

## The Merchants of MOOCs

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### I. INTRODUCTION

Meet the MOOC. In 2011, Stanford professors Peter Norvig and Sebastian Thrun filmed the lectures from their artificial intelligence course and put the videos *online*.<sup>1</sup> They *opened* registration to anyone, anywhere in the world. The response was *massive*: more than 160,000 students signed up. Although “only” 23,000 completed the course, that was still roughly 22,800 more than in a normal semester. And of the 248 students who received perfect scores, every single one took the course online, rather than at Stanford.

The success of the Stanford AI course made MOOCs—Massive Open Online Courses—front page news. It also drew the attention of a group I will call the “Merchants of MOOCs”: a loose network of

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<sup>1</sup> See generally John Markoff, *Virtual and Artificial, But 58,000 Want Course*, N.Y. TIMES, Aug. 15, 2011, at A11; Tamar Lewin, *Instruction for Masses Knocks Down Campus Walls*, N.Y. TIMES, Mar. 4, 2012, at A11; Steven Leckart, *The Stanford Education Experiment Could Change Higher Education Forever*, WIRED (Mar. 30, 2012, 9:34 PM), [http://www.wired.com/wiredscience/2012/03/ff\\_aiclass/](http://www.wired.com/wiredscience/2012/03/ff_aiclass/); Jeffrey R. Young, *From Self-Flying Helicopters to Classrooms of the Future*, CHRON. HIGHER EDUC., Oct. 5, 2012, at B12, available at <http://chronicle.com/article/From-Self-Flying-Helicopters/134666>.

educational entrepreneurs united by the goal of bringing MOOCs to the masses. Professor Thrun gave up his Stanford tenure to found Udacity, which has raised \$20 million in venture capital;<sup>2</sup> two of his Stanford colleagues founded Coursera, which has \$85 million to its name;<sup>3</sup> and Harvard and MIT jointly funded the nonprofit edX with \$60 million.<sup>4</sup> They, and many others, are promoting MOOCs as a transformative innovation for higher education.

Consider a typical MOOC program. Columbia University is working with a 14-member international consortium, including the London School of Economics and the Smithsonian, to offer courses in “computer science and technology, the arts, journalism, and physics,” featuring “a wealth of free content usually only available on university campuses and at leading museums and libraries.”<sup>5</sup> The centerpiece is “elaborate online courses replicating the Ivy League experience” that combine streaming video, online texts, and discussion groups.<sup>6</sup> Many are free, but students seeking college course credit can enroll for a fee.<sup>7</sup>

—Wait. What’s that? Oh. I see.—

Excuse me. I’ve just been informed that I’ve been talking about Columbia’s *previous* venture into online learning, Fathom.com, which launched in 2000<sup>8</sup> and closed in 2003 after blowing through \$25 million.<sup>9</sup> (Although some 65,000 people created Fathom accounts, very few of them paid for any courses.<sup>10</sup>) Fathom, of course, is completely different from Columbia’s *current* venture into online learning in partnership with Coursera, which offers Ivy League courses in computer science and economics that combine streaming video, online texts, and discussion groups.<sup>11</sup> They’re free to take, and

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<sup>2</sup> *Udacity*, CRUNCHBASE, <http://www.crunchbase.com/company/udacity> (last visited Aug. 13, 2014).

<sup>3</sup> *Coursera*, CRUNCHBASE, <http://www.crunchbase.com/company/coursera> (last visited Aug. 13, 2014).

<sup>4</sup> Press Release, MIT News Office, MIT and Harvard Announce edX (May 2, 2012), *available at* <http://web.mit.edu/newsoffice/2012/mit-harvard-edx-announcement-050212.html>.

<sup>5</sup> Press Release, Fathom Poised to Redefine Scope of Online Learning (Apr. 3, 2000), *available at* [http://web.archive.org/web/20030123191517/http://fathom.com/about/about\\_press\\_page.jhtml?pressReleaseId=1063](http://web.archive.org/web/20030123191517/http://fathom.com/about/about_press_page.jhtml?pressReleaseId=1063).

<sup>6</sup> Katie Hafner, *Lessons Learned at Dot-Com U.*, N.Y. TIMES, May 2, 2002, at E1.

<sup>7</sup> *Id.*

<sup>8</sup> See TAYLOR WALSH, UNLOCKING THE GATES: HOW AND WHY LEADING UNIVERSITIES ARE OPENING UP ACCESS TO THEIR COURSES 25–33 (2011).

<sup>9</sup> See Stephen Philips, *Blitzing the Glitz*, TIMES (LONDON) HIGHER EDUC. (May 16, 2003), <http://www.timeshighereducation.co.uk/176498.article>.

<sup>10</sup> See WALSH, *supra* note 8, at 33.

<sup>11</sup> *Columbia University*, COURSERA, <https://www.coursera.org/columbia> (last visited Aug. 13, 2014).

