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Critique Needs Community: On a Humanities Approach to a Civics of Technology

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Introduction

Marie K. Heath and Daniel G. Krutka are the co-founders of the Civics of Technology initiative, a network of critical scholars and practitioners that asks how, as technology continues encroaching in our lives, we can advance technology education for just futures. The project aims to empower students and educators to critically inquire into the effects of technologies on their individual and collective lives. Founded in 2022, the team of primarily social studies and educational technology educators conducts research, develops curriculum, and offers professional development.[1]

Marie is Assistant Professor of Educational Technology at Loyola University Maryland. Prior to her work in higher education, Marie taught high school social studies in Baltimore County Public Schools. Her teaching experiences influenced

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[1] See https://www.civicsoftechnology.org/. Accessed 7 December 2023.

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her research which focuses on the intersection of education, civic engagement, and technology in order to foster social change. She has published articles on technoethics and technosketpicism (Krutka et al. 2019), social justice and educational technology (Heath and Segal 2021), and social action and technology (Heath 2018).

Dan is Associate Professor of Social Studies Education at the University of North Texas. A former high school social studies teacher in Oklahoma City, his research has focused on teachers' professional learning networks (PLNs), but he has increasingly studied how to (a) encourage technoethical approaches to technology integration and (b) critically inquire into the ecological and disproportionate effects of past and present technologies. He also hosts the Visions of Education podcast.[2]

Juliane Jarke is Professor of Digital Societies at the University of Graz, Austria. Her research attends to the increasing importance of digital data in education, the public sector and for ageing populations. Juliane's research is situated in the areas of critical data studies, new materialism, and feminist Science and Technology Studies (STS). She has recently co-edited *The Datafication of Education* (2019), *New Perspectives in Critical Data Studies: The Ambivalences of Data Power* (2022), and *Algorithmic Regimes: Methods, Interactions and Politics* (2024).

Felicitas Macgilchrist is Professor of Digital Education and Schooling at the University of Oldenburg, Germany. Her research explores the cultural politics of educational technology, with a focus on critical, ethnographic, and speculative approaches. Felicitas is co-editor of *Learning, Media and Technology*.[3] Recent co-edited open access books include *Postdigital Participation in Education* (2023), *Schule und Unterricht im digitalen Wandel (Schools, Teaching and Digital Transformation)* (2023), and *Die datafizierte Schule (The Datified School)* (2023).

About the Conversation

This interview is part of the special issue on Designing Postdigital Futures. In June 2023, two of the special issue's co-editors, Felicitas Macgilchrist and Juliane Jarke, discussed the idea of a civics of educational technologies with Marie K. Heath and Daniel G. Krutka. The transcript has been edited for clarity.

Introducing the Civics of Technology

Felicitas Macgilchrist (FM): Thank you for joining us today. On the Civics of Technology website, you introduce the project by saying: 'Technologies are not neutral and neither are the societies into which they're introduced. As technology continues encroaching in our lives, how can we advance technology education for just futures?' (Civics of Technology 2023). Perhaps you can begin by telling us about what motivated you to found this initiative?

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[2] See https://visionsofed.com/podcast/. Accessed 7 December 2023.

[3] See https://www.tandfonline.com/toc/cjem20/current. Accessed 7 December 2023.

Daniel G. Krutka (DK): Civics of Technology maps to our own journeys. We both had an interest in technology, and although we were interested in critical theory and critical thinking, our interest in technology was not particularly critical. We both have a background in social studies, the cross-section of history, geography, economics, politics. We taught in those areas, and there is a lot of social critique in those fields. But that critique didn't always extend to technology. The primary response to technology in schools is basically to integrate it. You're using technology, but not really thinking *about* technology.

Marie and I had met through the social studies field, and as we started going to EdTech conferences in the United States, we increasingly felt uncomfortable about the lack of criticality there. Around this time, probably around 2017, the world started getting more critical about social media, digital technologies, data collection, and all these things, and we also started asking more questions. We also both had our own personal, radioactive spider bite moments that caused us to take a more critical perspective on technology.

For me it was smartphones. I increasingly saw them as problematic in my personal life, as well as society wide. Reading about the ways that smartphones are created, the minerals they require, the labour conditions. And then noticing what my smartphone was doing to my own attention span, to my relationships. That started to make me more critical.

