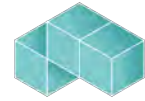


NORDES 2021



BACKCASTING [BETTER] FUTURES



DANIELLE WILDE
SDU, KOLDING
WILDE@SDU.DK

PAUL GRAHAM RAVEN
LUND UNIVERSITY, SWEDEN
PAUL.RAVEN@SVET.LU.SE

SJEF VAN GAALEN
STRUCTURE AND NARRATIVE
SJEF@STRUCTUREANDNARRATIVE.COM

MARIA KARYDA
AALTO, ESPOO & SDU, KOLDING
KARIDAMARY@GMAIL.COM

MARKÉTA DOLEJŠOVÁ
AALTO UNIVERSITY, ESPOO, FINLAND
MARKETA.DOLEJSOVA@ALTO.FI

SARAH TRAHAN
SDU, KOLDING
SATR@SDU.DK

ABSTRACT

The need for radical transformation of human practices to be more just, inclusive and sustainable is undeniable. This workshop seeks to trouble the role of design world-making efforts in the transformation process. Through a 4-step process, the workshop considers ways of moving from the rich imaginaries that often result from such world-making, to implementable transformations of situated practices for today. This conceptual and methodological re-scaling extends existing design efforts in two ways. First, we aim for desirable ‘implementable nows’ that carry the magic of unconstrained futures – fantastical, multi-species, situated and delightfully strange fabulations that are restorative and inclusive – yet are realisable today. Second, we borrow the notion of backcasting from futures-oriented studies. We investigate the potential of collectively casting back from design fabulations, so that we might (re-)narrate and thereby (re-)envision radical pathways for design in societal transition today.

INTRODUCTION

Experimental design research has long recognised the conflict between the need for new visions and the seeming impossibility of leapfrogging what Kelly (2010) describes as the *adjacent possible*: that which sits just outside what already exists; that which is possible because we can envision the pathway that may take us there, by making small adjustments, extensions or divergences in existing pathways. Kelly explains its value: “An invention or discovery that is too far ahead of its time is worthless; no one can follow. Ideally, an innovation opens up only the next adjacent step from what is known and invites the culture to move forward one hop” (2010:153). From a pragmatic perspective, this proposition seems logical. However, such logic risks driving iterative development that ignores the ways that design has been complicit in creating many of the problems we face today (Papanek, 1972).

We can no longer deny the need to radically and rapidly transform human practices to be more just, inclusive and sustainable. The World Economic Forum’s Global Risks Report 2021 (released in January), maps out intersecting risks from social fractures and environmental degradation, with which we must grapple if we are serious about resilience (WEF, 2021). In particular, the report argues that true sustainability will only be achieved through drastic lifestyle changes. Similarly, Wiedmann, Lenzen, Keyßer, et al. (2020) identify affluence as the greatest threat to humanity. Wiedmann stresses that “if we are to solve existential environmental problems – like climate change, biodiversity loss and pollution, we also have to change

our affluent lifestyles and reduce overconsumption, in combination with structural change (UNSW Newsroom, 2020)." Such changes require bottom-up action, new visions, new values, new practices.

The proposed workshop embodies a shared aspiration to expand the ways that experimental design research steps into this problem space. The work is led by *a desire*, a recognition of *a challenge*, and *a hypothesis*. The desire is to find ways of moving from future visions to new methods for formulating and infrastructuring practices today, while espousing values of inclusivity, equitable access to opportunities for flourishing, and multi-species justice. The challenge is to retain the magic of these future fabulations as we re-scale our vision to pragmatic, situated concerns. The hypothesis is that the approach of backcasting, reinterpreted through means of experimental design methods, may provide some clues for how we might do this.

BACKCASTING

Backcasting originated in Future Studies, is integral to Anticipation Studies, and has been applied in Sustainable Development (Dreborg, 1996; Holmberg & Robèrt, 2000; Poli, 2017). It is an explicitly normative approach that lends itself extremely well to collective research into high-complexity, long-term sustainability issues (Dreborg, 1996). At its core, backcasting enables researchers and stakeholders to collectively consider common but complex issues and scale-shift. This scale-shifting takes the form of moving from concepts that are almost impossible to usefully grapple with, to practical steps that might be taken towards futures in which today's concerns have been dealt with in some way.

