Forecasting the impacts of the “future of work” on universities: a sociological perspective

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Abstract
Purpose – The purpose of this study is to analyse the prospective impact of the future of work on universities.
Design/methodology/approach – Several brief case studies of heralded disruptors of higher education (HE) – including digital badges, for-profit universities and massive open online courses – are reviewed to illustrate inertial forces in the system.
Findings – The results indicate that several social forces will protect most universities from significant disruption, with the impetus for change being felt mostly in the periphery of the system.
Originality/value – The argument presented in this study serves as a corrective to claims that looming changes in the nature of work will radically disrupt universities. It calls for more nuanced theorizing about the interaction between technical and institutional forces in HE.

Keywords Sociology, Universities, Future of work

Paper type Conceptual paper

Introduction

For many decades, analysts have warned of immanent disruptions to modern labour markets because of rapid technological change (Bell, 1976; Braverman, 1974). Recently, these warnings have intensified, with developments in artificial intelligence and robotics facilitating the automation of increasingly complex and non-routine work tasks. Projections about the scope of this disruption range extensively across studies from single digit percentages (Arntz et al., 2016; Kim et al., 2017; Bughin et al., 2017; Oschinski and Wyonch, 2017) to just under half (Frey and Osborne, 2017; Lamb, 2016) of the labour force. In Canada, the future retraining of workers displaced by automation has been framed as one of the “grand” societal challenge of our time, requiring billions of dollars in investment and a radical rethink of our educational and training systems (Canadian Chamber of Commerce, 2018; Advisory Council on Economic Growth, 2017a, 2017b). Some claim that traditional colleges and universities will be unable to keep up with increasingly dynamic nature of work (Cukier, 2019) and that system reforms will be necessary for colleges and universities to become more “agile” and responsive (Anani, 2018; Desire to Learn, 2018).

In this piece, we engage in a sociological form of “social forecasting” (Bell, 1976), looking back at higher education (HE) history to theorize how universities have traditionally responded to disruptions in their environments. For this exercise, we draw inspiration from sociological theorizing about institutions (DiMaggio and Powell, 1983; Meyer and Rowan, 1977), labour markets (Abbott, 1988; Collins, 1979; Larson, 1979) and status hierarchies (Davies and Pizarro Milian, 2016). We hypothesize that looming changes in the world of work will likely impact universities in uneven and mediated ways because deeply...
entrenched norms and status sensitivities “buffer” their core structures from external disruptors. Indeed, we foresee only their peripheral structures responding in meaningful ways to external stimuli, with core structures undergoing change only when impinging forces push in the same direction as prevailing norms and status seeking. To justify this position, we reflect on the historical trajectory of several heralded but unsuccessful “disruptive” agents in HE, as well as counterparts that have successfully promoted systemic change. We conclude by discouraging “HE futurists” from overstating the likelihood of radical transformations in the system, especially in light of the abundance of evidence of HE’s institutional durability.

Institutions and status in higher education
Organizational change has long intrigued social scientists and management scholars. One dominant perspective argues that fields are governed by “isomorphic” forces (DiMaggio and Powell, 1983; Meyer and Rowan, 1977), with organizations abiding by a single or small subsets of socially accepted templates. Universities are no exception; studies find that their presidents typically strive to develop their structures into more elite ideal-typical forms (Brint et al., 2006). Indeed, organizational forms in HE are arrayed into a distinct hierarchy with research-intensive and selective universities generating the most social esteem (Davies and Zarifa, 2012). In turn, the institutional underpinnings of this hierarchy – comprising mutually reinforcing cognitive frames, norms and regulations (Scott, 2010) – are highly resistant to disruption. This renders most HE organizations incredibly inertial and operating according to centuries-old traditions unless pushed off their tracks by seismic exogenous “shocks” (Hannan and Freeman, 1977, 1984). This explanatory logic is evidenced by decades of organizational research that suggests that universities change in only a piecemeal fashion as opposed to being open to radical disruption.

A tale of failed disruptors
Since the 1970s, funders, regulators, technological innovations (e.g. digital platforms) and technical forces (e.g. marketization) have combined to promote several notable changes across HE. Universities have considerably expanded their undergraduate and graduate enrolments, and now offer far more vocationally oriented programs than before (Brint et al., 2005; Kraatz and Zajac, 1996). Despite such changes, universities have generally proven themselves to be remarkably durable and stable with many of their core institutional structures remaining intact or surviving in slightly mutated forms (Davies and Pizarro Milian, 2016). The brief case studies discussed below illustrate this broader pattern and provide the foundation for our “hypothesis of continuity”. This more historical-based approach we use, of course, differs from contemporary foresight methodologies, which often entails a more imaginative approach that produces many radical “futures”.

