

From Performativity to Performances: Reconsidering Platforms' Production of the Future of Work, Organizing, and Society*

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Abstract


This essay takes as its starting point Gernot Grabher and Jonas König's (2020) piece, "Disruption, Embedded. A Polanyian Framing of the Platform Economy," and suggests focusing on how digital platforms are realized on the ground. We propose that the people experiencing platformization have a strong influence over the futures that platforms can evoke. To illuminate this interplay between people and platforms, we offer a taxonomy of three ways that people intervene in how platforms produce the future: innovation, articulation, and opposition. In doing so, we build on Grabher and König's essay to enrich the analytical and predictive power of their framework. Moreover, we provide the beginnings of a theoretical framework of our own — namely, a sociology of people's performances and their role in future-making — which we believe can contribute to ongoing discussions on the future of work and organizing.

Keywords: Platform; performance; performativity; technology; work; determinism.

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1 Introduction

Determinism haunts today's rhetorics on the future of work, organizing, and society (Collins, 2018; Lebovitz et al., 2020; Orlikowski & Iacono, 2000). Claims of a coming and predestined future, be it one dominated by entrepreneurship, startups, precarity, markets, or artificial intelligence, fill the pages of even the most neglected corners of the Internet. In reflecting on these claims, Gernot Grabher and Jonas König (2020) shine a light on an important and often under-acknowledged dimension of the future of work and organizing: that it is produced (Beckert, 2016; see also Bourdieu, 2000; Emirbayer & Mische, 1998; Tavory & Eliasoph, 2013), rather than an inevitability of the flow of history (Arendt, 1959). In particular, they focus on the role that digital platforms¹ play in producing this future. They depict these platforms as intervening in the extant social order and evoking new arrangements amid market and state structures that have been primed to receive them well: a description that strongly alludes to, and which scholars might gloss as, these platforms' performativity (e.g., Callon, 2007; MacKenzie & Millo, 2003; Muniesa, 2014).² Grabher & König (2020) thereby attempt to break the veneer of objectivity which often accompanies perspectives on the future: an excellent foundation for interrogating how platform models construct potential futures.

Building on this foundation, we suggest an addendum. While Grabher and König acknowledge the influence of technologies, markets, and the state on society, and also admit that institutions like the state may contest platforms and the transformations they produce, we draw attention to how society is not only a recipient of, but also a participant in, these changes. Specifically, we highlight the people on the ground who constitute society, and receive and live through platformization. These people — though often overlooked by scholarship on organizational and institutional change (Hallett et al., 2009) — deploy, use, and realize these platforms. In other words, they may agentially react to these “occasions for structuring” (Barley, 1986), in ways that produce variance in what the future may look like.

In this brief essay, we map out the specifics of our theoretical extension. We describe literatures across the field of work, organization, and technology studies which have advocated for looking at people, and flesh out the analytical approach they propose. We then present various instances of its empirical manifestation, marshalling the insights of a set of field studies which have alluded to and witnessed related practices in the wild. In doing so, we ground and concretize our discussion, demonstrating specific ways by which factoring in this extension might enrich Grabher and König's (2020) analysis. Our ultimate aim is thus to not only build on, reconsider, and extend Grabher and König's framework, but to also provide a theoretical

1. Grabher & König's (2020) usage of the term “platform” spans from gig-economy platforms to large Internet companies like Google or Facebook. Tartleon Gillespie (2010, p. 349) points out that like other structural metaphors, “platform” carries a “semantic richness” which allows it to resonate with meaning across the semantic categories of architectural, figural, computational, and political application. For our purposes, we use “platforms” primarily in the computational sense, i.e. “an infrastructure that supports the design and use of particular applications, be it computer hardware, operating systems, gaming devices, mobile devices, and digital disc formats.”
2. While Grabher & König (2020) do use the term “performativity” in their article, they use it to describe mechanisms behind the economy's receptivity to platform futures, and not to frame the role of technologies in shaping social worlds. However, Grabher and König's overall description of how the future is produced resembles performativity, as described above. Of note, Grabher and König discuss extant market and state structures in ways that resonate with an overlooked, though absolutely crucial, piece of theories on performativity: the fact that nonhuman actants (e.g., models, technologies) can perform social orders only when existing structures are organized in such a way as to receive them well (Callon, 2007). This attention to extant structure, in part, is what separates performativity from theories on self-fulfilling prophecies (Merton, 1948).

framework of our own: one that shifts our attention from platforms' performativity to what we refer to as people's performances, in ways that we hope will provide fresh insight on how the future is produced.

