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The university in a world of digital technologies: Tensions and challenges

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ABSTRACT

This paper discusses the challenges and tensions in the relationship between the university as a social institution and the world of digital technologies in which it finds itself, from the perspective of an early-career academic in her late 20s. It argues that problems abound in the university's tendency to adopt non-educational digital technologies for educational purposes in the name of student engagement, and that this approach should be avoided. It also argues that, faced with an uncertain future of job automation and gig economy, universities should move away from the 'work-ready' graduate model. Instead, it should empower its students with the capacity to flexibly reprogram their skillsets for the changing nature of work, and play an active role in envisioning new (non)work realities by engaging students in the transformation of their education.

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CHINESE ABSTRACT

该论文从大学 20 年代末期的早期学术人士的角度出发, 讨论了大学作为社会机构发现其本身在与数字技术世界之间的关系中存在的压力与挑战。该论文认为, 大学趋向于以学生参与的名义, 为了教育的目的, 采纳了非教育性的数字技术, 其中充斥了各种问题, 并认为应该避免采用这种方法。该论文还认为, 面临工作自动化和零工经济的前途未卜, 大学应该抛弃“做好工作准备”的毕业生培养模式。反而, 大学应该培养学生能够灵活重新学习掌握技能专长的能力, 以适应工作的变幻莫测, 并通过让学生参与其教育情况的转型变革, 在对新的 (非) 工作现实的设想中发挥积极主动的作用。

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1. Introduction

This paper discusses the challenges and tensions in the relationship between the university as a social institution and the world of digital technologies in which it finds itself, from the perspective of an early-career academic in her late 20s. The paper first discusses the changing role of the university instructor with regards to social media use for teaching activities, arguing that the utilisation of non-educational digital technologies for educational purposes is more problematic than beneficial. It then discusses the role of universities in an uncertain future of the gig economy and job automation, and the crucial role students of higher education will play in transforming their own education in preparation for this future.

2. A professor walks into a class

In July 2017, a LinkedIn post by an associate professor at Deakin University went moderately viral. The post featured a photo of an empty classroom, accompanied by a long caption that explained

how the associate professor walked into his first class of the semester with an audience of zero:

“SHOULD I USE THE OLE SIZE 16s? I don't know about you but my generation always showed up for lectures and seminars, particularly at the start of semester. Here is my first class for 2nd semester which was supposed to have started 15 mins ago. After being pumped up to give a great class, I am deflated that they couldn't bother their arse to show up. The subject I am teaching is Estate Planning - a mixture of law, superannuation, tax and financial planning - and would be one of the hardest they will encounter in their whole course.

Students don't realise that their lecturers could be their best advocates for getting a job.

What would you do if you were in my shoes?”

(Adapted from [Raftery 2017](#))

The post was picked up by several online news outlets including Sydney Morning Herald, [news.com.au](#), and Mashable ([Cummins, 2017](#), [Lieu, 2017](#), [Young, 2017](#)). Of the hundreds of comments that the post itself received from LinkedIn users, some stood

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out. LinkedIn users claiming to be students who deliberately did not turn up for the class made three provocative points. The first was that the associate professor, as an education service provider, should not expect his customers to only behave in a way he deems appropriate. The second point stressed the real value of the modern education experience lies in the flexibility to gain work experience while doing a degree – something which may only be achieved by working in lieu of attending lectures. And third pointed to the fact that the availability and accessibility of online content means that contact time is no longer vital to learning.

While the incident itself might be trivial and forgotten before the next viral story, it highlights some of the most salient tensions and challenges in the relationship between the modern university and the digital ecosystem in which it finds itself. Some of these challenges predate digital technologies. The commercialisation of higher education, for example, and the need to reform the university as a social institution, have carried themselves into the digital age and manifest new tensions. Other challenges, such as discussions around digital accessibility of course materials and the consequent declining role of the university professor are more technologically driven. The LinkedIn incident itself was also technologically driven: the the associate professor used a social media platform to broadcast and seek feedback on a situation happening in his workplace. This further underscores the integrated role of digital technologies in higher education beyond classroom settings.

