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# Design for Balance: Reimagining Processes and Competences for Sustainable Futures

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# Editorial: Design for balance: Reimagining processes and competences for sustainable futures

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**Abstract**: Design for Balance stimulates the reimagination of our productive, technological, societal and cultural systems, moving away from compensation strategies, which focus on balancing their negative impacts, towards embracing systemic change, which focuses on establishing new balance within their components. Design principles, processes and competencies have contributed significantly to the current simplistic idea of facing sustainability through compensation strategies (e.g., tree replanting to offset carbon emissions). Imagining how design can shift towards reaching a systemic "balance" prompts challenging questions: Which design principles could inform this new paradigm of balance? Which design processes could enable its growth? Which diverse knowledge and competencies are required to design for embracing it? The track reflects on the evolution of design practices, processes and related competencies. The papers selected for this track address both the current gaps and limitations of design but also how the discipline can be reimagined through redefining principles, body of knowledge and systems of competencies.

**Keywords**: Systemic Balance, Sustainable Design Processes, Sustainable Design Principles, Sustainable Design Competences.

## 1. Introduction

In recent years, the world has been confronted with a convergence of crises that underscore the urgent need for sustainable solutions (D'Itria & Aus, 2023). The climate crisis, social insecurities, and economic instability have become pressing issues that demand immediate attention. These phenomena have revealed the interconnectedness of environmental, social, and economic systems and the inadequacy of current approaches to address them effectively (Richards et al., 2021). In the face of these challenges, it has become increasingly evident that traditional design paradigms are insufficient. They often prioritize short-term

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gains over long-term sustainability, exacerbating rather than mitigating the crises at hand. There is a critical need to rethink design paradigms to align with the imperatives of sustainability, resilience, and equity.

This track aims to critically examine current practices in design and propose new principles grounded in the concept of balance. By exploring the limitations of existing paradigms and the need for systemic change, this essay will highlight the importance of reorienting design towards holistic approaches that consider the interdependencies between environmental, social, cultural, and economic factors.

Our objectives are twofold: firstly, to critique the shortcomings of prevailing design paradigms in addressing sustainability challenges, and secondly, to propose a new framework based on the principle of balance. This framework will emphasize the integration of environmental stewardship, social equity, and economic viability to achieve sustainable outcomes. Through a multidisciplinary lens, this essay will examine the potential impacts of adopting a 'Design for Balance' approach across various sectors and scales. It will explore how this paradigm shift can inform design practices, policies, and systems to create more resilient and regenerative solutions.

We seek to contribute to the ongoing discourse on sustainable design by offering insights into the importance of rethinking design paradigms in the face of complex and interconnected challenges. By advocating for a holistic approach grounded in the idea of balance, it aims to inspire transformative action towards a more sustainable and equitable future.

## 2. Theoretical background

In the current landscape of design, there has been a growing interest in compensation strategies as responses to sustainability challenges (Haque & Ntim, 2020; Chaabane et al., 2011). These paradigms focus on mitigating environmental and social impacts through compensatory actions, which may include tree replanting to offset carbon emissions or the establishment of rehabilitation programs for communities affected by development projects (Huusko, 2021). Among the benefits of these strategies is the ability to provide an immediate solution to specific problems, offering a tangible way to mitigate the negative impacts of human activities on the environment and society. However, compensation strategies also have significant limitations. They can shift attention away from the root issues, create a false sense of security, and have unforeseen side effects on ecosystems and local communities. The need for systemic change is strongly emphasized in recent IPCC report[1] and other relevant studies on the climate and environmental crisis[2]. These documents highlight the necessity of addressing the structural roots of environmental and social problems rather than merely treating their symptoms. Systemic change entails a

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[1] https://wwww.ipcc.ch/report/sixth-assessment-report-cycle/
[2] https://www.unesco.org/en/climate-change, https://climate.copernicus.eu/esotc/2023, https://www.un.org/en/climatechange/reports

profound transformation of economic, political, and social models to drastically reduce greenhouse gas emissions, protect biodiversity, and promote social justice.

Traditional approaches to design have been widely criticized for their inability to effectively address sustainability challenges (Fletcher & Goggin, 2001). They have often prioritized short-term profit at the expense of the long-term well-being of people and the planet, thereby contributing to exacerbating the environmental and social crises we are facing (Ceschin,& Gaziulusoy, 2016). This critique underscores the need for critical reflection and a rethinking of the fundamental principles underlying design. The concept of 'balance' in design has historically been present in various cultures and disciplines but assumes even greater importance today in the context of sustainability (Schwaninger, 2008). The idea of 'Design for Balance' proposes integrating balance as a foundational principle in design practices, seeking to harmonize human needs with those of the environment in an equitable and sustainable manner (Singh et al., 2023; (Ceschin,& Gaziulusoy, 2019; Bryson et al., 2009; Parrish, 2007; Thorpe, 2007). This paradigm is based on theoretical foundations that promote consideration of the interconnection between natural and human systems, as well as the notion that human well-being is inseparably linked to the health of the planet (da Costa Junior et al., 2019). The adoption of 'Design for Balance' could have a significant impact on the design of products, services, and systems, encouraging innovative solutions that promote sustainability in all its facets (Schwaninger, 2008). However, implementing this paradigm effectively and on a scale remains a challenge, requiring a deep cultural and structural change in design practices and society as a whole.

