



Designing with the more-than-human: Temporalities of thinking with care

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ABSTRACT

This one-day workshop brings together HCI researchers, designers, and practitioners to engage with more-than-human temporalities in the context of designing with care. We invite participants to experiment and think with more-than-human time experiences as a starting point to integrate emergent methodologies and practices for more-than-human discourses in design. By using living and once-living media (e.g., fungi, plant and insect specimens, biodesigned artefacts) as starting points for investigating more-than-human temporalities, participants will discuss how a pluralistic temporal approach can offer to the discourse of designing-with nonhuman entities, and how this aligns with emerging HCI research trajectories and concerns.

CCS CONCEPTS

• **Human-centered computing** → **Interaction design process and methods**; *HCI theory, concepts and models*.

KEYWORDS

temporality, care, more-than-human design, biodesign, sustainable HCI, anthropocene

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1 BACKGROUND AND MOTIVATION

HCI is rising to the challenge of producing new methodologies, theories, and practices in the advent of wicked problems [17] brought about by global-scale climate crisis and related complex issues. Consequently, there has been an increased focus in HCI towards more-than-human centred discourses, achieved through research trajectories such as post-human design, animal-computer interaction (ACI), sustainable-HCI (SHCI), bio-HCI and so forth [12, 14, 16]. These fields bring non-anthropocentric values to the fore, and indicate different possibilities to designing for and with more-than-human centred worlds [27]. Exemplary research in this growing area includes the design and implementation of wildlife crossings [25], explorative human-fungi relations [10], the formation of dog internet [5], and participation methods to include nonhumans [7]. However, despite the increased efforts on decentring the human, finding appropriate ways of bringing multi-species agencies into the stage remain a crucial challenge. The exploration of alternative expressions of time in design [13] (which bring to the fore notions of multiple timespans and states of existing within time, among others) reveal relationships of interdependency that become a fruitful way of discussing nonhuman agency and the need for a renewed sense of ethics and care.

The workshop brings together the abundance of perspectives brought upon by multiple temporalities and thinking with care in design. We believe that these notions can help designers to attune better to multi-species agencies in the process of designing-with and contribute to a less human-centred approach in ecologically affirmative design practices.



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2 RELATED WORK

2.1 Time and temporality

Current understandings of time and temporality are shaped by anthropocentric notions (i.e., short-termism and acceleration) [19], and these notions define the effects we have on nonhuman beings and systems, such as landscapes, wetlands, plants, and animals. In HCI, these notions were traditionally manifested by seeing time as something to be measured, added, quantified, applied, and visualized [24] in what could be understood as an early wave of research, one that was focused on using technology to optimise and increase time efficiency [29]. Providing a response to that, a second wave has focused on investigating longer-term human-technology relations [13], putting temporality at the centre [18, 21] and designing for slowness, solitude, and mental rest [13]. However, most recently, a third wave of research is looking at social, and cultural dimensions of time [22], and the limitations of seeing time as a universal and human-centred notion [30], with an increasing trend to consider time beyond the long/short and slow/fast dichotomies, and as emerging out of social, political, economic relations [19]. Within this growing agenda, we emphasize the need to leverage more-than-human temporalities for a pluralistic temporal understanding.

2.2 Multi-species design

Facing a multitude of environmental problems caused by exploitative attitudes towards nature, designers and researchers have been re-evaluating design approaches [25, 27], attempting to become more inclusive of the perspective, experience, and agency of non-human entities. Examples of practices span habitat design [6, 23], toolkits for sensing [10], and technology used by nonhumans [2, 9], among others. When designing within multi-species contexts, the boundary between humans and nonhumans become blurry [25], and assumptions of what is typically human or non-human start to be questioned.

However, when attempting to design for or with nonhumans, we face challenges in going beyond human-centred biases. These challenges may arise due to taken-for-granted narratives of what makes humans unique, and due to assumptions and lack of understanding of other species, e.g. due to narrow research focusing on the behaviour of isolated species, large amounts of expertise in different fields (i.e. biology, cognitive and behavioural science, ecology) required to arrive at more comprehensive understandings of how nonhuman entities experience life, time, and the space around them [12], and challenges to cross disciplinary boundaries [20]. This causes a diminished perspective of other species, which often leads to simple forms of anthropomorphism [9]. Emergent research and practice in HCI, however, are contributing to the accumulation of situational knowledge for the creation of tailored inclusive approaches [3], which are particularly relevant when considering time and temporality.

2.3 Care ethics

Feminist ethics of care emphasize the relationality and interdependency of beings, and have been receiving increased attention in HCI research as a way to de-centre the human in design processes [8]. With the above-mentioned concerns dealing with multifaceted

design challenges, researchers have been focusing on how design and care bidirectionally affect each other. Exemplary research at the intersection of care ethics, HCI and design include utilising micro-situation re-enactments, care-based interactions between users and devices [1, 11], and care as a lens of reflection [15].

Emerging out of relations between different actors and through specific contexts, care can be seen as a situated practice that involves tensions and relationships of power [4]. Analysing care involves understanding who and what is cared for, when they are cared for, and who cares for whom. These questions position care practices in conjunction with temporality leading to a consideration of whose and what kind of time is being taken into account in relationships of care, and what are the tensions that emerge.

3 THEMES AND GOALS

In her "ethics of care", Tronto [26] proposes that "care is everything that we do to maintain, continue, and repair 'the world' so that we can live in it as well as possible. That world includes [...] all that we seek to interweave in a complex, life-sustaining web" [26]. To sustain this "web of life", living organisms develop unique temporalities by negotiating and interacting with other species and their environment, which have their own agencies. This workshop therefore aims to explore the situated temporalities that emerge out of these entangled relationships developed to maintain the 'liveliness' of an ecosystem, in what can be seen as an interdependent relationship of care.

By inviting participants to engage with living and once-living media, and through material speculation [28], the workshop will help construct more pluralistic temporal understandings and explore and integrate different notions of multi-species care as an important aspect of more-than-human design. We will actualize this goals along three interdependent thematic axes:

Expanding notions of time: What are current dominant notions and how can we explore multi-species temporalities to support more pluralistic notions? How and where can designers find multi-species temporal expressions? What kinds of methods and technologies can be utilised in the process? How can these understandings be incorporated into a post-human design practice?

Multi-species agency: How do we situate agency in a multi-species context? How to include this agency in the design process? Whose expertise and knowledge need to be integrated into design discourse to achieve this? How do we reconcile human-centred temporal understandings with the time of multiple species? How do we deal with (unintended) instrumentalism of nonhumans in design studies?

Thinking with care in design: How can care be positioned within these design processes? How does thinking about care expressions and ethics contribute to the way we consider and work with other species? How are care routines performed within a project? How can design research contribute to an understanding of care that is performed towards multiple species?

During the workshop, we will investigate evidence of more-than-human temporalities through these three interdependent themes. Through the lens of care, we will allow participants to experience

and imagine diverse temporalities, and explore how different intentions, agencies, and powers of non-humans and humans influence these relationships and temporalities.

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