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Editorial: Design dematerialisation: Opportunities through reduction

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UN reports state that the 2020 pandemic caused little impact to ‘slow climate change’ as Covid-19 was woefully ‘inadequate at transforming our behaviour’. Given the societal and infrastructural stresses Covid has wrought, coupled with the cataclysmic inter-related ecological warnings, evidenced by a succession of devastating ‘once-in-a-thousand-year events’, the Post-Covid era constitutes a new paradigm, providing unique environmental and social challenges for designers to address.

While aspirations for a ‘green recovery’ from the pandemic are yet to materialise as suitably radical policy. Extractive industries and voracious supply chains continue to drive international ecological collapse. Design in all its guises pervasively intervenes materially, culturally, economically and ultimately ecologically. In order to course-correct from a path of ecological collapse, it is imperative that the practices of design are reimagined and overhauled so that designers are able to pursue prospective ecological endeavours (not solely solution driven methods).

Design Dematerialisation can be viewed from a degrowth perspective, as an act to remove material things from the world; a shift in focus from static, material things, to dynamic, living experiences. This is a massive pivot from two centuries of cultural and economic norms that encouraged the transformation of the natural world into human commodities and unwanted by-products back into the natural world as pollution. This one-directional mode of world-making can be characterised as a straight line, with social and environmental destruction built-in at either end.



Design Dematerialisation is a provocation, asking designers a series of fundamental and existential questions: What roles can designers take in recalibrating humanity's custody of the planet? What should the underlying principles of design be, given the scale, complexity and proximity of climate and ecological emergencies? What are the challenges of systems literacy and capabilities to handle such complexity?

Paradigm shifts may be necessary, moving from attempts to circularise economies through design to embracing and ameliorating inevitable futures. The track will be working beyond sustainability and looking at means (as design practitioners & researchers) to work within reductive practices. Conceptual explorations include ideas of: design dematerialisation, design subtraction, design reduction etc., and discover the gaps and overlaps in these approaches.

The track invites proposals on the topic of emerging ideas, roles, activities and responsibilities of design practitioners in a world that must 'positively reduce' impacts on the environments their interventions directly and indirectly affect. A subtractive future is not really concerned with finding efficiencies of current norms but with the strategies, experiences, interactions, shifts, behaviour changes, re-connections and new economies of degrowth. This track seeks to interrogate the interconnection of philosophical, moral, and existential arguments with the concrete and tangible realities of taking and coordinating action in, and through the field and practices of design.

Our contributors span a range of approaches to researching design dematerialisation with two from applied and industrial perspectives including product lifecycles and contamination while two more explore pedagogic insights from a new integrated packaging course through to theoretical insights into undisciplined stewardship towards environmental pedagogy. Alternative hedonism brings new theoretical perspectives on design dematerialisation.

Maginer and Mugge explore consumer perceptions of product lifetime extension strategy and make contributions towards understanding the level of doubt inherent in current consumer attitudes towards strategies for product lifetime extension, while Wallner, Snell, Maginer and Mugge investigate the perception of contamination barriers preventing the purchase of personal medical products and contributes awareness to tackling contamination concerns in a circular economy.

Research from Chile led by Huerta, Cortés and Melo explores extended producer liability legislation and contributes an analysis of diverse student strategies for reducing packaging while Galdon and Hall propose undisciplined stewardship via the notion of deep products making a theory contribution to future design led pedagogy.

Harkness explores post-growth theory theorising around patterns of work and consumption bringing forth a contribution for understanding alternative hedonism and earth practices and their value in underpinning design dematerialisation.

Stitched throughout all of our contributions are contrasting and collaborating perspectives on design dematerialisation highlighting the opportunities, gaps and challenges facing future design theory and practices via applied products, education and theorising. We hope the

sharing and debate around this research begins to set out new terrain, inform direction and ultimately reshape a future for design that abandons the assumption of addition as its core *modus operandi*.

References

- Antoniuk, T. (2004) Object-ive Re-generation – Exploring How Developed Societies Perceive, Use, and Live With High-Tech Sustainable Materials, Objects, and Environments., in Redmond, J., Durling, D. and de Bono, A (Eds.), *Futureground – DRS International Conference 2004*, 17-21 November, Melbourne, Australia. Available at: <https://dl.designresearchsociety.org/drs-conference-papers/drs2004/researchpapers/126>.
- Chapman, J. (2021) 'Meaningful Stuff: Design That Lasts'. Cambridge, MA: MIT Press.
- Fry, T, (2009) 'Design Futuring: Sustainability, Ethics and New Practice'. London: Bloomsbury.
- Hickel, J. (2021) 'Less is More'. Bradford, UK: Windmill Books.
- Kahn, H.P. (2011) 'Technological Nature'. Cambridge, MA: MIT Press.
- Kimmerer, R. W. (2013) Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants. London: Penguin.
- Kuys, B., Velasquez Montoya, M., Thong, C., and Glover, J. (2012) Embedding Sustainability in Product Design Engineering Curriculum: A comparison of needs on an international level, in Israsena, P., Tangsantikul, J. and Durling, D. (Eds.), *Research: Uncertainty Contradiction Value – DRS International Conference 2012*, 1-4 July, Bangkok, Thailand. Available at: <https://dl.designresearchsociety.org/drs-conference-papers/drs2012/researchpapers/69>.
- J. -G. Persson, (1999), Dematerialisation-some implications on product design, Proceedings First International Symposium on Environmentally Conscious Design and Inverse Manufacturing, pp. 61-66, doi: 10.1109/ECODIM.1999.747582.
- Petrides, D., Papacharalampopoulos, A., Stavropoulos, Chryssolouris, P. (2018) Dematerialization and Environmental Sustainability: Challenges and Rebound Effects, *Procedia CIRP*, Volume 72, Pages 845-849, ISSN 2212-8271, <https://doi.org/10.1016/j.procir.2018.03.131>.
- Puig de la Bellacasa, M. (2017) *Matters of Care: Speculative Ethics in More than Human Worlds*. Minneapolis, Min: University of Minnesota Press.
- Tassinari, V., Staszowski E. (2020) *Designing in Dark Times: An Arendtian Lexicon*. London: Bloomsbury.
- Tonkinwise, C. (2004) Is Design Finished? Dematerialisation and Changing Things, *Design Philosophy Papers*, 2:3, 177-195, DOI: 10.2752/144871304X13966215068191
- Verma, A.K. and Prakash, S., 2020. Impact of covid-19 on environment and society. *Journal of Global Biosciences*, 9(5), pp.7352-7363.
- Watson, J. (2019) 'Lo-TEK: Design by Radical Indigenism'. Berlin: Taschen

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