CASTING BACK THROUGH DESIGN

Significant efforts have been made in design research to envision new futures and infrastructure new possibilities (Auger & Encinas, 2017; Björgvinsson, Ehn & Hillgren, 2012; Blythe et al., 2016; DiSalvo, Redström & Watson, 2013; Dolejšová, Wilde, et al., 2020; Escobar, 2018; Irwin, 2015; Le Dantec & DiSalvo, 2013; Light, 2019; Margolin, 2018; Wilde, 2020, etc.). We build on this foundation. Our work aims to broaden the scope of design's capacity to respond to existential challenges such as societal and ecosystem collapse, by suggesting radical, yet actionable design interventions, then rescaling them to become implementable in the now. This process involves developing strategies for scaling *out* – envisioning desirable interventions which might succeed replication through their iterative and situated duplication in different sites (Bauer, et al., 2020).

Our workshop similarly scales out our prior efforts (e.g. Dolejšová et al., 2020). It involves a hybrid launch and four online sessions that draw on experimental design research methods to grapple particularly with the *challenge* part of our *desire|challenge|hypothesis* formulation. To constructively face this challenge, we use participatory research through design and narrative design techniques to remodel backcasting, and rescale it for reconsideration *through* design.

CALL FOR PROPOSALS

To seed the workshop, we ask participants to apply with a position paper, and a short but rich vignette of a preferable future that considers multiple aspects of the world they wish to portray. One way of approaching this thickening of ideas is to use a STEEP analysis, in which Sociological, Technological, Economical, Environmental and Political factors are examined along with their mutual dependencies:¹ (Szigeti et al., 2011). Other methods and approaches are equally welcome. What is important is that the futures are richly complex and deeply considered.

To afford common ground in the proposed futures, we encourage participants to find inspiration in the Milan Urban Food Policy Pact (MUFPP²) and approach this policy initiative as an enabling constraint. The MUFPP proposes a range of actions that can be undertaken by cities today to transform their food system to be more sustainable. These include 6 categories of actions in governance, sustainable diets and nutrition, social and economic equality, food production, food supply and distribution, and food waste. The human food system impacts all 17 of the UN Global Goals (United Nations, 2019) and pressures all 9 planetary boundaries (Rockström et al., 2009; Willet et al., 2019). It is global in scope, yet plays out in intimate everyday actions, shapes and reflects our cultures, identities, interests and concerns. It thus embodies the scalar tensions inherent in the socio-ecological crises, which are impactful across personal, social, political, ecological and planetary scales. By relating future vignettes to one of the MUFPP focus areas, we can be sure to range across these scales as we focus our matters of concern.

THE WORKSHOP PROCESS

The workshop will begin with a hybrid launch at the Nordes conference, open to all. In this launch, the selected participants will present their future vignettes. For these presentations, we encourage the use of experimental, participatory, performative, poetic means to bring the futures to life both for the conference

¹www.designmethodsfinder.com/methods/steep-analysis

² <https://www.milanurbanfoodpolicypact.org>

participants in Kolding and those co-present online. Short facilitation sessions will enable collective deepening of each vignette. Following the launch, the workshop proper will consist of four 2hr online sessions focused on casting back through design. These sessions will be held on consecutive Fridays, as follows:

SESSION 1; WORLDBUILDING:

Participants work together to converge and develop their preferable futures, asking questions such as: *Which aspects of these futures can co-exist, and how? What are the conflicts, and complications of converging them?* The goal is to congeal 3-5 future worlds that will be collectively developed over the following sessions.

SESSION 2; CASTING BACK TO MOVE FORWARD:

Having built their enriched future world, participants work in small groups to identify 3 major pivot points that led to the development of that world: crucial events, social movements or environmental circumstances that prompted a reorientation. This work should be done from 3 perspectives: that of i) a human actor, who might plausibly exist today, ii) a human actor who would NOT plausibly exist today, and iii) a non-human actor from any timeframe. One pivot point should be common to all three points of view.

SESSION 3; (RE-)NARRATING:

This session will focus on (re-)narrating the story of *living through* one of the pivot points in the history leading up to the envisioned future. The first narration will unfold the subjective perspective of one of the three actors developed in session 2. It should aim to convey: *How it felt to live through the pivot point; the actors' motivations and actions during the event; and the challenges they have overcome in their journey to today.* The story of this pivot point is then (re-)narrated from the perspective of a different actor, and then another, and so on. These narrations can be supported by any medium or combination of media. The aim is to engage a multiplicity of views, and demonstrate the lived subjectivities of these events. As this work unfolds, groups may form and re-form, scaling up or down, in and out in size, focus and concern. The aim is to (re-)personalise, (re-)invest, and (re-)generate other perspectives on pathways, as a way to thicken the understanding of the futures in question.

