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# The Dissertation Dilemma and the Challenge of American Graduate Education

CHRISTOPHER P. LOSS AND CHRISTOPHER J. RYAN, JR.

# Abstract

As challenges to graduate education mount, so too have calls for reevaluating the dissertation. This article argues that the dissertation is a critical institution by which knowledge production is disciplined; however, alternative models of credentialing expertise are warranted. We explore the "dissertation dilemma" by explaining that the modern university's legitimacy hinges on the expert authority that the dissertation confers and the social deference that it commands. Next, we discuss shortcomings of the dissertation process, namely that it is supposed to sift out amateurs from experts, which negatively impacts demographically underrepresented doctoral candidates while failing to prevent the overproduction of Ph.D.s. Lastly, we evaluate reform proposals that have emerged as awareness of the challenges with graduate education has grown. We argue that these reform efforts have raised important questions about the university's role in American society that demand serious reflection on the part of stakeholders in and beyond the academy.

**Keywords:** *academia, academic labor market, dissertation, doctoral education, graduate education, higher education, universities* 

Over the last decade, it has become commonplace to discuss higher education in apocalyptic terms—as yet another core institution of civil society teetering on the brink of collapse.<sup>1</sup> There is evidence to support this claim. Consensus that higher education is a public good has withered away.<sup>2</sup> Plummeting state-level support—which dipped below 10 percent nationally during the worst years of the "Great Recession," while ticking up recently, — has exacerbated the impact of rapidly rising costs, shifting an ever-greater financial burden onto students and families.<sup>3</sup> Research suggests that college students, on average, do not learn that much, accrue substantial debt (averaging \$26,000), take forever to graduate (averaging six years), often never do so (some measures put the completion rate at fifty percent), and struggle to find decent-paying jobs.<sup>4</sup> The title of a recently published book, *The End of College*, captures well the prevailing, if hyperbolic, national mood.<sup>5</sup>

With policy makers' and the public's attention fixed on the crisis in undergraduate education—*the college*—the many challenges facing graduate education have garnered comparatively little attention. This is unfortunate but unsurprising, as for decades, warnings about the overproduction of Ph.D. graduates have gone unheeded.<sup>6</sup> New research has demonstrated the true extent of the personal and professional frustrations of over-credentialed, underemployed graduate students, not only among doctoral students in the acutely afflicted arts and humanities, but in virtually all fields that require a dissertation-based doctorate.7 The freshest data suggest that the problem is one of overproduction: The number of doctorates produced in 2010 now stands at almost five times the number produced in 1965, while faculty growth, at least since the 1980s, has absorbed at most 40 percent and often as little as 10 percent of the Ph.D.s produced.8 A recent study by the National Science Foundation concluded that today's newly minted Ph.D.s are less likely to report taking jobs in academe than doctoral graduates at any other time in the last century.9 The severe imbalance between inputs and outputs not only illustrates the inefficiency of the overproduction problem in doctoral education, but also offers confirmatory evidence that, in the words of The Chronicle of Higher Education's Leonard Cassuto, U.S. graduate education is indeed a "mess."10

At or near the center of the debate over the future of graduate training lies the dissertation. The dissertation is the wellspring of scholarly advance and of the higher education enterprise itself. It is how disciplinary communities stake out their intellectual turf, stay together, move forward, and why they break off in new directions. It is the engine of the entire knowledge production process and the main pathway whereby research—and the scholars who create it—make an impact on the world. For a large share of the hirers, firers, and aspirers in the modern university, the dissertation-doctorate is everything. For others—particularly dissertators themselves—it is simply too much. The enormity of the dissertation process reveals itself gradually, one sentence and paragraph at a time, often over a period of years, and writing one exacts a physical, psychological, and financial toll.<sup>11</sup> For many former graduate students, the mere thought of the dissertation stirs up a flurry of competing emotions ranging from sadness to joy, and blocking the experience out completely is commonly the preferred coping mechanism.<sup>12</sup> This is more difficult to do than it sounds: the dull black binding with the gold-colored inlaid script; the signature page with the illegible scrawls; the heart wrenching acknowledgements; all those pages with all those words and equations; typefaces, spacing, and margins drawn to exact specification; and the punchy bouquet of ink, glue, and papyrus makes the dissertation impossible to forget.

Nevertheless, as the challenges of graduate-education-as-usual continue to mount, so too have calls for reevaluating the place of the dissertation. This article argues that the dissertation is a critical, even the essential, institution by which knowledge production is disciplined; however, the academy should continue to explore alternative modes of credentialing expertise that move beyond the traditional dissertation-based doctorate. In service of this argument, we explore the "dissertation dilemma" using a historical-institutionalist frame that defines institutions as the taken-for-granted rules that dictate the legitimacy (or illegitimacy) of individual and group behaviors and norms.<sup>13</sup> First, we explain that the modern university's legitimacy continues to hinge on the dissertation-doctorate, and more specifically, on the expert authority that it confers and the social deference that it commands. We also explore some of the challenges attendant to the dissertation and to graduate education more generally, highlighting a historic paradox at the heart of this discussion: namely, that while dissertating is supposed to sift out the amateurs from the experts, it does so at the disproportionate expense of demographically underrepresented doctoral candidates while still failing to prevent a glut of Ph.D.s in the labor force. Having established the historical context, we next evaluate some of the reform proposals that have emerged as awareness of the challenges with graduate education has grown. Finally, despite their lack of widespread success, these efforts toward reform have nonetheless raised important questions about the university's role in American society that demand serious reflection and deliberation on the part of stakeholders in and beyond the academy. Given the important role that universities play in fostering civic agency and democratic citizenship, we hope that current efforts to improve graduate education will not only strengthen advanced training but also civil society.14

