

From the Editors-in-Chief

THE VALUE OF SUPERDIVERSE HUMAN-TECHNOLOGY ENTANGLEMENTS

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Abstract: *Human-technology relations are time and place related processes. Today, it is very common to describe human-technology interaction by stating that technology is ubiquitous and permeating all aspects of our everyday lives. This is often compounded by the fact that technological development has been rapid, and it seems to be accelerating. This speed makes the understanding the effects that technology has on us and our lives challenging or even difficult to realise. These kinds of notions have been repeated for decades already. The point here is not to criticize other scholars, but to argue that to reveal the value of quotidian human-technology entanglements we need to focus on the most mundane parts of our lives, scrutinizing something we do not necessary recall nor take notice of. This has been labelled as the “secret world of doing nothing” by ethnologists Billy Ehn and Orvar Löfgren (2010) to describe the most mundane activities of our everyday lives.*

Keywords: *technological development, technology, human-technology, technoculture.*



Sifting Understandings of Technology and the Digital Everyday

Looking back, it is easy to see how the developments in technology have shaped researchers' understanding and interests. In the late 1980's and early 90's researchers understood new technologies, the internet, and developing digital world as a new realm, new entity where different kinds of cultures could evolve. For example, in 1991 Constance Penley and Andrew Ross wrote about *technoculture*, and the need to understand both pros and cons of new technologies. They were concerned about the spread of Western technologies and how this might impact other cultures. They argued that technologies were far from neutral, "like all technologies, they are ultimately developed in the interests of industrial and corporate profits and seldom in the name of greater community participation or creative autonomy" (Penley & Ross 1991, xii). Some scholars criticized the concept of technoculture as being connected to technological determinism, but Penley and Ross have stressed the importance of cultural negotiations before adopting new technologies to limit the westernisation that they might bring. They also have raised the importance of bringing forth different, parallel narratives that can exist simultaneously.

A few years later, anthropologist Arturo Escobar and his colleagues wrote about *Cyberia*, a new cultural order, which described the social changes brought about by computers and information and biological technologies (Escobar 1994). *Cyberia* was seen as a concrete space, clearly distinct from everyday life. From the mid-2000s onwards, online research focused on Web 2.0 thinking, the backbone of which was formed by social media and various applications such as Facebook (Miller 2011) or social games such as Second Life (Boellstorff 2008) and their cultural reviews (Caliandro 2018). The concept of *Cyberia* seems to be constantly evolving, in part due to the development of new platforms such as the metaverse. In 2010s, phenomena such as datafication, big data, and algorithms have become the subject of research (see, e.g., van Dijck 2014; Lehtiniemi and Ruckenstein 2019; Lugosi & Quinton 2018). Researchers have also discussed widely issues of inequalities, power relations, artificial intelligence, and ethical aspects of technology in the online world (e.g., Helsper 2021; Hine 2015; Richardson 2015). These discussions indicate how important understanding and conceptualising time, and temporalities is.

Human-Material Entanglements

Human-technology relations are also part of our material relations, and this materiality is closely intertwined with the social and cultural. Digital technologies have also created a form of materiality, which is not so much 'im/material' but rather "in-material", and we are not always even aware of all the forms of materialities that exist (van den Boomen et al. 2009, 9). For example, software is a kind of materiality incorporated in a physical device that we do not often consider material, because materiality is usually connected to tangible things.

These material relations are also connected to a rather controversial question concerning agency: who possesses the ability to act? In her research, Kristiina Korjonen-Kuusipuro studied both the digital everyday of older adults and young people and learned that the "new digital normal" means different things for different people. On the one hand, older adults are often seen to be at risk of marginalization because of digitalization, and they are encouraged, sometimes even obliged to learn how to use, and use technological devices and services. On

the other hand, younger people are still often referred as digital natives, very competent users of all digital services and devices. With youth, the focus of discourses is often on the time spent using digital devices (so-called screen time), and the level of addiction they may have developed when gaming or just watching YouTube, for example.

Future Avenues for Understanding Superdiversity

We often expect technology to be something magical and we sometimes even believe in “a digital promised land”. However, it has become clear that technology does not bring equal opportunities and possibilities to all (for example, Helsper 2021). When doing research on quotidian human-technology relations, we are faced with *superdiversity*, the diversification of diversity (Vertovec 2007). The concept of superdiversity is usually used in migration or sociolinguistic contexts (for example Blommaert 2013), but Varis and Wang (2011) have used the concept to describe the diversity of the internet as a space where “the diversity is constrained by a complex of normative struggles, as new forms of meaning-making are accompanied with new systems of normativity”. The complexity of human-technology entanglements is overwhelming, and the challenge is how to capture and conceptualize it adequately. From the human viewpoint *techno-anthropology* (e.g., Ruckenstein 2015) might be one solution. On the other hand, from the technological viewpoint human-computer interaction and user experience studies support the discovery of useable and intuitive human technology relations. Together these viewpoints enhance the understanding of human-technology relations and may reveal the hidden patterns people and technologies co-construct in their daily lives.

Even though there are different ways of looking at human-technology relations, what is usually neglected are the various ways how cultural values, norms, practices, and meanings influence these relations. Culture means also sharing, and this sharing may arise from the need of reciprocity, an asymmetry between informal and formal knowledge, or a need to act through local communities, rather than individuals. Understanding differences among communities needs an empathetic understanding, because it is only through empathy that different kinds of experiences and voices can be heard. There is also knowledge that is not or cannot be expressed in a narrative form, with words. This knowledge includes for example bodily activities, feelings, emotions, and affects. These are challenging, but not impossible to research. For example, *sensory ethnography* developed by Sarah Pink (2009) offers one possible means of considering our perceptions, place relations, knowing, memory and imagination. It is also possible to combine sensory ethnography with participatory methods for more collaborative knowledge-making in which discursive, embodied and non-human perspectives that *come into being* in multiple intra-actions (for more about intra-actions, see Barad 2007; about collaborative knowledge-making for example Suopajarvi 2017).

Interestingly, technological imagination, or even daydreaming can have the power to allow people to explore possible futures, the abnormal, and even crazy ideas (see also Ehn & Löfgren 2010; Halse 2013), but also allow them to explore their everyday life as a meaningful subject for research. Sometimes people involved in research projects are skeptical about the significance of their mundane experiences. Therefore, we should also develop ways how we in concretely show people in what ways their experiential knowledge has been used, for example in co-design processes. Ethical issues will need to be carefully considered within

these processes. For example, those who plan technical solutions for older adults often justify them by saying that it may reduce the need to move around the house or reduce their need to visit local services in person, for example. However, this kind of movement could be of vital importance to support the older people's physical and mental activity. Furthermore, data recorded when creating or profiling technology for society should also be handled with caution. Very often they hide traits, perhaps unintentionally, that we seemingly do not notice, and in the wrong hands can be used to build discriminatory mechanisms.

Despite all these technological, social and cultural developments and changes, we still need to stress that technologies are far from neutral. They are results of social processes and include multiple power relations (also Penley and Ross 1991). From the social and cultural point of view, human-technology relations are also about belonging to society. The sense of belonging is central to human experience; it is a relational and dynamic process of emotional attachment that is under continuous (re)negotiation and requires contextualized definitions. Thus, scrutinizing both the human and the technological is of vital importance for equality of digital societies.

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