2 An Alternative Lens: From Performativity to Performance

Gaining an understanding of how platforms may change the world requires that we also look at how people experience the dramatic institutional changes in work and organizing that these platforms evoke. A variety of literatures engage in this project. For instance, the inhabited institutions perspective (e.g., Barley, 2019; Bechky, 2011; Hallett & Ventresca, 2006) has noted that the meanings that people attribute to change may have important implications for its perceived legitimacy, and thus how widely (and deeply) field-wide transformations spread (e.g., Lee & Bechky, 2020). The interactionists (e.g., Blumer, 1969; Goffman, 1959; Tavory & Fine, 2020) have likewise pointed to how social orders are constantly negotiated among their members, and how attention to the full range of interactants may have important implications for how social orders play out and transform. Even further, the social construction of technology perspective (e.g., Bijker et al., 2012; Oudshoorn & Pinch, 2003) has explained how technologies do not unidirectionally affect social worlds or necessarily move on their own, but are influenced and intimately shaped by the people that develop and use them.

Applied to platforms, these literatures shift our attention from technological performativity toward what some past scholarship (e.g., Stark, 2009; 2017; 2020) labels as people's "performances." This lens calls attention to people's astounding capacity to encounter, reflect on, and actively deal with (see also Hodson, 2001; Simpson, 1989; Vallas & Christin, 2018) the uncertainty of how their world is changing. It thereby allows for people's ability to co-exist with and answer technologies' performativity with appraisals of and responses to the worlds these technologies adumbrate. And in so doing, this lens can help draw attention to how people creatively interact with and work alongside the nonhuman actants that populate and shape our worlds, in ways that can help carve and/or clog the future. Essentially, this lens — and the variety of literatures that allude to it — point to the possibility that people on the ground will respond to prompts from nonhuman actants and structures around them, in ways that may fundamentally shape these prompts' effectiveness at performing social orders.

3 Empirical Manifestations: Performances in the Wild

In the next section, we review recent literature to gather several on-the-ground behaviors which exemplify the performances of people working with, for, and against technologies, illuminating some of the ways people help produce our future(s) of work and organizing: our capacity for innovation, articulation, and opposition.

3.1 Innovation

One part of the production of the future has been innovation: instances where people have been creatively inspired by their experience working alongside and with platforms, motivating their reflexivity and stimulating their ingenuity in ways that ultimately produce novel solutions to problems posed by their work. In a series of studies, Daniel Beunza and David Stark (e.g., Beunza, 2019; Beunza & Stark, 2004) explore this while studying the work of bond traders. These traders extensively use platform technologies, such as their Bloomberg terminals, and

the financial models these platforms produce to access the market (see also Knorr Cetina & Bruegger, 2003) and deduce the vagaries of the financial future. However, intuiting opportunities within these markets — a central part of their work — requires that traders actually *not* perform precisely what their technologies and models recommend. Arbitrage instead demands that traders look at these platforms' blind spots, and take advantage of the areas that the models they are exposed to may have overlooked: it “requires another cognitive process that we can think of as re-cognition (making unanticipated associations, reconceptualizing the situation, breaking out of lock-in)” (Beunza & Stark, 2004, p. 373). In other words, these models and the markets they represent induce reflexivity: traders must step out of the patterns recommended by their Bloomberg terminals or the Black-Scholes equation. And given that they must imagine and enact innovative ways of approaching markets, traders produce the future by not only relying on the use of platforms, but also flouting such platforms. Financial trading thus provides an intimate look into how platform technologies may not determine the future, but rather are subject to the innovations of those inspired by them to help determine what the future might be.