#### I. History

The dissertation-doctorate was a German innovation imported to the United States in the 1870s and 1880s by American Doktors who studied at the great universities of Gottingen, Leipzig, Heidelberg, and Berlin in the nineteenth century.<sup>15</sup> Smitten by the German ideal of Wissenschaft, or systematic research (and the social status that its pursuit bestowed in European circles), American academics incorporated the research doctorate into their home country's nascent university system. Slowly at first, then rapidly around World War II when government investment in research and development exploded, advanced graduate training emerged as a major social and economic phenomenon. In 1900, American universities produced about 3,500 PhDs. By 1960 doctoral production exceeded 10,000 per year. Today that number has climbed above 50,000, awarded in 273 distinct fields and from 297 different institutions-a third of which rank as "RU/ VH" ("very high research activity") under the widely accepted Carnegie Classification rubric.<sup>16</sup> Although the country's share of worldwide Ph.D. production has been eclipsed by China in recent years, the United States remains the gold standard for advanced training, and in virtually all fieldsfrom engineering and science to the social sciences and humanities-a dissertation is required to earn a degree.<sup>17</sup>

This received model requires that newly minted Ph.D.s have demonstrated expertise in an academic discipline or disciplines through the research, writing, and defense of a dissertation. Yet, the dissertation requirement poses real problems to graduate students' attainment of doctoral degrees, since only one-half to two-thirds of graduate students (depending on the field) who set out to get a Ph.D. ever receive one.<sup>18</sup> The fact that women and underrepresented minority groups suffer a disproportionate amount of attrition along the Ph.D. pathway highlights the inequity as well as the inefficiency of the dissertation-doctorate, at least from the perspective of the candidate pool, if not from the perspective of established faculty.<sup>19</sup> Those students who do complete their Ph.D. take more than eight years to finish, on average, and then several more years, on average, to land an academic job-that is, if they land one at all.<sup>20</sup> The dismal academic labor market is nothing new; and for graduate students interested in tenure-track positions, the situation is as dire as ever. Since the mid-1970s, the percentage of tenure and tenure-track positions has dropped from roughly half of all staff to a quarter-and there is no reason to believe that the situation will get better anytime soon.21

Understandably, in the last several decades scholars and learned societies, professional associations, philanthropic organizations, and some universities have begun taking a closer look at graduate training and have thought about ways to improve it.<sup>22</sup> Proposals to "fix" graduate education have provided superficial treatment to a range of issues, though most reformers agree that increasing aid and benefits, admitting smaller cohorts, encouraging interdisciplinary work with practical rather than theoretical applications, and preparing students for alternative, which is to say, non-academic, employment, are good places to start.<sup>23</sup> These reform proposals endeavor to cut down the time-to-degree and reinforce a massive but deeply divided academic labor force in which half of its 1.6 million members are modestly compensated "contingent faculty" of one classification or another.<sup>24</sup>

There has been much report-writing and even more handwringing over how to implement such reforms, but little in the way of coordinated action. Graduate education is an untidy business and American universities have never been particularly well organized for collective action except when it comes to intercollegiate sports. Perhaps reflecting a common fetish for institutional autonomy, most universities are still doing what they have always done: scouring the admissions pool for the most talented students and then bringing them in for what amount to lengthy apprenticeships for which there is a greater likelihood of failure than success.

Although the dissertation is far from the only problem with graduate training, it poses a major challenge not only because it is crucial to the legitimacy of the university, but also because it is implicated in many other problems with advanced training, including time-to-degree, cost and debt, attrition, and job placement. If the dissertation is the principal impediment to Ph.D. degree completion, and we believe that it is, what is to be done with it? Can it be improved? Or should it be abolished? Does it remain an important vessel of scholarly discourse? Or is it a useless relic of a bygone academic era? Is it caused by or causing the present crisis in graduate education in the United States and elsewhere? In short, what is the future of the doctoral dissertation? Does it even have a future? And can its future be solved through autonomous yet collaborative and consequential civic action by the university and its stakeholders?

To answer these questions requires a clear understanding of the mission of the modern research university that emerged after the Civil War and the role that the dissertation played in legitimating the institution. The architects of the modern research university, president-reformers like Charles William Eliot of Harvard, Andrew Dickson White of Cornell, and Daniel Coit Gilman of Johns Hopkins, backed by wealthy Gilded Age tycoons, sought to replace the fusty, old-time college with a cosmopolitan, modern university, with the goal of democratizing knowledge. While these men believed that both college and university should teach students and serve society, it was the university's research function that would distinguish the two models from one another. Yet, as the ideal of professionalization captured the scholarly imagination during the late Gilded Age and progressive era, the Ph.D. became the required credential for entry into any academic position, and specialized research in one of the budding disciplines became the key to staying there.<sup>25</sup> President Gilman of Johns Hopkins University crystallized the professoriate's new role, declaring in his *First Annual Report*: "It is their *researches* in the library and the laboratory . . . which will make the University in Baltimore an attraction to the best students, and serviceable to the intellectual growth of the land."<sup>26</sup>

Such "researches" did not include idly curious browsing or dabbling. Only focused, structured, and (typically) independent investigation in a specific field of study counted. Exact requirements varied from school to school and even from department to department. But well before the charter members of the Association of American Universities (AAU) convened for the first time, in 1900 to hash out uniform Ph.D. requirements, most schools were following Johns Hopkins' lead: two years of study beyond a bachelor's degree in "one main subject" and "one subsidiary subject," followed by oral and/or written examinations, and capped by the research and writing of an "elaborate thesis" prepared over the course of "the greater part of an academic year."<sup>27</sup> Except for the comparatively speedy threeyear time-to-degree, the other pieces of the Ph.D. puzzle, centered on the dissertation, have more or less remained stuck in place for over a century.

