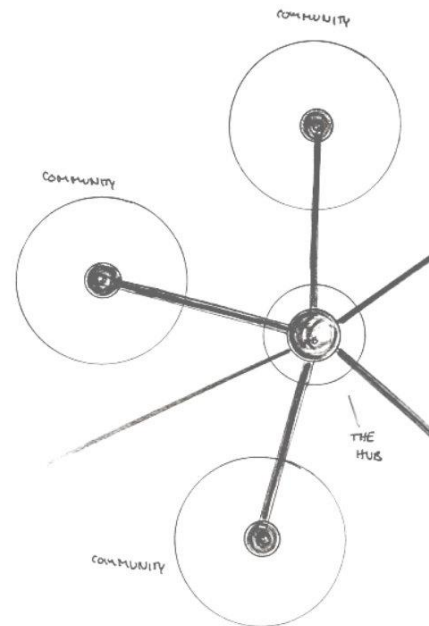
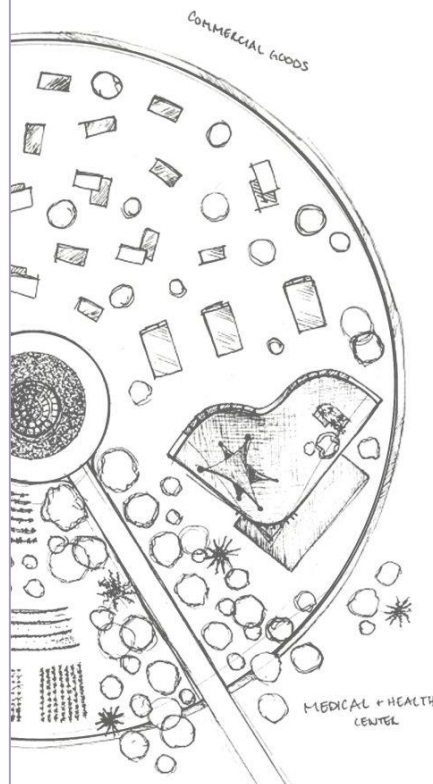


Section excerpted from:

INSIGHTS

4th-Year Students' Reflections on
Design for Social Innovation



Edited by Chiara Del Gaudio

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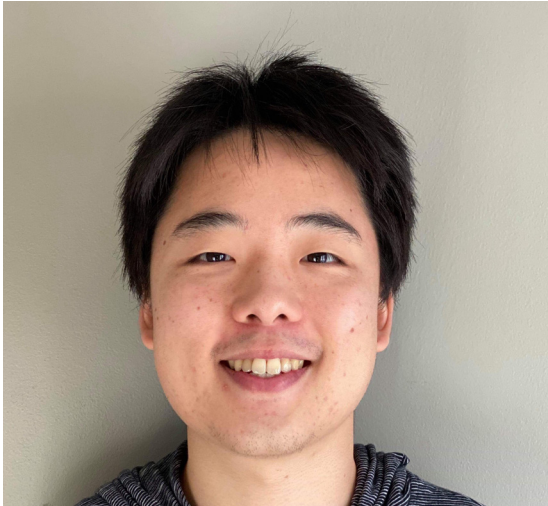
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Responding to the Fourth Industrial Revolution with Design for Social Innovation

TECHNOLOGY - FOURTH INDUSTRIAL REVOLUTION -
DESIGN - SOCIAL INNOVATION - FRAMEWORKS

Over the years, technology has changed the way we live, work, and relate to one another. We are now living in an era called the fourth industrial revolution where technologies are now dictating the future of the people's lives, which can be a real danger for those without new understanding or those who are not aware of the upcoming movement, since no one can yet predict the scale of change (Aurik, 2017). This paper will look at how design of social innovation can help people in being aware of the pervasiveness of the technology of the fourth revolution in their everyday lives and in being able to manage that influence on their choices as consumers. The solutions that can increase awareness of the speed and scope of the technological changes happening now come from design for social innovation by creating frameworks for thinking about and responding to them.

