CybORGs. Cybernetic Organisms and Cybernetic Organizations

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Abstract

This essay is a short reflection — part memoir, part professional update, and part provocation — that was offered at the 25th anniversary of the Center on Organizational Innovation in November 2024.

Keywords: Innovation; disability; interdisciplinary; design; work.

For those that don't know me, my name is Laura Forlano and I am a professor in Art + Design and Communication Studies at Northeastern University in Boston. I am a disabled social scientist and design researcher. In some of my recent work, I use "disabled cyborg" to discuss the ways in which both my technologies — an insulin pump and sensor system — and myself are disabled. This term — both as personal identity, professional persona and theoretical intervention — is a continual reminder to embrace imperfection — both in ourselves and in our technologies. In the face of our constant push for innovation — for example, AI-driven medical advances — technologies will continue to fail because they are social. Or, to put this a different way, the very basic notion from science and technology studies that humans shape technology and technology shapes humans in complex, socio-technical ways.

Riffing on the title of my new book *Cyborg* (2024), I will call this little provocation "CybORGs".

First, I want to thank David and the organizing committee for bringing us all together. The 25th year of COI is a very special occasion, and, given the events of this week only a few days after

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the November 5th, 2024 election, it is even more clear why reflecting on organizing diversity, joining together in community, and harnessing our creative imaginations for the development of technologies and co-evolving forms of organizing that support just and equitable futures is *Starkly* needed[1].

My years at Columbia were bookended by two unexpected events. September 11th was my very first day as a Ph.D. student in communications; and, the 2008 stock market crash marked the last. Given the interdisciplinarity of the program, in the years in between, I was able to take courses in a range of disciplines — learning about how these distinct fields made sense of innovation as well as about the cultures and habits of each field — sometimes from the Listservs. For example, the journalism students were always losing their favorite pencils. Business school students arrived 30 minutes early for class with a large Starbucks coffee and the Wall Street Journal; when class started, the women began shopping for Gucci bags and the men started betting on sports teams. Architecture students arrived an hour late; then, 30 minutes later, they disappeared for another 30 minutes to go get an artisanal coffee in the basement of Avery.

Early that semester, in the *Organizations and Interactive Technologies* course in 2001, which Paul-Brian TAed, David set the tone for what we were all doing there together. "Oh, no. I am not here to fill you up with knowledge," he said. We had our work cut out for us! One of the many readings from the class that stuck with me had the subtitle: *Does Saying "Hi" Really Matter?*, which traced the relationship between the increase in e-mail communication and the decline in overall organizational communication (such as "water cooler conversations"), which is relevant to what I will talk about today.

1 Cybernetic Organisms

At that time, I was studying the relationship between portable computing, the proliferation of wireless Internet and "remote work", which after the pandemic — a mass disabling event with many people suffering from long COVID, is something that we all now have a lot of experience with. In 2011, my research took a more personal turn when I was diagnosed with Type 1 diabetes. While it took time to assume a new personal and professional identity, I've found, in this experience, new ways of knowing and being, new research interests, and new communities. This has greatly influenced my ideas about what counts and who counts in terms of where to put my energy.

According to the poet Jillian Weise, disabled people are the only real cyborgs — everyone else is a tryborg.

Along these lines, I would like to share some early results from research with the Disability Alliance at Northeastern that I am doing with my doctoral student Eunju Pak. While, on the whole, remote work is something that greatly benefits disabled employees; in fact, it is something that disabled people have been advocating for many years with great difficulty. According to the Bureau of Labor Statistics, only 17.9% of disabled people were employed in 2020 as compared with 61.8% non-disabled people that were employed in 2020. As a result, many disabled people are also poor.

Universities (and other institutions) are now struggling to navigate the balance between in person and remote work. Generally speaking, as we know, faculty have much greater agency than staff in choosing when/where they work and this flexibility is often distributed along the

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1. Please forgive my pun and playful use of Stark's name here. The creative and memorable deployment of language is something that I always greatly appreciated during my time at Columbia.

lines of race, gender, ability and class causing significant tension between employees. And, as a result, disabled people are once again having to advocate for more flexibility — sometimes successfully and sometimes less so (often depending on their manager) — and many people are needing to quit their jobs or, even, drop out of the workforce entirely or retire early.

In in-person meetings, disabled people may need to take breaks, sit in ways that are comfortable and/or take notes in ways that better suit their access needs. But, they risk being berated or shamed for these behaviors. Even in Zoom-only settings, neurodiverse people might prefer to be "camera-off" in order to conserve energy, prevent burnout and/or focus their attention. Yet, these seemingly mundane decisions often result in ableist shaming i.e., statements that you are not here if you do not have your camera on, you are effectively not present. Without providing opportunities for disabled faculty, staff and students to participate meaningfully in work and organizations, we are losing out the benefits of disability as an asset in critical/creative thinking. Rather than "inclusion", we should move towards a model of solidarity in support of new ways of being/doing that will likely benefit us all.