Marie K. Heath (MK): I think our social studies background and our commitment to the humanities is a different approach to EdTech than a lot of our peers. Dan used to have a project called the Social Studies of Everything which was basically taking any object and thinking about the social and historical context of it. We wondered if we could do that with EdTech. This could be what we are really talking about, this need to understand technology through social, historical, etc. lenses in order to be a citizen today. Added to our frustration at EdTech conferences where we were looking for places to learn more about the context of technology and not finding critical theory or questions or methods or any significant strands in those conferences. That certainly informed the creation of the Civics of Technology project.

DK: Google was a core example for me. At the ISTE conferences,[4] huge EdTech conferences in the US, there would be 50 sessions on using Google tools. I went to several of them one year and no one was bringing up the data issues or the idea of surveillance capitalism. There was no discussion at all of this model of monetising our own data against us. Now, I get why people want to use Google resources. But to not even raise the problems or to not have any critical reflection, I found that very problematic.

We wanted to find community around a more critical approach. We wanted to talk to other people who cared about these things. And that's been one of the beautiful outcomes. We put our ideas on the website, and people have been sharing it. We've had all these serendipitous connections where we get to learn with and from other people. Both of us had been looking for that because, you know, critique needs community. We've been able to increasingly find that which is really rejuvenating.

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[4] See https://iste.org/events. Accessed 7 December 2023.

Building Communities and Conversations

Juliane Jarke (JJ): I really like this idea that critique needs community. Could you say a bit more about who is part of that community?

DK: We've met so many wonderful people. As we formed Civics of Technology, we just brainstormed and put out a kind of mission statement, to show the world, look, these are things we care about. Do you care about them too? But we always had the idea that we were willing to change and grow with the people who wanted to work with us. We want Civics of Technology to be a place where if you have an idea, you can put your ideas up on the website too. We wanted a collective curriculum-building, collective activities, and events.

Michelle Ciccone, for instance, is a graduate student at UMass Amherst, and joined us right at the beginning. She just came across us randomly online and started working with us. I met Jacob Pleasants from the University of Oklahoma randomly. Roxanna Marachi is a great example of a trajectory in this community. Our keynotes for the Liberatory Tech Action conference in 2022 were Ruha Benjamin and Sepehr Vakil because we were huge fans of their work, including their critical work with youth (Benjamin 2019; Vakil and McKinney de Royston 2022). At the 2023 conference, we similarly invited Luci Pangrazio, whose work I've been reading for years (Pangrazio and Selwyn 2019). We met Roxana through the community. She came to our '1st Tuesday' tech talks, and when she started talking about data brokers in education, I felt like I was already in a keynote (Marachi 2020). So, we invited her to be a keynote at the 2023 conference.

It was good to find that we were not alone with these interests. But we've also tried to be intentional about inviting people to write things and participate in events. We want to remain aware of our positionalities as white, cisgender scholars working out of academia which influence the way we're thinking about tech, and we hope that a diversity of stories will come out of our project.

MH: I would add one thing that is quite crucial. When we say the 'Social Studies of Everything' or 'Social Studies of Technology', we're thinking not only about individual people, but about many intersecting fields. These are fields that need to be in conversation and work together to critique technology if we want to work toward more just futures. This work requires colleagues coming from different perspectives. It seems obvious in hindsight, but it's been a delight to begin to work with folks in media studies, computer science, and computer science education. It has been awesome to find ourselves in this web of intersecting people, interests, and perspectives. This is growing the community, and it is also growing my own understandings and commitments.

Bringing 'Education' Back into Edtech

FM: That reminds me of your recent piece, 'More than knowing: towards collective, critical and ecological approaches and educational technology research' (Heath et al. 2023). That seems to be a place where you've brought a lot of different perspectives together.

MH: Thank you. The background for that was the observation that in much of EdTech in the US context there's still a dominant paradigm for research, for

understanding technology, for understanding education. And my own critique of that research is that although the word 'education' is in 'EdTech', there is rarely a deep theorisation of education in the field. What happens if we think about the meaning of 'education'? How is education situated in society? What does 'knowing' mean? Who is privileged in that?