The original promises of digital technologies were radical and optimistic. From the democratisation of knowledge with Wikipedia (König, 2013), to lowering obstacles to education access with MOOCs (Liyanagunawardena et al., 2013), technology determinists see a future where technological fixes to socio-political problems are not only possible, but inevitable. Larry Sanger, co-founder of Wikipedia, famously quipped in an article that “professionals are no longer needed for the bare purpose of the mass distribution of information and the shaping of opinion.” (2007). Jimmy Wales, another co-founder of Wikipedia, asked us to “imagine a world in which every single human being can freely share in the sum of all knowledge,” and used this plea as Wikipedia’s vision statement (Sutcliffe, 2016). While the anarchists speak of the demise of the university as an institutional pillar, others speak of the possibility to open up the university, mitigate inequality, and transform the learning experience. MOOCs are seen as means through which the university can become more globally inclusive, with the potential to enhance quality of life in developing countries (Patru and Balaji, 2016). Digital education, or online distance learning, has the potential to bridge geographical, social, and economic gaps for a more globally competitive workforce (Hiltz and Turoff, 2005). E-learning and the possibilities of constructing virtual worlds as learning environments might forever revolutionise higher education (Ruth, 2010).

The reality of digital and social technology’s integration into higher education, however, has been much more mundane. On an everyday basis, the university and its faculty deal with events and episodes of conflict that are illustrative of slowly but radically shifting power dynamics between the university as a social brand and the social base it purports to serve. Who should the professor be, if no longer the “keeper of knowledge”? Who are university students? What do they want from their education, if skills can be self-taught and work experience valued over contact hours? How should the university respond to, and stay abreast of, evolving social realities that are constantly being reshaped and redefined by digital technologies?

3. Racing on the machine¹: learning with technologies

While the use of learning management systems (LMS) as basic technology resources is the norm for higher education in the

English-speaking world, these technologies tend to be perceived as content- and activity-centric, as opposed to student-centric (Chatti et al., 2007; Mott, 2010). It is of little surprise, then, that when given the opportunity, a sizeable number of university instructors choose to conduct various teaching activities on popular social media platforms such as Facebook and Twitter with an aim to “enhance learning outcomes” (Wakefield, 2012; VanDoorn and Eklund, 2013; Chawinga, 2017). What makes social media most attractive as a site of teaching, according to these instructors, is the fact that students already spend a considerable amount of their time on these platforms (Wakefield, 2012; VanDoorn and Eklund, 2013). Technological affordances such as synchronicity and instantaneity of communication are also often cited as what makes social networking sites user-centric; the capacity for user communities to be built on these platforms are seen as network-centric and can help foster a sense of belonging for distance learners (VanDoorn and Eklund, 2013). However, it is unclear how these technological affordances in themselves qualify social networking sites as effective sites for teaching, as they can be faithfully built into LMS to facilitate more engaged learning.

What could be the harm in the professor “branching out” to where student attention is supposedly already engaged in order to facilitate learning? If no longer “keepers of knowledge”, can the professor at least be the “courier”? The problems with hijacking a proprietary technological space that was not built for educational purposes are manifold, but I will outline four main reasons. Firstly, social media platforms such as Facebook employ data and privacy policies that are commercially driven, and are often opaque. While it might be the case that most students are already sharing their personal data (whether fully informed about these services’ terms of use or otherwise), it is arguably unethical for instructors to require students to supply more data pertinent to their online identities that would eventually feed into the commercially driven practices of these companies.

Secondly, it is important to understand the geographical stickiness of online services that are global by design. Social networking services are required to comply with local laws in the different countries where they operate, and it is of their interest to build harmonious relationships with local governments. Facebook, for example, established a communication channel with the Vietnamese government to receive direct content blocking requests in April 2017 (VnExpress, 2017), and subsequently removed 159 anti-government accounts seven months later (Vo, 2017). With academic freedom being at the heart of what the university stands for, utilisation of digital technologies should not be driven by convenience, but rather by principle and thoughtful deliberation.

