

The growing gap between physical and social technologies

1 August 2018, by Jenna Marshall

The word "technology," from the Greek *techne*, usually evokes physical technologies like artificial intelligence, swarm robots, and the like. But there's an older meaning. By Jacob Bigelow's 1829 definition, technology can describe a process that benefits society. In that sense, social institutions, like governments and healthcare systems, can be seen, and studied, as technologies.

This summer at the Santa Fe Institute, a small cadre of scientists and entrepreneurs will convene a two-week long working group to address "the growing gap between our physical and social technologies." By bringing together an eclectic forum of engineers, writers, scientists, historians, lawyers, futurists, economists, philosophers, founders, philanthropists, and policymakers, the organizers aim to confront the apparent lag between our collective social technologies (e.g., political, economic, and cultural systems) and the nascent realities being synthesized by our physical technologies.

Labor efficiency, speed of transportation, and human communication have advanced in step with physical technologies. These advancements have simultaneously exposed an unmet need for social technologies whose creation is outside the scope of the physical-technological toolkit. Thus, the working group, which will run July 30–Aug. 10, will examine the two technological domains from a multidisciplinary, non-dogmatic framework in pursuit of novel solutions to these complex problems.

"I have had my eyes on the approaching tsunami of change for a long time," says the working group's lead organizer, External Professor Steen Rasmussen (University of Southern Denmark). "It is difficult to assemble the needed diverse teams so we together can understand the complex issues as well as develop and explore potential solutions."

Those solutions could include blockchain-style,

citizen-centric ownership of private data, for example, to address the privacy concerns that have been exacerbated by digital [technology](#). Developing a new school of economic thought that looks beyond the capital/labor dichotomy might be another social technology that could ameliorate the effects of technological automation on economic inequality.

Rasmussen says the transformations that could result from such solutions would change "our economy, our institutions and what it means to be human."

Provided by Santa Fe Institute

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