There are lots of other fields that have different understandings of knowing or knowledge, but we tend to not use them in EdTech research. This was by no means an exhaustive or deep dive into other fields, but I wanted to write the sort of the article that I wish I had had when I started learning about EdTech. As we write in that article, three of the four authors came out of university programs that were designed to analyse educational technology and yet we had little to no critical preparation in those programs. The article is a search for more expansive ways of thinking about education and technology.

DK: Yes, I thought that was an amazing paper. I learnt so much from it, as I often do in this partnership.

MH: Thank you, Dan. So, the second part of the 'EdTech' is the technology. In a lot of educational tech research, for instance in journals like *Computers and Education*, *Education and Information Technologies*, the *British Journal of Educational Technology, Educational Technology Research and Development*,[5] there is this idea that technology is an intervention into a classroom that will improve learning in whatever small, narrow way. While that may be true, I think it constrains our understanding of what 'just futures' might be. If the goal of the technology is to increase some sort of objective understanding of learning, we box out ways to think about care or about a more humane future. Those priorities are not included in justifications for using technology based on classic understandings of learning and knowing.

So I have been exploring my own personal understanding of what we can do. What actions can we take, what futures are we looking for? I have been finding a lot of hope in writings like Dr. Ruha Benjamin's new book, *Viral Justice*, where she discusses care communities and undertaking small actions where you are (Benjamin 2022). I've been thinking about how we can bring that into EdTech. Next on my reading list is Kelly Hayes and Mariame Kaba's *Let This Radicalize You: Organizing and the Revolution of Reciprocal Care* (Hayes and Kaba 2023). They are models that we could use in EdTech to make a more radical, loving, caring change. But it involves opening up to working outside the field of EdTech to do that.

FM: What I find especially fascinating here is your orientation to the field of EdTech and your humanities grounding. I have wondered recently about the different trajectories that critical EdTech scholarship has been taking in Europe and the US (which is already a very limited geographic orientation). I don't like these nation-based distinctions though, and you have just released a knot in my thinking: Perhaps since the more instrumental, or more learning-outcome based research is so much stronger in the US, scholars like yourselves are coming out of these

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[5] See *Computers and Education*, https://www.sciencedirect.com/journal/computers-and-education, *Education and Information Technologies*, https://www.springer.com/journal/10639, the *British Journal of Educational Technology,* https://bera-journals.onlinelibrary.wiley.com/journal/14678535, *Educational Technology Research and Development,* https://www.springer.com/journal/11423. Accessed 7 December 2023.

programmes which, as you said, don't have a critical orientation, and then you are writing from 'within' the field, and to those kinds of EdTech scholars. Whereas a lot of other critical scholarship is rooted in sociology, where scholars come to EdTech from a critical perspective rather than coming to a critical perspective from EdTech. What I also see strongly in your writing is a humanities perspective on social studies and education, or one deeply rooted in educational theory. You then draw on this to communicate with a specific part of the EdTech community, that part that is globally very dominant and which is very enthusiastic about technology as a solution.

DK: Perhaps it reflects our routes into the field, because in the end we're classroom teachers, right? That's where we started. I had no aspirations to be an academic. I was perfectly happy. I was going to be a basketball coach and a classroom teacher. And then my first job didn't need a basketball coach, so I went to graduate school instead because I didn't have anything to do at night! More seriously, we come to this as educators. When we are looking for how to enact a civics of technology, we think in terms of lessons: What will you do in the classroom?

Some of our early papers, like on technoethics (Krutka et al. 2019), were trying to figure out what we can start doing – right now – in the classroom. We were thinking through critical lessons together. When I talk to teacher candidates, I often just ask them what the term 'educational technology' means. I am frustrated because the field is not asking these questions with us. As Marie said, the very concept of learning is under-theorised and narrow. We think of individual, linear learning of specific content in a lesson, rather than broadening what is thought of as learning and what is thought of as technology. When you broaden these concepts, all of a sudden it becomes clear that we don't just have to *use* technology. Technology becomes an object of inquiry in and of itself, and critical inquiry is needed, especially as technology is increasingly invasive, intertwined with our everyday lives, collecting data, and nudging us towards certain behaviours and futures.