Criticism of the dissertation has an equally long pedigree. Not long after the AAU standardized doctoral requirements, Harvard psychologist and philosopher William James entered the fray, warning that the "Ph.D. Octopus"—the pointless over-credentialing of pedagogues—was about to capsize the university ship that had set its sails for vanity instead of substance.<sup>28</sup> The university, however, never ran aground because of the Ph.D., as James predicted, because neither James, a trained medical doctor who never bothered with a Ph.D., nor anyone else ever came up with a good substitute for it. The research-doctorate degree may have been "a sham, a bauble, a dodge," as James bombastically claimed, but it was a necessary one to ensure the growth and success of the university and the students and professors who called it home. (Ironically, at the time, as we explain below, the M.D. was the bigger sham, which may have explained James's fury.)<sup>29</sup> While a goal of doctoral education may have been to establish, legitimate, and control the social role of the professoriate, then, as now, the principal goal of doctoral education was to ascribe expertise by winnowing out the amateurs from the experts, and a rigorous test of intellectual mettle was perforce required to determine an individual aspirant's qualifications for membership. The dissertation was, and remains, that test. In fact, there would be no modern research university as we know it in the absence of the power of the dissertation to signal expertise. It may seem perverse, but the dissertation is actually supposed to filter unworthy candidates out of the Ph.D. pipeline in order to reinforce the legitimacy of American higher education.<sup>30</sup>

At the same time, the dissertation is not just any test but a major milestone marking the culmination of one private, cloistered phase of academic life and the start of a new, more public one. The dissertation typically begins in conversation between student and adviser, and for much of its formative period of development the adviser and the committee, and perhaps a trusted friend, are the only people who read it. The dissertation is a selfishly conceived and jealously guarded document; it is written for the candidate and her committee and no one else. Once the dissertation is signed, sealed, and delivered (so to speak), it enters its public phase of existence. The document, now repackaged as a book-like bound volume, is made available in the library stacks, online, or for purchase, unless it has been embargoed. It is ready to be read, and it will be read by search committees and fellow specialists and by a few proud loved ones and family members (who never really read it). Some of these dissertations will yield articles, chapters, and books that propel their authors into fulltime jobs and-fingers crossed-tenure-track appointments. Of these, a small subset of especially talented and/or lucky scholars may produce work that has a major, transformative effect on an entire field of study, changing the way fellow professionals and graduate students will think about and conduct their own research in the future. An even smaller subset-the best of the best, or maybe just the luckiest—will make a profound "discovery" that reaches beyond the confines of the academy to grab the attention of "regular people," some of whom may now change their thinking, action, or both because of its wider circulation.<sup>31</sup>

Still, only a fraction of all dissertations achieve this level of impact. Rather, most dissertations remain buried in the stacks, collecting dust, quiet and forgotten testaments of the grit and determination of the students who wrote them, and little else. It is for this reason that the value of the dissertation as a vehicle of graduate education has fallen into doubt. If half of all graduate students never finish their degree, and if fewer still write dissertations that are ever read, what is the point? Can whatever impetus the dissertation-doctorate model provides to "the intellectual growth of the land" (as Gilman put it) possibly outweigh its costs in individual fulfillment and social productivity? Or is it time to explore new means of certifying expert knowledge and skills—means that reward talent and weed out incompetence in a more equitable as well as a more efficient manner? In the next section we explore these questions.

### II. Reform

Graduate school and the traditions that suffuse it, including the dissertation-doctorate, are historical constructions and thus subject to reinvention and reinterpretation. The dissertation-doctorate was created at a particular moment in time and for particular reasons, and while the dissertation continues to provide a certain level of quality control among those who would claim specialized knowledge-and thus authority-within the university and society, it is also true that the received way of imparting expertise entails difficulties and challenges that are not only counterproductive but also corrosive of institutional legitimacy. Representation is paramount to institutional legitimacy in a democratic society, yet diverse doctoral student bodies-especially women and underrepresented racial minoritiesare often found wanting. Focusing specifically on the experiences of women and underrepresented racial minorities in the following section, we ask: What can be done to enhance the experience for all graduate students and to get more students across the graduate-school finish line and into real jobs? While paying close attention to the central paradox of the modern university-the dissertation-doctorate is at once the university's key source of institutional legitimacy and illegitimacy-we explore three different graduate-education reforms: financial aid and mentoring; alternative dissertation products; and program rationing to adjust the output of Ph.D. degrees, especially in fields suffering from acute market failure.

#### Aid and Mentoring

Although Ph.D. programs have and continue to provide financial support to doctoral students through teaching and research assistantships, stipends, and tuition remission, many Ph.D. graduates—and worse yet, dropouts—still accrue substantial debt. Based on 2014 data, graduate students make up just 14 percent of the all students enrolled in higher education but account for 40 percent of the \$1.3 trillion in outstanding student-loan debt.<sup>32</sup> A report by the National Science Foundation estimates that over 37 percent of all Ph.D. recipients carry some form of debt from their doctoral studies, and over 18 percent of all Ph.D. graduates carry debt in excess of \$30,000.<sup>33</sup> While Ph.D. graduates in the humanities are statistically the most likely to carry debt, Ph.D. graduates in the social sciences and education carry the highest average debt loads.<sup>34</sup> As Mary Ann Mason has shown, these financial stressors are also greater for women and underrepresented racial minorities, who are more likely to have existing undergraduate debt and to drop out of Ph.D. programs or, if they do finish, take longer to do so than their white male peers.<sup>35</sup>

