

See next page for additional authors

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Authors

Femke Coops, Marysol Ortega Pallanez, Joanna Boehnert, Idil Gaziulusoy, Silvana Juri, Anja Overdiek, Alma Leora Culén, Ida Nilstad Pettersen, Dan Lockton, Emma Dewberry, and Fabrizio Ceschin

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Editorial: Troubling Transitions: Growing Pains in Designing and Researching for Transformation

Femke Coops[a,i*], Marysol Ortega Pallanez[b], Joanna Boehnert[c], İdil Gaziulusoy[d], Silvana Juri[e], Anja Overdiek[f], Alma Leora Culén[g], Ida Nilstad Pettersen[h], Dan Lockton[i], Emma Dewberry[j], Fabrizio Ceschin[k]

[a] Eindhoven University of Technology
[b] Arizona State University, United States
[c] Bath Spa University, United Kingdom
[d] Aalto University, Finland
[e] SARAS Institute, Uruguay / Stockholm Resilience Center
[f] Rotterdam University of Applied Sciences, Netherlands
[g] University of Oslo, Norway
[h] Norwegian University of Science & Technology, Norway
[i] Norwich University of the Arts, United Kingdom
[j] The Open University, United Kingdom
[k] Brunel University of London, United Kingdom

*Corresponding author e-mail: f.coops@tue.nl

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Abstract: The theme track 'Troubling Transitions: Growing Pains in Designing and Researching for Transformation' at DRS2026 includes 12 papers that explore the growing pains, the frictions, contradictions, and (unresolved) dilemmas that characterise designing for transitions and transformations including tensions around epistemic challenges, transdisciplinarity, and participation, and the responses designers/design researchers are exploring to meet them. This editorial describes key growing pains addressed in the papers, while highlighting the different response to dilemmas in transition work. Through reflecting on the contributions to the track, several opportunities for future work arise as the field matures.

Keywords: Design, transitions, sustainability, tensions

1. Introduction

Designing for transitions and transformations has emerged as an influential, yet contested area of design research. It includes a growing body of design scholarship with theories of change related to sustainability, justice, and futures thinking (Coops et al., 2024; Miller, 2026). The field is defining itself through societally impactful research to support urgent transformations demanded by today's intertwined social-ecological crises. Transition theories have entered design research carrying the promise of systemic change: frameworks

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that move beyond product and service innovation toward the deeper transformations of infrastructure, governance, culture, and value necessary for societal transformation (Lähteenoja et al., 2023; Overdiek, 2024). In practice, however, applying these theories involves navigating a series of structural tensions that cannot be resolved by method alone. Expanded ecological and pluriversal ontologies and epistemologies that resist the extractive and linear logics of modernity are in tension with priorities embedded into the modern logic of normative design practice and unfettered economic growth (Leitao et al, 2024; Yu, 2025). This risks the appropriation of transition ethos to accompany dominant logics, with modes of greenwashing, reducing complex relational processes to linear and technocratic solutions, erasing emotional and political struggles, and ultimately reinforcing defuturing trajectories.

1.1 Troubling Transitions

In this track, we raise the issue of encountered tensions in design for transitions, given institutional and professional priorities and practices. We question how transition theories enable systemic change beyond previous forms of design research, and what is troubled in the process, about growing pains in this maturing field, and how designers respond to dilemmas encountered when doing this work. The papers gathered here respond to these questions from a range of contexts. From Indigenous land rights and wind energy governance in Norway (Laven et al., 2026), and participatory architecture in climate-vulnerable communities (Calvo & Fabregat-Nodar, 2026), to co-design processes that use game-based disruption as a sense-making tool (Yilmaz et al., 2026), responsible futuring grappling with limitations of transdisciplinary practices in achieving epistemic and social justice (Zaga et al., 2026), and reimagine conventional design briefs to challenge design pedagogy rooted in solutionism (Paez & Auger, 2026).

In reflecting on these contributions, we describe the growing pains, the frictions, contradictions, and (unresolved) dilemmas that characterise this transition work, including tensions around epistemic challenges, transdisciplinarity, and participation, and the responses designers/design researchers are exploring to meet them.

