ABSTRACT

Ubiquitous information and communication technologies are radically changing what organizations look like, and in many cases rendering formal organizations unsustainable. As ongoing organizations are replaced by supply chains and pop-up enterprises, we face renewed philosophical questions around ontology (what counts as a “firm?”), epistemology (can organizations know things?), and ethics (who can and should be held responsible in a world of dispersed enterprise?). Organization theorists have a number of advantages in helping construct both new theories and new institutions to help channel the economic forces unleashed by ICTs for human benefit.

Keywords: Information and communication technologies; outsourcing; new organizational forms; web page enterprise; ontology; organization theory
What would happen to organizations if everyone carried a small device that gave them instantaneous access to all the world’s information? And this mystical device made it possible to locate prices for every good and service, including prices for labor and other inputs to the firm? And it enabled competitive market platforms where buyers and sellers could compete and contract with minimal friction at any time?

In this mythical world, organizations would start to look very different, at least if costs mattered to them. Many of them would no longer exist, because their very reason for being was that information was hard to come by and gathering up inputs to production was costly. Take away these frictions, and many organizations become unnecessary. As the costs of organizing decline, the need for formal organizations vanishes. The sustainability of many formal institutions erodes with the cost of alternative solutions. But as organization theorists have documented over the course of decades, organizations are a shaping force in society. If organizations evaporate, we need to look elsewhere for sources of social stability.

This paper makes the case that we are rapidly headed into this mythical utopia/dystopia, describes the philosophical questions it raises, and suggests that organization theory may be the best place to look for tools to help make sense of it. I make some claims about institutions that are surprising, at least coming from me: access to information enables markets for activities that used to be protected by institutions (e.g., jobs housed within companies), and these markets can erode institutions. Institutions matter, but the form that institutions take can be reshaped by information and markets. We are now in a situation that demands conscious construction of new institutions to replace the old ones that provided order to social life. Organization theorists have a particularly useful set of tools to accomplish this, if they choose to use them.

THE DISINTEGRATING CORPORATE ECONOMY

Society is in the midst of a regime shift in the cost of organizing due to information and communication technologies (ICTs). Consider what it takes to get 250,000 people to show up for a political protest in a public space. The August 1963 March on Washington for Jobs and Justice, one of the landmarks of the American civil rights movement, was conceived the prior December by a group of activists and took eight months of massive effort to organize. It had six major sponsoring organizations with 200 activists working to coordinate transit by bus, train, and
carpool. There were 4,000 volunteer marshals on-site to ensure that the rally went off smoothly, in spite of the heat and the many efforts of opponents to thwart the event.

Compare this to Cairo in January 2011. In the wake of the Tunisian uprising of late 2010 and the ouster of long-standing dictator Zine El Abidine Ben Ali, activists in Egypt were inspired to consider that the time was right for Egypt to oust Hosni Mubarak as well. One activist had set up a Facebook page titled “We are all Khaled Said” as a memorial to a man killed by police that became a repository for information posts about police brutality and other aspects of the regime. Facebook allows such pages to conduct polls, and so in mid-January this post went up: “January 25 is Police Day and it’s a national holiday … if 100,000 take to the streets, no one can stop us … I wonder if we can???” Hundreds of thousands polled “yes,” and on January 25, 250,000 people converged on Tahrir Square in Cairo to demand the return of democracy. Within weeks, Mubarak was out.

In 1963, it took eight months and countless hours of effort by hundreds of volunteers to organize a massive gathering. In 2011, it took one activist with a compelling Facebook page.

Now consider some business examples (cf. Davis, 2013):

- In 2005, Blockbuster was the biggest video rental outlet in the United States, with 83,000 employees working at 9,000 stores in strip malls across the country. Ten years later, Netflix provided much the same service via Internet streaming with only 3,700 employees, largely concentrated in Silicon Valley.
- In 2009, the Flip was the best-selling portable video camera in the United States, created by a 100-person company in San Francisco that contracted out production and distribution. Meanwhile, Eastman Kodak was stumbling toward bankruptcy due to its inability to compete effectively in markets that it had utterly dominated for 120 years.
- In 2010, Sony had 150,000 employees and a 10.1% market share in the flat-screen television market. Vizio, its Irvine, California-based competitor, had a 27.6% market share with only 196 employees. Vizio served as a central node in a supply chain of production and distribution for an increasingly generic product. (Sony subsequently exited the television business.)
- In 2011, X5 Music Group in Stockholm was the second-largest distributor of classical music in the world, behind multinational giant Universal Music, with only 43 employees.
Thanks to information and communication technologies, it is a lot cheaper to coordinate the activities of many dispersed actors than it used to be, and this changes the possible shape of both social movements and organizations.