As the graduate-student population continues to expand and diversify along race and gender lines, therefore, rethinking the kinds, vehicles, and purposes of the aid provided by institutions is critically important. For instance, although debt burdens can accrue for graduate students throughout their training, they tend to accrue more rapidly during the lengthy dissertation-writing phase of the doctoral degree.<sup>36</sup> This suggests an important application for proposals to reform financial support for doctoral students: increased, targeted support during the dissertation writing stage.<sup>37</sup> The recent ruling by the National Labor Relations Board that graduate student assistants at private colleges and universities can be considered employees under the National Labor Relations Act provides an opportunity to make and examine the case for such support along with the case for better health care, childcare, and wages for teaching and research assistance.<sup>38</sup>

Yet financial support is not the only type of aid that matters to graduate students. Mentoring and advising is equally important to their success. For better or worse, graduate training remains a person-to-person enterprise.<sup>39</sup> When students enter graduate school, they are matched with an adviser, and this pairing becomes the most important professional relationship in the student's academic life.<sup>40</sup> The adviser-advisee relationship can make or break the graduate school experience and, as in any relationship, healthy adviser-advisee partnerships beget healthy outcomes, while unhealthy partnerships often result in disaster. Research on the importance of healthy mentoring and advising relationships for all graduate students is indisputable.<sup>41</sup> But it matters especially for women and minority students, as social psychologist Claude Steele has compellingly shown.<sup>42</sup> When thinking about "aid," therefore, it is not enough to think just in terms of dollars and cents. Universities are social institutions and the graduate training they provide turns on intimate intellectual partnerships that can have a strong determinative effect on whether a graduate student succeeds or fails in her effort to earn a doctoral degree.

#### Alternative Dissertation Products

The dissertation-doctorate remains the chief way by which disciplinary expertise is credentialed, but it is also the part of advanced study where the majority of attrition occurs. Thus, calls for an alternative to the traditional dissertation doctorate have increased in recent years. Although the push for a "new dissertation" has been especially pronounced in the arts and humanities (where attrition is highest, time-to-degree is longest, and the market for tenure-track jobs, or any job requiring doctoral training, is severely limited),<sup>43</sup> leaders in the STEM and social-science fields have also begun weighing the tradeoffs of alternative dissertation products, as evinced by their participation in the Future of the Doctoral Dissertation Conference at the annual meeting of the Council of Graduate Schools in Washington, DC, in January 2016. The conference was just the latest in a spate of task forces, reports, books, and articles probing the purpose and sustainability of the dissertation.<sup>44</sup>

From these myriad efforts, a number of possible reforms have emerged. One suggestion has been to retool graduate education using professional-school degree programs (i.e., medicine, law, business) as a blueprint. The perceived utility and comparative labor-market power of professional degrees lends much to this approach, though on closer examination using professional education as a model presents its own challenges.<sup>45</sup> The professional schools differ in two key ways from graduate programs. First, whereas business, law, and medicine are two-, three-, and four-year programs, respectively, Ph.D. programs can take twice as long; second, and more importantly, neither business nor law nor medicine require a formal defense of original scholarship for the conferral of a degree. Thus, despite some similarities between professional training in business, law, and medicine and advanced training in fields with a dissertation-doctorate, the latter is and remains distinct because of the centrality of the dissertation itself.

As Leonard Cassuto notes, the problem is that "graduate school is professional school," but one that trains its cohorts to "want [only] the kinds of jobs that are most scarce and that most of them won't ever get."<sup>46</sup> Thus, the argument to reform graduate education by shifting its curricular focus, even if slightly, away from purely academic applications to prepare students for a broader array of professional context seems sound and aligned with the modern realities of the academic job market.<sup>47</sup> A few institutions have begun the process of embedding practical skills in Ph.D. curricula and "deconstructing the taboo" of non-academic careers, but this shift has been slow, according to most reports.<sup>48</sup>

Still another suggestion has been to replace the traditional dissertation with alternative approaches, as Cassidy Sugimoto of Indiana University has advocated.<sup>49</sup> Possibilities include digital projects, portfolios of work, and collaborative capstone projects where students meld theory and practice in order to solve a real-world problem.<sup>50</sup> Providing students with a menu of choices seems to be the guiding principle of the alternative-approaches school. English professor Paul Yanchin, who directs the Institute for the Public Life of Arts and Ideas at Canada's McGill University and has thought widely about alternatives to the dissertation-doctorate, has identified the following list of possible choices for demonstrating disciplinary expertise: "single-author and collaborative essays, electronic archives or other kinds of digital scholarly resources, editions, translations, works of scholarship in a range of forms and oriented toward multiple audiences."<sup>51</sup>

All of these options are already being tried, but each still requires a considerable investment of time and resources. Whether these alternatives will improve upon the model we presently have, or just diminish the value of the Ph.D. and the legitimacy of the universities who confer them, is anyone's guess. While the team-based capstone and portfolio model have taken hold in practitioner-based doctorates such as the Ed.D. (doctor of education)<sup>52</sup>, and work well in art and design fields, neither is yet considered a viable replacement for the dissertation in the sciences or humanities. This raises a final point: whatever alternatives are proposed and adopted, they must meet the standards for expert membership set by the existing professional community. Efforts to impose new modes of certification from the outside, whether in history or English studies or biology, will inevitably end in failure. The modern university federates a wide range and expanding complex of self-regulating communities of inquiry, and the legitimacy of the entire enterprise depends on the continued ability of those communities to maintain control over the training and certification of future experts.53

# **Program Rationing**

Rationing—or the closure of graduate programs in areas where demand has atrophied—is another way of dealing with the problem of graduate education. This approach has been given a fresh hearing by Michael McPherson and the late William Bowen in their 2016 book, *Lesson Plan.*<sup>54</sup> Rationing is never received well by faculty or former graduates, and few administrators relish making the decision. Professors like to think of knowledge—at least in their own fields—as something that expands; sending departments into receivership represents a direct affront to the research ethos that hinges on the gradual, progressive accumulation of more and better knowledge.<sup>55</sup>