2. Growing pains in transition work

We observe from the papers in this track that designing and researching for transitions and transformations is increasingly defined by and entangled with tensions around power, legitimacy, scale, and knowledge. The papers highlight the growing pains designers and the field go through when confronting power asymmetries in participation and knowledge creation, attempting to weave in the dynamics across scale, pace, and praxis for action and impact, and navigating expectations of social and ecological impact, particularly in transdisciplinary work. As such, the contributions underline exclusion and power asymmetries as pillars of unsustainability; attend to the tangibility and labour of design practice; and explore the challenges of integrating plural knowledges.

One of these frictions concerns the persistent gap between participatory aspirations and the unequal conditions under which participation actually takes place. Markedly, Laven et al. (2026), Rantanen et al. (2026), and Paez & Auger (2026) show that transition processes are

often framed as inclusive while remaining shaped by processes that quietly determine whose voices count and what forms of change are thinkable.

Importantly, transitions should not only be environmental, but also social, cultural, economic, and judicial, cutting across branches of governance. Laven et al. (2026) present a powerful case in their analysis of wind energy development on Indigenous Sámi lands in Norway. By examining the intermediary ecologies and governance infrastructures that shaped the wind energy licensing process, the paper reveals how sustainability transitions can simultaneously advance environmental goals while undermining cultural rights and democratic legitimacy. This work is especially important for drawing attention to the entanglement of environmental transitions with legal frameworks, institutional decision-making, and the rights of historically marginalized groups. The Sámi case, in particular, resonates with ongoing work in design research on democracy and representation, and begins to address a critical gap: how to approach legitimacy, rights, and governance not as external constraints to sustainability, but as integral to transition processes.

A second friction manifests in situated action and impact, not only when working across different levels of scale, but also in the dialectics of praxis, and the different paces where transformations unfold. In terms of scale, Lee (2026) underscores the tensions between global urgency and conventional measures of impact and personal lived experiences, including sensorial and affective aspects and how they are typically omitted. Regarding praxis, Hu et al. (2026) highlight challenges of moving from abstraction to situated action regarding interventions and knowledge generation, and most importantly, in making long-term, systemic frameworks tangible and actionable in small-scale, community-led practice. From a pace perspective, Yilmaz et al. (2026) critique typical participatory planning and design that treat time as linear progression to a desired future, often missing the messiness of social-ecological issues, particularly regarding disruptive shocks that reorder systems, and invite us to adopt recursive approaches to futuring, embracing disruption. As such, aligning with emerging pluriversal and more-than-human literature that explores other-than-linear temporalities (Bessai et al, 2024; Ortega Pallanez, 2025).

Lastly, the promise and difficulty of inter/transdisciplinarity is underlined as a recurrent friction across the track. While several papers value the integration of plural knowledges, they also show that such integration is never straightforward. Dantas, et al. (2026) explore challenges in transdisciplinarity as epistemological, methodological, political, and practical as part of a proposed design-oriented transdisciplinary framework. Calvo and Fabregat-Nodar's (2026) participatory architecture offers a useful "deep adaptation framework" with components — resilience, relinquishment, restoration, and reconciliation. Resilience theory is further developed in Hu, Donald Campbell, & Baron's (2026) counter-infrastructure concept, with their argument on obscuring features of traditional methods, arguing instead for relational dynamic approaches to sustainability. Importantly, these papers do not present such frictions as failures alone, but as sites where transformation becomes possible if conflict is engaged with rather than smoothed over.

3. Responses to Dilemmas in Transition Work

Some of the dilemmas that transition work is experiencing are being addressed in practice through the expansion of specific practices and counter-material responses. Many responses move past deep-seated solutionist paradigms in design, academia, government, and elsewhere, reframing and reimagining the role and positioning of design. Others bring to the fore how affective, embodied, and lived experiences sustain transition work.