ICTs enable pervasive markets. When I was a young faculty member socializing with one of my colleagues, I mentioned how much I liked his kooky lamp. He hated the lamp, and jokingly suggested that he’d be happy to sell it to me for $20 to get it out of his house. This provoked an idea: what if people had sticky notes discreetly attached to everything in their house with a price listed? Then at the end of every social occasion, visitors could gather up the things they wanted to buy, pay up, and both parties would be better off. Of course, we now live in that imaginary utopia, and it is called eBay. Almost everything in your house that can be shipped via UPS has an implicit price tag on it: we live in an endless garage sale.

It’s not just the things in the house, of course: thanks to real estate website Zillow, the house itself is also implicitly for sale. In recent times, two well-compensated recruits to my university’s football coaching staff showed up on my street and bought two houses. The homeowners were not planning on moving, but the buyers knew what the houses were worth from the website Zillow, and made offers sufficiently attractive to persuade both existing residents to cash in and move out.

The idea that everything is for sale has extended from physical goods and property to human activities, or what would today be called “the service economy.” A 2015 article in the Wall Street Journal titled “There’s an Uber for everything now” noted that just about any service that any human being can provide to another has an app for it operating in San Francisco, including physician housecalls, massages, on-street valet parking, laundry, package pickup and delivery, and more specialized services (Fowler, 2015). (My own idea for an on-demand diaper-changing service is called “Duber.”) A glut of under-employed 20-somethings without enough coding skills to get jobs on the inside ensures that the technorati never have to park their own car or endure a trek to the post office. Participation in this reserve army might be called “Student Loan-Activated Volatile Employment.”

Pervasive markets can undermine institutions, particularly formal organizations. Here is Coase’s (1937) explanation for why we have firms at all: “The main reasons why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism. The most obvious cost of ‘organizing’ production through the price mechanism is the cost of discovering what the relevant prices are.” Firms create costs (e.g., paying bosses
who produce nothing useful themselves), but using markets also has costs, and one of them is figuring out prices for inputs. It can be costly to survey potential suppliers to figure out which ones could provide the right inputs and then negotiate a price, and to adjust if demand goes up or down. Sometimes it is cheaper to make rather than buy. Take employment: if it were easy to just hire people for particular tasks and pay them a set rate per task, and the future were predictable, then we might not need employees. But when Coase wrote, firms hired people with the understanding that they will adjust what they did day-to-day as conditions changed. On balance, firms with employees often turned out to be a more cost-effective choice than the alternatives.

In the 1990s, however, ICTs and the advent of the Web made it increasingly feasible for firms to shop around for inputs, and to re-assess their “make versus buy” decisions. This led to an ongoing Nikefication of industry, by which design, production, and distribution were organizationally separated, and noncore functions (pension management, human resources, IT) were contracted out to external vendors. The logical end stage of this development is that the parts of organizations become available for anyone to rent. This makes it possible to create a temporary enterprise, snapped together like houses made of interlocking plastic bricks. As we saw with Flip and Vizio, these pop-up enterprises are often much more cost effective and nimble than established incumbents. It’s a lot more expensive to be Sony than to be Vizio.

If Coase were right, and we had ready prices for everything, then traditional firms would become increasingly unnecessary. Those with long memories may recall the electronics chain store Circuit City, which operated hundreds of stores nationwide and was an exemplary success in the widely read book *Good to Great*. Circuit City was liquidated in January 2009, unable to compete with Best Buy on service or Amazon on price, and its logo, brand name, and web address were acquired by Systemax of Long Island. Systemax then created a replica website that sold essentially the same merchandise as the old Circuit City, but without the employees, by creating, in effect, an automated order fulfillment system. The website had functionally replaced the original brick and mortar store chain and its employees.