Still, the decision to close programs with low enrollments and poor job placement, while difficult, can be beneficial-just ask historians of the medical profession. Although most of today's doctors are unaware, medicine rose to the top of the learned professions in status and power only after radical and relatively recent reforms. Throughout the 19<sup>th</sup> century, medicine was an inchoate profession whose authority was undermined by a surfeit of poorly trained amateurs "educated" via an apprenticeship model at unaccredited and unregulated "crank" shops. The story of how illegitimate medical colleges were scrubbed from the institutional landscape unfolded over several decades, and depended on two key events: first, medical practitioners' embrace of scientific research that accompanied the alignment of medical schools with the budding university system; and, second, the release of the Carnegie Foundation's famous Flexner Report in 1910. Written by education gadfly Abraham Flexner, who two years earlier had authored a critical study of the American college and would later go on to found the Institute for Advanced Study at Princeton, the report offered a scathing review of the dilapidated state of the medical profession, which was attributed to overproduction and a lack of regulation over medical schools.<sup>56</sup> Foremost among his findings: the excess of unsavory medical colleges whose minimally trained graduates degraded the entire profession. Flexner's eponymous report precipitated a national conversation on the crisis in medical education. The medical community mobilized and lobbied for and won new statelevel regulations and licensing laws that forced amateur medical schools to shutter. Their organizational efforts paid off professionally and financially. Nearly half of the 155 then-existing medical schools closed between 1910 and 1920, setting the stage for medical profession's rapid ascent up the professional ladder.57

Now, with the production of Ph.D.s at record levels and the academic labor market unable to absorb all but a fraction of the supply, programmatic compression presents itself as a vexing but viable solution to solving the dissertation dilemma. This does not necessarily mean the abolishment of "poor performing" programs; it could mean downsizing graduate training in certain programs while professionals consider alternative pathways for their graduates, whether in academic or non-academic positions. No matter what, we consider program contraction as an option of last resort. The strategic reallocation of financial support and the experimentation with alternative credentialing requirements, so long as they are derived from within the academy and meet the needs of particular fields, should be the first steps in dealing with the dissertation dilemma.

## Conclusion

To date, there is insufficient data to determine any consensus among the academic profession regarding the merits or demerits of the dissertation-doctorate. We wager, however, that most tenured or tenure-track faculty members have given the topic little consideration. As the direct beneficiaries of the existing model, who have secured their current positions in large part because they wrote a "good" dissertation, why would they? Among those who have contemplated the future of the dissertation, whether as a scholarly subject or as a member of some professional-association task force, our anecdotally informed sense is that most faculty favor renovating and expanding the model rather than bulldozing it.58 The traditional dissertation-based doctorate remains the touchstone for advanced training and at the very core of how universities distinguish themselves from rival knowledge-producing institutions in order to maintain their standing atop the order of learning in the United States. Despite increasing attention to "the accelerating pace of change in higher education,"59 we see no evidence to suggest that such change will radically transform the dissertation-doctorate, at least in the decade ahead.

Nevertheless, we also think that particular fields (especially those in the arts and humanities, where the academic labor market is most unforgiving), institutions, and professional associations will and should continue to explore alternative modes of credentialing that move beyond the traditional dissertation-based doctorate. The dissertation is a historical artifact, albeit one that continues to be flexible, adaptable, and productive, and all who work in higher education ought to be open to the possibility that a new and better model, more appropriate for the demands of our own time, might yet emerge from the experiments now underway.

To get it right, we will have to move beyond the dissertation, however, and ruminate on an even bigger issue: the future of graduate education and the difficult governmental and financial dynamics that now surround it in our democratic society. Is our society committed to higher learning and willing to invest in it? Do we believe in scientific and humanistic inquiry? Or have the worsening budget cuts and the crippling political partisanship of the last several decades irreparably damaged our capacity to create new knowledge to change the world? And, closer to home, what responsibility do faculty and administrators bear for the wanton overproduction of graduate students in fields that are simply incapable of absorbing new initiates? Can we build a better and more efficient university than the one we have now? Or can that only be achieved at the expense of the creativity and spontaneity necessary to produce cutting-edge research? Do we understand our social mission and are we willing to defend it? These are fundamental questions, and how we choose to address them will determine both the fate of graduate education and that of the American research university itself.

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#### NOTES

1. Ronald G. Ehrenberg, "American Higher Education in Transition," *The Journal of Economic Perspectives*, 26 (2012): 193–216; Richard H. Hersh and John Merrow, *Declining by Degrees: Higher Education at Risk* (New York: Macmillan, 2015).

2. Jeffrey J. Selingo, College (Un)bound: The Future of Higher Education and What It Means for Students (Houghton Mifflin Harcourt, 2013). See also, Walter W. McMahon, Higher Learning, Greater Good: The Private and Social Benefits of Higher Education (Baltimore: Johns Hopkins University Press, 2009).

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3. William R. Doyle and Jennifer A. Delaney, "Higher Education Funding: The New Normal," *Change: The Magazine of Higher Learning*, 41 (2009): 60–62; Andrew Barr and Sarah E. Turner, "Expanding Enrollments and Contracting State Budgets: The Effect of the Great Recession on Higher Education," *The ANNALS of the American Academy of Political and Social Science*, 650 (2013): 168–193; Michael Mitchell, Vincent Palacios, and Michael Leachman, "States Are Still Funding Higher Education below Pre-Recession Levels," *Center on Budget and Policy Priorities* (May 1, 2014) available at http://www.marshall.edu/2020/files/05-01-14\_CENTER-on-BUDGET-anD-POLICY-PRIORITIES-STATES-ARE-STILL-FUNDING-HE-BELOW-PRE-RECESSION-LEVELS.pdf.