Coursera offers certificates of completion for a fee.<sup>12</sup> As you can see, Fathom and Coursera have nothing in common—or nothing that anyone involved cares to admit.

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As Columbia’s amnesia about Fathom suggests, MOOCs are far from unprecedented. Almost everything in them has been tried before, often repeatedly. In what follows, I will critically examine some common claims about MOOCs in light of this missing context and suggest that MOOCs are both far less and far more disruptive than the Merchants of MOOCs would have us believe.<sup>13</sup>

## II. SUPERSTARS

The first claim that the Merchants of MOOCs make is that MOOCs will allow all students to learn from the very best professors. Thousands of Joe Coursepacks teach introductory calculus every year. Some of them are good; some are terrible. Replace them with a single MOOC, and it can feature the clearest and most engaging lecturer.<sup>14</sup> As David Brooks puts it, “a few star professors can lecture to millions.”<sup>15</sup>

There’s just one problem. We already have lectures from elite professors for the masses. They’re called “The Great Courses,” and they come in an affordable package of 24 videos for a special, limited-time price of \$69.95.<sup>16</sup> The “massive” in “MOOC” is the same as the “mass” in “mass media”: people have been using broadcast technologies to deliver education for decades. From 1957 to 1982, CBS aired *Sunrise Semester*, a half-hour program in the early morning featuring NYU professors delivering college-level lectures.<sup>17</sup> NBC’s

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<sup>12</sup> *A Milestone for Signature Track, Certificates for the Life-Long Learner*, COURSERABLOG (Sept. 12, 2013, 4:28 PM), <http://blog.coursera.org/post/61047298750/a-milestone-for-signature-track-certificates-for-the>.

<sup>13</sup> For a useful survey of MOOC history and theory, with some reflections on their implications for legal education, see generally Phillip G. Schrag, *MOOCs and Legal Education: Valuable Innovation or Looming Disaster?*, 59 VILL. L. REV. 83 (2014).

<sup>14</sup> See, e.g., Robert Ghrist, *Calculus: Single Variable*, COURSERA, <https://www.coursera.org/course/calcsing> (last visited Aug. 16, 2014). Professor Ghrist is on the faculty of the University of Pennsylvania. *Robert Ghrist*, COURSERA, <https://www.coursera.org/instructor/~140> (last visited Aug. 16, 2014).

<sup>15</sup> David Brooks, *The Campus Tsunami*, N.Y. TIMES, May 4, 2012, at A29.

<sup>16</sup> See, e.g., Michael Starbird, *Change and Motion: Calculus Made Clear, 2nd Edition*, THE GREAT COURSES, [http://www.thegreatcourses.com/tgc/courses/course\\_detail.aspx?cid=177](http://www.thegreatcourses.com/tgc/courses/course_detail.aspx?cid=177) (last visited Aug. 16, 2014). Professor Starbird is on the faculty of the University of Texas at Austin. *Professor Michael Starbird*, THE GREAT COURSES, [http://www.thegreatcourses.com/tgc/professors/professor\\_detail.aspx?pid=191](http://www.thegreatcourses.com/tgc/professors/professor_detail.aspx?pid=191) (last visited Aug. 16, 2014).

<sup>17</sup> ROBERT D.B. CARLYLE, COLLEGE CREDIT THROUGH TV: OLD IDEA, NEW DIMENSIONS 53–57 (1974); Fred M. Hechinger, *About Education*, N.Y. TIMES, July 27,

answer was *Continental Classroom*, which ran from 1958 to 1963.<sup>18</sup> Nicaragua used radio for distance education in mathematics starting in 1974, and dozens of countries followed its lead.<sup>19</sup> The MOOC format adds little to the tools already at hand.

If anything, the MOOCs of today fall rather short of their predecessors. A recent article in *The New Yorker* offers a revealing look inside the making of one of Harvard's MOOCs, "The Ancient Greek Hero."<sup>20</sup> The day before the course went live, the videos for the first lecture weren't finished.<sup>21</sup> The main video editor was a classics Ph.D., but don't worry, she was trained in "digital storytelling" by Harvard's "MOOC video guru."<sup>22</sup> And the professor, Gregory Nagy, was planning to bring a cameraman on his spring break trip to Greece to film the mists at Delphi.<sup>23</sup> Why, we might ask, is the Francis Jones Professor of Classical Greek Literature scrambling to get second-rate B-roll footage? And do we really think that the resulting videos will be the pinnacle of pedagogical achievement in teaching ancient Greek literature?

### III. FLIPPING

Paradoxically, a second claim about MOOCs is that they enable interactive learning. MOOCs themselves are pilotless drones—automated and distant—but they can also support the teachers whose boots are on the ground. Consider another Harvard course. Michael Sandel teaches a moral philosophy survey so popular it might as well be a MOOC: "Justice" regularly enrolls a thousand students.<sup>24</sup> Sandel turned it into a MOOC for edX, which went out to other universities and invited them to use "JusticeX" not as a replacement for philosophy courses but as a component of them.<sup>25</sup>

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1982, available at <http://www.nytimes.com/1982/07/27/science/about-education.html>.