Across the track, there is a clear push to reposition design not as the delivery of solutions to predefined problems, but as an ongoing, situated negotiation of conflict, uncertainty, and interdependence. Some of the contributions refer to the changing role and nature of engagement of expert designers in transition processes, stressing how this field departs from an evolved understanding and reframing of designers as mere providers of solutions, especially products, but rather helping create conditions for participatory inquiry, exploration and knowledge generation (e.g., with terms like scaffolding, bridging or provocateurs), acting as hybrid scalar mediators (Lee, 2026), particularly fostering collective sense-making (Yilmaz, 2026). The repositioning of design also refers to the expansion of typical applications of design practices (e.g., prototyping by Vitaller del Olmo, 2026), tools (e.g., brief by Paez & Auger, 2026) methods, and even production/material cycles (Yang et al., 2026). These applications were initially formulated to solve and design discrete problems and now adapt to what transition work needs.

In order to embrace frictions around epistemic challenges, transdisciplinarity, and participation and work productively with them, transformational counterspaces for alternative practice are required to pluralize the array of responses. This is what several contributions surface in various contexts and at different scales. Intermediary methodologies bridging engineering rationality with Life Centred Design (Hu et al., 2026) are a pragmatic example of emerging pluralistic spaces for professional collaboration. Moving to the societal scale, power-sensitive transition arenas (Rantanen et al., 2026) are designed to become industry-driven, centre the impacted people and decentre the transition team. Counter-infrastructures (Ka Ki Lee, 2026; Ampatzidou et al., 2026) are developed where bioregional thinking, maintenance, and sensory engagement that foreground resilience and interdependence are explored as alternatives to current infrastructures. Building on more permanence in space, Calvo & Fabregat-Nodar (2026) further show with their deep adaptation framework how participatory architecture enables communities to transform vulnerabilities into actionable interventions for sustainable development and transitions. These contributions build on participatory and co-design methodology, and suggest combining this with approaches from other fields such as infrastructuring, transition governance, intersectional feminism, and sustainable leadership. They hereby expand the limits of existing design logics.

Another response refers to the types of knowledge and evidence that count for transitions or in transition-related collective processes. The papers by Yilmaz (2026), Rolfes & Robbers (2026), Hu et al. (2026), and Ka Ki Lee (2026) speak of affective dimensions, sensory and embodied knowledge, and connecting transitions to lived experiences (as in Lee, 2026). In particular, Yimaz et al. (2026) embrace the 4Es of embodied, embedded, enactive, and extended and develop a game-based framework to use disruption as a sense-making and

boundary-critiquing tool in co-design processes. It is worth stating how across these papers, approaches or ideas related to care and relationality are becoming quite popular.

In sum, the responses to ongoing dilemmas in transition work foreground situated negotiation of conflict, uncertainty, and interdependence across levels of scale, and knowledge systems and their validity. The contributions move toward decentering outcomes and focusing on the socio-political conditions that shape transition processes, their outlook, and maintenance in the long-term. The overarching implication is the repositioning of the designer's role itself, along with the transformation of design practices, tools, and even the ways of being and working in these spaces to be more than just problem-solvers.

4. Future work

The growing pains in designing for transitions and transformations and their associated responses across the track point to several opportunities onward as the area matures. One is the need for more explicitly power-sensitive methods that do not merely invite participation but reshape how processes are developed, managed, and legitimized. Another direction stems from the need for better-grounded and empirically tested methodologies that connect long-term systemic thinking with small-scale, situated action without collapsing complexity into simplification. As this area of research and practice matures, an additional question is rather one about the need for depth, rigour, and refinement of approaches and contributions, and when aiming for societal impact, about documentation, evaluation, and assessment.

