The power of computing technology is growing at an exponential pace, whether one measures power by size, speed, or any of countless other metrics. With this power comes a host of opportunities for people to fulfill their potential by connecting, learning, and sharing. In the meritocracy of computing, socioeconomic status doesn't dictate one's success in the online marketplace. However, computing technology is currently a privileged meritocracy: those who don't have access to technology are ineligible to participate in its online interpersonal and economic ecosystem. It's understandable, then, that we would envision a future where every person has the opportunities afforded by computer and internet access. But lest we be swept up by our western ideals and mores, we need to consider the nuances of that vision and move forward with those nuances in the forefront of our minds.

Take, as a case study, the One Laptop Per Child initiative. The project was initially hailed as a certain success-to-be, but as years of work went by with lackluster results, it faced criticism on a number of fronts. First, its efforts to improve access were undermined by practically nonexistent internet connection in the locations where the project was operating; second, in its reasonable effort to be a "minimally invasive" intervention, it glossed over needed support structures like teacher training and tech support; third, it attempted to introduce technology in areas where food security and other health issues were much more pressing concerns. Successful technological interventions will need to overcome these and other contextual weaknesses.

Insufficient internet connectivity is a clearly prominent barrier to technological equity. The UN has declared internet access a basic human right; in a 2015 report, it concluded that only about 40% of the world's population has an internet connection. Google's Loon balloon project, which uses cellular network transmissions to move internet data through a phalanx of stratosphere-based balloons, and Facebook's Internet.org research, which uses satellites and long-flying solar-powered drones to efficiently transmit internet access to remote regions, are both promising technological tools. But matters of access will need more than an airborne infrastructure as a solution: there will need to be advances on the ground to ensure equitable access to that infrastructure. The UN reports that in developing countries, 25% fewer women than men have internet access; in parts of sub-Saharan Africa, that number is as large as 50%. The socioeconomic barriers to access will require innovations in public policy coupled with a sharp understanding of regional economic and social dynamics.

Equitable internet access is not the end-all be-all of broadening the reach of technology. Efforts must be made sensitive to the needs of local communities. For instance, only about 5% of the world's 7,000+ languages are present on the internet, according to the UN report. Without broadening language support in translation services, domain names, and typefaces, foisting technology onto developing communities may amount to steamrolling the local culture in those areas. In a more understated vein, the field of human-computer interaction (HCI) has thus far based its research into usability design principles on the performance of westernized study participants; this made sense in the context of designing for developed countries, but expanding technology to other populations should include investigation into how people of different cultures interact differently with devices.

Finally, the goal of advancing technological equity should be put into perspective. Computing power is a fantastic catalyst for economic development, but in regions where more basic human needs such as nutrition and sanitation are in shambles, aid should be prioritized toward those ends.

The field of computing shows a lot of promise, but advancing equity in computing technology access will require an interdisciplinary collaboration between public policy experts, anthropologists, economists, linguists, HCI specialists, and computer scientists. By bringing these varied perspectives together, we can move toward a world where hope and history rhyme.