3.2 Articulation

Another part of the production of the future has been articulation: instances where people have actively worked to integrate platforms into the flow and texture of everyday life, thus allowing these platforms the impact that otherwise would not be possible without this hidden human labor (Jackson, 2014; Star & Strauss, 1999; e.g., Elish & Watkins, 2020). In other words, workers play a crucial role in co-creating the new worlds of work that these platforms attempt to usher in. Workers on the micro-task platform Amazon Turk maintain a suite of tools outside of what the platform offers, including third-party vendor management platforms, Excel spreadsheets, and technologies for social and peer support: all marginal and often invisible tasks that are nonetheless critical to them being able to do their work effectively, and that are crucial to the continued effectiveness of the platform at producing high-quality work for clients (Gray & Suri, 2019). In another example, gig-work drivers in Jakarta have built richly populated labor networks to share informational and emotional support (Qadri, 2020). This allows them to work around the fact that their daily experience of work often leaves them atomized and individuated, instead helping them to figure out how to navigate the platform and maintain their motivation to stay on it in ways that ultimately scaffold the platform's success at providing rideshares for users. And in a suburb outside Chicago, delivery drivers for Amazon, reverse-engineering the platform's location-based methods for assigning jobs, have begun to hang their phones in trees, in what AI researcher Meredith Whittaker (2020) has called “folk tradecraft.” Doing so allows them to not only get around some of the technical shortcomings of the platform in assigning work (and get more work), but also provide the kind of rapid service that users have come to expect from Amazon and prop up its reputation.

Another area of articulation work revolves around the emerging phenomenon of biometric security. Given that platform-based gig work operates without human managers or keycards needed for access, platforms are beginning to explore the use of facial recognition as a form of identity verification. For instance, Uber and Amazon have both begun asking for “selfies,” which workers are required to submit to the platform before they can log on to the platform and begin working. However, as Elizabeth shows in a series of studies (Watkins, 2020a; 2020b), the technology often fails: drivers on ridesharing platforms are locked out of the platform due to system errors. Over a third of drivers (38%) surveyed report that the technology breaks down

frequently. And in order to survive, drivers have had to try and repair these system breakdowns. Specifically, drivers have often found workarounds, with some showing the camera an image of themselves using another object such as a printed-out photo or a photo on another device. And in thereby gaining access to the app, these drivers participate in articulation work: they not only gain access to the app in ways that enable them to do their job and allow for their own survival, but also get the platform to work and provide the kind of service expected from prospective clients. Social worlds are ultimately determined, not solely by platforms, but by the local interactions between the technology and the workers, who do the labor of repairing these technologies' shortcomings. Workers provide the hidden human labor that bridges between these technologies and their social worlds, making possible (or, articulating) the disruptions they attempt to evoke (see also Irani & Silberman, 2013; Rosenblat & Stark, 2016).

3.3 Opposition

Yet another part of the production of the future has been opposition: instances where people have pushed back against platforms, in ways that contest and thereby shape visions of how our social world should look. Kate Kellogg, Melissa Valentine, and Angèle Christin (2020) provide a compelling framework by which we might look at such contestation. Notably, they introduce the notion of “algo-activism” to elucidate the variety of ways that both individuals and collectives have resisted the rise of algorithmic technologies. In one compelling empirical manifestation of this, many have criticized the technocratic values of software companies, as codified into their products and used the world over, for producing objectionable futures. For instance, Safiya Noble (2018) writes about accusations against Google of racism and inattention to the dignity of racial minorities. Specifically, she notes that internet searches through its platform, using the search term “Black girls,” elicited pornographic results. And in following the public outcry that ensued throughout the early 2000s, Noble writes that Google reshaped its platform, carving out an alternative future for its participation in age-old social and racial inequalities. And carrying this same spirit forward, activists have recently begun agitating against companies producing facial recognition services for commercial and state-based application: services which have been shown to function poorly when shown images of Black, Indigenous, people of color (BIPOC), and in particular women of color (Buolamwini & Gebru, 2018). Consequently, a number of cities around the United States have either banned or placed restrictions on the use of facial recognition by public entities, such as police departments.³