<sup>18</sup> See CARLYLE, *supra* note 17, at 46–53.

<sup>19</sup> See, e.g., Andrea Bosch, *Interactive Radio Instruction: Twenty-Three Years of Improving Educational Quality*, 1 EDUC. & TECH. NOTES 1, 1, 7 (1997), available at [http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1997/01/01/000009265\\_3980429110717/Rendered/PDF/multi\\_page.pdf](http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1997/01/01/000009265_3980429110717/Rendered/PDF/multi_page.pdf) (summarizing twenty-two projects using radio for distance education).

<sup>20</sup> Nathan Heller, *Laptop U: Has the Future of College Moved Online?*, THE NEW YORKER, May 20, 2013, at 80.

<sup>21</sup> *Id.* at 83.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> See Nikita Makarchev, *Sandel Wins Enrollment Battle*, THE CRIMSON (Sept. 26, 2007), <http://www.thecrimson.com/article/2007/9/26/sandel-wins-enrollment-battle-justice-triumphs/>.

<sup>25</sup> See Rob Reich, *Much Ado About MOOCs*, BOSTON REV. (June 13, 2013), <http://bostonreview.net/us/much-ado-about-moocs>.

The idea here is the “flipped classroom.”<sup>26</sup> Instead of bringing students together for lectures in a scheduled class and having them do homework problems on their own, a flipped class puts the lectures online for students to watch on their own time and has them come together in the classroom to solve problems. The theory is that intensive learning requires interactive engagement, and therefore face-to-face class time is most usefully spent on this mode of learning. The lecture’s core job—delivering information—can be pushed to asynchronous out-of-class channels in a way that coaching, teamwork, and problem-solving cannot.

The theory of the flipped classroom, like the theory of the superstar professor, sees Joe Coursepack’s lectures as a horrible waste, but for quite different reasons. The problem is not Joe Coursepack himself, but the misuse of his skills. Thus, rather than replace Joe Coursepack with Michael Sandel, the flipped classroom aims to leave Joe Coursepack in his job but replace his lectures with seminars. EdX proffered JusticeX as the lecture component of a flipped classroom. In this “blended” MOOC model, Sandel takes on the grunt work of the moral philosophy lecture, leaving individual philosophy professors free to focus on discussion and dialogue.<sup>27</sup>

The philosophers at San José State University demurred, writing in an open letter to Sandel that “[t]here is no pedagogical problem in our department that JusticeX solves.”<sup>28</sup> They have a point. True, a flipped classroom requires canned lectures. But according to the theory of the flipped classroom, producing lectures—whether for canning or for immediate consumption—is the *easy* side of teaching. The pedagogical argument for flipping the classroom is precisely that the hard part of teaching is the face-to-face part, the part that doesn’t go away when you put Michael Sandel on YouTube and hit “play.” What JusticeX does for philosophy professors, they could do for themselves with a webcam. If lectures are broken, MOOCs don’t fix them.

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<sup>26</sup> See, e.g., Heller, *supra* note 20, at 83; Tina Rosenberg, *Turning Education Upside Down*, OPINIONATOR (Oct. 9, 2013, 11:45 AM), <http://opinionator.blogs.nytimes.com/2013/10/09/turning-education-upside-down>.

<sup>27</sup> David LaMartina, *Blended MOOCs: The Best of Both Worlds?*, CAMPUS TECH. (Aug. 21, 2013), <http://campustechnology.com/articles/2013/08/21/blended-moocs-the-best-of-both-worlds.aspx>.

<sup>28</sup> Letter from Philosophy Dep’t at San José State Univ. to Michael Sandel (Apr. 29, 2013), *available at* <http://s3.documentcloud.org/documents/695245/san-jose-state-u-open-letter.pdf> [hereinafter “Letter from Philosophy Dep’t”].

To be sure, Michael Sandel and the JusticeX team have access to better production facilities and support than your typical Joe Coursepack, and Sandel's lectures are the product of decades of mindful refinement. But let us not forget that the Stanford AI course's recorded lectures caught on not because of their technical sophistication, but despite their lack of it. Thrun and Norvig filmed their videos in the basement of Thrun's guesthouse, in front of a tiny white screen.<sup>29</sup> Sandel himself "chose to do nothing more than upload [existing videos of his lectures from a PBS series], broken down into shorter chunks, accompanied by poorly written multiple-choice quizzes on the content at regular intervals."<sup>30</sup> Today's MOOCs are rush jobs, but that hasn't held them back. If lo-fi production was good enough for the world's most successful MOOC, it seems unlikely that hi-fi production is the secret ingredient in the MOOC cocktail.