Thirdly, social media are not neutral technologies that can be unproblematically appropriated for educational purposes. Social media are better understood as a techno-social practice woven into the fabric of modern society. The “collapse of contexts” (Boyd, 2002, 2008; Marwick and Boyd, 2011) is inevitable, and can be more problematic than beneficial. Context collapse on social media happens when social contexts are meshed as a result of site-specific architectural designs or agentic user practices. This can be intentional – context collusion) – or unintentional – context collision (Davis and Jurgenson, 2014). When a collapse of contexts occurs, social actors navigate the shifting boundaries between private and public, professional and personal, in order to maintain contextual integrity (Nissenbaum, 2010). In the instance of university classrooms, both the professor and the student perform their own identities and personal negotiations in different social media contexts (David and Jurgenson, 2014). These contexts are pertinent to specific social relationships, situational definitions, temporal moments, and distinct locales (David and Jurgenson, 2014). Even when the professor actively initiates context collusion and invites students to socialise as a means to deliver knowledge and facilitate discussion (for example, by become friends on Face-

¹ Hughes 2017.

book), there is no guarantee that context *collision* will not occur. This is largely because context collision is particularly common in authority-subordinate relations (David and Jurgenson, 2014), which characterises the professor–student relationship.

Personal missteps as well as mishandling of user data by social media companies can also cause context collision. Even though strategies can be devised to mitigate potential consequences of context collision, such as deliberate curation of content for the lowest common denominator of contacts within a network (Hogan, 2010), using decoy profiles or aliases (Marwick and Ellison, 2012), or applying elaborate privacy settings on different contact groups (Vitak, 2012), context collision often happens outside of normative technological structures and agentic user practices. LinkedIn, for example, is often understood as having a low normative level of context collapse, and tends to establish context collision of dispersed contacts (Papacharissi, 2009). However, as the incident discussed in the previous section illustrates, context collision can happen on LinkedIn, in this instance as an unintended consequence of a supposedly genuine act of sociality.

The fourth and final problem with the hijacking of social media platforms for use in education (or the professor being the “courier of knowledge”) is with the very premise that by engaging with students on social media, university instructors are staying abreast of technological trends and bringing the learning experience closer to their students. A study conducted on Android social media applications found that across the globe people are cutting down on their social media usage time – and the trend holds true for all major platforms: Facebook, Snapchat, Twitter, and Instagram (Tuchinsky, 2016). People aged 18–29, according to studies by Pew Research Center, are quickly picking up on mobile messaging applications such as Kik, Snapchat, and Whatsapp, which favour intimate, more private communication over broadcast communication (Duggan, 2015a,b). There is growing literature around how cautious young people are about their online privacy (Dowd, 2011, Velden and El Emam, 2013, Agosto and Abbas, 2017), which in part might explain the shift away from social media and into “private” chat. As internet behaviour rapidly evolves, reactively catching up with what is perceived as “the latest thing” is likely to be ineffective. While the student-centric approach to learning and teaching is desirable in principle, it is unclear whether the principle applies to the utilisation of social media for teaching, and by extension, the transformation of university instructors into couriers of knowledge.

4. Racing against the machine²: robots are taking your jobs

The pressures of digital technologies on universities also exist beyond the employment of education technologies or appropriation of social media for educational purposes. On a macro level, digital technologies are also changing the nature of jobs and giving rise to new forms of economic activities, which in turn imposes new demands on universities and higher education. The gig economy – paid work facilitated by digital technologies that match economic demands with the supply they need without implicit or explicit contract or the potential for long-term employment – is disrupting the global economic order (Graham et al., 2017). Coexisting with this skill-based, task-oriented trend is the automation of jobs – a trend that will displace jobs which involve mostly routine tasks (Hughes, 2017). MacCrory et al. (2014) found that there is a decline in job demand for perceptual and supervisory skills in the technologised job market, while jobs requiring interpersonal skills and equipment skills are in increased demand. Further complicating this picture, however, is the breadth of jobs that can be replaced by the marriage of cyberphysical systems and interconnected artificial intelligence (AI). From the AI that is expected to replace a large cohort of paralegals and attorneys (Turner, 2016), financial softwares with the capacity to replace university-educated

