

PREFACE

Temporalities of Engagement in Design for Public Spaces

The Focus Section explores the opportunities for temporal aspects of design in public spaces to take a more prominent position in current design research and practice, especially within fields of human-computer interaction, interaction design, and media studies. Currently, a new wave of conversations about time is on the rise, and it is timely. We live in a period of change, from social unrest and refugee crises to pollution and climate change. In this light, our existence can be perceived as more temporal than just a decade ago.

Simultaneously, people's engagement as designers, activists or spectators is growing. Being a designer in this context is understood broadly, in the sense of Simons [1] quote that *"Everyone designs who devises courses of action aimed at changing existing situations into preferred ones"*. Design has come to play an important role in our everyday lives, as more and more professional and non-professional designers, design researchers, the HCI community, design activists, and other communities engage actively in diverse forms of design, shaping the world around us through design thinking [2], urban landscaping [3, 4], experience design [5], or Do-it-Yourself (DIY) movement [6, 7], sustainable design [8, 9], to name a few.

Latour argues that the more matters of fact are turned into matters of concern, the more they are rendered into objects of design [10]. This point is central for participatory projects, as the question of who's concerns and how are these brought forth, is crucial. In traditions, such as participatory design, the focus on temporality is not only about the speed of production or time of interaction, but also the choices that are made, when they are made, and how pressure of time influences the decisions [11]. It is in moments of time that certain concerns are raised ... or not. The present time offers plenty of room for raising concerns and engaging people in design, as long as design processes are thought of with a broader scope and scale of time.

Time and temporality, seen from an engagement perspective, play a role in designing for participation in the cultural sphere through civic engagement, participatory museums, participatory art, as well as in experiences in public spaces like botanical gardens or public libraries. If design is thought of as an activity concerned with transforming something (things, services, organizations, practices, etc.) into a preferred state, then such transformative processes are intrinsically entangled with time, growth, learning, and matters of becoming [12].

Temporalities in HCI and Interaction Design

Hildebrandt, Dix and Meyer noticed the absence of sustained focus on temporal aspects within the HCI community, and called for the workshop on Time Design [13]. They outlined time as a design feature, with a functional role, rather than just a descriptive property of interaction. Drawing on research from fields such as systems design, human factors, and cognitive psychology several application areas were proposed where time aspects are crucial. Renewed sensitization to temporal aspects in interaction design led other researchers to construct frameworks for discussing time.

In [14], for example, the authors distinguish between live time (the time we live by, unfolding in the present), unbroken or continuous time (the time runs in an unbroken interval, but the speed of time passage can be altered), sequential time (implying the chronological order of events), fragmented time (shuffled in time, making random sequences in relation to chronological time) and juxtaposed time (overlapping sequences of time). These time concepts, Lundgren and Hultberg argued, were useful in thinking about time as a design material for common software applications. They implemented a small set of demos to show how to design with time as the design material. In [15], Lindström and Ståhl focus on figuration of patchworking that figures design as entanglements in multiple temporalities.

Another factor that increased the interest for temporality in interaction design is the speed of evolution of interactive technologies. Increased complexity of interactions made temporal perspectives on experiences with interactive technologies into an interesting research focus. Benford et al. [16, 17], for example, use a notion of trajectories, as a way to express the nature of collaboration in multi-users experience or, in creating a slow, deeply engaging interactive games. In [18], Faconti and Massink propose the concept of continuity for researchers on interactions in HCI and *“thinking of interaction over time intervals rather than at discrete points”*. Odom, in [19], takes this further and explores interaction opportunities with slow technologies. Huang and Stolterman [20], propose a way to examine and describe temporal patterns in interaction design, considering their work as initial steps towards awareness of and tools for studying temporality in interaction design research. The paper proposes a tool for analyzing and describing time, using graph-based representation of time and the initial vocabulary that includes six concepts: the elements of time (duration, in-between, frequency, before, session, after), focus (full, aware, removed), attention (high, low), action (speed-up, slow, stop, pause, continue), notification (notice, warning) and intention of use (plan). Finally, Velt, Banford and Reeves [21] present the survey of papers in HCI that use trajectories (understood as coherent journeys through a user experience) as a conceptual framework. They discuss trajectories as a possible emergent HCI theory, in its nature different that the theories inherited from other fields, such as sociology, anthropology, or psychology. A parallel between trajectories and, for example, annotated portfolios [22], or strong concepts [23], all representing ways to bridge between theory and practice in interaction design research, was made.