SESSION 4: MAKING IT TANGIBLE:

In this final session, groups articulate design actions that can be (or are being) embarked on today that will

reorient situated local practices towards the envisioned futures. The aim of this work is to make tangible our thinking around how design can be instrumental in instantiating steps towards envisioned futures, or exert influence on crucial pivot points such that they move from being preferable or even possible, to being plausible (Voros, 2003). Following, we reflect on the potential of casting back through design, and how this work may be developed. This reflection and discussion section is pivotal to the workshop, and we hope will result in a series of action points for furthering our collective inquiry.

AFTER THE WORKSHOP

This workshop is part of an interdependent series of experimental design research inquiries, co-authored by a shifting collective of researchers. We invite participants to join our collective efforts, which are gathered under the moniker of Feeding Food Futures³ (n.d.). In the tradition of previous workshops (e.g. Davis et al., 2020; Dolejšová, van Gaalen, et al., 2020; Dolejšová, Wilde, et al., 2020), we envision a collective publication in which we might gather the futures, reflect on the process and insights derived. The purpose of such a publication would be to extend the reflective process so we might further scale the project of transitioning society forward in ways that are richly informed by critical experimental design processes.

CONCLUSION

Rather than proscribe how backcasting should be done in design, the purpose of this workshop is to experiment with a proposed model for *casting back through design* to preserve radical ways of imagining in what we do to move forward. We approach this effort from a range of scales, building on the hypothesis that casting back through design, through (re-)narration and world-making, can assist us in operationalising societal transition. People recognise themselves in stories, not in theories or diagrams. By developing – and not only backcasting, but recasting – personal stories using experimental design methods, we can build nuanced, context-situated perspectives that are relatable to our preferred future visions, and make first moves in infrastructuring pathways towards them. This combined process of world-making and narrative recasting is designed to give rise to scalable experimental design research methods, that might serve as tools for responding to the urgent, complex, and highly situated challenges we are facing.

