http://truth-out.org/news/item/18120-massive-open-online-courses-and-beyond-the-revolution-to-come

Massive Open Online Courses and Beyond: the Revolution to Come
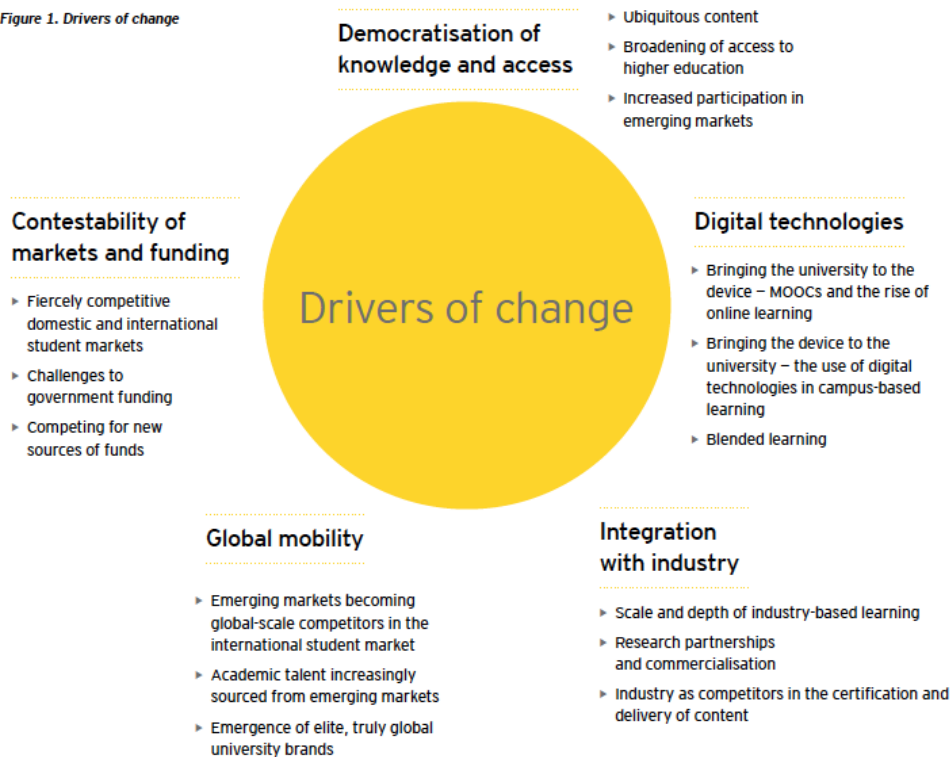
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By Michael A Peters, Truthout | News

The New York Times dubbed 2012 the year of the MOOCs - massive open online courses. Suddenly the discourse of MOOCs and the future of the university hit the headlines with influential reports using the language of "the revolution to come." Most of these reports hailed the changes and predicted a transformation of the delivery of teaching and higher education competition from private venture for-profit and not-for-profit partnerships. Rarely did the media focus on questions of pedagogy or academic labor. This article suggests that MOOCs should be seen within the framework of postindustrial education and cognitive capitalism where social media has become the dominant culture.

Ernst & Young's *Universities of the Future* carries the line, "A thousand year old industry on the cusp of profound change." The report suggests that the current Australian university model "will prove unviable in all but a few cases." It identifies five major "drivers of change": democratization of knowledge and access, contestability of markets and funding, digital technologies, global mobility and integration with industry.

Figure 1. Drivers of change

Democratisation of knowledge and access
- Ubiquitous content
- Broadening of access to higher education
- Increased participation in emerging markets

Contestability of markets and funding
- Fiercely competitive domestic and international student markets
- Challenges to government funding
- Competing for new sources of funds

Drivers of change

Digital technologies
- Bringing the university to the device – MOOCs and the rise of online learning
- Bringing the device to the university – the use of digital technologies in campus-based learning
- Blended learning

Global mobility
- Emerging markets becoming global-scale competitors in the international student market
- Academic talent increasingly sourced from emerging markets
- Emergence of elite, truly global university brands

Integration with industry
- Scale and depth of industry-based learning
- Research partnerships and commercialisation
- Industry as competitors in the certification and delivery of content

Source: Ernst & Young, University of the Future.

With the driver "digital technologies," the report mentions MOOCs specifically as transformative of the way education is delivered and accessed and how "value" is created by higher-education providers. Clearly, this feature also is systematically related to the other features. I do not have the space here to evaluate this report except to say that it is self-serving in that it favors the privatization of education.