As we are speaking, Apple Vision Pro has just come out. Another technology that's going to put us in goggles and narrow our field of vision. The first inclination in the U.S. is for teachers to say, could this be used in school, how can students use it? Whereas the question we need to ask is: Is this the future we want? It looks like people are rejecting the idea of us all living in a Metaverse. We're figuring out our own futures instead. People are asking what it looks like for us all to have just futures. Those are the questions we need to be asking in classrooms. What do lessons look like, in which we can ask these questions? How do you get students to develop critical dispositions to ask those questions in their everyday lives? That is the challenge.

Hope in Small Radical Acts

MH: I was also sure that I would teach social studies in the classroom. It shocked me that I did not, and have taken this winding path to the place that I'm in now. This was not a future that I had imagined for myself. But to come back to what we were saying earlier about small radical acts, I recall a conversation Dan and I had where he said, you know, teaching is a consistent, small, radical act every single day. There

is a line in *Viral Justice* where Dr. Benjamin says, 'I've tended to teach like my life depends on it' (Benjamin 2022: 23). I feel that deeply. I identify with that as a space, as an educator to consistently make radical, small acts of change every day. That is our audience and those are the roots that guide our work.

DK: And that's where we can find hope, right? Because with the challenges we face, the social injustices, the systemic injustices, the impact of climate change on our communities, all of these anxieties that we have, we have a sense of people wanting to make a more just world. Well, you can find opportunities for hope in a classroom with each lesson. When you work with students, you can find hope really quickly. They are often very interested in these conversations. They often care deeply. They don't fit the stereotypes we have for them. They're very worried about their own smartphone usage and the future of the planet. A lot of them care about racial justice and gender justice. And they think about these things. When you start to talk to them about it, you find a lot of hope in that. If we have anxieties about where technology is taking us, our classrooms are places to change this. That's what we hope comes out of this project.

Ethics Beyond Checklists and Beyond Modernist Enlightenment

JJ: There are so many ways to follow up on this. Let me come back to your comment on technoethics. There has been an expansion of writing and talking about ethics in recent years, but the goal is often just to generate checklists rather than a more critical or generative critique through ethics. What's your take on this?

DK: I agree, checklists can provide an easy option for not doing the work. It's as if people are saying: here's the checklist you're supposed to follow and then not really engaging in the issues. When we wrote the technoethics article, I was watching the television comedy show *Silicon Valley* (Judge et al. 2014–2019).

The very next episode after we submitted was the episode where they created the Institute of Tethics (Technology Ethics), and I felt like, oh, we could have just called it *tethics*. It reflects that point that Silicon Valley has used ethics as a term to get out of doing real justice work. Now, there is nothing inherently wrong with checklists if you're committed to the work. Checklists only work for people who are engaging in the struggle, who are seeking to learn deeply, who are grounded in their commitment to making just futures. But they don't work for the people who are looking for easy answers. With the technoethics approach, we were hoping to generate the start of discussions. From our observations, none of these questions about democracy, ethics, the environment were being asked about EdTech in most U.S. classrooms. Our hope was to initiate a conversation.

JJ: Yes, the checklists suggest that you could just tinker with the technology, produce ethical software, but never actually question whether you want to have the technology within the classroom at all. Your aim is to invite reflections on the politics of technology?

DK: Part of the hope with our technoethics piece was that some people would deem certain technologies unethical and reject them. There are certain cases where, if you think deeply about the options, you should conclude that there are too many problems, we should not use this technology. That's what we were hoping the

method could achieve. Whether it works is a very good question. We have to see whether it is effective or if it allows us to skirt around the most important questions that we have to ask.

FM: That reminds me of a recent piece by Jeremy Knox where he wrote about deontological and consequentialist ethics. He suggests that the trend toward designing ethical principles is closely aligned with deontological ethics.

> Deontology is often focused, although not exclusively so, on rules for moral conduct, for example, determining the 'goodness' or 'correctness' of an individual's actions by examining the extent to which such actions have adhered to underlying laws that define 'good' or 'correct' behaviour. (Knox 2022).