#### IV. SCALE

A third claim about MOOCs is that they solve a version of Baumol's cost disease.<sup>31</sup> Entertainment scales with technology: millions of people can play *Call of Duty: Grenada* for the cost of making it once. But teaching doesn't scale. Thousands of Joe Coursepacks at thousands of colleges give the same lectures every year, duplicating one another's work. By pushing that work into a single set of videos and online materials—goes the argument—it becomes possible to offer an equivalent education for much less.

Again, a comparison with the superstar theory is illuminating. Rather than replacing Joe Coursepack with Michael Sandel because Michael Sandel is *better*, the point is to replace Joe Coursepack with Michael Sandel because Michael Sandel is *cheaper*. He isn't cheaper in an absolute sense; named chairs in the Ivy League eat steak whenever they want, and their MOOC teams have to eat too. Rather, Michael Sandel is far cheaper *per student* than Joe Coursepack because his salary and support can be spread across many more users. This is what

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<sup>29</sup> See Leckart, *supra* note 1.

<sup>30</sup> Reich, *supra* note 25.

<sup>31</sup> See, e.g., Heller, *supra* note 20, at 84; Bruce Guile & David Teece, *The Real Winners of the Coming Revolution in Higher Education*, FORBES (Mar. 3, 2013, 9:01 AM), <http://www.forbes.com/sites/forbesleadershipforum/2013/03/12/the-real-winners-of-the-coming-revolution-in-higher-education/>. But see Dylan Matthews, *The Tuition is Too Damn High, Part V—Is the Economy Forcing Colleges to Spend More?*, WASH. POST WONKBLOG (Aug. 30, 2013), <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/08/30/the-tuition-is-too-damn-high-part-v-is-the-economy-forcing-colleges-to-spend-more/> (challenging Baumol cost disease explanation of higher education prices).

Internet start-ups mean when they say that a business model “scales;” this is why the “massive” in MOOC is of such interest to investors.

But even on this basis, it is still not clear that Michael Sandel has much to offer San José State. By their nature, large-lecture survey courses are already where faculty operate at maximum efficiency. The time that the San José State philosophy faculty devote to introductory lectures is simply not where the great bulk of costs in having a philosophy department lie. To be sure, preparing good lectures is serious work for any conscientious professor, and it can take years of revisions to get a lecture course right. But taking that work off of a department’s shoulders will not fundamentally transform higher education.<sup>32</sup> If Baumol’s cost disease is the problem, MOOCs “solve” it not simply by cutting the cost of lecture classes, but also by substituting lectures for seminars—the very opposite of what flipped-classroom proponents prescribe.<sup>33</sup>

MOOC advocates also sometimes promise to reap economies of scale by using automatic grading and peer assessment.<sup>34</sup> It might be more accurate to say that MOOCs use the grading methods they can afford. If those methods do any good for students, so much the better. In its first and famous run-through, the Stanford AI course simply dropped the programming assignments because the course staff “had enough on its plate.”<sup>35</sup> Perhaps MOOCs will someday crack the tough nut of grading, but for now they assume a nutcracker.

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<sup>32</sup> This point is an application of Amdahl’s law: the maximum overall improvement from optimizing part of a system is limited to the fraction of the system that the part represents. If lecture courses take up 25 percent of a department’s teaching effort, then even a 50 percent cut in the costs of delivering lectures will still reduce the department’s overall costs by only 12.5 percent. Large lecture courses, *precisely because they are large*, look like the great bulk of what a department does only from the students’ point of view, not from the faculty’s. If every student takes three 100-person lecture courses and one 10-person seminar in a semester, students will spend most of their time in lectures, and faculty will spend most of their time teaching seminars.

<sup>33</sup> See generally Graeme Wood, *The Future of College?*, THE ATLANTIC, (Aug. 13, 2014), <http://www.theatlantic.com/features/archive/2014/08/the-future-of-college/375071/> (profiling the Minerva Project, an all-seminar, all-online accredited university whose founder aims to “replace (or, when he is feeling less aggressive, ‘reform’) the modern liberal-arts college”).

<sup>34</sup> See generally, e.g., Chris Piech et al., *Tuned Models of Peer Assessment in MOOCs*, PROC. 6TH ANN. INT’L CONF. ON EDUC. DATA MINING (2013), <http://arxiv.org/abs/1307.2579>.

<sup>35</sup> Leckart, *supra* note 1.

## V. UNBUNDLING

A fourth claim about MOOCs is that they will disrupt higher education by unbundling it: they will replace *prix fixe* programs of study with *à la carte* ones. Take for example Georgia Tech's online Masters in computer science, essentially a series of MOOCs rolled together into a degree program.<sup>36</sup> For \$6600, Georgia Tech will certify you as having passed their program of study and graduate you with a fully-accredited Masters degree. There is no need to move to Atlanta, no need to quit your day job, no need to attend Yellow Jackets games.