In *An Avalanche is Coming: Higher Education and the Revolution Ahead*, Michael Barber, Katelyn Donnelly and Saad Rizvi, like the Ernst and Young, report, use the language of "revolution" to describe the changes about to transform higher education. Lawrence Summers, president emeritus of Harvard University who writes the foreword, suggests that [An Avalanche is Coming](#) correctly predicts the impending transformation:

> *Just as we've seen the forces of technology and globalisation transform sectors such as media and communications or banking and finance over the last two decades, these forces may now transform higher education. The solid classical buildings of great universities may look permanent but the storms of change now threaten them.*

Michael Barber, one-time education adviser to Tony Blair and now consultant for the giant education publisher Pearson, signals that the functions of the traditional university are being "unbundled" - which means that some universities will need to specialize solely in teaching. Barber and his colleagues mention emergent forms of the university: the elite university, the mass university, the niche university, the local university, the lifelong learning mechanism. For Barber and his colleagues, MOOCs are symbolic of an avalanche: "Just as an avalanche shapes the mountain, so the changes ahead will fundamentally alter the landscape for universities." With the student consumer as king, the growth of MOOCs and a more global system that makes up a leading part of the growth of the knowledge economy, "the new world the learner" will choose an education in a global marketplace with an "eye trained on value."

The New York Times "Schools for Tomorrow" Conference to be held September 17, 2013, focuses on "Virtual U: The Coming of Age of Online Education." The opening plenary asks "Is Online Education The Great Equalizer?" and provides the following primer:

There is no doubt that we are in the middle of an online education revolution, which offers huge potential to broaden access to education and therefore, in theory, level the playing field for students from lower-income, lower-privileged backgrounds. But evidence to date shows that the increasing number of poorly designed courses could actually have the reverse effect and put vulnerable students at an even bigger disadvantage.

This is to be followed with the debate: "Has The University As An Institution Had Its Day?" for which this description is added:

Higher education has always been an array of autonomous institutions, each with their own courses, their own faculty, and their own requirements for their own degrees. But online education is starting to break down those lines, in ways that are likely to lead to a lot more shared courses, consortia and credit transfers. In addition, there are a growing number of companies (not schools) providing higher education courses outside the traditional higher education institutions. As we move towards the possibility of a multi-institution, multi-credit qualification, is the traditional higher education institution in danger of losing applicants, income and identity?

The next agenda is devoted to "new era business models" including "an increasing assortment of new ventures offering for-profit schools, for-profit online courses, tests, curricula, interactive whiteboard, learning management systems, paid-for verified certificates of achievement, e-books, e-tutoring, e-study groups and more." And finally, the conference is to address "Gamechangers: How Will Online Education Revolutionalize [sic] What We Know And Understand About Learning?" with this orientation:

Traditionally, pedagogical research has been done in tiny groups; but new-generation classes of 60,000 students make it possible to do large scale testing and provide potentially game-changing research on how students learn best. Using the big data from online courses, we have access to new information about what pedagogical approaches work best. MOOCs, and many more traditional online classes, can track every keystroke, every homework assignment and every test answer a student provides. This can produce a huge amount of data on how long students pay attention to a lecture, where they get stuck in a problem set, what they do to get unstuck, what format and pacing of lectures, demonstrations, labs and quizzes lead to the best outcomes, and so on. How can we use Big Data for the good of the education profession, and not for "Big Brother"?

In "MOOCs and Open Education: Implications for Higher Education" - a self-described "white paper" - Li Yuan and Stephen Powell embrace a balanced analysis that sees MOOCs as an extension of existing online learning approach, but one that has generated "significant interest from higher-education institutions and venture capitalists that see a business opportunity to be exploited" that offer scalability and new business models of open education, enabling the disaggregation "of teaching from assessment and accreditation for differential pricing and pursuit of marketing activities." They embrace the theory of disruptive innovation (Bower & Christensen, 1995) to explain why some innovations can disrupt existing markets at the expense of incumbent players and suggest that current UK policy through a radical agenda allows "new, for-profit providers to enter the higher education market."

