

Design Infrastructuring Toward A Utopian Economy

Maryam Heidari pour, Institute of Design, Illinois Institute of Technology, Chicago, USA, maryam@id.iit.edu

Abstract

The political rhetoric of today economy has framed innovation as reproduced and reserved by specific people in specific locations. This framing has shaped the discourse of who is deserving and who is not deserving and gradually sets the foundation of social discrimination, inequality, and exploitation as part of the neoliberal economy. Given the claim that entrepreneurs are inventing the future, this paper envisions alternative futures in which performing economy contributes to socio-technical transformation. To that end, this paper focuses on two community- based initiatives in Chicago that their contribution to economy is not recognized due to incompatibility with mainstream narrative. In these counter-hegemonic exemplars, different but potentially related future-making practices occur; they are shifting the emphasize from individual entrepreneur to a collective economic development and moving forward the discussion of entrepreneurship to the kind of society and the kinds of citizens that it is creating. By conducting ethnographic study on these exemplars, patterns have emerged that are informative to design strategies for infrastructuring and socio-material negotiations.

Keywords: alternative economies, infrastructuring, entrepreneurship, futures, community engagement

This research attempts to challenge the neoliberal takeover of entrepreneurship. Obsessed with innovation, neoliberal societies are supporting policies of privatization, deregulation, trickle-down economics to pave the way for the next revolutionary and disruptive technological change. But the overlooked aspect is the increased insecurity of workforce along with hard work and low pay (Sennett, 2006; Neff, 2012; Derickson, 2013). A case in point, Silicon Valley, a globally recognized center of innovation and entrepreneurship, is infamous for having a bell curve wage gap that has created a servant/ master dichotomy. By recognizing that the hegemonic model has set the foundation for inequality and discrimination, this research proposes a list of principles for infrastructuring toward the realization of an alternative mode of economy. Infrastructuring is an unfolding process of socio-material negotiations to handle controversies by aligning norms and values (Star & Bowker, 2002; Karasti et al., 2010). In design, infrastructuring has been specifically investigated for the realization of democracy and formation of publics around matters of concern (Ehn, 2008; Björgvinsson et al., 2010; Le Dantec & DiSalvo, 2013). Along with the same lines, this research aims at using infrastructuring as a set of strategies to increase awareness around the issues of neoliberal economy and encourage discussion among community members toward the realization of an alternative model.

Background

Entrepreneurship is socially constructed as a masculine experience associated with white mentality, which reproduces the stereotype of women and communities of color as ignorant and incapable in the field (Weber, 2006). This socially constructed of abilities leads to discrimination in access to entrepreneurial resources, which in turn contributes to segregation in the startup index (Popescu, 2012). To illustrate, Wadhwa, *et. al.*, (2009) counted the ways in which systematic or hidden biases in the venture-capital industry filters out minority groups from access to finance. They claim that venture capitalists invest in people who fit into the “pattern” of successful founders, openly identified as “white, male, under 30, nerds, with no social life who dropped out of Harvard or Stanford”. In this stereotype of successful founder, women and many other categories of people are overlooked. Such hidden biases lead to conformity in the community of entrepreneurs that negatively impacts innovation. But more importantly, it raises the question of “how the world is designed and for whom” (Wajcman, 2007). In other words, by marginalization of many groups from entrepreneurial activities, entrepreneurs are “inventing” a future¹ that is not compatible with the fabric of the society.

