"Let Them Eat Apps!": Technopopulism As A Progressive Agenda

by

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There was big news in the mailboxes of our apartment building recently. Our basement laundry room, which had been closed for a week to replace the twenty or so washers and dryers serving our 110 apartments, was about to re-open. Hooray! Furthermore (the flyer continued) our lives would now be vastly improved because the new machines were *smart*. No longer would we take tedious elevator rides toting our heavy sacks of dirty laundry to the basement only to find that all the machines were in use. The wonderful new machines were equipped with sensors and telecommunications functions, and they could inform us by text message or e-mail when they were free!

Well, we all had a good laugh over this high-tech enhancement. In our building, everyone knows that the only way to secure a washer or dryer during busy periods is to negotiate in person in the laundry room with the formidable ladies of the housekeepers' network.

We are by no means members of the 1%. The tenants of our building are mostly either families with young children whose parents both work long hours or retired people who have occupied their apartments for more than a quarter-century. For either group, once-a-week help with the laundry and housecleaning is a lifesaver.

And so it is in my family. For the past twenty-plus years we have benefited from the services of a Colombian woman who speaks limited English. Through her I have become acquainted with the immigrant Latina, Caribbean, and Southeast Asian women who work for other white-collar tenants and gossip with the building staff. Many of them have smartphones, but they certainly don't have access to their employers' text or e-mail accounts. As with any social group, they have their own pecking order, their factions, their rituals. Turf battles are common. Laundry can be a dirty business in many ways.

So we tenants rolled our eyes, tossed the flyer in the trash, and made jokes about the fantasy world in which the laundry machine software engineers lived. Then the new IT network in the basement crashed and we were unable to do any laundry for several days due to "server configuration issues." We were not amused. The old standalone coin-op technology seemed to work more reliably.

New Yorkers like me famously love to kvetch, but the reason I am airing our family's metaphorical laundry is not to seek company in our episode of domestic misery. Rather it is because this situation illustrates a new aspect of the "digital divide" that is becoming increasingly problematic in all areas of Americans' personal, professional, and civic lives.

Take nursing home care, for example. For a period of about five years at the end of my mother's life, as dementia overwhelmed her ability to survive without 24-hour custodial

supervision and hands-on attention to her physical needs, I was her medical, legal, and financial agent under a Power of Attorney and Health Care Proxy. A solitary, independent widow with strong faith that God would look after her, she had made no advance provisions for her own long-term care and had not cooperated with family members' attempts to do so. To inform myself so that I could make intelligent choices on her behalf, I met with doctors, lawyers, and financial planners, all of whom were highly educated and confident that they understood how the nursing home dementia care system worked. They showed me websites where I could learn about nursing home ratings, standards for dementia caregiving, financial thresholds for Medicaid eligibility, laws governing protection of certain IRA savings assets, guidelines for palliative care. Talking across a polished conference table with these experts, scrolling through screens of computer data, in theory it all seemed rational and manageable at the outset.

The reality on the ground turned out to be quite different. The doctors', lawyers', and financial planners' predictions about my mother's nursing home experience proved to be astonishingly inaccurate. I soon learned that the only way to get anything done was for me to negotiate in person on location with a coterie of formidable ladies. In terms of social status they were a notch above the housekeepers' network: naturalized immigrants or native-born working class, fluent in English, literate, high school or community college graduates. But like the housekeepers, they had their own low-tech way of doing things, their own power structure and unwritten rules, and it bore little resemblance to the way the system was supposed to work.

Do we want Mom's Medicaid application to be filed by the deadline with accurate information from the nursing home? Sit with the nursing home administrator and walk her line-by-line through the incorrect form she drafted to make revisions. Do we want Mom's nursing home bill to reflect actual fees and payments? Sit with the billing clerk and show her the mistakes in each month's invoice. Do we want to change Mom's legal address? Stand on line for an hour at the Human Resources Administration office window and show identification to a civil servant – three times, since each HRA employee has a different idea of what is required. Do we want Mom to be given soft food after her cracked dentures are replaced? Sit with the dietician and repeat the dentist's instructions. Do we want Mom to be protected from the demented man who barges into her room at night and tries to climb into bed with her? Sit with the social worker and assert that no, Mom is not imagining this and yes, a guard and/or barrier is necessary. Do we want Mom's pain medication increased? Chase the head nurse from floor to floor, and when you find her sit with her and inquire why the doctor's palliative care guidelines are not being adhered to.

