

## **2014-2015 Executive Summary**

The U.S. Programs Future of Work Inquiry

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### **Overview**

In 2013, the Open Society Foundations' U.S. Programs initiated a two-year, collaborative learning inquiry into emerging technologies and the future of work in 30 years. It was based on the hypothesis that the relationship between technology and the economy – in terms of the types of work that we do, the quantity of work available, how we do it, and how it is used to manage work and workers – is too significant to be ignored. Due to existing structural inequalities, there is a risk that emerging technologies may reconfigure work in ways that will impact OSF's communities of concern – communities of color, immigrants, youth, women, and the formerly incarcerated – more severely than communities with greater access to economic opportunities.

Many of the current debates about emerging technologies and the economy center on the nature of technological unemployment, which asserts that automation and robotics will result in the elimination of a large number of jobs. According to Frey and Osborne, 47% of jobs in the United States are believed to be “at risk” of computerization.<sup>1</sup> On the other hand, MIT's David Autor believes that accounts of technological displacement are greatly overstated because it is difficult for machines to perform tasks that require adaptability, common sense or creativity.<sup>2</sup> According to a recent Pew study, “Experts envision automation and intelligent digital agents permeating vast areas of our work and personal lives by 2025, but they are divided on whether these advances will displace more jobs than they create.”<sup>3</sup> Currently, most estimates show that between 34% and 44% of the workforce is made up of contingent workers, which might include job categories such as interns, freelance, temporary, part-time, self-employed, project-based, consultants, contract and independent workers.<sup>45</sup>

This Executive Summary addresses what we learned and how we learned it. We hope this will inform future research and advocacy around emerging technology and the future of work and efforts to create positive, alternative possible futures for the most vulnerable among us. We believe that we can make a

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<sup>1</sup> Frey, Carl Benedikt, & Osborne, Michael A. (2013). *The future of employment: how susceptible are jobs to computerisation?* Paper presented at the Machines and Employment Workshop, Oxford, England.

<sup>2</sup> Autor, David. (2014). *Polanyi's Paradox and the Shape of Employment Growth*. Paper presented at the Federal Reserve Bank of Kansas City, Kansas City.

<sup>3</sup> Pew Research Center, August 2014, “AI, Robotics, and the Future of Jobs” Available at: <http://www.pewinternet.org/2014/08/06/future-of-jobs/>

<sup>4</sup> See <https://www.freelancersunion.org>.

<sup>5</sup> See [http://www.kellyservices.com/Global/The\\_Talent\\_Project\\_iPad\\_App/](http://www.kellyservices.com/Global/The_Talent_Project_iPad_App/)

meaningful difference in how this transformation unfolds, and in who gets left out or marginalized, if we ask the right questions, infuse our thinking with new and better information, and get ahead of technological and organizational changes to create strategies for participation.

### **What We Studied**

The Future of Work Project's specific focus was on the relationship between emerging technologies and the future of work. Previously, an emphasis on technology had received little attention from funders, advocates, and our grantees, while social justice and structural inequalities had received limited attention from technologists and futurists.

The Project's initial hypothesis was that:

- The role of technology in the future of work is so significant that current conceptions of 'a job' may no longer reflect the relationship to work for most people in the U.S. – that even the idea of 'jobs' as being the best or most stable means of income will come into question; and
- The likely prospect for the U.S. is that 20-30 years from now, most people will not receive a singular income from a single employer in a traditional employer/employee relationship. For some, this means freedom. For others - those with a substandard education, a criminal record, mobility challenges, or facing ongoing structural inequality - this will likely increase vulnerability.

The research agenda sought to address these questions:

- 1) **Which specific emerging technologies and their use could significantly impact the jobs, types of work, and structure of work that advocates for our communities of concern are relying on to improve and grow?**
  - How, and at what rate, are those target industries adopting these technologies?
  - What is the likely range of impact of those technologies, in terms of scale and timing, on the people and communities we care about?
  - How might the communities we care about harness technologies for their own benefit?
- 2) **What is the range of likely possibilities for how the relationship between employees and employers will transform given the use of emerging technologies?**
  - What could be the biggest factors influencing that transformation and steering it in different directions?
  - Is there likely to be a dominant standard, or a proliferation of new models?
- 3) **What models in business, policy and community life could alleviate the negative impact and increase the positive impact of the way work and jobs will transform given the use of emerging technologies?**
  - Do concepts like "basic income" or innovations spurring from the so-called sharing economy represent viable strategies for at-present low-income communities?
  - What would it take - culturally, intellectually, politically, financially - to shape and implement new models?