On the other hand, narrow characterization of entrepreneurs negatively impacts the economy of cities with diverse population. A case in point, in 2013 Chicago unveiled its Tech Plan as an extensive strategy to attract technology companies and provide them the best infrastructure to grow and succeed in order to achieve citywide economic growth and prosperity². Although in 2016 venture capital investments increased almost double compared to 2015 and Chicago was

named the nation’s top city for return on startup investment (DJX VentureSource, 2016), its startup growth rate for the same timeframe dropped from 25th to 30th among metropolitan areas in the nation (Morelix, *et. al.*, 2016). Although several contributing factors exist, conventional wisdom holds that economic growth requires population growth and the Chicago area had the greatest population loss of any major city in the nation in 2015 (The United States Census Bureau, 2015). Although the Chicago Tech Plan will create job opportunities for qualified candidates in high-end tech/service industries, it eliminates the need for many middle-class jobs that are dominant in a city with roots in the industrial age. Therefore, in spite of investments, Chicago’s unemployment rank 46 among 51 large metropolitan areas in the United States (Bureau of Labor Statistics, 2016-B). Marginalization of people from entrepreneurial activities by sorting the city resources toward high-tech innovation startups that are incompatible with many residents’ skills and experience. This issue again shows the importance of promoting more diverse categories of entrepreneurs and considering alternatives to the dominant model.

¹ The motto of Xerox Park in Silicon Valley, Invent the Future, has become a virtual mantra: you can’t predict the future, but in Silicon Valley you can “invent” it.

Research Questions

The goal of this research is to create a new myth for a plural form of economy to increase participation of more diverse groups in entrepreneurial activities and to create conditions for them to succeed. This new narrative will respond to the dystopian version of the future in which

the majority of the labor force will lose their economic role due to automation³; the new narrative will include today's capabilities and motivations of marginalized entrepreneurs and unleash their potential by utilizing new relationships and values. In the new narrative, diverse people can contribute to a more dynamic version of economy, and their participation will be a whole new mode of performing entrepreneurship as a common part of a larger ecosystem. To achieve this objective, number of research questions were raised. These include: How are the alternative models of performing economy different from mainstream model? What are the factors that help them to succeed? What kinds of skills, values, and relationships are unique to them? What are the values embedded in their activities? What is the role of existing alternative models in shaping the economy of their locality and creating a cohesive community vibe? How might values around innovation and entrepreneurship be further embedded in their culture of innovation? What could be a new mode of entrepreneurship inspired by them? How can we design infrastructure to promote this mode of entrepreneurship among women?

Methodology

This study started with an extensive literature review to conceptualize issues that form the basis of this research. This also created a set of criteria to evaluate the findings. In addition, during the last year, two studies were completed. In order to address the research questions and design a new narrative for the future of economy, this research looked at initiatives that are already engaged in extraordinary social, cultural, and environmental entrepreneurial activities in Chicago, even if they are not generating revenue. This allows for analysis into how their values are translated into skills, motivations, and challenges, if not revenues. One was the Read/Write Library, an entirely volunteer-run nonprofit organization that preserves community media. Along

with interviewing its founder, staff, board members and visitors, participant ethnography was conducted by participating in their monthly book club meetings, volunteer gatherings, and workshop preparation sessions. During the study period, library also ran three BiblioTreka events, and a four-month-long exhibition at the Hyde Park Art Center that were both included as data gathering sites. A lot of infrastructure related needs were discovered along with insights that can potentially inform community organizing activities. The second was the Coder Space, a nonprofit organization where African American teenagers were taught to code, collaborate on local client projects and develop leadership skills for a digital world. It was a four-month participant ethnography of their weekly meetings, interviewing founder, teachers, volunteers, and students.

In addition, the researcher took the role of facilitator for their weekly sessions in which students democratically participated in envisioning the future of Coder Space, exploring its marketing strategies, and expanding community engagement activities. Both of these initiatives are probably closest to von Hippel's user innovation with the two advantages that Benkler (2016) counts: they have "localized, contextual knowledge of needs, and high degree of practical experimentation". But more importantly, they were chosen as excellent examples for this research due to their potentiality to reframe economy as a discursive construct that can be reconstructed to contribute to social transformation (Cameron & Gibson-Graham, 2003). In other words, to move forward the discussion of entrepreneurship to the kind of society and the kinds of citizens that they were creating.