Anyone who has assumed responsibility for an incapacitated person knows that these challenges and crises are not unusual. Communication gaps occur. Bureaucracy causes delays. The decline and demise of a loved one is inevitably a difficult journey. Yet the traveling conditions are made more stressful by the widening gap between the white-collar experts whose clean hands design the architecture of the information systems and the blue-collar laborers whose hands get dirty from contact with bodies, forms, and bills.

Years ago when I was in school studying anthropology, I learned that an important theme of early ethnographic research was the mutual misunderstanding between indigenous communities and the colonial administrators sent out to govern them. Caught between the

worldviews of the caregiving practitioners and eldercare theorists, I felt like one of those 19th-century anthropologists translating between two entirely separate cultures. This type of "digital divide" extends well beyond whether or not a person knows how to operate a computer: it indicates that the tools themselves are evolving without regard for whether or not they suit the purposes of the users.

The disastrous initial rollout of the Affordable Care Act's Healthcare.gov website provided a larger-scale illustration of this phenomenon. Granted, there were multiple failures in that deployment, and the case study will furnish discussion points in management and engineering seminars for years to come. As a veteran quality assurance manager for information systems development in large organizations, I was especially struck by the lack of end-to-end testing which Healthcare.gov 1.0 had undergone from the users' perspective. Such tests would have uncovered issues with usability, transaction volume, data security, interoperability of components, upstream and downstream system dependencies, and so forth. Instead different elements of the architecture were created independently and tested separately by different contractors, and somehow when all the pieces of this wickedly complex plumbing were connected the metaphorical water was expected to flow smoothly the first time the millions of users turned on their faucets.

Around the same time Healthcare.gov was experiencing its deployment failures, media reports of public demonstrations against real estate gentrification and conspicuous overconsumption in Silicon Valley began to appear. As a consequence of their recent tendencies to inflate property values, crowd the airspace with their private jets, and host Berlusconi-scale parties, technology managers who only a few years earlier had exemplified the best of American capitalism and meritocracy now seemed to emulate the worst robber-baron behaviors. And while San Francisco may be home to the most egregious concentration of technowealth, it is by no means the only habitat: nowadays Seattle, Portland, Chicago and New York all provide the developers of apps, software, and information systems with the trendy neighborhoods, locavore restaurants, and networks of creative, well-educated colleagues in which they thrive. The employees of the Healthcare.gov contractors tend to live in less glamorous places, and they draw steady salaries rather than bet their futures on windfalls from IPOs, but they still enjoy a far more secure and comfortable lifestyle than many of their end-users.

Increasingly, the poorer the user community is, the more they suffer from the digital divide. Healthcare.gov's initial fiasco caused the media flashlight to shine upon a dark corner of American life where it now appears many critical IT systems are infested with similar bugs. Every week brings new revelations of a social service that is unavailable to legitimate clients due to problems with its website. Particularly vulnerable are the food stamp, welfare, Medicaid, and unemployment benefit sites that for years have been underfunded and poorly maintained by impoverished state governments.

It would be troubling enough if the digital aristocrats were simply enjoying their engineering lifestyle behind the electronic fences of Versailles-like campuses, eating subsidized food from the company cafeterias and relaxing with on-site massages, and they responded to the plight of the technoproles with a haughty, "Let them eat apps!" In fact, the situation is riskier. Since 9/11, in the U.S. much of our top talent has been recruited and vast quantities of resources

invested for the purpose of developing information systems that watch, track, record, and monitor people clandestinely. As the surveillance mechanisms of this cyber-panopticon become more pervasive and more intrusive, any organized rebellion by disgruntled end-users becomes less feasible.