Whereas a consequentialist ethics prioritises the consequences of the design or use of technology irrespective of the actor's intentions. I read your technoethics as more attuned to consequences than principles. Was that important as you were thinking about these issues?

MH: It was the impact of technology that we tried to think through, yes, regardless of intention or design. Although it is important to consider whether the design of a given technology is ethical, because there are intentional ways to design technology either unethically or more ethically. Designing for a never-ending user scroll to maximise engagement is, from my perspective, unethical in intent and should be named as such. However, there are also consequences that are certainly problematic, regardless of whether developers say, 'Oh I didn't mean it to be used that way'. OpenAI, for instance is busy proclaiming that they didn't mean ChatGPT to be used the ways it is, but hey, you dirty humans picked it up in your broken society and chose to use it like that. Instead of recognising from the outset that they are releasing ChatGPT into a broken society (see McQuillan et al. 2023).

This brings us beyond even deontological or consequentialist ethics. Although these are both useful ways of thinking, both are rooted in the modernist enlightenment, influenced by men like Immanuel Kant and Jeremy Bentham. This excludes ideas of Indigenous ethics or postmodern critical thought. These, however, offer powerful ways to think about technology in society. One of the areas I've been reading recently is Indigenous ethics, and particularly Kim TallBear's (2013) work on DNA and Indigenous DNA. She writes about the materiality of objects that can ground a community. For instance, blood and blood quantum laws in the US: who owns blood and in what ways does blood make a person part of a community? If a person hasn't been part of that community but blood tests say that they are, does that make them a citizen of the community?

These are fascinating ways to think about the intersection of ourselves and our bodies and our society and our belonging and technology, which are far beyond any checklist. It requires a whole reframing of what you value and think about in the world. And again, these are conversations that we have not been having, but that we should be introducing as we think about technology in schools, in society, and with children. As we think about what technology means for learning, we need to be asking, as Dan said, what are we trying to grow? Is that the future we want?

To return to your question, I do feel there is use in both deontological and in consequentialist approaches. But I also think that they're familiar to us, writing from

(and speaking in) the Western world. This is a familiar practice: let's make a list of pros and cons. We could do the consequentialist list of impacts, or we could do the deontological list of inherent rightness or wrongness of something (as defined by whom, is the question though). Those are familiar thought patterns. But there are ways of opening up different opportunities, including postmodern, Indigenous ethics and an ethics of care, which have all been part of the conversation less frequently.

DK: Yes, it's always important for us, particularly as white cisgender scholars, to see what questions other communities would ask, particularly those that have been minoritized or whose perspective the tech industry does not consider. For example, should you, as I think I did earlier in my career, tell people to develop professional learning networks through social media? Which means not considering how, for instance, a Muslim woman wearing a hijab is going to get harassed on those platforms. We have to be able to understand that not everyone will have the same experiences with technologies.

One of my favourite podcasts this year was the Sunday show created by Tech Policy Press. They had a really good episode titled 'An Indigenous Perspective on Generative AI'.[6] Michael Running Wolf talked about how generative AI was allowing curators and content creators online to continue the appropriation of Indigenous identities and cultures. He talked about how that was already happening and what it would look like going forward. He raised questions that I had not thought of when I saw the problems of generative AI. This is all part of intentionally developing a diverse, inclusive community committed to justice. I have to be able to ask difficult questions about areas that don't directly affect me. If we're moving towards just futures, it's not only our own. It has to be for everyone or it doesn't work.

Reclaiming Design from Design Thinking

FM: I believe this takes us to the core of design. You've mentioned being intentional a few times now, for instance, intentionally seeking out perspectives, intentional community-building, intentional ethics, etc. How then does 'design' play a role for you? Is design a word that you work with? If so, how do you understand design? What does the concept do for you?

MH: I love this question because it's *not* a word I use often. I have to admit, I always had some sort of gut negative reaction to the word. I was wondering why I find the word distasteful? I have encountered it a lot in partnering with my computer science colleagues. The word conjures images of someone trying to lead or force me down a path or design my future for me in a way that imagines there's some kind of control. I instinctually shy away from that image. I prefer a much more open-ended possibility of unfolding. Now, I have read Sasha Costanza-Chock's book, *Design Justice* (2020), which I liked. It's more about hackathons, discotheques, and the idea of emergent kinds of communities. Again, I'm noticing a theme in this conversation for myself! Your questions keep bringing me back to small communities, to being-with, and to emergent thinking.