² More information on Chicago Tech Plan is available at: <http://techplan.cityofchicago.org/>. It is the first-ever comprehensive technology plan in the city of Chicago that provides long-term strategies to enable communities with technology.

³ Cowen, Tyler. *Average is over: Powering America beyond the age of the great stagnation*. Penguin, 2013.

Results

By synthesizing the pile of data that was gathered over a year-long research with the two Chicago-based initiatives, patterns started to emerge that were visibly in contrast with the mainstream startup culture that are following the Silicon Valley model of innovation.

These

patterns are currently organized under six categories of 1) Comfort, 2) Care, 3) Temporality, 4) Materiality, 5) Reappropriation, and 6) Empowerment. Each pattern is either aligned with or informative for the theories of alternative economy and innovation. The aspect which is specifically informing for design research is how these patterns could expand our understanding of infrastructuring. In a neoliberal society that the fast pace adoption of technology, looking ahead, and being efficient with time and resources are being promoted, these patterns are opening up an alternative look into how the innovation culture can be different, and the very different kind of infrastructures that are needed for promoting and replication:

- **Comfort:** In contract to cool culture and fun environment of startups, here instead comfort is being embedded in every interaction. One tactic is by being transparent about the values that the initiative is beholding, for example their position in relation to LGBTQ communities, people with disabilities, and illegal immigrants creates a sense of comfort among members of those communities. Comfort is also traceable in their discussion sessions in which experts and city officials are treated equally and have the same say as first time participants.
- **Empowerment:** Although both initiatives are training knowledge workforce, but the empowerment is not in individual skills that they are learning, but through the new relations they are building. Individuals feel empowered by being around people who have the same vulnerability as they have, and their empowerment is in resistance.
- **Temporality:** These initiatives experience a very different relation to time. Unlike the quickening speed of technology that seem inevitable, these initiatives are sanctuary places for healing. Instead of looking ahead, it is encouraged to looking around and be mindful about the consequences of actions taken.
- **Care:** Unlike the obsession with change, care may not bring change. In fact, it is about intentional distractions in the flow of the process to see who needs attention and what needs maintenance.
- **Reappropriation:** Unlike the obsession with “new” and the next big disruption, one strong pattern that emerged is reappropriation, both in materials and content.
- **Materiality:** In order to engage the public and encourage them to reflect on socio-political dynamics, one strategy is to materialize the issues. In other words, provide a context in which participants can reflect on their everyday life and understand the higher level dynamics. The materialization, in contrast to abstraction of expert topics, encourages more diverse groups of people to engage in conversations and reflect on their aspirations for the future.

Discussion

In order to design a new narrative for the future of economy, this research looked at two initiatives that are already engaged in extraordinary social, cultural, and environmental entrepreneurial activities in Chicago, even though they are not generating revenue. This allows for analysis into how their values are translated into skills, motivations, and challenges, if not revenues. The data was used to drive insights which were then synthesized and translated into creation and introduction of a set of principles for design infrastructuring to promote an alternative mode of contributing to economy. These principles are 1) Comfort, 2) Care, 3) Temporality, 4) Materiality, 5) Reappropriation, and 6) Empowerment. The next step is to translate these principles into a set of engagement activities to rehearse participation in an alternative mode of economy. The goal of this phase is not to come up with a polished model, instead these engagements aim at bringing together wider range of audience

together and facilitate a deeper reflection on their experience. From the insights extracted from those engagement sessions, a deeper understanding on translation of principles to infrastructuring strategies will be conceptualized. Finally, some frameworks translatable to various contexts will be developed, which will lead to guidelines for other designers.

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Author Biography

Maryam Heidaripour

Maryam Heidaripour is a PhD candidate at the Institute of Design of Illinois Institute of Technology. Her research combines community engagement methods with critical thinking of feminist STS to envision a world not yet existing and form actionable aspirations for the betterment of society. In particular, to move forward the discussion of entrepreneurship to the kind of society and the kinds of citizens that it is creating