In another example of platform contestation, Kevin interviews music composers, as part of a broader ethnographic study on a startup developing an artificially-intelligent digital platform that composes music (e.g., Lee, 2020). He discovers that some music composers have opposed artificial intelligence's rise across their industry. They have pointed not only to the threat that artificial intelligence poses to their livelihoods, but also to its violation of their community's values: their commitment to music's human touch, and to their craft as an intimate form of human expression. Consequently, many composers have resisted by blocking the rationalized futures that artificial intelligence promises: some composers have vehemently refused to use artificial intelligence in their work, and have passionately critiqued people — including members of their own community — who do. And while Kevin discovers vulnerabilities in this community's opposition — namely, composers' willingness to automate forms of their work which they view as less valuable, interesting, and human — even their acquiescence is an active

3. The advocacy group Ban Facial Recognition has created a website cataloguing the state of facial recognition legislation across the United States, available here: <https://www.banfacialrecognition.com/map/>.

accomplishment. It is constituted by their ability to appraise oncoming technologies in light of incumbent values, and to consent only when these technologies allow for desired futures. So-called deterministic technologies are thereby met with human agency, in ways that can oppose and shape the social worlds that might otherwise proceed from these technologies.

4 Conclusion: Performances in a Performed Society

Our essay began by praising Grabher & König (2020) for drawing attention to the various ways by which the future of work and organizing is produced, while also suggesting an addendum: a close look at the people living through and experiencing platformization, pointing to the potential salience of people's performances in the face of platforms' performativity. And by showing how people might innovate, articulate, and oppose platform futures, we show a handful — though certainly not an exhaustive list — of skilled performances that people engage in, and which, in conversation with platforms, have a strong influence on what kinds of futures are produced. We believe this extension can enrich the analytical and predictive power of Grabher and König's framework. Moreover, we provide the beginnings of a theoretical framework of our own — namely, a sociology of people's performances and their role in future-making — which we believe can contribute to and play a role in framing ongoing discussions on the future of work, organizing, and society.

Such discussions have long been core to our mandate as sociologists; the discipline began by studying the dramatic transformations in work, organizing, and society that wracked the Western world at the dawn of the twentieth century, ranging from the rise of bureaucracy to the increasing division of labor to the disorienting advance of urban life. Moreover, contemporary scholars — confronting yet another set of major transitions in work, organizing, and society — have faced “the same challenge that confronted the field's founders: the need to develop images of organizations that are congruent with the realities of work in a new economic order” (Barley & Kunda, 2001, p. 77; see also Barley et al., 2017; Bechky, 2011). If anything, recent events have made this call all the more important and urgent. Ours is an exciting, if often terrifying, age (Phillips, 2020): one wracked by the rise of political populism and polarization (Hochschild, 2016), the passionate protest of age-old social inequalities (Lamont, 2018; Milkman, 2017), the birth of technologies beyond our predecessors' wildest imaginations (e.g., Beane, 2019; Sachs, 2020; Shestakofsky, 2017), and a global pandemic (Esposito et al., 2020), the likes of which have not been experienced in living memory.

Amid all these dramatic changes, it is perhaps tempting to envision ourselves as caught up in institutional transformations beyond our will, control, or intervention. Adopting this perspective of powerlessness absolves us of the anxiety of responsibility for these transformations. Given the sheer amount of anxiety that defines our modern era (e.g., Weber, 1904), such a respite from anxiety may be welcome, if not actively sought out. However, adopting this perspective also willfully forgets our collective capacity to confront structures, be they organizations, technologies, ideologies, or political leaders, among others. It erases our important role in how our societies come to be, undermining the energy, optimism, and passion required for an active citizenry and healthy democracy (Arendt, 1959; Tocqueville, 1835). Acknowledging our capacity for skilled performances in such a chaotic and contested world thus becomes far more than an analytic or academic exercise. Rather, this acknowledgement holds within it the weight of our lives and possible future(s): our ability to provide “unsponsored analysis of the social arrangements enjoyed by those with institutional authority” (Goffman, 1983, p. 17), to

unveil the fragility of the structures that attempt to shape who we are, to mobilize hope, and to inspire attempts at harnessing the flow of history.