Moreover, acknowledging the limitations of our design research processes does not emerge as a common or central aspect. Often, we have yet to comprehensively unpack the conditions, biases, or expectations related to the institutions under which designers/design-researchers operate and their possible constraints (e.g., metrics, evaluation, funding, timelines etc.) or reflect on or challenge where the theory that is engaged or used comes from (virtually all from the Global North). This calls for a need for greater reflexivity and an opportunity to deeply discuss the failures and unpack limitations, risks, or gaps more thoroughly. This points to a need to change the style and language in which we report this type of work, overcoming the typical "idea-selling" orientation of some scientific writing styles (optimistic and not critical enough), which consequently challenges ideas and practices deeply ingrained in designers' training and professional (commercial/industry) practice. We need to adopt and practice new styles of writing that more humbly account for failure and limitation of what the work is enabling and achieving.

Furthermore, reflections on the limitations of the role of the designer, and the need for sustaining co-designed counter-infrastructures beyond the duration of a case/project, would be an interesting extension of the current state of designing for transitions and transformations. At the same time, a critical limitation in this field of work is associated with not just the complexity and messiness of some of the most consequential social-ecological problems, but the fact that many of the most difficult problems are political and also poorly resourced, not at all resourced, and often with well-resourced entities that reproduce power asymmetries. If we aspire to address the most severe challenges, we must also confront the problems that institutions are not yet addressing. What does research look like when it is

operating in these contexts, where there are few resources and researchers have inadequate support to do justice to the problem at hand? What does designing for transitions and transformations have to offer when addressing difficult, politicised, under-resourced, and under-researched issues with insufficient infrastructural support? In this space, there is a tension between a desire for methodological rigour, the scale of complexity, and the tasks required to address social-ecological problems.

Altogether, the contributions we received build on the body of work presented in previous tracks concerning transitions and transformations. These ongoing developments show a field that is maturing and developing a critical self-awareness that enables more honest ways to describe what actually happens when doing this work, as well as what influences it. We hope this track provides new ways of practicing and being in this field that attends to these troubles and encourages us to continue wrestling with them.

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About the Authors:

Femke Coops is a design researcher exploring lost futures and emotional dynamics of letting go in sustainability transitions through physical spaces. She is an external PhD candidate at TU Eindhoven and an affiliated researcher at Norwich University of the Arts

Marysol Ortega Pallanez is Assistant Professor in Design at Arizona State University. She explores transition design and ontological design, focusing on design practices that center caring for relations over problem-solving to address today's social-ecological crises.

Joanna Boehnert is Reader in Design for Sustainable Transitions, Bath Spa University. ARHC Innovation Scholar on Transition Templates and DRS S&T SIG co-convenor. Her work advances ecological design thinking and participatory, justice-oriented transitions.

İdil Gaziulusoy is Associate Professor of Sustainable Design and Leader of NODUS Sustainable Design Research Group at Aalto University, Finland.

Silvana Juri is a Research Associate at SARAS Institute (Uruguay) co-coordinating its T-Lab, and postdoctoral fellow at the Stockholm Resilience Center (Sweden). Her research focuses on transformative creativity, and pluriversal transdisciplinary processes with particular focus on wiser food systems transformation.

Anja Overdiek is professor Cybersocial Design at Rotterdam University of Applied Sciences. Her field spans socio-technical contexts for sustainability transitions in the city, systemic co-design method and competencies. She uses design-led and action research methodology based on an eco-centric approach.

Alma Leora Culén is a professor and a member of a Design group at the Department of informatics, UiO – University of Oslo. Her research is in sustainability transition and sustainable interaction design, focus on engagement and participation in facilitating transitions. She leads the interdisciplinary research group Design for Democracy at UiO.

Ida Nilstad Pettersen is Professor at the Department of Design, Faculty of Architecture and Design, NTNU – Norwegian University of Science and Technology. Her research interests include social practices, sustainability transitions, participation, consumption and urban natures.

Dan Lockton is Director of the Institute for Sustainable Worlds, Norwich University of the Arts, UK. He is interested in creative methods for collective imagination in an age of crises.

Emma Dewberry is Senior Lecturer in Design Ecologies, Open University and a DRS S&T SIG co-convenor. Her research examines how design education practices enable sustainable transitions.

Fabrizio Ceschin is a Reader in Design for Sustainability at Brunel University London, where he coordinates the Design for Sustainability research group and he is the Director of the MSc Integrated Product Design.