How can a website replace a firm? In fact, a website is a pretty good approximation of what a firm does these days (Davis, 2016b). Old people like myself imagine that websites are sitting out there waiting to be perused, like books in a bookstore. But if you right-click a website and examine the source code, you will see that the page comes into existence
only when you visit it and it registers what kind of device you are using, what operating system, what browser, what time of day it is, where you are located, and so on. The site makes a set of calls on resources stored in databases, often connected to other websites, to produce a performance in the form of the website you see. “Calls on resources” could mean “find the price for this input” or “place this order with a supplier.” I might offer you a flat-screen television on my website with the price determined by creating a set of calls on supplier and assembler websites to find out what their current prices are for inputs and production. Voila: a replacement for the Coasean firm.

It is easy to visualize this for physical inputs of the sort that go into making a television. Until recently, however, this scenario was implausible for labor inputs. Firms still needed employees to show up somewhere. Yet thanks to smartphones, this problem is being solved through “Uberization.” Uberization is the creation of impromptu labor markets enabled by smartphones in which buyers and sellers can connect for the performance of specific tasks for specified fees. For Uber, of course, the task is a ride, but the same idea applies to all the “Uber for X” apps, and could easily be extended to other specifiable tasks. If you can state what the task is in advance, there can be an Uber for that.

Now consider the tasks currently performed by workers holding “jobs,” particularly in retail and food service (the biggest employers in the United States). How many jobs at Walmart or Starbucks could be Uberized, made available for bidding by self-employed micro-entrepreneurs rather than employees? It is easy to imagine a certification system in which tasks were made available via app to those who had been prescreened for their suitability. “Associates” might hold certifications for a portfolio of tasks (each associated with an average rating from prior users, as in a LinkedIn profile); the app would then qualify them for bidding on shifts within a commutable distance that they specify. Right now, this sounds like a young adult dystopian novel. On the other hand, the number of Uber drivers has been doubling every few months, and now far surpasses employment at any auto company. Low-cost alternatives often run roughshod over established ways of doing business (like Kodak, or Circuit City, or Yellow Cab). The implausible sometimes becomes the inevitable (see Davis, 2016a).

Institutional collapse is not always fun, and so it will be with the collapse of the traditional corporation. In the next section, I consider some of the philosophical issues we are now confronting in our increasingly disintegrated economy.
THE PHILOSOPHICAL CHALLENGES OF A DISINTEGRATED ECONOMY

Times of major social change can create challenges for the conceptual categories we use to understand social and economic life. Our current period of organizational upheaval raises some surprisingly deep philosophical issues about ontology, ethics, epistemology, and politics.

Take ontology. If you spend time with 20-year-olds, you may eventually here them utter the phrase “Is that even a thing?” Ontology is having a cultural moment. What counts as a “thing” these days? What are the boundaries around “things”? What defines them? This comes up when we think about the firm. In economics, the “firm” is defined as the basic productive unit in an economy. But what counts as a firm? A New York Times article profiled a woman in New York who operated six businesses all with one employee — her. She sold hand-painted bicycle helmets, rented a peddle cart for pop-up shops at local street fairs, created whimsical websites, and had three other enterprises (Martin, 2015). Is she a firm, or six firms, or does the category no longer apply?

Vizio raises the same kind of question. How do we think about Vizio? Is Vizio a giant corporation because it sells so many TVs, or a tiny corporation because almost nobody works there? Notably, hardly anybody works as Facebook, Yelp, LinkedIn, Zillow, Zynga, or any other technology company that has gone public since the Great Recession. Giant, or tiny? Or is size no longer a relevant attribute to consider?

Questions of ethics loom newly large due to the dispersed nature of contemporary enterprises. Philosophers who write about ethics love fanciful thought experiments. My daughter has ruined many family dinners talking about the “trolley problem.” In the trolley problem, a trolley is headed toward four people who are oblivious and cannot be warned to escape in time. You are standing next to a lever that controls the track. If you pull the lever it will change tracks and save the group, but it will run over one person due to your action. What do you do? Do you cause the death of one person to save four others (an act of commission), or through inaction allow the death of the four (an act of omission)?

