

Foreword by Morgan Klaus Scheuerman

In *Machine-Readable Faces: Pixels, Proxies, Praxes* by Cristina Voto

I often recall an extremely transformative moment in my life as a researcher. I had just published my first paper in my new life as a PhD student, titled “How Computers See Gender”¹, and was now giving a talk on it at my department’s weekly seminar. In this work, I critically interrogated how ‘gender’ is classified by computer vision models. Inspired by Joy Buolamwini and Timnit Gebru’s *Gender Shades*, I audited commercially available models to understand how accurately they classified gendered faces, extending this analysis beyond the typical analysis of ‘men’ versus ‘women’ to explicitly include trans and non-binary faces. I argued that these systems are *inaccurate*, particularly in their complete inability to recognize ‘non-binary’ concepts.

The approach I took in my work—claiming that a system was zero percent accurate for non-binary faces—had greatly upset a more senior computer science student in the seminar. He began to argue with me that this finding was erroneous, the system cannot be called inaccurate if it is tested for something it was never trained to do in the first place. I retorted that this was precisely the point of the work: that classification is not inherently true, but political. As I attempted to bridge epistemic gaps between my constructivism and his positivism, I felt further and further pushed into a corner where his reality was the only one that could be correct. No discussion could turn the tide; Philip Agre’s “Critical Technical Practice,”² in which he describes his ‘waking up’ from the ‘constricting’ cognitive style of AI, was of no use. As Agre aptly wrote: “*AI people find it remarkably difficult to conceptualize alternatives to their existing repertoire of technical schemata.*” In fact, I had faced exactly what he articulated: “*a demand to express disagreements with the existing language within the existing language itself.*”

I feel that moment was one that transformed the way I thought about research, as something highly fragmented not just by disciplinary epistemology, but by worldview. Knowledge is a discursive exercise. Machine learning has intentionally,

¹ Morgan Klaus Scheuerman, Jacob M. Paul, and Jed R. Brubaker. 2019. How Computers See Gender: An Evaluation of Gender Classification in Commercial Facial Analysis Services. *Proc. ACM Hum.-Comput. Interact.* 3, CSCW, Article 144 (November 2019), 33 pages. <https://doi.org/10.1145/3359246>

² Agre, “Toward a Critical Technical Practice: Lessons Learned in Trying to Reform AI.”

discursively positioned itself as a *science*, embracing the power imbued with ‘technical’ and ‘positivist’—even though the exercise of predicting human behaviors, classifying human features, and segmenting intangible concepts into discrete labels is, from my point of view, a constructivist endeavor.

When I first met Cristina, we had already been doing work in the same topic space for a couple of years—divided likely only by the frustrating gulf commonly, ironically, formed in the academy even between those of us with similar constructivist worldviews. Once more, the gap arises: discipline.

Much of my own work has been focused on building bridges from the social sciences and humanities to computer science, trying to demonstrate how the human and the social should not be pursued as a purely technical or pragmatic task to be solved for. In doing so, I have often tried to simplify and make more tangible the philosophical concepts present in feminist theory, queer theory, social constructionism, and phenomenology. But we have also (or should have, at least) moved past starting our interdisciplinary conversation standing on the island built by and for the machine learning field. We should not have to be backed into a corner, trying to encourage a computer science PhD student to consider Agre’s point about questioning the discursive repertoire underlying a restrictive technical schema.

Rather than simplify concepts for the computer scientist, Voto uses *The Machine-Readable Face: From Proxies to Praxes* to dive headfirst into the philosophical. She speaks first to the philosopher, and perhaps last to the applied computer scientist. In doing so, she lays out—through engagement with philosophers like G. W. F. Hegel and Bruno Latour, critical theorists like Judith Butler and Frantz Fanon, modern artists like Shinseungback Kimyonghun and Jake Elwes, and contemporary AI ethicists like Ruha Benjamin and Kate Crawford—how the treatment of the face in computer vision is a recursive loop that reinforces a politics of recognition.

Though I had forgotten myself when reviewing the proposal for the book, Voto had reminded me that I had apparently asked a question I thought might spur some reflection or inspiration: “Does the use of the face as data in machine learning inherently change images of the face in any way?” Poignantly, this book delves

into how the face is transformed into a proxy, a 'unit of decision'³ operationalized for a technical system that we, as humans, then adapt, mold, and respond to. As articulated on page 69, "Portraits are no longer singular inscriptions but elements of a persistent dossier that circulates within biometric archives and computational datasets." If our images are fodder for the machine, the very meaning of what an image means to us as humans changes – our family photographs, our visual memories of our loved ones, take on a second, more insidious meaning as they are uploaded to the web and scraped as data. Our desire to preserve the faces of those important to us as humans may implicate those important to us in systems of surveillance and oppression. Or, as quoted on page 132: "It's not a person anymore, it's just pixels."

The Machine-Readable Face provides readers with a new imagining of the politics and power underlying computer vision, tracing the digitization of the face through semiotic operative praxes. It shows how something so intimate as the face, our face, is viewed as but an allographic schema for the sake of computation: reproducible, copiable, spreadable, for the sake of someone else, for the sake of a computational task. While certainly of fascination to the theorist, nearly thirty years later, I also hope that the computer scientist can do what Agre laid forth and engage with this book, to "turn to other, nontechnical fields for inspiration," to dive into the philosophical rather than the computational.

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³ Page 8