

SRE and Justice

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Not yet at its midpoint, 2020 is already an unforgettable year. This article will appear in the fall edition of *login*: but was drafted in June, three weeks after the tragic death of George Floyd. The Black Lives Matter movement is at the forefront of current events, eclipsing even the ongoing pandemic. By the time you read this, the news cycle may have changed again (to what is anyone's guess), but right now, Black Lives Matter is at the top of everyone's mind, including mine. I sat down to write this column with the intention of drawing out often overlooked nuances of health-checking in distributed systems, but that will have to wait until a later column. There are more pressing matters at hand.

Black people are incredibly underrepresented in the technology industry, and the percentages have barely moved in the last several years [1]. Black technologists are even more underrepresented when you break out engineering staff from the rest of the business. I don't have statistics, but based on my own experiences in this discipline, site reliability engineering as a sub-field includes very few Black people. None of this is OK.

We have not welcomed Black people into our field, and too many are leaving, or choosing never to enter, because of that [2]. Avoiding use of offensive language such as "master/slave" (use "leader/follower" or "primary/replica") and "whitelist/blacklist" (use "allowlist/denylist" or "blocklist") is table stakes. We in senior roles also need to "give away our legos" [3] to members of underrepresented groups by supporting them through projects that help them grow and by sponsoring them.

Big tech often speaks of diversity as a means to an end, and this is a problem. For example, training sessions intended to reduce unconscious bias usually tell us to value diverse teams because those teams are more effective and creative and therefore better for business. I have always viewed this approach as incredibly dehumanizing. The people who work for any organization, and indeed, those who might aspire to work there, are not commodities. They do not exist as a means to benefit your business or to increase your key performance indicators. People should be treated well (and fairly) simply because they are human beings and intrinsically valuable. It is our obligation and our duty to our Black colleagues. It is a matter of justice.

Justice is a complicated topic, and different thinkers have different approaches to it, but the twentieth-century American philosopher John Rawls's contributions have been the most influential in recent times [3]. Rawls proposes a thought experiment: what if we designed the rules of society from behind a "veil of ignorance," without knowledge of what our eventual social position would be? Rawls thinks that we'd choose two key principles for a just society: the first and overriding principle being civil liberties for all, such as freedom of speech and the right to equal treatment under the law; and the second principle being that the only social and economic equalities that exist should work to the advantage of the least well off—so, for example, a business owner can fairly make more income than average because that business provides affordable services and employment, lifting others.

Black Lives Matter is a call for justice for Black people in their dealings with the police. It is also a matter of justice that Black people deserve to be able to work in the technology industry on an equal basis to anyone else, and to achieve their full career potential. Black people also deserve to have more voice and influence in tech than they currently do, and this is vital as technology now has significant bearing on political issues and on civil liberties.

An incomplete list of the places where justice currently meets technology includes:

- ◆ Predictive policing technologies
- ◆ Use of automated surveillance and facial recognition technology by authorities (including at protests)
- ◆ Targeted political advertising
- ◆ Software expert systems in the public realm, including in social welfare decision-making and criminal justice
- ◆ Collection, use, and sharing of personal information of all kinds
- ◆ Determining credit scores and conducting background checks

Black people in the United States (and in many other countries) have never truly had equal civil liberties in practice. This makes the dearth of Black representation in technology at a time when technology is impacting civil liberties in such profound ways deeply troubling. Shalini Kantayya's new documentary, *Coded Bias*, about Joy Buolamwini's research at the MIT Media Lab on racial bias in AI, discusses how flawed facial recognition technologies disproportionately impact Black people [5]. Cathy O'Neil's Euler prize-winning book *Weapons of Math Destruction* describes many more examples, ranging from the impact of technology on workers' rights to bias in predictive policing technology [6].

I am not suggesting that SRE (or operations-focused engineers in general) can solve all of these problems. However, I do think that we have valuable perspectives on the systems that we work with. For example, we tend to have a broad view of system architectures and a good understanding of what data exists in our systems and how it is managed. We ought to know how reliable and robust our systems are, and if they are fit for purpose. We know whether appropriate security and privacy measures are in place. We have access to metrics and logs. In short, we

know a lot about our systems and are thus well positioned to spot many potential ethics concerns. For instance, it's feasible that operations engineers at Facebook could have spotted Cambridge Analytica's excessive API use to harvest personal information in order to influence voters ahead of the 2016 US elections and Brexit referendum.

In recent years we have seen many engineers and technologists speaking out about ethical concerns in the technology industry. This is an important development—vigilant engineers can provide an essential counterbalance to the reduction in transparency, oversight, and accountability that normally goes hand-in-hand with the automation of any process. SREs and other kinds of production-focused engineers have a role to play here, and Black engineers and others from underrepresented groups ought to be part of that.

What are the service level objectives (SLOs) and service level indicators (SLIs) for our democracies and civil liberties, and how do we do our part to uphold them as a profession? With our current demographic makeup, there is no way we can justly answer these questions.

References

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- [2] A. Scott, F. K. Klein, U. Onovakpuri, *Tech Leavers Study* (The Kapor Center, 2017): <https://www.kaporcenter.org/tech-leavers/>.
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- [6] C. O'Neil, *Weapons of Math Destruction* (Crown Books, 2016).