They identify the following players:

edX is a non-profit MOOCs platform founded by Massachusetts Institute of Technology and Harvard University with $60 million; 20 to 30 courses in 2013.
Coursera is a for-profit company that started with a $22 million total investment from venture capitalists, including New Enterprise Associates and Kleiner, Perkins, Caufield & Byers Education, Stanford University, Princeton University and the Universities of Michigan and Pennsylvania; 197 courses in 18 subjects.
UDACITY is a for-profit start-up founded by Sebastian Thrun, David Stavens and Mike Sokolsky with a $21.1 million investment from venture capitalist firms, including Charles River Ventures and Andreessen Horowitz; 18 online courses.
Udemy was founded in 2010 with a $16 million investment from Insight Venture Partners, Lightbank, MHS Capital, 500 start-ups and other investors; it provides a learning platform, which allows anyone to teach and participate in online video classes; more than 5,000 courses, 1,500 of which require payment, with the average price for classes between $20 and $200.
P2Pu was launched in 2009 with funding from the Hewlett Foundation and the Shuttleworth Foundation. P2PU offers some of the features of MOOCs; community-centered approach to provide opportunities for anyone willing to teach and learn online; 50 courses.
Khan Academy, another well-known free online learning platform, is a not-for-profit educational organization with significant backing from the Bill & Melinda Gates Foundation and Google. The Khan Academy, started by Salman Khan in 2008, offers more than 3,600 video lectures in academic subjects with automated exercises and continuous assessment.

We can add start-ups outside the US:

Open2Study **-** Australian start-up partnered with eight Australian universities.
Schoo - funded by Japanese venture capitalists.
Veduca- Brazilian start-up that uses materials developed by American universities but adds Portuguese subtitles; has some original material from the University of Sao Paulo.
Futurelearn - partnered with mostly British universities.
iversity **-** German start-up available in English and German.
(from Wikipedia, http://en.wikipedia.org/wiki/Massive_open_online_course)

Tarique Haider provides a comprehensive list of 35 MOOC providers. Most of these are for-profit or not-for-profit venture capitalist or philanthropic partnerships with universities and increasing big publishers and providers of video content.

The advent of MOOCs is widely touted to change the face of higher education by issuing large-scale "massive open online courses" often with 60,000 to 100,000 participants. While there have been widespread experiments with forms of distance education using online technologies, it was not until 2003 that the first courses were offered. Later in the decade, growing out of the open-education movement, the first successful MOOCs were offered. The term was coined in 2008 in the context of a discussion of connectivism. Not long after, The New York Times christened 2012 "The Year of the MOOC." It is only in the past few years that the majority of MOOC providers have established their companies and begun offering courses.

MOOCs are to get a great push from legislation being considered in the California and Florida senates. Senate Bill 520 - "Student instruction: California Online Student Incentive Grant programs" - was introduced by Sen. Darrell Steinberg in early June 2013 and passed unanimously, although the amendments have been significant. The position paper The Right to Educational Access: Using Online Education to Address Bottleneck Courses in California, written for The 20 Million Minds Foundation, outlines the extent of the bottleneck problem and the online solution. Nearly 90 percent of California's 112 community colleges reported waiting lists for courses in autumn 2012, with an average of 7,000 students on waiting lists per college. Meanwhile, only 60 percent of students at the University of California and a paltry 16 percent at California State University were able to earn a degree within the standard four years, largely because of their inability to register for the courses they need to graduate.

The final text of the bill looks to create three incentive-grant programs for online courses to be administered by the office of president or chancellor for each system "in consultation with their respective statewide academic senates." Each system will create a list of 20 high-demand lower-division courses for each system that are "deemed necessary for program completion, deemed satisfactory for meeting general education requirements, or in areas defined as transferable lower division courses" and "provide up to 15 incentive grants to faculty and campuses to facilitate certain intersegmental and intrasegmental partnerships and partnerships between online course technology providers and faculty. The bill spells out the criteria for incentive grants based on courses offering instructional support to promote retention, interaction and academic integrity using texts from the California Digital Open Source Library and "adaptive learning technology systems" that can provide significant improvement in student learning with the proviso that these courses can be "made available to students of another system, regardless of the system at which they are enrolled."

Florida and New York are following suit. The Florida Legislature is looking to expand the online offerings of the 12 universities in the system and to consolidate the authority for the future. The State University of New York, a system with 64 campuses, is seeking to offer new online degree programs and to consolidate authority.

The University of Melbourne, in Australia, "is the first Australian University to join Coursera, the educational technology company which partners with over 30 leading universities world-wide to offer free online access to world-class higher education. Through Coursera, Melbourne can provide first-class tertiary courses to a broad and diverse new audience who otherwise may not have the chance to engage with the University." The University of Waikato and Massey in New Zealand are pursuing MOOCs.