2   Cybernetic Organizations

Provocation #1: So, how to create new organizational norms/forms to support these diverse ways of living/being with a focus on disability and human difference? What is the role of the new technologies i.e., Teams, Slack, etc. in mediating these new configurations? Will universities be able to recalibrate in order to improve in person interactions for those that are on campus while also allowing for greater flexibility for all?

Provocation #2: I've spent much of the last twenty years importing and exporting theories and methods from one field to another; usually importing Science and Technology Studies (STS) theories to design and using design methods inventively in order to think through ideas: "making and doing" as we say at the 4S conference. But, in order to do this well, it's very important to know when you are importing and when you are exporting. I've found design to be a very open field in which there is even a sense that it's OK if you never do the same thing twice, which seems to differ greatly from other fields, which claim to focus and narrow your disciplinary expertise over time.

But, how open and interdisciplinary can knowledge really be at the doctoral stage? How can we cultivate the peripheral vision or "double vision" that is required for innovation?[2] I'm currently struggling with this question while leading and teaching in a new practice-based PhD program in Interdisciplinary Media and Design with over 52 fully funded students that have joined in the last three years. The students are focused on about 5 clusters of topics: human computer interaction (HCI), games, art, design + architecture, communications and journalism.

Provocation #3: I completely agree with Pablo Boczkowski's point from yesterday that the rise of computational data has resulted in universalist frameworks, diagrams and models such as "digital twins" that are abstracted and lacking in qualitative richness. This is certainly true in the design field with the rise of systems diagrams (again). But, my friends, the map is not the territory. We know this as social scientists and, in particular, those that use rich qualitative and ethnographic research in order to bring our field sites to life. This is an area where the field of

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2. A reference to Stark's discussion of "double vision" and "peripheral vision" as being essential for innovation in academic research as well as organizational innovation as described in his latest edited book *Practicing Sociology* (2024).

design, despite having incorporated ethnographic methods over twenty years ago with the shift to human-centered design, has an opportunity to grow and deepen our quest for understanding how people make sense of the world (and not merely their needs or pain points). At the same time, sociology and related social science and humanities disciplines might expand their modes of inquiry by further incorporating visual methodologies such as sketching and diagramming, physical methodologies such as prototyping and performative methods such as role-play and experiential futures.

I will close with a few of the things I learned by being part of COI in the early years:

1. There is no substitute for good conversation, good meals and good wine in forming communities (so many people and institutions forget that they need to break bread together — heck, in most of my meetings, we do not even have time to eat[3];

2. When a good idea lands on you, no matter how strange, it's your responsibility to *REcognize* it and take it where it needs to go[4];

3. Great titles and playing with language matters (and I was glad to see this highlighted in the new book);

4. If it's not fun, just don't do it;

5. I probably still don't know what I'm *SEARCHing* for, but I'm getting very close (Stark, 2011).

3 Postscript

After delivering these reflections, our panel — consisting of myself, Pilar Opazo and Gernot Grabher — used brightly colored cotton yarn in coral, mint and violet to weave together the conversation in the room. The set up for this (small) design intervention was fairly easy. At the beginning, I held the coral-colored ball of yarn in my hands and anyone that wanted to follow up on something that I said would ask for the color yarn. Then, each of the speakers would continue holding onto the yarn until multiple people were tangled in the web. Ultimately, many people wanted multiple balls of yarn because the conversation was interdisciplinary and cross-cutting as one would expect. This was a playful way to visualize the intellectual connections (and, perhaps, power dynamics) in the room. Similarly, the presentation at the beginning of the day used quantitative data to map the community's intellectual connections, thematic interests, citational synergies and innovative trajectories. Overall, the COI reunion was an energizing example of the very principles that animated the early work of the Center: a ritual experience of rich and generous intellectual exchange within a trusting community.

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3. In fact, in our household, when we go about deciding what to eat for dinner, my husband sometimes refers to "the Starkian method", encouraging us to try something new or different (though I must confess that I once saw David eat an egg salad sandwich for lunch twice in a row).

4. A reference to Stark's definition of innovation and related concepts of search and recognition, which he often sketched on the whiteboard in class in 2001 and later published in *The Sense of Dissonance* (Stark, 2011): "The fundamental challenge is the kind of search during which you do not know what you are looking for but will recognize it when you find it" (p. 1).

References

Forlano, L., & Glabau, D. (2024). *Cyborg*. Cambridge, MA: The MIT Press.

Stark, D. (2011). *The Sense of Dissonance: Accounts of Worth in Economic Life*. Princeton, NJ: Princeton University Press.

Stark, D. (2024). *Practicing Sociology: Tacit Knowledge for the Social Scientific Craft*. New York, NY: Columbia University Press.

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