### **What We Learned: Technology is a Major Driver, But Not the Sole Driver of Changes to Work**

We did not reach a conclusion on whether technology would be the central driver of mass displacement of jobs. While we remain concerned about how technology is changing the nature and type of work, as well as the relationship of workers to their employers, the reality is likely to be much more complicated. Technology will play a sizable role in all aspects of future employment, but policy, regulation,

macroeconomics, big data, the shift in work structures for many, the decline of labor unions, and the changing nature of worker organizations are also significant. Of the three primary research questions above, the Project delved most deeply into the second question about the changing relationship between workers and employers. The main research findings include:

1. Technology is embedded in socio-technical systems.

It is difficult to separate technology from the economic, political, social, and cultural contexts in which it is used. These contexts shape the development of technology, which in turn shapes the ways in which we adopt, appropriate, and use it.

2. Technology is not neutral.

Technology contains many hidden biases at every stage of development—including in its creation, deployment, adoption and use. It is possible to create prototypes, experiments and demonstration projects built on alternative sets of values.

3. Technological displacement of jobs may in fact be reconfiguration.

Technologies do not necessarily replace jobs in a binary fashion. Rather, they displace, reconfigure, and change the nature of the way work is distributed across humans and machines. As a result, it is difficult to predict the scale of the change, the types of jobs, or the industries that could be impacted by change.

4. Technological innovation is rapidly outpacing government regulation.

While progressives typically look to government to spur regulatory reform, the government is currently ill equipped to address the challenges posed by emerging technology. Government does have an important role to play, but it is unclear how emerging technology should best be regulated. Advocates need to adapt their own tools to address the changing landscape of work and regulation.

5. Technology displacement at the margins of the economy will likely become the norm.

Professionals and low-wage workers are experiencing a splintering of work that has resulted in the growth of contingent labor. For professionals, this means a growth in the number of people pursuing freelance, entrepreneurial, distributed, and remote forms of work. For low-wage workers, this is increasingly experienced as temporary and precarious labor. OSF's communities of concern are already more likely to be isolated from the mainstream economy and engaged in the informal economy. The justice system has a sizable role in preventing many people from participating in the economy.

6. Emergence of new definitions that blur traditional legal categories.

Existing socio-technical configurations (new technologies, new kinds of jobs, and new companies and organizations) are redefining traditional categories around work and employment, including definitions around the classification of employers and employees. These new work configurations are blurring sociological boundaries, with legal, economic, and social implications for how these relationships are regulated, as well as how people view themselves, form identities, and relate to one another.

7. Economic gains from emergent socio-economic models are unevenly distributed.

Among OSF's communities of concern, some individuals and groups are able to harness models within the so-called "sharing economy," while others become even more marginalized. The sharing economy is well known, with the widespread use of applications and platforms such as Airbnb and Uber. Other less visible technologies, such as automation and "just-in time scheduling" also play a role in reshaping work.

8. Technology allows for new kinds of freedom as well as new kinds of control.

While technology has the potential to empower people, it also perpetuates existing forms of structural inequality, including sexism, racism, and classism. Biases are manifesting through new platforms; for example, racism through rating and reputational systems and employment algorithms. OSF's communities of concern are already being much harder hit by existing socio-technical transformations. It is likely that they will be disproportionately impacted due to persisting digital inequalities.

9. Labor advocates and OSF grantees have little space for imagining the future.

The day-to-day work of economic justice advocates is constrained by election cycles, advocacy campaigns, funding deadlines and regulatory guidelines, which constrains their imagination and limits the time-frames that they can think about and plan for. Design methodologies such as speculative design, scenarios, video storytelling, and participatory design can be used to create space to envision other possible futures.

10. Greater technology literacy is necessary among labor advocates (as well as society more broadly) and greater social justice literacy is necessary among technologists.

To some extent, technologists control the ways in which social issues are addressed; they create software systems, help determine who uses the technology and for what purpose. On the other hand, technologists are themselves embedded in complex systems with competing demands and pressures; thus, their agency in making such decisions may be greatly diminished and, in addition, they often lack an understanding of issues of structural inequality.

