Fighting on All Fronts
Contribution to GTI Forum Technology and the Future

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Emerging—and existing—technologies are bringing us closer to the brink. And even if they turn out to be more benign, envisioning some technological advance as our salvation will waste precious time as the ecosystems upon which we rely move closer to collapse and the violent forces of authoritarianism gain power.

All technology, from hammers and hummers to routers and killer robots, is intended to increase power: to do something cheaper, easier, faster, with more entertainment value, with stronger impact, at greater distances, in more places, or with greater stealth. Technological power, like economic, political, cultural, institutional, or physical power, is distributed unevenly, and it tends to be accumulated by people and organizations who already have too much. Algorithmic power has accelerated those differences; the computer has helped create today's unprecedented economic divide. Many of the world's richest people gained their fortunes through such algorithms, and it is their ideologies as well as the computer systems themselves that are taking us in dangerous directions.

So many trends are headed in the wrong direction: climate change, extinctions and other assaults on nature, weaponization of new spheres and other preparations for war, mass migrations, famines, and pandemics, all of which are aided and abetted by widespread computer use. At the same time, our collective ability to address them may be declining.

The rise of authoritarianism worldwide further erodes our problem-solving capability. China has established the world's most extensive surveillance and control system. If you park your bike in the wrong place, you may find that your Internet speed has been throttled.[1] These systems—

and China is not the only producer—are being purchased by authoritarian regimes who are eager to maintain tight control and keep track of their enemies.[2] In cause for alarm, recent surveys have shown that people in less autocratic countries are turning away from democracy and towards authoritarianism because of government dissatisfaction.

Meanwhile, the man who used algorithms to expose millions of unsuspecting users on his platform to racist propaganda is now welcoming us to a glittering three-dimensional zone where everyone will want to be since the weather, actual and metaphoric, outside the zone is so frightful. Twitter's Jack Dorsey and the venture capitalists argue about what form Web3 will take, but agree (without consulting us) that it will be based on blockchain technology and cryptocurrency.[3]

Even relatively benign technology presents challenges. It uses too much energy, and its usage is accelerating dramatically. According to a recent ACM TechBrief, "The energy demands and carbon output of computing and the entire ICT sector must be dramatically moderated if climate change is to be slowed in time to avoid catastrophic environmental damage."[4] Data centers use about 3% of the world's global electricity, twice as much as they did ten years ago. The use of AI takes a large bite: the required resources are doubling every few months; the usage increased an estimated 300,000 times between 2012 and 2018.

Will AI induce painful unemployment? The US has apparently already made that commitment. Companies are enthusiastically developing applications designed to perform tasks that humans do now. This could lead to mass demonstrations and social upheaval with unknown consequences. A progressive platform regarding AI would include more regulation and more transparency. (But not just for AI: less-smart software is also very capable of reinforcing racism and other unfortunate biases.) Bitcoin and other cryptocurrencies are a boon to speculators and criminals as well as those whose ideology alleviates them from tax burdens. Incidentally, the current dollar-based economy is far more egalitarian than the Bitcoin economy. And use of blockchain/cryptocurrency technology is growing so rapidly that its carbon footprint now exceeds that of entire nations.[5]

My version of moving forward is not popular because it relies on humans changing behavior and acting responsibly. Any "solution" that I would proffer would not rely entirely on government (or its absence); luck; technology; divine intervention; AI; demonization of people due to gender, sexual preferences, creed, race, etc.; neoliberalism (or its abolition); a favorable arc of history; or

any other singular leader, philosophy, religion, dogma, or manifesto to rescue us. We need middle-range theories, mutual adaptation and adjustment, and integrating thinking and acting.[6] If we are to survive with any of our humanity intact, it will be because enough of us tried hard enough and intelligently enough using the resources we could muster or develop as effectively as possible.

Social change, like waging war, requires pushing forward on all relevant fronts—and local conditions will vary. Social change movements will obviously use different approaches than the wagers of war, but they must employ the same logic: They cannot afford not to fight on all fronts. The idea that we must or can identify the "one thing" we need or the "first thing" we need to do is simply too risky. In other words, we can work for progressive uses of, say, blockchain technology, but certainly that should not mean opposing the cultivation of sustainable lifestyles or international networks.

While, as Paul Raskin suggests, we do need to resist some "specific technologies outright" (e.g., autonomous killer robots) and "advocate policies to regulate" other technologies (e.g., surveillance technology), we also need to actually be *building* technological alternatives, as to not "cede the field to business-as-usual forces." In the 1990s, there were over 200 digital community networks around the world that were free to use. The Seattle Community Network, which I helped launch, provided thousands of email accounts before the corporate tsunami swamped the innovative home-grown democratic institutions.

Work has continued in the civic tech arena, and some of the under-heralded technology initiatives are the most relevant for the great transition. Citizens, civil society, and governments worldwide are exploring avenues for building an informed participatory culture using technology that complements face-to-face venues. The focus is not about making democracy more convenient or delegating decisions to algorithms. In Barcelona, for example, activists worked with city government to develop an "ecosystem of public policies" using a variety of approaches including Decidem, which is now in use in New York City, Milan, and Mexico City.[7] Here in Washington State, the first climate assembly in the U.S. was recently convened. After extensive deliberation, a randomized group of citizens submitted nearly 100 recommendations to address climate change to the state legislature. This of course is only a minute sliver of the current work that includes citizen science, deliberation, decision-making, news reporting, and divides-bridging in diverse venues as well as

theorizing, empirical work, and institutional transformation. An important issue now is how to learn from and leverage these efforts worldwide.

This may seem like a tepid response in the face of the catastrophic scenarios unfolding around us. But we are a clever species, and we may just be clever enough not to annihilate ourselves. Success will depend on our civic intelligence, not on a technological deus ex machina. If the civic tech approach helps increase and improve our civic intelligence (including our ability to work together), then I can find some reason to be hopeful.

Left for another day is the question of what type of society might emerge from the ashes of the one that collapses. My feeling is that the smoldering ruins would not be the ideal breeding ground for a sustainable society. The grand experiment in which we learn whether humans can exist together may be coming to an end.

Endnotes

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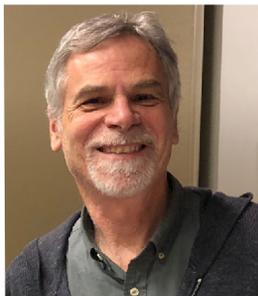
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