For-profit colleges and universities
In the early 2000s, the proliferation of for-profit colleges and universities (FPCUs) in the USA (Douglass, 2012) – such as the University of Phoenix and now-defunct Everest College – led many to predict that they would soon rival non-profit counterparts (Cronin and Bachorz, 2006; Christensen et al., 2011). FPCUs operated unencumbered by rigid academic conventions (e.g. tenure systems), adversarial labor unions or faculty associations and other slow bureaucratic structures (e.g. university senates) (Tierney and Hentschke, 2007). This allowed them to quickly adapt to consumer demands and discard low-demand programs (e.g. humanities) in favour of fields better aligned with dynamic student tastes (Berg, 2005). It also facilitated cost-sensitive reforms such as the hiring of cheaper, non-tenure track faculty. These traits led FPCUs to be branded as “agile predators” (Deming...
et al., 2012) that would disrupt the field at large, thus driving traditional non-profit universities to adapt or face mass extinction.

Despite such bold predictions, FPCUs have struggled in recent years, relinquishing much of the market share they earned in the early 2000s (Douglass, 2012). Many now foresee the demise of the FPCU sector on the horizon (Surowiecki, 2015; Wong, 2015). FPCU’s remain significant players only in the least prestigious market segments: serving non-traditional students in vocationally oriented training (e.g. hair-styling). Far from upending the system, FPCU’s greatest influence on universities has been by transplanting business practices into HE. Recruiting students via “lead generators,” telemarketers and ads in subways was once deemed undignified by traditionalists in academia, but has been proven highly effective by FPCUs (Fain, 2014; Marcus, 2016). FPCUs also demonstrated the sheer size of the continuing education market, prompting non-profits to emulate their part-time and online program offerings (Kirst and Stevens, 2015). Non-profit universities layered these novel practices on top of preexisting administrative structures in an effort to tap into new markets. This, of course, is a far cry from initial expectations about FPCU’s ability to disrupt the sector.

Massive open online courses

Excitement with massive open online courses (MOOCs) exploded in 2011 after a pair of Stanford professors attracted ~160,000 students to their Artificial Intelligence course (Ng and Widom, 2014). MOOCs were soon heralded by the media as the most important experiment in HE (Weissmann, 2012). Respected scholars and commentators suggested that “college may never be the same” (Marklein, 2012) and that “the end of college” was near (Carey, 2016) save for the most prestigious institutions in the system (Brint, 2012).

Soon after the Stanford experiment, competitors in the space proliferated, including Coursera, edX and Udacity. Much public discourse about MOOCs revolved around their potential to revolutionize service delivery, allowing for an unprecedented number of students to be taught at extremely low costs. This indicated that, in theory, anyone could soon have access to Ivy League professors (Bulfin et al., 2014; Selwyn et al., 2015). The implications of this were massive for a system where admissions selectivity – in particular – is strongly associated with notions of exclusivity and prestige. Truly universal access to university programming threatened to upend this status system.

However, as with FPCUs, excitement with the MOOC experiment quickly evaporated. Many enrolled in MOOCs but completion rates were abysmal. Credits earned through MOOCs failed to achieve widespread recognition among universities or employers. Advocates of MOOCs have recanted bold prophecies about their potential, refocusing their attention on impacts within smaller niches in corporate training (Schuman, 2013). As early as 2016, one industry insider noted “almost no one uses the label ‘MOOC’ anymore” (Ferreri, 2016). Nevertheless, non-profit universities have absorbed the technological platforms and strategies developed via MOOCs to more efficiently deliver online programming to both traditional and adult learners. Our judgment, again, is that MOOCs did not live up to the hype.

Digital badges

Conventional degrees bundle together broad types of knowledge acquired from multiple disciplines, all under the banner of academic “breadth” and “cultivation”. Digital badges threatened this scheme by credentializing “bite-sized” chunks of knowledge (Ford et al., 2015). In addition, they allow for more efficient certification to be performed by varied actors, including industry or professional associations and employers (Finkelstein et al., 2013). This directly challenges HE organizations’ monopoly on credentialing (Olneck, 2018), and threatens their primary revenue stream. If certification of proficiency became available
through alternative, more efficient and cost-effective means, why would students invest the
time and money required for a traditional degree?

Despite their incredible promise – and the compelling logic of the reasoning presented
above – it remains to be seen whether badges will ever gain traction beyond the information
technology sector because few fields have skills that can be as easily and neatly
compartmentalized. Though there has been some experimentation, there is no evidence that
digital badges are “eating” into the market for traditional degrees. However, unlike FPCUs and
MOOCs, our assessment is that the jury may still be out on digital badges because they enjoy
the backing of corporate giants such as IBM and Microsoft (Grant, 2016). Nevertheless, we
see no signs that they will cause mass disruption within HE in the foreseeable future.

Understanding change in higher education

Bold predictions about the effects of the abovementioned agents assume that universities
are highly responsive to technical or market pressures, including those to cut operating
costs, generate revenue, more efficiently package knowledge, and – as assumed by the
future of work literature – meet student and employer demands. They assume such technical
pressures erode institutionalized traditions and drive efficiency-minded reforms. But, history
tells us that this is not necessarily the case. Though providing solutions to technical
problems, the agents discussed above have triggered only peripheral adjustments. This is
because conventional non-profit universities are only very loosely, and at times entirely
decoupled, with surrounding technical environments.