finance workers, to Wordsmith, a computer software that has been producing journalistic content for the Associated Press since 2014 without human intervention (LaGrandeur and Hughes, 2017), the future of work and the role universities play in preparing their graduates for this future is at best uncertain. Frey and Osborne (2013), in their landmark study, estimated that 47% of American jobs are at risk of automation within two decades, and found similar trends for British and European jobs (Frey and Osborne 2015). Arntz et al. (2016) put forward a counter-claim, arguing the automation of tasks does not necessarily lead to the automation of whole occupations, and estimates that only around 9% of jobs in the United States and OECD countries would be replaced (2016). While much still remains to be understood about the future of automation, it is without question that the university needs to be proactive in responding to these macro changes.

Automation is the latest development in broader technological forces that have reshaped our understanding of the world and who we are in that world. Castells (2000, 2011), for example, has for the past two decades argued that in the ‘network society’ in which we live, self-programmable labourers – who can work flexibly with information and can retrain themselves to adapt with new skill demands from the network economy – will replace generic labourers, who will eventually become deskilled, interchangeable, and replaceable. Floridi (2014) argues that information and communication technologies have forced us to rethink our self-understanding in fundamentally different ways. Floridi calls it the “fourth revolution”, after the Copernican, Darwinian, and Freudian revolutions in human development. Progress made in designing AI has forced us to rethink human agency. If artificial agents can be programmed to do jobs that are otherwise carried out by human beings, then what is the purpose of education Gunkel (2017) argues that it is high time we rethought and recalibrated the social value of education and employment. The neo-liberal narrative of “better education equals better jobs”, he posits, has consistently dominated our social understanding of education for several generations, and has led to the marketing of higher education mainly as “hire education” (at least in the United States) (Gunkel, 2017, p. 151). With the prospects of technological unemployment looming large in the future, and with economists beginning to consider such scenarios as reducing working hours to free up more jobs for everyone, instituting a universal basic income guarantee, and using micro-fees and micro-incomes to offset unemployment (LaGrandeur and Hughes, 2017), it is in the university’s best interest to rethink its social functions, as well as its relationship with employment. Social stigma around unemployment is entrenched by the perception that work is a moral obligation, and that failure to gain work is failure to fulfil one’s duty to society. With the changing nature of work, however, there is an opportunity to rethink the social values of unemployment. Gunkel (2017) goes as far as suggesting that we should think seriously about what it means to be “gainfully unemployed” – instances where technologies absolve us of the drudgery of work and leave us with “free” time (p. 148). The university, then, should perhaps prepare its graduates for both employment and gainful unemployment.

For this recalibration to work, students of higher education have an important role to play. Curriculum co-design and co-creation have been gaining momentum in recent years, with the aim of (among other things) helping make higher education more equitable for disadvantaged social groups (Seale, 2013), increasing political engagement (Bessant et al., 2016), and facilitating interdisciplinarity on a grassroots level (Woomer et al., 2016). As we rethink the future of work and education in relation to time, space, identity, and wealth, students should be encouraged to explore and reflect critically on the changing nature of their disciplines – be it social sciences, humanities, or STEM. In the face of uncertainty, students of all disciplines need to be encouraged and taught to be imaginative, creative, and inventive – in other words, to “re-

² *ibid*

program” themselves when the need arises, and to program new futures of employment.

5. The technological future of higher education

This paper has discussed the relationship between the university as an institution and the technological ecosystem that drives changes both within and without the higher education sector. It argues that universities should not try to “catch up” with technology trends initiated elsewhere, either for student engagement or curriculum development. Rather, universities should instead take a radical role in helping shape new socio-technological realities in order to stay relevant and useful. With digital technologies teaching us new lessons about ourselves and reinventing our understanding of human capabilities, universities have a responsibility to not only provide, but also transform, higher education in a manner reflective of this epistemic shift. Universities should move away from producing ‘work-ready’ graduates by trying to deliver knowledge and expertise to students at their doorstep in the name of engagement and technological innovation. Instead, the technology savvy university should move into preparing graduates with the flexibility and independence that allow them to reprogram their skillset, as well as envision and help shape their own future (non)work realities.

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