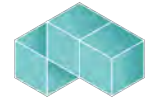
³ <https://foodfutures.group/>

REFERENCES

- Auger J, Hanna J. and Encinas E. (2017) Reconstrained Design: Confronting Oblique Design Constraints. *Nordes* 7(1).
- Bauer, F., Bulkeley, H., Ericsson, K., Hasselbalch, J., Eriksson Lagerqvist, D., Nilsson, L. J., Nikoleris, A., Raven, P. G., Raymer, C., Romeling, A., Bengtsson Sonesson, L., Stripple, J., van Veelen, B. Scaling theories of change in REINVENT case studies. [project report]. [online] Available at: <https://www.reinvent-project.eu/s/D61-Scaling-theories-of-change-updated.pdf> [Accessed 27 Jan. 2021]
- Björgvinsson, Erling, Pelle Ehn, and Per-Anders Hillgren. "Agonistic Participatory Design: Working with Marginalised Social Movements." *CoDesign* 8, no. 2–3 (2012): 127–44. DOI: <https://doi.org/10.1080/15710882.2012.672577>.
- Blythe, M., Andersen, K., Clarke, R. and Wright, P., (2016). Anti-solutionist strategies: Seriously silly design fiction. In Proceedings of the 2016 *CHI Conference on Human Factors in Computing Systems* (pp. 4968-4978)
- Davis, H., Wilde, D., Altarriba Bertran, F. and Dolejšová, M., 2020, July. Fantastic(e)ating Food Futures: Reimagining Human Food Interaction. In *Companion Publication of the 2020 ACM Designing Interactive Systems Conference* (pp. 377-380).
- Dreborg, K.H., 1996. Essence of backcasting. *Futures*, 28(9), pp.813-828.
- Carl DiSalvo, Johan Redström, and Matt Watson, "Commentaries on the Special Issue on Practice-Oriented Approaches to Sustainable HCI," *ACM Transaction on Computer–Human Interaction* 20, no. 4 (2013): article no. 26, DOI: <https://doi.org/10.1145/2509404.2509408>
- Dolejšová, M., van Gaalen, S., Wilde, D., Graham Raven, P., Heitlinger, S., and Light, A. (2020). Designing with More-than-Human Food Practices for Climate-Resilience. In *Companion Publication of the 2020 ACM Designing Interactive Systems Conference (DIS' 20 Companion)*. 381–384.
- Dolejšová M., Wilde D., Altarriba Bertran F., et al. (2020). Disrupting (More-than-) Human-Food Interaction: Experimental Design, Tangibles and Food-Tech Futures. In Proceedings of the 2020 *ACM Designing Interactive Systems Conference*. 993-1004.
- Dubach, I. (2020) Overconsumption and growth economy key drivers of environmental crises: scientists' warning on affluence. *UNSW Sydney Newsroom*. [online] Available at: <https://newsroom.unsw.edu.au/news/science-tech/overconsumption-and-growth-economy-key-drivers-environmental-crises-scientists/> [Accessed 27 Jan. 2021]
- Escobar, A. (2018). *Designs for the pluriverse: radical interdependence, autonomy, and the making of worlds*. Duke University Press.
- Feeding Food Futures. [online] Available at: <http://foodfutures.group> [Accessed 27 Jan. 2021]
- Holmberg, J. and Robèrt, K.H., 2000. Backcasting—A framework for strategic planning. *International Journal of Sustainable Development & World Ecology*, 7(4), pp.291-308.
- Irwin T. (2015). Transition design: A proposal for a new area of design practice, study, and research. *Design and Culture* 7: 229-246.
- Kelly, K., 2010. *What technology wants*. Penguin.
- Le Dantec, Christopher A, and Carl DiSalvo. "Infrastructuring and the Formation of Publics in Participatory Design." *Social Studies of Science* 43, no. 2 (2013): 241–64. DOI: <https://doi.org/10.1177/0306312712471581>.
- Light A. (2019). Redesigning Design for Culture Change: Theory in the Anthropocene. *Design Research for Change*. Design Museum, London.
- Margolin, V. (2018). *The Politics of the Artificial: Essays on Design and Design Studies*. Chicago: University of Chicago Press.
- Poli R. ed. (2019) *Handbook of anticipation: Theoretical and applied aspects of the use of future in decision making*. New York: Springer.
- Papanek, V. (1972). *Design for the Real World: Human Ecology and Social Change*. London: Thames and Hudson.
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F.S., Lambin, E.F., Lenton, T.M., Scheffer, M., Folke, C., Schellnhuber, H.J. and Nykvist, B. (2009). A safe operating space for humanity. *nature*, 461(7263), pp.472-475.
- Szigeti, H., Messaadia, M., Majumdar, A. and Eynard, B., 2011, October. STEEP analysis as a tool for building technology roadmaps. In *Internationale challenges e-2011 conference*, Florence. 26-28.
- United Nations, About the Sustainable Development Goals. [online] Available at: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> [Accessed 27 Jan. 2021]
- Voros, J. (2003). A generic foresight process framework. *Foresight*. 5. 10-21.

- Wiedmann, T., Lenzen, M., Keyßer, L.T. et al. Scientists' warning on affluence. *Nat Commun* 11, 3107 (2020). <https://doi.org/10.1038/s41467-020-16941-y>
- Willet, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A. and Jonell, M. (2019). Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*, 393(10170), pp.447-492.
- wef.ch/risks2021. (2020) World Economic Forum Global Risks Report 2021 [online] Available at: <https://www.weforum.org/reports/the-global-risks-report-2021> [Accessed 25 Jan. 2021]
- Wilde, D., Vallgård, A. and Tomico, O. (2017). Embodied Design Ideation Methods: Analysing the Power of Estrangement. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 5158–70. New York: ACM, 2017.