When I took ethics in college, the professor loved such thought experiments, and his particular favorite was this: “Supposed that every time I step on this floor tile, unbeknownst to me, someone on the other side of the world gets a painful shock. What are my responsibilities?” Yet this thought experiment is not so fanciful these days. Suppose you have a cat, and you go to the grocery to buy it a can of Purina seafood-flavored cat chow.
It turns out that the fishermen in Thailand who catch the shrimp that go into Purina cat chow are held in horrific slave-like conditions. By buying this cat chow, someone on the other side of the world is, essentially, getting a painful shock due to your actions. Who is responsible? Sartre would argue that disclaiming responsibility due to ignorance would be mauvaise foi, bad faith. And ignorance is a slippery defense. What about Nestle, the giant multinational corporation that controls the brand whose contractors produce the slavery-tainted pet food? Should we accept their claims of ignorance?

This leads to questions of epistemology: What does it mean to know? Who can know things? Can companies know something? The Dodd-Frank Act of 2010 included a “conflict mineral” provision to address the problem of responsible supply chains. Section 1502 requires all companies listed on US stock markets to report on where certain minerals in their products came from. Most electronics contain the mineral tantalum, and most tantalum comes from the Democratic Republic of the Congo (DRC), where the proceeds from some mines fund armed conflict. The idea behind Section 1502 was to deprive warlords of their funding by getting corporations to only buy tantalum from conflict-free sources in the DRC and elsewhere.

Four years later, 1,325 corporations filed conflict mineral reports with the Securities and Exchange Commission. How many were able to say that they knew with reasonable certainty that their products were not contributing to conflict in the DRC? Only 15, or about 1 in 100. A total of 19% said they were reasonably confident that they were conflict-free; 80% were unable to say due to ignorance. The following year, companies reported roughly the same numbers (Kim & Davis, 2016).

How can this be? Multinational corporations rule the world, yet they are claiming to be as ignorant as babies. To dig deeper, we interviewed supply chain managers. We learned that manufacturers often have impossibly complex supply chains. In one industry, we were told that the company had 1,200 first-tier suppliers, and those suppliers had 8,000 second-tier suppliers, and those suppliers had 30,000 or more third-tier suppliers, many of them mom-and-pop companies spread around the globe. Vouching for a supply chain meant sending surveys to the 1,200 suppliers to ask about their use of tantalum, and asking them to survey their suppliers, and so on. What is a reasonable survey response rate to claim to know that one’s products are conflict-free with certainty? 99% 95% 50%? One supply chain managers stated that he/she would be unwilling to claim certainty unless every single survey came back, which is a very high standard (albeit epistemologically defensible).
This, finally, leads to questions of politics. Was the Dodd-Frank Act effective at eliminating conflict in DRC? Or could it actually make things worse? In Bangladesh, the Rana Plaza factory collapse in 2013 revealed that some of the best-known Western fashion brands were being produced by sub-contractors under dangerous conditions that had taken the lives of over 1,100 workers. Afterward, some major brands pulled out of Bangladesh entirely to avoid the potential stigma of future calamities. But the workers of Bangladesh need jobs, and exit is a blunt response. Similarly, if firms decide to avoid minerals from the DRC entirely, they are inflicting economic harm on conflict-free sources within the DRC.

Our disintegrated economy raises a number of knotty philosophical problems. Can organization theory help?

**CAN ORGANIZATION THEORY HELP?**

It may seem evident that a field with “organization” in its very name is poorly suited to a constantly shifting world of web page enterprises. Emirbayer (1997) and others have long noted the limitations of social theory rooted in entities like “organizations” rather than in relationships and actions. The contemporary economy reinforces this point. But while the last edition of my favorite text on organization theory shifted its title from *Organizations* to *Organizations and organizing* (Scott & Davis, 2007), the relabeling is more aspirational than real. This is a problem for organization theory. Counting organizational births and deaths misses the point in a world of shifting supply chains and pop-up enterprises assembled from off-the-shelf parts. Reifying categories is a mistake in a world where industry boundaries are a conundrum. (Is Uber a transportation company, a tech company, or a platform? Are Apple and Google in the same industry? Explain your answer.)

Network analysis comes closest to addressing fields as a system of relations rather than a group of actors, but even network research typically imagines relationships as “on” or “off” rather than continuously shifting. (An exception is the work of Natalie Cotton-Nessler at Bentley, who has created a method and a suite of measures for mapping networks that are constantly updating.)

