



Time to re-humanize algorithmic systems

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In *Mushroom at the End of the World* (2015), Anna Tsing argues for telling stories that displace the human as the leading character of world-making. She follows the matsutake mushroom across different sites, making visible current ecological orders and their capitalist underpinnings. When the mushroom takes center stage, alternative futures can be sketched, ones that demonstrate how “multiple futures pop in and out of possibility” (Tsing 2015, 2). Such calls for “post-huma” and “more-than-human” approaches have been voiced across social and humanistic sciences concerning human–nonhuman relations, independent of views of the “nature” of the nonhuman, technology, or animal and so forth. In the world of artificial intelligence (AI), however, the human perspective can be as far-reaching as that of the mushroom. We need more stories that treat people as critical and creative agents in socio-technical transformations and human–machine interaction. We must re-humanize algorithmic systems.

Re-humanizing is a starting point for exploring the agencies at play in algorithmic systems and beyond. The goal is not only to highlight human involvement in technological processes but also to investigate *how* humans are involved and thereby implicated in such processes. In our research program at the University of Helsinki, we highlight humans as promoters, innovators, accomplices, and skeptics of algorithmically mediated world-making. We re-humanize by foregrounding the role of humans in algorithmic systems and related processes to challenge the notion that machines could or should ever work autonomously. In the process, we consistently avoid the term “artificial intelligence,” because it connotes a mechanical power that can operate without any human involvement. While our inquiries bring us to the realm of AI, we remain cautious of ascribing human-like

autonomy, intentionality, and decision-making qualities to machine-based procedures.

Re-humanizing technical systems is of course not a new research endeavor, but it is needed with ever-increasing urgency. With the spread of algorithmic systems from media and health to urban planning and education, algorithms have drifted out of the computational realm to shape the everyday. Credit scoring, hiring practices, allocation of social benefits, social media engagement, health care diagnostics, and student evaluations can now rely on algorithmic logics. Yet, amidst these developments research that seeks to understand how people envision, experience, live with, and promote algorithmic systems remains surprisingly limited. Mundane experiences with algorithmic systems become sidelined, as the “algorithmic drama”, as Malte Ziewitz (2016) characterizes it, energizes the research community.

Algorithmic drama, focusing on the power of algorithms to make decisions about our lives and steer our futures, is fed by an anticipatory stance: AI is “necessarily coming and therefore always demanding a response” (Adams et al. 2009, 249). We marvel at the amazing things that AI is doing: defeating the human in a game of Go, diagnosing rare diseases, and cleverly combining pictures. Optimistic stories of AI are reinforced by speculations of how lives in smart cities, offices, and homes will become more fulfilling as digital technologies pave the way for unprecedented convenience.

In pessimistic scenarios, anticipation turns into a project of loss. Algorithmic systems are treated as external forces that threaten humans and even humanity itself, discussed as if they could capture our societies, thoughts, and behaviors in ways that obliterate any notion of sovereignty or free will. From the pessimistic perspective, whether this is actually the case—let alone how and in which situations—is no longer at stake, as we need to respond to the felt loss by operating in a crisis mode that assumes that the autonomy to define our own aims has already vanished. Both the optimistic and pessimistic future scenarios bypass the role of humans in promoting and practicing future anticipations, taking the affective forces of scenarios at face value.

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1 Making the absent human present

A focus on re-humanizing algorithmic systems emphasizes that futures require constant human efforts to become what they end up being. Professionals nurture an experimental and entrepreneurial attitude, working to confirm that algorithmic technologies align with personal and professional aims as people adopt and adapt them to their requirements. Yet, the substantial computational, design, and marketing efforts that go into creating and promoting algorithmic systems tend to disappear from sight. A vast new realm of data work—the gathering, ordering, cleaning, editing, and labeling of the data that make AI possible in the first place—is also consistently ignored. Little or no emphasis is placed on the active translation and contextualization work conducted by users of products and services. The hours of work that go into adjusting to the requirements of and tinkering with algorithmic systems remain largely unacknowledged.

We need a discussion that stays close to how algorithmic systems shape and seek to transform everyday lives and societal structures. For instance, our earlier work focused on the Finnish data activism initiative MyData, a technologically driven effort to re-humanize the digital environment by means of new data arrangements. We demonstrate how technology developers seek “human-centric” data arrangements, which often translates into development aims by which humans are efficiently tied to human–technology loops. While aiming to re-humanize, technology development has a tendency to dehumanize, as it expects humans to fit into certain prescribed machinic processes. We have also studied “bottom-up AI imaginaries” that focus on content moderators’ notions of a desirable AI system in terms of the human–machine division of labor. We continue this line of work by focusing on social workers’ adoption of algorithmic decision aids and prisoners training AI, querying how humans become participants in AI systems. Our exploration of the humans “behind the chatbots” is also instructive in this regard by making visible how humans interpret human–bot communication by training, manipulating, and supervising chatbots that appear to work autonomously.

Methodological choices are at the core of re-humanizing efforts, as they will influence how we think about present and future possibilities in relation to technologies. We know by now that algorithmically powered technologies are limited in their capabilities to grasp the contingencies of daily lives. Machines can automatically sort and classify large datasets, but they cannot feel or make sense of life. A logical conclusion would be to let go of overly optimistic visions of smart machines, implement systems that actually do what they promise to do, and foster human agency alongside algorithmic operations. When people play the leading role in our inquiry, we can trace their influences, explore their practices, and eventually sketch alternative futures from the ground up, futures that are currently hiding behind curtain in the algorithmic drama.

Curmudgeon Corner Curmudgeon Corner is a short opinionated column on trends in technology, arts, science and society, commenting on issues of concern to the research community and wider society. Whilst the drive for super-human intelligence promotes potential benefits to wider society, it also raises deep concerns of existential risk, thereby highlighting the need for an ongoing conversation between technology and society. At the core of Curmudgeon concern is the question: What is it to be human in the age of the AI machine? - Editor.

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