Unbundling is a way of extending the reach of higher education. Carnegie Mellon's Masters in computer science costs \$41,000.<sup>37</sup> Students who could never scrape together 410,000 dimes can find a way to make it work at a sixth of the price. So Georgia Tech's online Masters program brings higher education to students who were previously excluded from it because of the cost. But unbundling is also a way of undercutting other parts of the higher education market. Georgia Tech's \$6,600 degree does more than just bring in new students who couldn't afford Carnegie Mellon's \$41,000; it also siphons away some students who could. This possibility cannot have escaped the attention of Georgia Tech's administrators—or Carnegie Mellon's. It certainly didn't escape the attention of the philosophers at San José State, who wrote that the JusticeX MOOC model would turn them into “glorified teaching assistant[s].”<sup>38</sup>

This is where the claim of “disruption” comes in. The term comes from Clayton Christensen's theory of disruptive innovation, in which some new technologies change an industry's entire structure.<sup>39</sup> Disruptive innovations deliver value to users in a way that is incompatible with existing institutions in an industry. As a result, upstarts rather than incumbents deploy the innovation—and then supplant the incumbents as the innovation takes off. MOOCs look like a disruptive innovation because of their openness, their online delivery, and their digital economies of scale—all qualities that set them apart from traditional universities.

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<sup>36</sup> Gabriel Kahn, *The MOOC That Roared*, SLATE (July 23, 2013, 5:45 AM), [http://www.slate.com/articles/technology/technology/2013/07/georgia\\_tech\\_s\\_computer\\_science\\_mooc\\_the\\_super Cheap\\_master\\_s\\_degree\\_that.html](http://www.slate.com/articles/technology/technology/2013/07/georgia_tech_s_computer_science_mooc_the_super Cheap_master_s_degree_that.html).

<sup>37</sup> *2014–15 Graduate Tuition and Fees Information*, CARNEGIE MELLON UNIV., <http://www.cmu.edu/hub/tuition/graduate/index.html> (last visited Sept. 13, 2014).

<sup>38</sup> See Letter from Philosophy Dep't, *supra* note 28.

<sup>39</sup> See generally CLAYTON CHRISTENSEN, *THE INNOVATOR'S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL* (1997).



It is the claim of disruption that is largely responsible for the sudden influx of venture capital backing the Merchants of MOOCs. Disruption is about many things, but it is especially about money. Venture capitalists look at an existing market—here higher education—and tally up the dollars coursing through it in a year. Then they look for a disruption machine that pockets a large fraction of those dollars by dramatically undercutting the industry’s present prices. The money in MOOCs, in other words, comes from a belief that they will be effective in smashing higher education as it currently exists and scooping up some of the money thereby shaken loose. The Merchants of MOOCs look forward to the day when the philosophers at San José State bring home the salaries of glorified teaching assistants.

Disruptive innovation, of course, requires both a disruptor and a disruptee. In existing universities, the large survey courses that MOOCs are poised to replace are currently cross-subsidizing the seminars.<sup>40</sup> They pay for the library, the study space, the lab benches, and the many other components of an “education” that have no separate price tag attached. Perhaps we should call unbundling by another name: skimming the cream.

But here again, there is something missing from the story. We already have inexpensive unbundled remote courses of study that can culminate in accredited degrees, and we have had them for a long time. The University of Phoenix offered its first online class in 1989. The United Kingdom’s Open University, founded in 1969, is still going strong. Long before computer networks, there was television: NYU gave some students credit for *Sunrise Semester* courses in the 1950s. And before there was television, there were letters: the University of London started awarding correspondence-course degrees in 1858. If the unbundling of the degree from the campus is the test, MOOCs are not new, and MOOCs are not special.

## VI. OPENNESS

A fifth claim about MOOCs is that they will make higher education more open. What made the Stanford AI course take off is not that it was online or that it was massive, but that it was genuinely open to all comers. Traditional university courses like Carnegie Mellon’s are trapped behind a \$41,000 paywall; the Stanford AI course was free for all. It is precisely this quality, however, that is hardest to

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<sup>40</sup> Ironically, it is precisely these sorts of small and focused instruction that flipped-classroom proponents continually extoll. See, e.g., Daphne Koller, *Death Knell for the Lecture: Technology as a Passport to Personalized Education*, N.Y. TIMES, Dec. 5, 2011, at D8.

see and to sustain when MOOCs are treated as profit-making ventures.<sup>41</sup> It is not obvious how courses offered for free online will pay for themselves. Most of the options being tried are adapted from other Internet businesses. One approach is to make the courses themselves free but charge for credit—a “freemium” model familiar from free-to-play games like *Candy Crush* and *Temple Run*.<sup>42</sup> Another is to charge recruiters for access to students—an ad-supported model familiar from Facebook.<sup>43</sup> And Sebastian Thrun now believes that the future of college consists of courses catering to the hiring needs of corporate sponsors.<sup>44</sup> All of these models remain uncertain. But the Merchants of MOOCs seem inclined to walk away from free education if it becomes clear there is no blood in this stone.<sup>45</sup>

To similar effect is the related suggestion that MOOCs will make higher education more egalitarian. Universities are hierarchical, to be sure, but so are MOOCs. If anything, the Merchants of MOOCs have put the superstar lecturer on a higher and yet more remote pedestal. And it is true that MOOCs embrace the market. But their limited brand of “competition” involves oligopolistic information platforms struggling for pre-eminence.<sup>46</sup> It is a far cry from the loose self-assembly of genuinely networked organizations.<sup>47</sup> MOOCs are not the bazaar, where a thousand diverse voices jostle each other with a thousand messages; they are cathedrals, huge and expensive edifices where anointed bishops preach a Sunday sermon to the masses.<sup>48</sup>

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<sup>41</sup> See, e.g., Tamar Lewin, *Students Rush to Web Classes, but Profits May Be Much Later*, N.Y. TIMES, Jan. 6, 2013, at A1.