Yet discontent is growing, with popular anxieties vividly illustrated in recent novels such as Gary Shteyngart's *Super Sad True Love Story* and Dave Eggers' *The Circle*. Legislators in European countries are taking steps to limit data retention by private companies, restrict ubiquitous video mapping, and prevent interception of private on-line communications by government agencies. The U.S., however, still fears terrorists more than totalitarians. Because we are proud of the tools we invented, nowhere is the gap between the design of systems created by elite technologists and the real-world needs of the less privileged users as wide as it is in America.

Some of the solutions to this problem could lie within the realm of public policy. For example, we could allocate more money for state government IT projects and for improving computer science education in schools. In the private sector, corporations might emulate the model of Indian high-tech firms and establish their own training programs for students representing underserved end-user populations.

An even more effective long-term approach would be for technologists to acknowledge the risks inherent in the digital divide we have created. We might aspire to a new ideal of technopopulism: information systems everyone can use that provide the social services everyone needs, with equal access for all and without violations of privacy or civil liberties.

Our systems re-engineering project might begin by borrowing a page from the 19th-century playbook of colonial administrators, and draw upon the studies ethnographers make of American communities to explore how non-technologists actually obtain and exchange information today. This practice is already common for product design among high-tech companies such as Intel, Microsoft, Google, IBM, and other members of the Ethnographic Praxis in Industry association. Xerox's Palo Alto Research Center has sent ethnographers into the field to document people's attitudes and behaviors for public service projects such as the layout of a municipal parking system or the workflow in a veterans' hospital. Their research often uncovers inconvenient truths about the end-users' difficult lives which the system engineers fail to imagine as they envision how their designs will be implemented.

"Usability" might seem like a vague concept, but the standards, methods, and success criteria for usability analysis comprise a well-established discipline. Here in New York, one of the strongest supporters of the usability professionals' network and one of the more rigorous practitioners of usability analysis has been the financial information firm Bloomberg LLP. As mayor, Michael Bloomberg made many of our city services more usable. From the 311 telephone number that improved citizens' access to government agencies, to the pedestrian malls and the bike share program, to tourist-friendly attractions, under the twelve-year Bloomberg administration New York became an easier and more pleasant place to get around. The same usability engineering principles and processes that had made Bloomberg LLP a global leader in financial information systems were applied successfully to systems serving the public.

There was a catch, however. New York City has five boroughs and a very diverse population, yet mostly it was the wealthier areas of Manhattan and Brooklyn that benefited from Bloomberg's usability engineering expertise. Our new mayor, Bill de Blasio, aims to reduce inequality throughout the city in all domains over which the municipal government presides. It was a desirable enough goal in these times to persuade a majority to vote for him. His success as a so-called progressive mayor will largely be measured by the progress he makes toward achieving it.

Technopopulism shares this progressive agenda. Like the idealists a century ago who worked toward goals such as a minimum wage or women's suffrage, proponents realize it will be a long and bumpy road. We will know we have arrived when it is as easy for a manual laborer with a high school GED in Memphis to navigate state-run websites and information systems and obtain medical insurance or file a claim for unemployment benefits as it is for an MBA marketing manager in Palo Alto to order a new espresso machine from an on-line retailer. We could declare the mission accomplished when a caregiver of a patient in a nursing home can log on to a secure, private database whose records were shared among Medicare, Medicaid, private insurers, and the nursing home's doctors, nurses, social workers, and billing clerks, and verify the details of treatments and services received by the patient as effortlessly as looking up the details of a cell phone call on the wireless company's website.

But I doubt we will ever convince the members of our apartment building's housekeepers' network that text messaging and e-mail functionality for washers and dryers is a reasonable idea. More advanced technology isn't always an improvement, and some processes just work better when they are embedded in face-to-face interactions by live human beings. On the other hand, RFIDs for missing socks…