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[6] See https://techpolicy.press/an-indigenous-perspective-on-generative-ai/. Accessed 7 December 2023.

Also, when I read your article, Felicitas and Juliane (Macgilchrist et al., 2023), I felt it had the vocabulary and theories for the gut reaction I mentioned. It's *design thinking* that specifically feels teleological. Design thinking, and the associated work that loops design into innovation and entrepreneurship, implies there is an endpoint. It implies that if we do this thing here, then work through that thing there, we will achieve this particular goal. That approach feels like design-as-control, as opposed to a vision of design which centres care and storying. The latter recognises that, as you wrote, there is no such thing as designing 'from scratch', because every 'from scratch' is embedded within some other ideas that are already formed. That baseline where the scratch started. If I have any more positive thoughts today about design than I used to have, it is because of your critical reflection and reframing of the concept. But I still want to reclaim the word from that teleological, control-oriented kind of use.

DK: Yes, one of the reasons for a kind of revulsion to the word is because it has been so marketed in the US, like the 'everyone needs to code' movements. And I wonder: do we all need to code? Why would we need to learn that? It's the imposition of a kind of machine thinking. Similarly with computational thinking, which is a weird term. Do we need to think like computers? Whereas now we can see more human-centred thinking in a lot of the strong critical scholarship that's emerging. We mentioned Ruha Benjamin earlier, but also work like Tricia Hersey's *Rest is Resistance* (2023), which is resisting the technical culture that demands us to be on 24/7 and to constantly participate.

But given the lack of critical work prioritising this human side of design, especially in the US context, it makes sense that we have a natural inclination to push back against design because it's been marketed at US schools within the frame that everyone needs to have science, math, and computer thinking. Without that, you will fall behind in our capitalist society. For our Civics of Technology initiative, it's good when people from science, math and technology come into our field because they can really help us grow and learn. We don't feel like we have to participate in technical design processes because we're humanities, although in reality, we actually do. That has been a great area of growth. Jacob Pleasants is a good example (Pleasants et al. 2019). He comes from a science education background and is really into asking these critical questions. He can start getting into the technical aspects in ways that I wouldn't.

Humanities' Understanding of Technology

JJ: That leads me to a quick follow up question about computational thinking and whether you actually need to know, let's say, how technology works—even if we only understand it to a certain degree—in order to unpack or demystify the black box so it doesn't become this mysterious package that can fulfil all promises. With the recent conversations around generative AI, I feel that a lot of people are starting to become interested in the inner workings of technologies, precisely because it has been promised as something that's going to radically change everything. Would you say there is a need for computational thinking in order to understand how machines work?

MH: I don't know about computational thinking, but for me, the idea of everyone learning to code finally resonated when I understood that to be an informed citizen and to understand and care about our communities, you do need to know what an algorithm is. You don't need to know how to code one, but you do need to understand how it works. To your point: yes, to demystify. So that I understand why I'm seeing what I'm seeing. I like the stochastic parrots' article by Emily Bender, Timnit Gebru and colleagues (Bender et al. 2021). They explicitly caution both scholars and the public to avoid confusing natural language processing with actual natural language. It's an algorithm. It's not a human. It's not a being that you are in conversation with. It's just math happening in the background that doesn't care about or respond to you at all. Overall, I think that you're right, that this is perhaps the reason that everyone needs to learn to code or to understand what coding is. We interact with algorithms constantly every day. For me, it is less important to know how to write code and become a coder. But understanding the impact on our individual and social lives is important.

DK: I recently wrote an article with Jacob Pleasants and Phil Nichols, where we tried to think about the different components of thinking about technology (Krutka et al. 2023). We came up with this iceberg metaphor. We said you have to understand three categories: the technical, the psychosocial (the psychological and the social), and the political. Now, I will generally focus on the psychological and social aspects of, for instance, generative AI: How does it affect us as individuals when we interact with these things? How does it affect our society? And the political aspects: Who makes the decisions? Those are humanities questions.