<sup>42</sup> See, e.g., Steve Kolowich, *How EdX Plans to Earn, and Share, Revenue From Its Free Online Courses*, CHRON. HIGHER EDUC. (Feb. 21, 2013), <http://chronicle.com/article/How-EdX-Plans-to-Earn-and/137433/>.

<sup>43</sup> Lal Jones-Bey, *Coursera and Your Career*, COURSERABLOG (Dec. 4, 2012, 2:15 PM), <http://blog.coursera.org/post/37200369286/coursera-and-your-career>.

<sup>44</sup> Max Chafkin, *Udacity's Sebastian Thrun, Godfather of Free Online Education, Changes Course*, FAST COMPANY (Nov. 14, 2013), <http://www.fastcompany.com/3021473/udacity-sebastian-thrun-uphill-climb>.

<sup>45</sup> See Caitlin Emma, *Online Courses Don't Live Up to Hype*, POLITICO (Sept. 18, 2013, 11:37 PM), <http://www.politico.com/story/2013/09/online-courses-failing-moocs-97031.html>.

<sup>46</sup> See, e.g., Leckart, *supra* note 1 (“In 50 years, [Thrun] says, there will be only 10 institutions in the world delivering higher education and Udacity has a shot at being one of them.”).

<sup>47</sup> See generally YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* (2006).

<sup>48</sup> See generally ERIC S. RAYMOND, *THE CATHEDRAL AND THE BAZAAR: MUSINGS ON LINUX AND OPEN SOURCE BY AN ACCIDENTAL REVOLUTIONARY* (1999).

To appreciate how far from fully open MOOCs can be, compare them to their precursors. Take the Khan Academy, one of the inspirations for the Stanford AI course.<sup>49</sup> Its proprietor, Salman Khan, a hedge fund analyst, was tutoring his cousin in mathematics online. Other friends were interested in the tutoring, so Kahn made videos of himself talking while drawing on a digital whiteboard and posted them to YouTube. Interest in the videos took off—hundreds of millions of views by now—so he quit his day job and focused on making more videos.<sup>50</sup> Salman Khan didn't have a business plan. He just made his videos and shared them under a Creative Commons license.<sup>51</sup> Anyone can watch, anyone can share, and anyone can revise, reworking Khan's lessons or adding to them. You can watch them any time, in any sequence, as you need. Try taking one of Coursera's courses out of term, or remixing an Udacity lecture. Good luck with that.

Genuinely open education, in other words, is free as in freedom. And it is all around us. MIT OpenCourseWare, launched in 2002, provides syllabi, lecture notes, videos, slides, and even full textbooks available for unrestricted reuse.<sup>52</sup> The Open Education Consortium maintains a directory of more than 35,000 courses with "materials developed by experienced educators that are available for use, repurposing, and modification (including translation), in whole or in part, by everyone, everywhere in the world."<sup>53</sup> And the world of freely available education goes far beyond formal courses from well-known institutions. There is Vi Hart, who uses animated doodles to explain prime numbers, hexaflexagons, fractals, and other mathematical topics.<sup>54</sup> There is Mike Duncan, an amateur historian and stay-at-home dad who produced the History of Rome podcast, hundreds of thousands of words over a five-year run.<sup>55</sup> There is Typophile, a discussion board for typographers, with an entire curriculum's worth

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<sup>49</sup> Clive Thompson, *How Khan Academy Is Changing the Rules of Education*, WIRED (Jul. 11, 2011, 9:17 PM), [http://www.wired.com/magazine/2011/07/ff\\_khan/](http://www.wired.com/magazine/2011/07/ff_khan/).

<sup>50</sup> *Id.*

<sup>51</sup> *Khan Academy Terms of Service* § 7.1, KHAN ACADEMY (Mar. 11, 2013), <http://www.khanacademy.org/about/tos>.

<sup>52</sup> MIT OPENCOURSEWARE, <http://ocw.mit.edu/index.htm> (last visited Sept. 13, 2014).

<sup>53</sup> *About the OCW Consortium*, OPEN COURSEWARE CONSORTIUM, <https://web.archive.org/web/20140410002036/http://www.ocwconsortium.org/about-ocw/> (last visited Sept. 30, 2014) (accessed using the Internet Archive Wayback Machine to view the Apr. 10, 2014 version of this website).