The Fourth Industrial Revolution: History, Effects, and Frameworks

Building from the electronic and digital revolution, the fourth industrial revolution is the advancement from simple digitization to innovation based on combining technologies that allow companies to innovate in manufacturing and engineering (Lee et al., 2018). The revolution can potentially improve economic development and the quality of our life by affecting the business models. It could reshape customer expectations, the quality of products and services, and lead to new innovations (Lee et al., 2018). This can give rise to a positive impact on society, but it can also lead to potential risks. According to the 2013 study from Frey & Osborne (2017), automation has taken over 4 million manufacturing jobs in the United States, replacing workers with machines and software. This number will

increase rapidly, and the 2013 study from Frey & Osborne (2017) shows how, in the next two decades, over half of the workforce will be replaced by technology. The danger of the revolution is bigger than imagined, yet not many people in the middle and poor classes are aware of this change that is going on right now. The problem is not learning from the history of the previous revolution, which leads to a lack of national or international conceptual frameworks to think about answers and decisions with respect to the change (Maynard, 2015). We must look at how technological changes affect the nature of work and society from the past and then use the past's lessons on today's problems (Aurik, 2017). The first industrial revolution introduced steam-powered machines in the United Kingdom, and this caused a change in working class families' lives by companies forcing them to move from rural areas into industrial areas to find work. (Aurik, 2017). The second and third revolution introduced electricity, which created new professions like engineering and teaching, with middle classes demanding new social policies (Aurik, 2017). One way to raise awareness, according to Lee et al. (2018), is to inform the government about the revolution and let citizens and tech companies engage with the government. However, the government seems to be behind on the data and has yet to find effective and sustainable solutions to the crisis due to skepticism on whether the fourth revolution will have a dramatic effect on citizens' individual lives (Maynard, 2015).

Analysts have developed frameworks and dialogues on how the government and tech companies should respond to technological change (Lee et al., 2018). First, we need to foster effective stakeholder dialogue because we still lack the method to ensure positive outcomes from combining

technology. One framework is to provide educational opportunities for current and future stakeholders, from consumers to CEOs. This influences their decisions on buying and selling goods and services during the fourth revolution (Maynard, 2015). Educational platforms can spread the word on the revolution to society by creating opportunities in recreational areas and on the internet like YouTube and Twitter (Maynard, 2015). Another framework we can use is developing foresight tools, such as scenario planning and providing programs for detecting early warnings on potential widespread failures of combining technologies (Maynard, 2015).

Discussion

Learning from past changes, we can use design for social innovation to bring awareness to people about the fourth industrial revolution. Design for social innovation, defined as a new creative idea that works in meeting social goals, can help in having companies and government work together to raise awareness among people, especially the middle classes since it affects them the most as consumers (Manzini, 2014). It seems that we still lack effective and sustainable solutions to technological changes due to the government lacking knowledge of modern technologies. Companies could take advantage of the technological changes since they increase revenue by replacing human workers with automation. The changes, however, provide better quality in goods and services, which influence the way consumers buy their products. I think designers can use social innovation by creating new ideas by turning craftsmanship into advanced technologies (Manzini, 2014), since the fourth industrial revolution is the current

era with little data on the outcomes of the future (Maynard, 2015). The possibilities on whether the fourth industrial revolution can create new jobs or affect people's lives are unclear since this is a new era. The methods used when designing for social innovation can possibly raise awareness and influence consumers' behavior, but it is still unclear whether the methods are effective since the issue is not a concern the government is dealing with as of this time (Maynard, 2015). However, it is not too late to alter people's perspective on the fourth industrial revolution. Designers are now facing new challenges and issues on various projects involved in the new technological change and dealing with coming up with new innovative ideas in achieving social goals.



“How can design of social innovation help people in being aware of the pervasiveness of the technology of the fourth revolution in their everyday lives and in being able to manage that influence on their choices as consumers?”

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