In thinking through the technical, it's made me search out sources like the stochastic parrots article (Bender et al. 2021). I had to read a lot to have a very, very small understanding of the technical. I'm never going to understand the technical in deep ways, but I felt I had to understand the 'machines are taking over' narrative that the tech industry wanted us to fear so that we would concede their notion of the inevitability of it. I need to do enough to understand that we were getting fed a lot of bullshit. I just don't think as a society, every student needs to understand how complex technical systems work.

Living a Good Life with Technology

FM: I would like to ask one final question. You wrote a blog piece on living a good life with technology, based on Albert Borgmann (Krutka 2023). What would a good education with technology look like?

DK: I wrote that blog because Albert Borgmann had recently passed away. I had read some of his thinking about technology and wanted to highlight his legacy (Borgmann 1984). Albert Borgmann was very focussed on the philosophical question of what it means to live a good life. It's easy to forget that question, although a lot of critical scholars ask a similar question, through the lens of, for instance, how the bias embedded in code can affect people's day to day experiences. To make Borgmann's work as simple as possible, it was thinking about whether a given technology helps me to move towards the things I value. Most of us value family. We value relationships in our community. We value things like that. Borgmann's point was that many technologies promise to make things more efficient.

We know all the marketing that they're going to save women labour, as Ruth Schwartz Cowan (1984) showed in *More Work for Mother*. Borgman's argument was that some burdens are not actually bad. For example, you may be able to order the manufactured technical dinner and then no one has to cook dinner. But maybe cooking dinner with your family is actually something that makes your life better. I really appreciated him asking those questions about what makes a life worth living. He helps us think through whether technology actually enhances the things that are most important to us. Of course, there's no one single good life for all of us. We have to ask these questions collectively and from intersectional perspective around technology. How do we make sure we can all live good lives? That means addressing justice issues.

MH: Yes. I really like the idea of thinking about technology through lenses of care or community or healing. With technologies that help us work toward things we value. And asking that question: is this the future we want? And then thinking about ways to take back, to democratise, to reclaim technologies. I'm thinking about groups like those in Detroit who have taken back surveillance technology or others who have hacked technologies in order to raise money to listen to police scanners, to hear who's been arrested and then raise money for bail.[7] I imagine us finding ways to hack a technology, to reclaim it and use it to undermine or defy or dismantle oppressive power structures. And then in the perfect world, that would not be necessary anymore. And then we would just have technologies of care and healing and community.

FM: I appreciate those lenses very much. I've long been inspired by the idea of 'convivial technologies', technologies for the good life (Illich 1973; Vetter 2018). But then my inner sceptic jumps in and reminds me to be cautious about the potential closures if the new concepts become hegemonic.

DK: Yeah, critical engagement is ongoing. One thing Borgmann, Cowan and the groups that Marie mentioned, as well as other critical thinkers, have thought about, is the force of technology. One of our statements at Civics of Technology is 'technologies are not neutral'. There are obvious ways that bias is embedded into tech. But we don't often think of technology as having a force. I say that trying not to be too deterministic, and I am not stripping us of agency. These thinkers point out that it is great to have central heating and air conditioning. Yet something is lost when the family stove where you all had to sit around together to get warmth disappears and you all disperse around the household. Something is lost when technologies push us in certain directions. It's easy to be down the road before we realise that we're in a place we don't want to be.

For many technologies, once we start to think critically about them, we can realign our values in relation to the technology. You can do that by saying, well, we should spend time sitting around together closely as a family. And you can make sure that happens instead of everyone being dispersed in their own rooms, with one person on their tablet, the other person streaming something, a third person on social media.

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[7] See, for instance, the Detroit Community Technology Project (https://detroitcommunitytech.org/) and the Appolition app which rounds up e-commerce transactions and sends the difference to the National Bail Out network (https://www.digitaltrends.com/cool-tech/appolition-bail-jail-app/). Accessed 7 December 2023.

Technology providers want us constantly on their technologies. They want our lives to be consumed by their tech. We can, however, choose to reassess our values. I think many of us want to be back in communion with other people in meaningful ways that move us towards a better world.

JJ: That is a beautiful final sentiment. Thank you so much for taking the time to join us today.

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