<sup>54</sup> *Vi Hart*, YOUTUBE, <http://www.youtube.com/user/Vihart> (last visited Sept. 13, 2014).

<sup>55</sup> THE HISTORY OF ROME, <http://thehistoryofrome.typepad.com> (last visited Sept. 13, 2014).

of accumulated practical knowledge about fonts, typesetting, and design for anyone who wants to dive in.<sup>56</sup> And there is Wikipedia, now a world-leading research resource for college students.<sup>57</sup> These are just a few of the ones that I, personally, have learned from. For each resource and community I have named, there are tens of thousands more I could have.

One advantage MOOCs have over these various resources is structure: the “C” stands for “course,” as in “prescribed course of study.” When you listen to Mike Duncan’s podcasts, you’re on your own: no one will notice or care if you give up after a week. But a MOOC has a meaningful sequence of checkpoints and deliverables to help students tie themselves to the mast. There is something to this point, but the contrast between MOOCs and open educational resources should not be overstated. On the one hand, MOOCs’ commitment mechanisms also often fall short. Nearly six out of seven of the students who started the Stanford AI course failed to finish, and when A.J. Jacobs signed up for eleven MOOCs for a *New York Times* experiment, he completed the “two courses with lighter workloads and less jargon.”<sup>58</sup> On the other hand, nothing prevents layering the checkpoints and other work of a “course” on top of open resources. Many teachers who integrate the Khan Academy into their classrooms customize their selections for each student.<sup>59</sup> MOOCs bundle student supervision with course content, but in an unbundled world, even that union can be questioned.

The “openness” of these other creators and communities is of an entirely different order than the openness of MOOCs. It is the freedom to take content and build on it, to mash up one resource with another. It is the freedom to dive in and out of topics, pulling them together in ways that don’t follow the fixed rhythms of a college course. And, most of all, it is the freedom to join in, not just as a student but as a teacher, moving back and forth between learning and sharing what you have learned as you collaborate with others from around the world

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<sup>56</sup> TYPOPHILE, <http://typophile.com> (last visited Sept. 13, 2014).

<sup>57</sup> WIKIPEDIA, <http://www.wikipedia.org> (last visited Sept. 13, 2014). Alison J. Head & Michael B. Eisenberg, *How Today’s College Students Use Wikipedia for Course-Related Research*, FIRST MONDAY (Mar. 1, 2010), <http://firstmonday.org/article/view/2830/2476>.

<sup>58</sup> A.J. Jacobs, *Two Cheers for Web U!*, N.Y. TIMES, Apr. 20, 2013, at SR1.

<sup>59</sup> See, e.g., Somini Sengupta, *Online Learning, Personalized*, N.Y. TIMES, Dec. 4, 2011, at B1; Adam Cotterell, *48 Idaho Schools “Flip The Classroom” and Pilot Khan Academy Online Learning*, BOISE ST. PUBLIC RADIO (Sept. 3, 2013, 1:00 PM), <http://boisestatepublicradio.org/post/48-idaho-schools-flip-classroom-and-pilot-khan-academy-online-learning>.

on their own diverse educational journeys. MOOCs are charismatic megafauna, but open education is an entire ecosystem.

## VII. DISRUPTION

Let us take stock. MOOCs are truly groundbreaking on exactly zero out of five claims. In some cases, MOOCs replicate familiar features of existing institutions: what is JusticeX but the largest philosophy lecture course ever offered, the *reductio ad absurdum* of Justice? In some cases, MOOCs recapitulate longstanding projects to unbundle higher education: what are Coursera's certificates of completion but the cheapest credits ever sold? And in some cases, MOOCs drink from the wellspring of open educational resources: what was the Stanford AI course but a massive educational potlatch? The combination, perhaps, is novel—but these three strands pull in quite different directions: sustaining higher education, disrupting it, or questioning its assumptions entirely.

An ironic fact about MOOCs today—one of many—is that they are often mediocre and occasionally terrible.<sup>60</sup> This is sometimes taken as a proof that they are no serious threat to higher education, or as providing sufficient reason to oppose them. These claims miss a basic point about disruptive innovations, which are consistently worse in the near term than the older systems they disrupt. It is precisely this fact that keeps incumbents from embracing the innovation; if MOOCs today really were clearly better than classroom instruction, we would not be having this conversation. This does not mean MOOCs will stay worse, it does not mean they will get better. It just means that to criticize MOOCs is not to refute them. From the perspective of the students flocking to online courses, worse is better;<sup>61</sup> the value of personal instruction is far outweighed by its cost and inconvenience.<sup>62</sup>

On the other side, the claim that MOOCs are good simply because they are disruptive is equally misguided. The Syrian civil war is certainly *disruptive*, especially for Syrians. Not all destruction is

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<sup>60</sup> See, e.g., Will Oremus, *Online Class on How To Teach Online Classes Goes Laughably Awry*, SLATE (Feb. 5, 2013, 7:05 PM), [http://www.slate.com/blogs/future\\_tense/2013/02/05/mooc\\_meltdown\\_coursera\\_course\\_on\\_fundamentals\\_of\\_online\\_education\\_ends\\_in.html](http://www.slate.com/blogs/future_tense/2013/02/05/mooc_meltdown_coursera_course_on_fundamentals_of_online_education_ends_in.html) (“[W]hen it comes to free online education, you get what you pay for.”).