4. Lisa B. Kahn, "The Long-term Labor Market Consequences of Graduating from College in a Bad Economy," *Labour Economics* 17, (2010): 303–316; Jesse Rothstein and Cecilia Elena Rouse, "Constrained after College: Student Loans and Early-career Occupational Choices," *Journal of Public Economics*, 95 (2011): 149–163; William Elliott and Il Sung Nam, "Is Student Debt Jeopardizing the Short-term Financial Health of US Households," *Federal Reserve Bank of St. Louis Review*, 95 (2013): 405–424; Joseph E. Stiglitz, "Student Debt and the Crushing of the American Dream," *New York Times* (May 12, 2013); Robert G. Valletta, "Recent Flattening in the Higher Education Wage Premium: Polarization, Skill Downgrading, or Both?," in *Education, Skills, and Technical Change: Implications for Future U.S. GDP Growth* (Hulten and Ramey, 2016); and Richard Arum and Josipa Roksa, *Limited Learning on College Campuses* (University of Chicago Press, 2010).

5. Kevin Carey, *The End of College: Creating the Future of Learning and the University of Everywhere* (New York: Riverhead Books, 2015).

6. Allan M. Cartter, "The Academic Labor Market," in *Higher Education and the Labor Market* (New York: McGraw Hill, 1974); Carnegie Commission on Higher Education. *Ph.D.'s and the Academic Labor Market* (New York: McGraw Hill, 1976).

7. Francis Green and Yu Zhu, "Overqualification, Job Dissatisfaction, and Increasing Dispersion in the Returns to Graduate Education," *Oxford Economic Papers* 62, (2010): 740–763; Edwin Lueven and Hessel Oosterbeek, "Overeducation and Mismatch in the Labor Market," *Handbook of the Economics of Education* 4 (2011): 283– 326; Peter Fiske, "What Is a PhD Really Worth?," *Nature* 472, (2011): 381.

8. William G. Bowen and Michael S. McPherson, *Lesson Plan: An Agenda for Change in American Higher Education* (Princeton, NJ: Princeton University Press, 2016): 110. Michael S. McPherson and Charles Kurose, "Imbalance and Faculty Labor Markets," unpublished memo, September 23, 2014, cited in ibid.

9. National Science Foundation, *Doctorate Recipients from US Universities: Summary Report 2014*. Division of Science Resources Statistics, Directorate for Social, Behavioral, and Economic Sciences, National Science Foundation (2016), available at https://www.nsf.gov/statistics/2016/nsf16300/digest/nsf16300.pdf.

10. Leonard Cassuto, *The Graduate School Mess: What Caused It and How We Can Fix It* (Cambridge, MA: Harvard University Press, 2015).

11. Jill Yesko's recent article in *Inside Higher Ed*, "An Alternative to ABD," captures the agony of graduate education as well as any we've read; see https://www.insidehighered.com/advice/2014/07/25/higher-ed-should-create-alternative-abd-status-essay#sthash.788x84OW.dpbs.

12. One study indicated that the lack of research on the dissertation is due to the stress and trauma of writing one. For more on this, see William G. Bowen and Neil R. Rudenstine, *In Pursuit of the Ph.D.* (Princeton, NJ: Princeton University Press, 1992): 2.

13. James G. March and Johan P. Olsen, "The New Institutionalism: Organizational Factors in Political Life," *American Political Science Review* 78.3 (1984): 734–49; Walter W. Powell and Paul J. Dimaggio, "Introduction," in *The New Institutionalism in Organizational Analysis*, ed. Walter W. Powell and Paul J. Dimaggio (Chicago: University of Chicago Press, 1991), 1–40; and Hugh Heclo, *On Thinking Institutionally* (Boulder, CO: Paradigm Publishers, 2008).

14. Christopher P. Loss, *Between Citizens and the State: The Politics of American Higher Education in the 20<sup>th</sup> Century* (Princeton University Press, 2012).

15. On the German roots of the dissertation, see William Clark, *Academic Charisma and the Origins of the Research University* (University of Chicago Press, 2006), 183–238. On the rise of the American university, see Laurence R. Veysey, *The Emergence of the American University* (University of Chicago Press, 1965).

16. Chris Golde and George Walker et al, *Envisioning the Future of Doctoral Education* (Jossey Bass, 2006), 3; NORC, Survey of Earned Doctorates (SED), available at http://www.norc.org/Research/Projects/Pages/survey-of-earned-doctorates-(sed). aspx; Doctoral-granting University Data, Carnegie Classification of Institutions of Higher Education, available at http://carnegieclassifications.iu.edu/descriptions/basic. php (accessed Dec. 4, 2015).

17. David Cyranoski et al, "Education: The Ph.D. Factory," *Nature*, April 20, 2011, available at http://www.nature.com/news/2011/110419/full/472276a.html.

18. According to the Council of Graduate School's Ph.D. Completion Project, the ten-year completion rate is 55–64 percent in STEM; 56 percent in the social sciences; and49 percent in the humanities. For the report, see http://www.phdcompletion.org/ resources/CGSNSF2008\_Sowell.pdf.

19. Mary Ann Mason, Nicholas H. Wolfinger, and Marc Goulden, *Do Babes Matter? Gender and Family in the Ivory Tower* (Rutgers University Press, 2013); Council of Graduate Schools, *PhD Completion and Attrition: Policies and Practices to Promote Student Success* (Washington, DC, 2010), available at http://cgsnet.org/phd-completion-and-attrition-policies-and-practices-promote-student-success-o.

20. Leonard Cassuto, "Ph.D. Attrition: How Much Is Too Much?" *Chronicle of Higher Education*, July 1, 2013, available at http://chronicle.com/article/Ph.D.-Attrition-How-Much-Is/140045/ (accessed Nov. 22, 2015); Dan Edmonds, "More Than Half of College Faculty Are Adjuncts: Should You Care?" *Forbes*, May 28, 2015, available at http://www.forbes.com/sites/noodleeducation/2015/05/28/ more-than-half-of-college-faculty-are-adjuncts-should-you-care/.