Temporalities in Cultural Institutions

Our interest in this special focus section was not in exploring interactions or experiences for their own sake, rather, we were looking for relationships between the framings of time and temporalities and design. We have focused primarily on design within and for the public sphere and spaces such as museums, galleries, libraries and urban landscapes.

The new communication forms and organizational shapes that has been introduced by digital technologies has transformed these institutions – and introduced a new temporality to their interaction with society. From this, we have new concepts emerging of organizations that are accessible at all times and in new scales of use. In

the museum field, concepts like the distributed museum [24], the participatory museum [25] and the connected museum [26] show how museums and museum visits are not necessarily fixed to a building or a timeframe of a visit, but can also exist online and on mobile devices in multiple times and spaces such as in the streets and in excavation areas. Museums are therefore becoming more and more social institutions that are accessible from everywhere and for everybody. The same tendency can be seen in archives. This requires their design processes to take into account the new time scales for use. Cultural institutions in this way emergently define themselves in terms of the audience experiences and engagement they provide, and also in relation to the roles they have and can have in society. For example, museums are increasingly connected to health and wellbeing [27] and to community work, equality and social justice [28]. Museums are in this perspective seen as having far many more societal functions than simply to display objects of history, art, and science.

Summary of the Papers Included in the Focus Section

The three papers chosen for the section showcase different and complementary understandings of temporality.

In the first paper "*Move into the open space – the impact of artistic interventions in urban landscapes*," Wróblewska and Borucka discuss the role of incorporating creative engagement into processes of urban and social development using cultural means of action and expression. It presents three examples of artistic interventions in the public sphere focusing on types of participation in these interventions. The work describes how time and temporalities are used and understood in the cultural context, addressing the length of time for the selected projects and actions taken during that time. The paper reflects on how to achieve long-term effects of these and similar actions on the city and urban living. The city and its identity are viewed as a sort of palimpsest with overlapping urban narratives changing over time, but still recognizable so that the present serves as a reminder of both past and future. "*Move into the Open Space*" illustrates how sustained support of artistic interventions in the public space contributes to rich insights, inspiration, and the improvement of urban everyday living.

The paper is anchored in a disciplinary tradition other than interaction design. It is artistic in its expression. Although it does not use the same terminology as the other two papers, it discusses the same time-related themes of continuity, fragmentation, juxtaposition, expressed beautifully through the notion of the palimpsest.

Kautonen's paper "*Conceptual Model of Stakeholders' Investment Engagement in Public Services' Design*", offers an interesting contrast to the first concerning the research area, the topic treated in the paper, and positioning of temporality. The paper addresses challenges of public service design based on the broad notion of co-design. The paper proposes a conceptual model of different stakeholders' investments in design activities, based on the literature analysis and key concept identification. The argument is made that the public sector is undergoing transition towards *New Public Management*, which builds on the central concepts from business practices, to deliver new public services.

Although the aspect of time was not explicitly a part of the research agenda, time-relatedness of cost-justifications repeatedly emerged. This varied from a very short effort to permanent strategic commitment to design. All key interests of the paper (stakeholders, valuation concepts, instruments, metrics, and the public sector), were found to be related to time. The paper concludes with the notion that while temporalities are acknowledged in the instruments and metrics, in the public sector, in relation to stakeholders, temporality seems to be an uncharted territory.

This leaves us with the last paper, Gasparini and Culén's "*Temporality and Innovation in Digital Humanities: The Case of Papyri from Tebtunis*". This paper builds a bridge between time and Design Thinking innovation processes, suggesting diverse temporal notions that help organize and analyze design processes for public organizations when working in multidisciplinary teams. The case describes how the three influential institutions holding papyri from Tebtunis applied Design Thinking to propose a concept for a common platform that aims to change and innovate the way research on papyri is done.

Together, the papers in this focus section represent new and varied perspectives on time in participatory cultures, and design and innovation processes for public spaces. They share a common optimism that focusing on time concerns advances research and practice in their fields.