**How We Learned: Research, Engagement, Participatory Learning, and Partnerships**

The Future of Work Project commissioned original and secondary research along with the coordination of participatory learning events and convenings in order to address the questions posed in the research agenda. The specific outputs include the following:

**Researching and creating a data visualization [landscape map](#)** of 100+ related future of work efforts, ranging from one-time events or writings to full, staffed, and ongoing explorations. The landscape map is organized around three themes: politics, economy, society and culture; technology and innovation; and business practice.

**Drawing on expertise across the social justice, technology, and business sectors.** At the outset of the project, OSF interviewed 30 leading advocates, academics, elected leaders, funders, and labor leaders to develop and inform the key research questions. A 25 person Advisory Council of leading social justice, business, and tech leaders was brought together in October 2013 to shape the inquiry.

**Building a 450 person community** that received periodic updates, shared information with us, and was a primary vehicle for identifying researchers, convening speakers, and participatory learning participants.

**Organizing convenings and participatory learning experiences** including: four convenings for Board, U.S. and global staff, outside experts, and grantees; three OSF staff discussions; and recruiting business, technologist, and advocate speakers and moderating a session for 100 funders. In March 2014, OSF organized a standing room only convening spotlighting Carl Benedikt Frey, the Oxford researcher who co-authored a [study](#) that became an *Economist* cover story, finding that 47% of current U.S. jobs could disappear in the future due to automation. In November 2014, OSF organized a participatory learning event through a 40 person visit to the [MIT Media Lab](#), typically accessible only to its corporate and military patrons. This was a rare opportunity for technologists to engage with social justice leaders (and

vice versa). In April 2015, OSF organized a convening that explored key debates related to technology and the future of work which helped solidify the three key themes that emerged from the inquiry.

**Commissioning a [literature review](#) and curating a [research agenda](#)** with 20 policy, scholarly, and design outputs from academics and advocates. The literature review was drafted by the Roosevelt Institute and the research agenda snapshot provides topline details and links to all outputs. Additionally, several commissioned researchers secured placement for their writing (or influenced stories), in [Harper's](#), [The Guardian](#), and [The Nation](#).

**Developing a partnership with the U.S. Department of Labor (DOL)**, including organizing a multi-division DOL briefing with OSF commissioned researchers – an MIT-affiliated academic and a Virginia-based workers' rights advocate – discussing Uber, regulation, and displaced workers. In December 2015, OSF will co-sponsor a symposium at DOL on the future of work and DOL's evolving regulatory frameworks. DOL is grappling with worker classification at a time when as many as 53 million U.S. workers are contingent and the framework for many worker protections was established decades ago.

### **Conclusion**

Over the course of the two years of the Future of Work Project, we learned a great deal about the changing nature of the relationship between employees and employers. We confirmed that the trends in contingent and freelance work, once seen as marginal, are becoming the norm for a larger number of people. Our inquiry surfaced three key themes that we will integrate into OSF's broader economic advancement work moving forward:

- (1) Given the intersection of the "new economy" with low-wage work, how should we reimagine the social safety net? What benefits and protections should be afforded to contingent workers? What are the roles for nonprofits, government, and the private sector in reimagining this in the future? How can we catalyze new ideas and advocacy around worker protections and other policies to benefit our communities of concern, should jobs begin to disappear? A deeper examination of Universal Basic Income is one product of the learning inquiry.
- (2) Where will jobs increase and how can those industries, along with the so-called sharing economy, benefit workers on the margins? How can we explore the effects of technology, organization, and regulation on the workforce using a sectoral analysis in industries that are expected to grow in the future (i.e. healthcare, retail, and hospitality)?
- (3) What new models of worker engagement can be developed that bring scale, sustainability, and influence for workers in a time of great transformation in the marketplace? Can the tech sector build new models that will further individual dignity and participation as work transforms and workers seek to address issues of wages, conditions, and rights?

With continued efforts on these key themes as well as greater engagement between economic justice advocates and civic technologists, we believe that we can make progress on understanding the issues that are shaping the future of work in decades to come. Most importantly, by focusing on these issues, we believe that we can improve access to economic opportunities for OSF's communities of concern and set the course towards overcoming existing structural inequalities.