Practices and structures in HE persist because they are deeply institutionalized and
associated with notions of prestige. A university will threaten its own legitimacy if it does not
carefully balance innovation with tradition – regardless of the available technical benefits or
resources (Deephouse, 1999; Zhao et al., 2017). If, for example, a university shuts down
low-enrollment programs, converts all courses to online delivery and defunds student clubs,
government and athletic programs – it will certainly dramatically reduce operating costs.
However, it will draw the ire of current and incoming students, alumni, faculty and the
academic community at large. Only peripheral organizations (e.g. FPCUs) already viewed
as unconventional can afford to radically deviate from long-standing norms of what it means
to be a university because, in a sense, they have little legitimacy or status to begin with
(Han, 1994; Pizarro Milian, 2018).

In the rest of the field, unconventional competitive strategies and reforms can trigger status-
demotion. Universities gain status by being selective and by not taking all comers.
Credentials are valued more if they are perceived by employers to be exclusive and difficult
to obtain (Wolf, 2002). This renders HE credentials a positional good whose value is
inversely related to their accessibility (Collins, 1979). Such dynamic makes universities
mindful of their openness because too much can dilute their brand (Bills, 2003; Collins,
1979). Our overarching point is that prevailing notions of prestige and exclusivity in HE are
highly durable and provide the parameters that channel “disruptive” forces.

To further illustrate our argument about the centrality of institutions and status seeking, we
next discuss two profound changes within the field of HE since the 1970s: the growth of
occupational training and industry-university collaborations. We theorize that the
proliferation and sustainability of these practices – far from being a direct response to
disruptive market forces – is attributable to their compatibility with longer-standing
institutional norms and status-seeking norms.

Vocational training

Since the 1970s, student enrolments have grown in occupationally oriented fields (e.g.
engineering and nursing) while shrinking in the humanities (Brint et al., 2009). Some
characterize this trend as a unidirectional corporate restructuring of universities into training centers (Giroux, 1999). However, vocationalization is consistent with a broader “interpenetration” of HE and society (Davies and Mehta, 2018). While only “classic professions” (e.g. clergy, law, medicine) trained inductees through universities in earlier centuries, many other occupations (e.g. nurses, social workers) have since emulated this model (Abbott, 1988; Larson, 1979). By establishing “avatars” (e.g. departments/programs) in universities (Abbott, 2005), these occupations were able to demarcate their knowledge as something distinct from that held by the lay people and facilitate claims of expertise. Moreover, educational credentials served as a device to restrict the supply of practitioners in the labor force (Brown, 2001). As such, the proliferation of new vocational fields in universities is far from a simple adaptation to corporate interests, being buttressed by the efforts of status-minded occupational groups.

Industry partnerships

Many have pointed to industry-university research partnerships as a prime example of the impact of “neo-liberal” forces on HE (Turk, 2000). Yet, partnerships of this sort have occurred in North America since the early 20th century when corporations started to strategically harness the research capabilities of universities. However, importantly, we advance that these partnerships have proliferated because they afford universities with resources (e.g. funds, equipment) required to fuel status-seeking activities. Industry-backed research chairs and donations allow for the recruitment of “star” academics (Burgan, 2005), particularly in sciences that require exorbitantly expensive lab facilities (Kirp, 2009). Once these individuals are recruited, their prestige “rub[s] off” on their surroundings (Podolny, 2010), elevating the status of their research centers, academic departments and broader university. They, in turn, act as “magnets” that attract the most talented crop of graduate students and other academic researchers (Collins, 2009). Links to the corporate giants that facilitate all of this with their financial capital – especially those originating from technologically advanced sector (e.g. computer science, military) – help to advance the image of universities as agents in the advancement of science. Thus, rather than corporate exploitation, we see that industry-university partnerships feed status-seeking efforts by universities.

Conclusion

Our view is that institutional norms and status-seeking serve as “seawalls” that restrict the effects of disruptive forces – such as those generated by the “future of work” – allowing them to infiltrate the core of the system only when they are compatible with prevailing trends. Otherwise, the effect of disruptors is kept at bay, triggering only peripheral adjustments. This bi-directional interplay of institutional and technical forces was theorized in classic perspectives developed within the sociology of education in the 1970s (Davies and Mehta, 2018), but has gained little attention in contemporary debates. Our hypothesis of continuity prompts some logical questions: what are the consequences of HE’s institutional durability – for universities, labor markets and society at large. For HE, we fathom that vocationally oriented training will continue to be concentrated in peripheral areas of the system, among community colleges, FPCUs and industry-based apprenticeships. These service providers, given their unprestigious stature and younger age, are far less embedded in institutions and prone to status seeking (Brint and Karabel, 1991). In addition, we expect industry-based professional development to play a more prominent role in skills training. We do not foresee our hypothesis of continuity as disrupting labor markets because for most of our history the content of university programs has been only very loosely coupled with employer needs. As per societal-level arrangements, we foresee that universities will continue to serve as a primary “hub”, where knowledge is legitimized, individuals are socialized and numerous other social processes play out (Eaton and Stevens, 2020; Stevens et al., 2008). Overall, the unresponsiveness of universities to the world of work will be “par for the course”.

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Further reading

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