The difficulty is not just with the theory, but with the data we use to apprehend our world. It is now well-known that traditional methods of polling, which rely on contacting respondents via landline telephones,
provide a highly distorted view of public opinion in a society where most people under 40 no longer have a landline. Much the same is true of the organization of the economy: our methods of tracking economic activity are best suited to an economy in which work takes place during set hours at dedicated facilities controlled by individual firms that employ workers for indefinite periods. For example, census data and employment data (e.g., from the Equal Employment Opportunity Commission) are often collected at the establishment level. But firms are not the same as establishments. Some establishments are units of larger firms, which is easy to account for. But some facilities like incubators contain multiple cohabiting firms; coworking spaces might house employees of diverse “outside” firms in the same location; establishments may host temp workers from a variety of agencies as well as independent contractors; and much economic activity does not happen through firms, as in the case of pick-up work crews assembled for the day in the parking lot of a Home Depot store. And sometimes six firms with the same employee all reside in a tiny studio apartment in New York.

Some things that are not firms, and are not accounted for well in data on the economy, are nonetheless economically significant. Wikipedia provides vast benefits to its users; it just happens not to charge consumers a fee, or pay those who voluntarily contribute their labor. The Web runs on free open-source software (particularly Linux, Apache, MySQL, and PHP) created by communities of volunteers with no property rights, organized by noncorporate, nongovernmental, perhaps non-organizational systems (Benkler, 2013). These are not firms, yet they utterly essential productive components of our economy. Any theory of the 21st century economy would be deeply inadequate without taking these sort-of entities into account, yet they elude our data baleen. The fact that software is free does not mean that it is not valuable; indeed, the LAMP stack is utterly indispensable, yet invisible to the kind of surveys we use to X-ray the economy.

In short, if we go out looking for a world of organizations, we will find them, but we will be missing vast swaths of our “organizational” world.

Yet organization theory brings some distinctive strengths to this challenge. Organization theory is an interdisciplinary field that draws on all of the social sciences and connects with nearly all of the professional schools, from business and policy to education and public health. Its empirical base is vast, and its corpus of theory is elaborate, if not downright baroque. It has the raw materials to match the conceptual challenges of a post-corporate economy. OT’s diverse constituents mean that it draws on an unusually broad array of theoretical ideas and mechanisms. Even if any given theory turns out to have run out of steam (e.g., population ecology),
there are nonetheless salvageable ideas that a bricoleur might find use for. Just as peasants re-purposed the building materials from amphitheaters and temples after the collapse of the Roman Empire, we might find uses for theories initially created to make sense of durable formal organizations even after the organizations are gone.

A first starting point is to get the ontology right. If organization theory is to be useful, it has to stop being too attached to organizations and be more attentive to how organizing happens. If we go looking for organizations to count and run regressions on, we will surely find them, just as people interested in studying marriages among royal families will still find them in Denmark, Spain, or the United Kingdom. But studying royal families provides surprisingly little insight into the Europe of today, no matter how comprehensive the data.

A second is to get the topics right. Supply chains receive almost no attention; open-source communities are largely ignored; the shift from jobs to tasks should be a central item on the agenda. Because detailed time-series data are so readily available, we have spent far too much time on US-based public corporations (and their directors, analysts, and funders) and far too little on the alternatives that are emerging all around us.

**CONCLUSION**

We are living in interesting times, where pervasive information technology radically changes the feasibility and cost of different forms of collective action. In the political world, it means that social movements organize and disband on a daily basis from issues that range from the small (protesting an unfairly fired hostess at a chain restaurant) to the extra-large (regime change in Egypt). In the world of organizations, it means that markets have spread to places that used to be protected from them, and that jobs are morphing into tasks, to the detriment of traditional formal organizations. This creates a raft of philosophical issues that resist easy answers. Organization theory may have the most apt tools to address some of these issues, if researchers choose the right topics and adopt the right ontology.

**REFERENCES**


This article has been cited by:

1. Joel Gehman Michael Lounsbury Royston Greenwood How Institutions Matter: From the Micro Foundations of Institutional Impacts to the Macro Consequences of Institutional Arrangements 1-34. [Abstract] [Full Text] [PDF] [PDF]