References

- Arendt, H. (1958). *The Origins of Totalitarianism*. New York: Schocken.
- Barley, S.R. (1986). Technology as an Occasion for Structuring: Evidence from Observations of CT Scanners and the Social Order of Radiology Departments. *Administrative Science Quarterly*, 31(1), 78–108. <https://doi.org/10.2307/2392767>
- Barley, S.R. (2019). Working Institutions. In T. Reay, T. B. Zilber, A. Langley, H. Tsoukas (Eds.), *Institutions and Organizations: A Process View* (pp. 12–32). New York: Oxford University Press.
- Barley, S.R., Bechky, B.A., & Milliken, F.J. (2017). The Changing Nature of Work: Careers, Identities, and Work Lives in the 21st Century. *Academy of Management Discoveries*, 3(2), 111–115. <https://doi.org/10.5465/amd.2017.0034>
- Barley, S.R., & Kunda, G. (2001). Bringing Work Back in. *Organization Science*, 12(1), 76–95. <https://doi.org/10.1287/orsc.12.1.76.10122>
- Beane, M. (2019). Shadow Learning: Building Robotic Surgical Skill When Approved Means Fail. *Administrative Science Quarterly*, 64(1), 87–123. <https://doi.org/10.1177/2F0001839217751692>
- Bechky, B.A. (2011). Making Organizational Theory Work: Institutions, Occupations, and Negotiated Orders. *Organization Science*, 22(5), 1157–1167. <https://doi.org/10.1287/orsc.1100.0603>
- Beckert, J. (2016). *Imagined Futures: Fictional Expectations and Capitalist Dynamics*. Cambridge (MA): Harvard University Press.
- Beunza, D. (2019). *Taking the Floor: Models, Morals, and Management in a Wall Street Trading Room*. Princeton (NJ): Princeton University Press.
- Beunza, D., & Stark, D. (2004). Tools of the Trade: The Socio-Technology of Arbitrage in a Wall Street Trading Room. *Industrial and Corporate Change*, 13(2), 369–400. <https://doi.org/10.1093/icc/dth015>
- Bijker, W.E., Hughes, T.P., & Pinch, T. (Eds.). (2012). *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge (MA): The MIT Press.
- Blumer, H. (1969). *Symbolic Interactionism: Perspective and Method*. Berkeley: University of California Press.
- Bourdieu, P. (2000). *Méditations pascaliennes*. Paris: Seuil.
- Buolamwini, J., & Gebru, T. (2018). Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification. In *Proceedings of the 1st Conference on Fairness, Accountability and Transparency*, (pp. 77–91). Available at <http://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf>