NORDES 2021



BACKCASTING [BETTER] FUTURES



DANIELLE WILDE
SDU, KOLDING
WILDE@SDU.DK

PAUL GRAHAM RAVEN
LUND UNIVERSITY, SWEDEN
PAUL.RAVEN@SVET.LU.SE

SJEF VAN GAALEN
STRUCTURE AND NARRATIVE
SJEF@STRUCTUREANDNARRATIVE.COM

MARIA KARYDA
SDU, KOLDING
KARIDAMARY@GMAIL.COM

MARKÉTA DOLEJŠOVÁ
AALTO UNIVERSITY, ESPOO, FINLAND
MARKETA.DOLEJSOVA@ALTO.FI

SARAH TRAHAN
SDU, KOLDING
SATR@SDU.DK

WORKSHOP MOTIVATION

We can no longer deny the need to radically and rapidly transform human practices to be more just, inclusive and sustainable. The proposed workshop embodies a shared aspiration to expand the ways that experimental design research steps into this problem space. The work is led by *a desire*, a recognition of *a challenge*, and *a hypothesis*. The desire is to find ways of moving from future visions to new methods for formulating and infrastructuring practices today, while espousing values of inclusivity, equitable access to opportunities for flourishing, and multi-species justice. The challenge is to retain the magic of these future fabulations as we re-scale our vision to pragmatic, situated concerns. The hypothesis is that the approach of backcasting, reinterpreted through means of experimental design methods, may provide some clues for how we might do this.

WORKSHOP LENGTH

Half Day at the conference – hybrid [online and live] launch event, followed by four 2hr online sessions, held on four consecutive Fridays.

TENTATIVE PROGRAMME

The workshop will begin with a hybrid launch at the Nordes conference, open to all. In this launch, the selected participants will present their future vignettes. For these presentations, we encourage the use of experimental, participatory, performative, poetic means to bring the futures to life both for the conference participants in Kolding and those co-present online, and short facilitation sessions to enable collective deepening of each vignette.

Following the launch, the workshop proper will consist of four 2hr online sessions focused on casting back through design. These sessions will be held on consecutive Fridays and will unfold as follows:

SESSION 1; WORLDBUILDING:

In this session, participants work together to converge and develop their preferable futures, asking questions such as: *Which aspects of these futures can co-exist, and how? What are the conflicts, and complications of converging them?* The goal is to congeal 3-5 future worlds that will be collectively developed over the following three sessions.

SESSION 2; CASTING BACK TO MOVE FORWARD:

Having built their enriched future world, participants work in small groups to identify 3 major pivot points that led to the development of that world. Such pivot points may be crucial events, social movements or environmental circumstances

that prompted a reorientation. This work should be done from 3 perspectives: that of i) a human actor, who might plausibly exist today, ii) a human actor who would NOT plausibly exist today, and iii) a non-human actor from any timeframe. One pivot point should be common to all three points of view.

SESSION 3; (RE-)NARRATING:

This session will focus on (re-)narrating the story of *living through* one of the pivot points in the history leading up to the envisioned future. The first narration will unfold the subjective perspective of one of the three actors developed in session 2. It should aim to convey: *How it felt to live through the pivot point; the actors' motivations and actions during the event; and the challenges they have overcome in their journey to today.* The story of this pivot point is then (re-)narrated from the perspective of a different actor, and then another, and so on. These narrations can be supported by any medium or combination of media. The aim is to engage a multiplicity of views, and demonstrate the lived subjectivities of these events. As this work unfolds, groups may form and re-form, scaling up or down, in and out in size, focus and concern. The aim is to (re-)personalise, (re-)invest, and (re-)generate other perspectives on pathways, as a way to thicken the understanding of the futures in question.

SESSION 4: MAKE IT TANGIBLE:

In this final session, groups articulate design actions that can be (or are being) embarked on today that will reorient situated local practices towards the envisioned futures. The aim of this work is to make tangible our thinking around how design can be instrumental in instantiating steps towards envisioned futures, or exert influence on crucial pivot points such that they move from being preferable or even possible, to being plausible. Following, we reflect on the potential of casting back through design, and how this work may be developed. This reflection and discussion section is pivotal to the workshop, and we hope will result in a series of action points for furthering our collective inquiry.

PARTICIPANT ACCEPTANCE CRITERIA

Participants apply with a vignette of preferable futures, considering multiple aspects of the world they wish to portray. The vignette can take the form of text, illustration, video or other media, equivalent to not more than one page, accompanied by a one-page expression of interest. Preference will be given to participants who can commit to all 4 workshop sessions.

PHYSICAL LOCATION

The lead author directs the SOFT Lab at SDU in Kolding and will be responsible for ensuring a workshop venue.

MATERIALS & TECH ASSISTANCE

A small budget, access to kitchen facilities and design materials will be welcome. The first author is based at SDU and can access appropriate studio and food preparation spaces.

HANDLING OF ONLINE PRIVACY CONCERNS

We will work in Zoom and Miro. Participants will be asked to provide consent in advance for any data collection, including video recordings or photographs of the different sessions. They will also be able to sign on anonymously, request not to be filmed or recorded, and control their own video and voice contributions.

—