21. https://www.theatlantic.com/business/archive/2013/04/the-ever-shrinking-role-of-tenured-college-professors-in-1-chart/274849/.

22. For the earliest and most thorough study of the formative years of U.S. graduate education, see Bernard Berelson, *Graduate Education in the U.S.* (McGraw Hill, 1960). The more recent wave of interest was galvanized by Bowen and Rudenstine, *In Pursuit of the Ph.D.*, in the early 1990s, as well as by the Carnegie Foundation for the Advancement of Teaching and the Council for Graduate Schools, which in 2010 launched The Ph.D. Completion Project.

23. For this distillation, see Louis Menand, *The Marketplace of Ideas: Reform and Resistance in the American University* (W.W. Norton & Company, 2010), 141–55.

24. Faculty data at all Title IV institutions in NCES, "Enrollment and Employees in Postsecondary Institutions, Fall 2014," USDOE, p. 10, available at http://nces.ed.gov/pubs2016/2016005.pdf (accessed Nov. 22, 2015).

25. Edward Shils, "The Order of Learning in the United States: The Ascendancy of the University," in *The Organization of Knowledge in Modern America*, 1860–1920, ed. Alexandra Oleson and John Voss (Johns Hopkins University Press, 1979), 19–50.

26. Hugh Hawkins, *Pioneer: A History of the Johns Hopkins University*, 1874–1889 (Cornell University Press, 1960), 65, italics added.

27. John Higham, "The Matrix of Specialization" in *The Organization of Knowledge in Modern America*, 1860–1920, ed. Alexandra Oleson and John Voss (Johns Hopkins University Press, 1979), 11.

28. William James, "The Ph.D. Octopus," *Harvard Monthly*, XXXVI (1903), 1–9, cited and discussed in Frederick Rudolph, *The American College and University:* A *History* (University of Georgia Press, 1962), 397.

29. The dire state of medical education was subsequently exposed with the release of the Flexner Report in 1910, written by Abraham Flexner with support from the Carnegie Foundation.

30. On the university's consolidation of social status, authority, and power in the wake of the professionalization of the professoriate, see Mary O. Furner, *Advocacy and Objectivity: A Crisis in the Professionalization of American Social Science*, 1865–1905 (University Press of Kentucky, 1975).

31. For an enthusiastic defense along these lines, see Jonathan R. Cole, *The Great American University: Its Rise to Preeminence, Its Indispensable National Role, Why It Must Be Protected* (Perseus Books Group, 2009).

32. Sandy Baum and Patricia Steele, "Who Goes to Graduate School and Who Succeeds?," Urban Institute, Jan. 11, 2017, http://www.urban.org/research/publication/ who-goes-graduate-school-and-who-succeeds.

33. National Science Foundation, *Survey of Earned Doctorates*, available at https://nsf.gov/statistics/srvydoctorates/#tabs-1.

34. Ibid. See also Jason Delisle, "The Graduate Student Debt Review: The State of Graduate Student Borrowing." *New America Education Policy Program* (2014).

35. See ibid. See also Mary Ann Mason, Marc Goulden, and Karie Frasch. "Why Graduate Students Reject the Fast Track." *Academe* 95, (2009): 11; Mary Ann Mason and Eve Mason Ekman. *Mothers on the Fast Track: How a Generation Can Balance Family and Careers* (Oxford University Press, 2007).

36. Robert Weisbuch and Leonard Cassuto, "Reforming Doctoral Education, 1990 to 2015," *Andrew W. Mellon Foundation*, June 2, 2016, available at https:// mellon.org/media/filer\_public/35/32/3532f16c-20c4-4213-805d-356f85251a98/ report-on-doctoral-education-reform\_june-2016.pdf.

37. A recent report by the Modern Language Association's Task Force on Doctoral study recommends full funding for the duration of the doctoral program. Report of the MLA Task Force on Doctoral Study in Modern Language and Literature, Modern Language Association, May 2014, available at https://www.mla.org/content/down-load/25437/1164354/taskforcedocstudy2014.pdf.

38. National Labor Relations Board, *Student Assistants Covered by the NLRA*, Aug. 23, 2016, available at https://www.nlrb.gov/news-outreach/news-story/board-student-assistants-covered-nlra-o.

39. Terry Gatfield, "An Investigation into PhD Supervisory Management Styles: Development of a Dynamic Conceptual Model and Its Managerial Implications," *Journal* of Higher Education Policy and Management 27, no. 3 (2005): 311–325. 40. David C. Price and Arthur H. Money, "Alternative Models for Doctoral Mentor Organisation and Research Supervision," *Mentoring and Tutoring* 10, no. 2 (2002): 127–135.

41. Wilhelmina Wright-Harp and Patricia A. Cole, "A Mentoring Model for Enhancing Success in Graduate Education," *Contemporary Issues in Communication Science and Disorders* 35 (2008): 4–16; Barry Bozeman and Mary K. Feeney, "Mentor Matching: A 'Goodness of Fit' Model," *Administration & Society* (2008).

42. Claude Steele, *Whistling Vivaldi: How Stereotypes Affect Us and What We Can Do* (W.W. Norton, 2010).

43. Barbara E. Lovitts and Cary Nelson, "The Hidden Crisis in Graduate Education: Attrition from Ph. D. Programs," *Academe* 86, (2000): 44.

44. Stacey Patton, "The Dissertation Can No Longer Be Defended," *Chronicle of Higher Education*, Feb. 11, 2013, available at http://chronicle.com/article/The-Dissertation-Can-No-Longer/137215/; "Re-envisioning the Ph.D.," available at https:// depts.washington.edu/envision/project\_resources/national\_recommend.html, cited in Menand, *Marketplace of Ideas*, 141.