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References

1. Simon H.A.: *The Science of Design: Creating the Artificial Des.* Issues, 4, pp. 67–82 (1988)
2. Brown T.: *Change by design: how design thinking can transform organizations and inspire innovation*, HarperCollins Publishers, New York, NY, (2009)
3. Fischer P.T., Hornecker E.: *Urban HCI: spatial aspects in the design of shared encounters for media facades* Proceedings of the 2012 ACM annual conference on Human Factors in Computing Systems. pp. 307–316 (2012)
4. Ingram M.: *Washing urban water: diplomacy in environmental art in the Bronx*, New York City Gen. Place Cult., 21, pp. 105–122 (2014)
5. Fosh L., Benford S., Reeves S., Koleva B., Brundell P.: *see me, feel me, touch me, hear me: trajectories and interpretation in a sculpture garden* Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. pp. 149–158 (2013)
6. Caldwell G.A., Foth M.: *DIY Media Architecture: Open and Participatory Approaches to Community Engagement* Proceedings of the 2Nd Media Architecture Biennale Conference: World Cities. pp. 1–10. ACM, New York, NY, USA (2014)
7. Ratto M., Boler M.: *DIY citizenship: Critical making and social media*, MIT Press, (2014)
8. DiSalvo C., Sengers P., Brynjarsdóttir H.: *Mapping the Landscape of Sustainable HCI* Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. pp. 1975–1984. ACM, New York, NY, USA (2010)

9. Fuad-Luke A.: *Design Activism: Beautiful Strangeness for a Sustainable World*, Routledge, (2013)
10. Latour B.: *A Cautious Prometheus?: A Few Steps Toward a Philosophy of Design* (with Special Attention to Peter Sloterdijk), Design History Society Falmouth, (2008)
11. Greenbaum J., Stuedahl D.: *Deadlines and work practices in new media development: its about time PDC*. pp. 70–77 (2000)
12. Stuedahl D., Smørðal O.: *Matters of becoming, experimental zones for making museums public with social media CoDesign*, 11, pp. 193–207 (2015)
13. Hildebrandt M., Dix A., Meyer H.A.: *Time Design CHI '04 Extended Abstracts on Human Factors in Computing Systems*. pp. 1737–1738. ACM, New York, NY, USA (2004)
14. Lundgren S., Hultberg T.: *FEATURE Time, temporality, and interaction interactions*, 16, pp. 34–37 (2009)
15. Lindström K., Ståhl Å.: *Figurations of spatiality and temporality in participatory design and after – networks, meshworks and patchworking CoDesign*, 11, pp. 222–235 (2015)
16. Benford S., Crabtree A., Flintham M., Greenhalgh C., Koleva B., Adams M., Tandavanitj N., Farr J.R., Giannachi G., Lindt I.: *Creating the spectacle: Designing interactional trajectories through spectator interfaces ACM Trans. Comput.-Hum. Interact. TOCHI*, 18, pp. 11 (2011)
17. Benford S., Giannachi G., Koleva B., Rodden T.: *From interaction to trajectories: designing coherent journeys through user experiences Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. pp. 709–718. ACM (2009)
18. Faconti G.P., Massink M.: *Continuity in human computer interaction Presented at the* (2000)
19. Odom W.: *Understanding Long-Term Interactions with a Slow Technology: An Investigation of Experiences with FutureMe Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. pp. 575–584. ACM, New York, NY, USA (2015)
20. Huang C.-C., Stolterman E.: *Temporality in Interaction Design Proceedings of the 2011 Conference on Designing Pleasurable Products and Interfaces*. p. 62:1–62:8. ACM, New York, NY, USA (2011)
21. Velt R., Benford S., Reeves S.: *A survey of the trajectories conceptual framework: investigating theory use in HCI Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. pp. 2091–2105. ACM (2017)
22. Gaver W.: *What Should We Expect from Research Through Design? Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. pp. 937–946. ACM, New York, NY, USA (2012)
23. Höök K., Löwgren J.: *Strong Concepts: Intermediate-level Knowledge in Interaction Design Research ACM Trans Comput-Hum Interact*, 19, pp. 23:1–23:18 (2012)
24. Bautista S., Balsamo A.: *Understanding the distributed museum: Mapping the spaces of museology in contemporary culture*, (2011)
25. Simon N.: *The participatory museum*, Museum 2.0, (2010)
26. Drotner K., Schröder K.C.: *Museum communication and social media: The connected museum*, Routledge, (2014)
27. Dodd J., Jones C.: *Mind, body, spirit: How museums impact health and wellbeing*, Research Centre for Museums and Galleries (RCMG), University of Leicester, (2014)
28. Sandell R., Nightingale E.: *Museums, equality and social justice*, Routledge, (2013)