- Callon, M. (2007). What Does It Mean to Say That Economics Is Performative? In D. MacKenzie, F. Muniesa, & L. Siu (Eds.), *Do Economists Make Markets? On the Performativity of Economics* (pp. 311–357). Princeton: Princeton University Press.
- Collins, H. (2018). *Artifical Intelligence: Against Humanity's Surrender to Computers*. Hoboken: Wiley.
- Elish, M., & Watkins, E.A. (2020). Repairing Innovation: A Study of Integrating AI in Clinical Care. *Data and Society*. <https://datasociety.net/library/repairing-innovation/>
- Emirbayer, M., & Mische, A. (1998). What Is Agency? *American Journal of Sociology*, 103(4), 962–1023. <https://doi.org/10.1086/231294>
- Esposito, E., Stark, D., & Squazzoni, F. (2020). Society after COVID-19: An Editorial Note. *Sociologica*, 14(1), 1–2. <https://doi.org/10.6092/issn.1971-8853/11015>
- Gillespie, T. (2010). The Politics of “Platforms”. *New Media & Society*, 12(3), 347–364. <https://doi.org/10.1177%2F1461444809342738>
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*. New York: Doubleday.
- Goffman, E. (1983). The Interaction Order: American Sociological Association, 1982 Presidential Address. *American Sociological Review*, 48(1), 1–17. <https://doi.org/10.2307/2095141>
- Grabher, G., & König, J. (2020). Disruption, Embedded. A Polanyian Framing of the Platform Economy. *Sociologica*, 14(1), 95–118. <https://doi.org/10.6092/issn.1971-8853/10443>
- Gray, M.L., & Suri, S. (2019). *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass*. New York: Harcourt.
- Hallett, T., Shulman, D., & Fine, G.A. (2009). Peopling Organizations: The Promise of Classic Symbolic Interactionism for an Inhabited Institutionalism. In P. Adler (Ed.), *The Oxford Handbook of Sociology and Organization Studies: Classical Foundations* (pp. 486–510). New York: Oxford University Press.
- Hallett, T., & Ventresca, M.J. (2006). Inhabited Institutions: Social Interactions and Organizational Forms in Gouldner's Patterns of Industrial Bureaucracy. *Theory and Society*, 35(2), 213–236. <https://doi.org/10.1007/s11186-006-9003-z>
- Hochschild, A.R. (2016). *Strangers in Their Own Land: Anger and Mourning on the American Right*. New York: The New Press.
- Hodson, R. (2001). *Dignity at Work*. New York: Cambridge University Press.
- Irani, L.C., & Silberman, M.S. (2013). Turkopticon: Interrupting Worker Invisibility in Amazon Mechanical Turk. In W. E. Mackay, S. Brewster, & S. Bødker (Eds.), *CHI '13: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 611–620). New York: ACM.
- Jackson, S.J. (2014). Rethinking Repair. In T. Gillespie, P.J. Boczkowski, & K.A. Foot (Eds.), *Media Technologies: Essays on Communication, Materiality, and Society* (pp. 221–239). Cambridge: The MIT Press.

- Kellogg, K.C., Valentine, M.A., & Christin, A. (2020). Algorithms at Work: The New Contested Terrain of Control. *Academy of Management Annals*, 14(1), 366–410. <https://doi.org/10.5465/annals.2018.0174>
- Knorr Cetina, K., & Bruegger, U. (2002). Global Microstructures: The Virtual societies of Financial Markets. *American Journal of Sociology*, 107(4), 905–950. <https://doi.org/10.1086/341045>
- Lamont, M. (2018). Addressing Recognition Gaps: Destigmatization and the Reduction of Inequality. *American Sociological Review*, 83(3), 419–444. <https://doi.org/10.1177/2F0003122418773775>
- Lebovitz, S., Lee, K.W., Watkins, E.A., Bechky, B., & Kellogg, K.C. (2020). Artificially Intelligent Futures: Technology, the Changing Nature of Work, and Organizing. *Academy of Management Proceedings*, 2020(1). <https://doi.org/10.5465/AMBPP.2020.1993osymposium>
- Lee, K.W. (2020). *Augmenting or Automating? Breathing Life into the Uncertain Promise of Artificial Intelligence*. Working Paper.
- Lee, K.W., & Bechky, B.A. (2020). *Anachronization: Loss through Changing Work, Organizations, and Institutions*. Working Paper.
- MacKenzie, D., & Millo, Y. (2003). Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange. *American Journal of Sociology*, 109(1), 107–145. <https://doi.org/10.1086/374404>
- Merton, R.K. (1948). The Self-Fulfilling Prophecy. *The Antioch Review*, 8(2), 193–210. <https://doi.org/10.2307/4609267>
- Milkman, R. (2017). A New Political Generation: Millennials and the Post-2008 Wave of Protest. *American Sociological Review*, 82(1), 1–31. <https://doi.org/10.1177/2F0003122416681031>
- Muniesa, F. (2014). *The Provoked Economy: Economic Reality and the Performative Turn*. London: Routledge.
- Noble, S.U. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: New York University Press.
- Orlikowski, W.J., & Iacono, C.S. (2000). The Truth Is Not Out There: An Enacted View of the Digital Economy. In E. Brynjolfsson & B. Kahin (Eds.), *Understanding the Digital Economy: Data, Tools, and Research* (pp. 352–380). Cambridge: The MIT Press.
- Oudshoorn, N.E., & Pinch, T. (2003). *How Users Matter: The Co-Construction of Users and Technologies*. Cambridge: The MIT Press.
- Phillips, D. (2020). An Open Letter to Young Scholars on the COVID-19 Crisis. *Columbia Business School Ideas at Work*. <https://www8.gsb.columbia.edu/articles/ideas-work/open-letter-young-scholars-covid-19-crisis>.
- Qadri, R. (2020). Algorithmized But Not Atomized? How Digital Platforms Engender New Forms of Worker Solidarity in Jakarta. In A. Markham, J. Powles, T. Walsh, A.L. Washington