The state mandate in the US has been given, and together with a variety of new business models, it seems clear that the age of MOOCs has arrived. How are we to understand this purported sea-change?

In the first instance, it is helpful to see this change not just as a new technology for delivering teaching to large numbers of students. It is really more a wider set of socio-technological changes that might be better explained within a theory of postindustrial education focusing on social media as the new culture. This theory points to fundamental differences between the logic of industrial systems and that of information systems. Computer-based information systems embrace all forms of automation, expert systems, search engines, management information and processing systems that include both hardware (monitor, processor, printer and keyboard) and software (the programs), together with databases and networks that make up what is known as the information technology platform. These can provide truly global systems based on algorithms that have a kind of scalability that dwarfs the old assembly line production.

Social media differ from industrial media: social media are based on "a group of Internet-based applications that build on the ideological and technological foundations of [Web 2.0](), and that allow the creation and exchange of [user-generated content]()" (Kaplan & Haelein, 2010). In this sense then, MOOCs might be seen as a form of industrially scaled automation of the teaching function that uses Internet platforms to deliver content globally. MOOCs are based on the traditional one-to-many broadcast principle rather than the many-to-many, horizontal peer-learning structures. The question is to what extent massively large online classes permit or encourage peer learning or interaction. Is there a face-to-face simulated environment?

There are two major issues that require investigation and ongoing assessment. The first revolves around academic labor policy raising larger long-term issues of digital or immaterial labor: automation, deskilling and deprofessionalization, as well as casual and part-time recruitment of nontenured faculty or staff, adjuncts and technical staff with little pedagogical knowledge to replace trained faculty. One of the claims that has been made is that the major MOOC providers do not tend to hire people who have experience or training in instructional design, course design, digital pedagogy, the learning sciences or educational technology. Instead they are hiring programmers, often with little or no experience.

"Digital Taylorism" is a general term that refers to the industrial process of digitizing work, and it is a term used and embedded in the larger framework of "cognitive capitalism" - sometimes referred to as "third capitalism," after mercantilism and industrial capitalism. Cognitive capitalism is an increasingly significant theory, given its focus on the socio-economic changes caused by Internet and Web 2.0 technologies that have transformed the mode of production and the nature of labor. The theory of cognitive capitalism has its origins in French and Italian thinkers, particularly Gilles Deleuze and Felix Guattari's *Capitalism and Schizophrenia*, Michel Foucault's work on the birth of biopower and Michael Hardt and Antonio Negri's *Empire and Multitude*, as well as the Italian Autonomist Marxist movement that had its origins in the Italian *operaismo* (workerism) of the 1960s.

In postindustrial society, Hardt and Negri observe, "jobs for the most part are highly mobile and involve flexible skills. … They are characterized in general by the central role played by knowledge, information, affect and communication." Under different conditions, Hardt and Negri contend, such work might be conceived as extending our distinctively human creative powers in relationships with machine and computer power, such as artificial cognition. This theory might be thought of as one of the theoretical frameworks for thinking about questions of digital academic labor in the long term.

The P2P Foundation provides the following description of cognitive capitalism as a working hypothesis:

The production of wealth is no longer based on standardised and homogenous models for the organisation of the labour process regardless of the types of good produced. Production in cognitive capitalism takes place through a wide variety of labour-process models made possible by the development of new technologies of linguistic communication and transportation, and particularly characterised by forms of networking. Cognitive capitalism means that the production of wealth takes place increasingly through knowledge, through the use of those faculties of labour that are defined by cognitive activity (cognitive labour), in other words principally through immaterial cerebral and relational activities.

The other major issue with MOOCs is whether it will be responsible for the further monetization and financialization of higher education. It is clear that what are now free courses could easily become monetized in the future through a variety of business models. MOOCs are increasingly the result of venture capital partnerships and for-profit arrangements among big publishers, universities and providers of video content. As the UK Universities' Report "MOOCs: Higher Education's Digital Moment?" puts it:

MOOCs may also be emblematic of a broader shift in attitudes towards online education that reflects changing patterns of online activity in wider society. MOOCs and other open and online learning technologies may reshape the core work of institutions, from pedagogical models to business models, and the relationship between institutions, academics, students and technology providers.