<sup>61</sup> See generally RICHARD P. GABRIEL, *THE RISE OF WORSE IS BETTER*, available at <http://www.dreamsongs.com/RiseOfWorselsBetter.html>.

<sup>62</sup> See Clay Shirky, *Napster, Udacity, and the Academy*, SHIRKY.COM (Nov. 12, 2012, 12:31 PM), <http://www.shirky.com/weblog/2012/11/napster-udacity-and-the-academy/>; Clay Shirky, *Your Massively Open Offline College Is Broken*, THE AWL (Feb. 7, 2013), <http://www.theawl.com/2013/02/how-to-save-college>.

creative. It is entirely possible that if MOOCs capture a significant amount of the value in higher education, it will come not just at the expense of existing institutions but of society. From an unbundled point of view, cross-subsidies are a tremendous inefficiency in higher education. For the student who just needs four more organic chemistry credits, everything else is a distraction, an unnecessary expense.

But bundling is the cornerstone of the modern research university. American higher education doesn't just educate a great many students in exchange for a great deal of money; it also generates a great deal of research and provides a stabilizing and humane institution in society, one dedicated to the long-term flourishing of humanity. It does so by linking these three missions—teaching, scholarship, and service—and vesting them in the same faculty. They are linked for a reason, and we should not lightly sever those bonds.

When the Merchants of MOOCs invoke “openness,” it merely clouds the issue. It prevents us from seeing clearly how little MOOCs offer—and how much more they could. I am hard pressed to think of a better example of the corrupting influence of the venture-capital mindset on our perceptions of what is valuable in an idea. From the Merchants of MOOCs' point of view, the “openness” that supposedly turns MOCs into MOOCs is equal parts pricing strategy, inconvenience, and rhetorical cover.<sup>63</sup> It legitimates the dismantling of the academy as an autonomous and public-serving institution in society, while at the same time co-opting free and open networked education into a private profit-making scheme.

#### VIII. THE FUTURE

Just because something is disruptive, does not mean it will succeed. Coursera, Udacity, and edX may all crash and burn in a pile of flaming dollar bills, just like Fathom before them. But if they do, it will not end the challenge that open education poses to universities—or the opportunity it offers. Do not confuse the success of a MOOC, or a MOOC company, with the success of the educational ecosystem around them. Indeed, in a world of open education, it is entirely possible that everyone will be educated even as no one makes any money at it. Profits are not the only sign of success; not every loss is a

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<sup>63</sup> See generally Aaron Bady, *The MOOC Moment and the End of Reform*, THE NEW INQUIRY - ZUNGUZUNGU BLOG (May 15, 2013), <http://thenewinquiry.com/blogs/zunguzungu/the-mooc-moment-and-the-end-of-reform/>; Aaron Bady, *Tree Sitting*, THE NEW INQUIRY - ZUNGUZUNGU BLOG (Feb. 12, 2013), <http://thenewinquiry.com/blogs/zunguzungu/tree-sitting/>.

failure.

If universities are in the encyclopedia business, then perhaps MOOCs are Encarta: digital, cheap, popular, and doomed. Even now, the educational version of Wikipedia is assembling itself in the less well-funded shadows of the Internet. On the day we are able to see it whole, the sight will be more inspiring and more terrifying than any MOOC.

What is exciting about MOOCs is not the scale, or the online delivery, or any of the other features usually cited in describing them. It is that initial electric thrill of the Stanford AI course: *what if education were available, free, to anyone in the world who seeks it?* It is the democracy of ideas of Open CourseWare and Vi Hart and the History of Rome and the Khan Academy—that anyone, anywhere, with knowledge to impart or in search of wisdom is welcomed with open arms. These universal, inclusive ideals are at the heart of the academic mission.

I would have thought that the great truth of the Stanford AI course was that a great many people want to know more about AI, and that when we say “tuition be damned” it is actually not hard at all to reach them. What stands in need of disruption is not the system of higher education but rather the far larger system of exclusion from higher education.<sup>64</sup> How to preserve what is best about the academy while better opening its doors to the world is a difficult question. But out of all the questions posed by the Merchants of MOOCs, is it not the one most worth answering?

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<sup>64</sup> See Aaron Bady, *Questioning Clay Shirky*, INSIDE HIGHER ED (Dec. 6, 2012), <http://www.insidehighered.com/views/2012/12/06/essay-critiques-ideas-clay-shirky-and-others-advocating-higher-ed-disruption>.