- (Eds.), *AIES '20: Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society* (p. 144). New York: ACM.
- Rosenblat, A., & Stark, L. (2016). Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers. *International Journal of Communication*, 10, 3758–3784. Available at <https://apo.org.au/sites/default/files/resource-files/2016-10/apo-nid202756.pdf>
- Sachs, S.E. (2020). The Algorithm at Work? Explanation and Repair in the Enactment of Similarity in Art Data. *Information, Communication, & Society*, 23(11), 1689–1705. <https://doi.org/10.1080/1369118X.2019.1612933>
- Shestakofsky, B. (2017). Working Algorithms: Software Automation and the Future of Work. *Work and Occupations*, 44(4), 376–423. <https://doi.org/10.1177%2F0730888417726119>
- Simpson, I.H. (1989). The Sociology of Work: Where Have the Workers Gone?. *Social Forces*, 67(3), 563–581. <https://doi.org/10.2307/2579528>
- Star, S.L., & Strauss, A. (1999). Layers of Silence, Arenas of Voice: The Ecology of Visible and Invisible Work. *Computer Supported Cooperative Work (CSCW)*, 8(1-2), 9–30. <https://doi.org/10.1023/A:1008651105359>
- Stark, D. (2009). *The Sense of Dissonance: Accounts of Worth in Economic Life*. Princeton: Princeton University Press.
- Stark, D. (2017). For What It's Worth. In C. Cloutier, J.-P. Gond, & B. Leca (Eds.) *Justification, Evaluation and Critique in the Study of Organizations. Contributions from French Pragmatist Sociology* (pp. 383–397). Bingley: Emerald.
- Stark, D. (Ed.). (2020). *The Performance Complex: Competition and Competitions in Social Life*. New York: Oxford University Press.
- Tavory, I., & Eliasoph, N. (2013). Coordinating Futures: Toward a Theory of Anticipation. *American Journal of Sociology*, 118(4), 908–942. <https://doi.org/10.1086/668646>
- Tavory, I., & Fine, G.A. (2020). Disruption and the Theory of the Interaction Order. *Theory and Society*, 49, 365–385. <https://doi.org/10.1007/s11186-020-09384-3>
- Tocqueville, A.D. (1835). *Democracy in America*. New York: Penguin.
- Vallas, S.P., & Christin, A. (2018). Work and Identity in an Era of Precarious Employment: How Workers Respond to “Personal Branding” Discourse. *Work and Occupations*, 45(1), 3–37. <https://doi.org/10.1177%2F0730888417735662>
- Watkins, E.A. (2020a). Took a Pic and Got Declined, Vexed and Perplexed: Facial Recognition in Algorithmic Management. In M. Bietz & A. Wiggins (Eds.) *CSCW '20: Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing* (pp. 177–182). New York: ACM <https://doi.org/10.1145/3406865.3418383>
- Watkins, E.A. (2020b). *Facial Recognition and the Fairness Heuristic: Interactional Perceptions of Equity, Transparency, and Justice*. Working Paper.
- Weber, M. (1904). Die protestantische Ethik und der “Geist” des Kapitalismus. *Archiv für Sozialwissenschaft und Sozialpolitik*, 20, 1–54.

Whittaker, M. [@mer__edith] (2020). The folk tradecraft of workers observing and assessing opaque algorithmic management systems then modifying their behavior in response is both heartbreaking and impressive “people’s research.” [Tweet]. *Twitter*, 1 September. https://twitter.com/mer__edith/status/1300878248059056134.

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