## 3. Reimagining Design Through the Lens of Balance

The track welcomed submissions that contemplate the development of design practices, processes, and associated skills. Its objective was to examine design elements that have not effectively advanced sustainable progress. Through scrutinizing their shortcomings, the aim was to reconceptualize these aspects by redefining principles, expanding knowledge bases, and refining competency systems (Bianchi et al., 2022; Lambrechts & Petegem, 2016).

*Exploring the role of design in the new product development process towards circular business innovation: Systematic literature review and future directions* addresses how design strategies in New Product Development (NPD) can promote sustainable and circular innovation, focusing on the integration and challenges of circular design practices. It highlights the importance of design in transformation towards sustainability, examining circular design techniques' effectiveness and adoption barriers, and suggests future research directions to align NPD with circular economy principles.

In *A Theory Instrument for reimagining embodied practices,* the authors utilize Embodied Sensemaking Theory to enhance design processes for social interactions and energy consumption awareness among youth, using tangible 'Theory Instruments'. Through experimental sessions, the paper demonstrates how experiential actions, such as shaping

textiles, can practically apply theoretical concepts, thus helping to navigate complex social and material interactions.

*Repositioning design as the new attractor in sustainability* critiques the conventional trajectory of sustainability in design, proposing a nuanced cartography of sustainability that encompasses four typologies. It argues for a design paradigm that integrates human-nature relationships and affective qualities, suggesting that design could lead alternative and more effective sustainability paths and provide theoretical frameworks to guide future research.

*Reflections on the Usefulness and Limitations of Tools for Life-Centred Design* discusses the application of specific tools like systems and actant maps through autoethnographic workshops using a flat-pack chair case study. It reflects on the tools' utility in promoting systems thinking and identifying knowledge gaps, and evaluates their support for life-centered design in both practice and educational settings.

*Learning from the past: How to apply the circular economy practices of Japan's Edo period to modern society* draws lessons from Japan's Edo period, renowned for its circular economy, to inform modern sustainable practices. By comparing past and present circular practices, it develops a pattern language through workshops, which proves effective for enhancing modern product circularity, and suggests its broader application to contemporary design challenges.

*Activating key principles of systemic design through exploratory prototyping* investigates the use of exploratory prototyping in systemic design processes through workshops, illustrating its benefits in understanding and framing complex systems. It presents how prototyping aids in appreciating system complexities and interdependencies, proposing a revised approach to prototyping that supports the emerging needs of systemic design.

*Reframing radical innovation in pursuit of sustainable futures* explores the role of design in shaping sustainable futures amid advancing technology and social complexities. It highlights the need for radical shifts in design practices to address systemic challenges and proposes reframing radical innovation to better support sustainable transitions.

In *Transitions to Multispecies Futures in the Design Classroom*, design students reimagine a university campus as a multispecies habitat for 2050, engaging with interdisciplinary insights and practical design tasks. The experience reflects on systems change education and the role of design in fostering sustainable futures through post-anthropocentric approaches.

*Learning from Circularity Manifestos. Crafting designerly circular approaches for the upholstered furniture sector* explores how Circularity Manifestos can act as cultural catalysts for public awareness and behavioral change towards circular design. Through case analysis and literature review, it links theoretical frameworks with practical strategies, emphasizing the need for a comprehensive design approach to enhance circularity.

*Starting from scraps: Design reuse assessment of waste materials* delves into the challenges of designing with industrial scraps, emphasizing the co-evolutionary nature of design processes. By examining various industrial cases, it identifies critical inquiry modes for

material assessment, advocating for integrated design phases to improve outcomes and advance sustainable manufacturing practices.

Updating the concept of Sustainable Interaction Design (SID), *Should we re-frame Sustainable Interaction Design? Towards a more holistic sustainability "in designing"* explores its evolution and expands its focus to include social-economic dimensions alongside environmental sustainability. It proposes a holistic approach to design processes that balances environmental integrity with social equity and economic viability, aiming to meet broader sustainable development goals.

## 4. Conclusions

Throughout the contributions we received, we explored various pressing challenges facing sustainability and design in today's world. Overall, there is a shift towards holistic approaches that consider social, economic, and environmental dimensions in design for sustainability. We discussed the limitations of traditional design paradigms and proposed new principles based on the concept of balance. These principles emphasize holistic integration, regenerative practices, and participatory engagement. We also highlighted the need for evolving design processes and competencies to support these principles and advocated for interdisciplinary approaches in design education and practice.

To the design community, we issue a fervent call to embrace these changes wholeheartedly. Let us move beyond the confines of conventional thinking and dare to reimagine design through the lens of balance. Let us commit ourselves to fostering sustainability, resilience, and equity in all our endeavors. By embracing new principles, evolving our practices, and fostering interdisciplinary collaboration, we can unleash the transformative power of design to create a more just, thriving, and sustainable world.

As we conclude, let us reflect on the immense potential of design to positively influence global sustainability efforts. Design is not merely about aesthetics or functionality—it is a powerful tool for driving systemic change. By embracing the principles of balance and adopting a holistic approach, designers can become catalysts for innovation and progress. Together, we can harness the creative power of design to build a more sustainable future for generations to come.

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