I found Ian Bogost's discussion very helpful in this regard. In "MOOCs and the Future of the Humanities (Part One): A roundtable at the LA Review of Books," Bogost provides an approach from political economy that provides an overall context within which to view some of the central features of MOOCs. I summarize Bogost's points in abridged form:

MOOCs are a type of marketing. They allow academic institutions to signal that they are with-it and progressive, in tune with the contemporary technological climate.
MOOCs are a financial policy for higher education. They exemplify what Naomi Klein has called "disaster capitalism": policy guilefully initiated in the wake of upheaval.
MOOCs are an academic labor policy. As a consequence of the financial policy just described, MOOCs are amplifying the precarity long experienced by adjuncts and graduate student assistants and helping to extend that precarity to the professoriate. MOOCs encourage an ad-hoc "freelancing" work regime among tenured faculty, many of whom will find the financial incentives for MOOC creation and deployment difficult to resist.
MOOCs are speculative financial instruments. The purpose of an educational institution is to educate, but the purpose of a start-up is to convert itself into a financial instrument. The two major MOOC providers, Udacity and Coursera, are venture-capital-funded start-ups, and therefore they are beholden to high-leverage, rapid growth with an interest in a fast flip to a larger technology company or the financial market.
MOOCs are an expression of Silicon Valley values. Today's business practices privilege the accrual of value in the hands of a small number of network operators.
MOOCs are a kind of entertainment media. We are living in an age of para-educationalism: TED Talks, "big idea" books and the professional lecture circuit have reconfigured the place of ideas (of a certain kind) in the media mainstream.

Bogost voices some concerns that academics and institutions should take seriously. The UK Universities' Report provides a more sober analysis, suggesting that the long-term impact on higher education is not clear. The report also questions the sustainability of MOOCs and their relevance to the core work of higher education institutions. The report provides a useful framework for assessing MOOCs based on a couple of questions: What are the aims of engaging with massive open online courses in terms of mission, recruitment and innovation? What organizational changes do new online models of education require in terms of sustainability, pedagogy, credit and capacity?

These questions frame institutional evaluations of MOOCs. Additional questions concerning the future of academic labor, the nature of global competition and the adoption of national policy approaches are also important. And there is also the central question involving the perspective of the learner.

MOOCs emerged from the open-education movement with an emphasis on "openness" and scale in online education. Ultimately the philosophy of MOOCs will be determined by the interpretation of "openness."

With the advent of the Internet, Web 2.0 technologies and user-generated cultures, new principles of radical openness have become the basis of innovative institutional forms that decentralize and democratize power relationships, promote access to knowledge and encourage symmetrical, horizontal peer learning relationships. In this context radical openness is a complex code word that represents a change of philosophy and ethos, a set of interrelated and complex changes that transform markets, the mode of production and consumption, and the underlying logic of our institutions. How well do and will MOOCs advance these values?

I would like to suggest that "peer philosophies" are at the heart of a radical notion of "openness" and would advocate the significance of peer governance, peer review, peer learning and peer collaboration as a collection of values that form the basis for open institutions and open management philosophies. This form of openness has been theorized in different ways by John Dewey, Charles Sanders Pierce and Karl Popper as a "community of inquiry" – a set of values and philosophy committed to the ethic of criticism that offers means for transforming our institutions in what Antonio Negri and others call the age of cognitive capitalism. Expressive and aesthetic labor ("creative labor") demands institutional structures for developing "knowledge cultures" as "flat hierarchies" that permit reciprocal academic exchanges as a new basis for public institutions.

The reinvention of the university as a public institution allows an embrace of a diverse philosophical heritage based on the notions of "public": "the public sphere," "publics" (in the plural), "civil society" and "global public sphere" - all concepts that hold open the prospect of addressing the local and the global - both the community, the regional as well as the national and the global. This is a philosophy out of which values can be forged and orientations adopted that reflect this heritage, which squares with an institutional identity as a part of a historical public system of higher education and which contributes to a global civic agenda of common world problems. MOOCs have a significant role to play in this situation.

The notion of the university as a public knowledge institution needs to reinvent a language and to initiate a new discourse that reexamines the notions of "public" and "institution" in a digital global economy characterized by increasing intercultural and international interconnectedness. This discourse needs to begin by understanding the historical and material conditions of its own future possibilities, including threats of the monopolization of knowledge and privatization of higher education together with the prospects and promise of forms of openness (open source, open access, open education, open science, open management) that promote the organization of digital creative labor and the democratization of access to knowledge.

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