45. For a discussion on the crisis in legal education, see, e.g., Bryant Garth, "Legal Education Reform: New Regulations, Markets, and Competing Models of Supposed Deregulation," 83 Bar Examiner (December 2014): 17-26; Bryant G. Garth, "Crises, Crisis Rhetoric, and the Competition in Legal Education: A Sociological Perspective on the (Latest) Crisis of the Legal Profession and Legal Education," 24 Stanford Law & Policy Review (2013): 503; Steven Harper, The Lawyer Bubble: A Profession in Crisis (Basic Books, 2016); Eve Darian-Smith, "The Crisis in Legal Education: Embracing Ethnographic Approaches to Law," King's College London Transnational Law Institute Research Paper (2015). While the business school model has withstood the Recession, where law schools have withered, business schools are still not without critics calling for reform. See, for example, Martin Parker, "University, Ltd: Changing a business school," Organization 21 (2014): 281-292; Thorsten Gruber, "Academic Sell-out: How an Obsession with Metrics and Rankings Is Damaging Academia," Journal of Marketing for Higher Education 24, (2014): 165–177; Leonard Seabrooke, "Epistemic Arbitrage: Transnational Professional Knowledge in Action," Journal of Professions and Organization 1, (2014): 49-64. See, e.g., Timothy T. Clydesdale, "A Forked River Runs through Law School: Toward Understanding Race, Gender, Age, and Related Gaps in Law School Performance and Bar Passage," Law & Social Inquiry, 29, (2004): 711-769; Dongbin Kim and Cindy Otts, "The Effect of Loans on Time to Doctorate Degree: Differences by Race/Ethnicity, Field of Study, and Institutional Characteristics," The Journal of Higher Education, 81 (2010): 1–32; John Robst and Jennifer VanGilder, "Salary and Job Satisfaction among Economics and Business Graduates: The Effect of Match between Degree Field and Job," International Review of Economics Education 21 (2016): 30-40; Mark Richardson, Carl Evans, and Gbolahan Gbadamosi, "The Work-Study Nexus: The Challenges of Balancing Full-time Business Degree Study with a Part-time Job," Research in Post-Compulsory Education 19, (2014): 302-309.

46. Cassuto, The Graduate School Mess, 4.

47. "Five Ways to Broaden the Doctoral Curriculum," *Chronicle of Higher Education*, Jan. 29, 2017.

48. Vimal Patel, "Opening Doors for the Ph.D.," *Chronicle of Higher Education*, Jan. 29, 2017.

49. Cassidy R. Sugimoto, "Toward a Twenty-first Century Dissertation," *Council of Graduate of Schools*, January 2016, http://cgsnet.org/sites/default/files/DissFwd\_Print%20All%20Papers.pdf.

50. Arie Rip, "Strategic Research, Post-modern Universities and Research Training," *Higher Education Policy*, 17 (2004): 153–166; T. W. Maxwell, and Glenda Kupczyk–Romanczuk, "Producing the Professional Doctorate: The Portfolio As a Legitimate Alternative to the Dissertation," *Innovations in Education and Teaching International* 46, (2009): 135–145. See also Katina Rogers, "Opportunities Created by Emerging Technologies," *Council of Graduate of Schools*, January 2016, http://cgsnet.org/sites/default/files/DissFwd\_Print%20All%20Papers.pdf; Carol Tenopir, "Technological Opportunities and Human Realities for Dissertations in the Future," *Council of Graduate of Schools*, January 2016, http://cgsnet.org/sites/default/files/DissFwd\_Print%20All%20 Papers.pdf.

51. Paul Yanchin, "Instruments of Knowledge: Toward the Reform of the Dissertation," *Council of Graduate of Schools*, January 2016, http://cgsnet.org/sites/default/files/DissFwd\_Print%20All%20Papers.pdf, 53-57.

52. Claire Smrekar and Kristin McGraner, "From Curricular Alignment to the Culminating Project: The Peabody College Ed. D. Capstone," *Peabody Journal of Education* 84, (2009): 48–60; David A. Stevens, A Comparison of Non-Traditional *Capstone Experiences in Ed. D. Programs at Three Highly Selective Private Research Universities* (ProQuest, 2010).

53. On the origin of professionalization process, see, for example, Magali Sarfatti Larson, *The Rise of Professionalism: A Sociological Analysis* (1977; Berkeley: University of California Press, 1979).

54. William G. Bowen and Michael S. McPherson, *Lesson Plan: An Agenda for Change in American Higher Education* (Princeton, NJ: Princeton University Press, 2016): 110.

55. On the allure of scientific progress and its challenges, see Andrew Delbanco, *College: What It Was, Is, and Should Be* (Princeton University Press, 2012), 90–101.

56. For a thoughtful overview of Flexner's life, see Robbert Dijkgraaf's essay, "The World of Tomorrow," in the recent reissue of Abraham Flexner, *The Usefulness of Useless Knowledge* (1939; Princeton University Press, 2017), 3–47.

57. Paul Starr, *The Social Transformation of American Medicine* (Basic Books, 1984); and Joseph F. Kett, *The Pursuit of Knowledge under Difficulties: From Self-improvement to Adult Education in America*, 1750-1990 (Stanford University Press, 1994).

58. The most well publicized recent study was issued by the Modern Language Association, Report of the MLA Task Force on Doctoral Study in Modern Language and Literature (May 2014).

59. Richard DeMillo, "The Accelerating Pace of Change in Higher Education," *James G. Martin Center for Academic Renewal*, Feb. 8, 2017, https://www.jamesgmartin.center/2017/02/accelerating-pace-change-higher-education/.