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# Journalism Education: The View from the Provost's Office

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**Abstract**

Journalism education traditionally has occupied an uneasy space on the fringe of the university. Recent trends have not made its footing any more secure. The tension between the professional nature of journalism education and its scholarly aspirations, which tend away from applied research, are confusing to upper-level university administrators, who favor units that present a unified vision for achieving and maintaining excellence. To consider ways to improve the standing of journalism, this essay looks at the subject from the point of view of the provost, the campus chief academic officer.

**Keywords**

journalism education, journalism history, journalism school administration, provosts' attitudes

Throughout its history journalism education has occupied an uneasy space on the fringe of the university. English and biology are essential components of any campus. Journalism is not. A number of elite universities have taken the view that journalism training does not belong in the university at all. As Harvard professor Abraham Flexner put it in the 1930s, journalism schools were merely vocational, "on a par with university faculties of cookery and clothing."[1] Professional journalists have contributed to this ambivalence. Some embrace the bias of institutions that shun journalism education as mere trade-school instruction. They argue would-be journalists ought to concentrate on history, political science, and other subjects that prepare them to understand news events. At the same time, an opposite professional attitude acts as a much more

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powerful centrifugal force on journalism education. A large number of reporters and editors, as well as former journalists who have gone into the classroom or joined journalism-related foundations, argue that journalism programs are out of touch with the everyday practical needs of newsrooms. The most strident critics declare that university educational norms are inimical to worthwhile journalism instruction.

To consider ways to improve the standing of journalism, this essay looks at the subject from the point of view of the provost, the campus chief academic officer. No office is more important to the head of a journalism program.

## Journalism Education, a Blurred Picture

What do provosts think of journalism education on their campuses? Here, for a start, are three answers.

Initially, Provost A viewed journalism education as simply teaching students to write for news organizations. Now he understands the program better. He is pleased that it includes other communications disciplines besides journalism and that these programs seem to be focused on how the audience learns and the impact of media. Holding a health-related doctorate, he is a strong believer in professional training and in research related to that training. "Strong research drives strong teaching," he says. He does not have a complete understanding of journalism research done on his campus but knows that the research is not a "shining star." He appreciates that there are other markers for excellence, such as when faculty are interviewed nationally.

Provost B, a scientist, speaks highly of journalism education at his university. It is considered one of the better programs in the country, has the only professional undergraduate degree on campus, and enjoys strong ties to working journalists. He particularly likes that the college is trying to help the media industry reinvent itself. "We are quite proud of it," he says, "and intend to keep it on the forefront." He is less impressed with the doctoral program and with research being done. He wonders if, in fact, it really is a serious discipline. "There is an aspiration to a theoretical base," he says, but not broad acceptance by the school generally that that is valuable.

"I am a bit at a loss; I will be honest with you," Provost C responds when asked about the journalism program at her university. She hears from professionals that the school is not turning out students who are ready to go into the workforce. "I am not sure that they do not need to be more trade focused at the undergraduate level. I am not sure that they are what we need them to be." At the same time, she says, "We do not have scholars who are pushing the boundaries of scholarship." Coming out of the humanities, where she taught classics, Provost C is nevertheless open to professional training and takes great pride in another information-related professional program on campus. Its faculty are tops, she says, with groundbreaking research. It generates significant external research funding and has national projects. It is notably successful at job placement.

These three responses are from interviews I conducted in 2012. Before stepping down as executive vice-chancellor and provost at my institution, I asked my Southeastern Conference (SEC) counterparts what they thought about journalism education on their campuses. The SEC offers a convenient sample.[2] Journalism education

at those schools range from having highly regarded programs to having none at all, as is the case at Vanderbilt.

As these three examples suggest, provosts' responses varied considerably. Nevertheless, the interviews contained revealing consistencies. The most important of these is that provosts are uncertain about journalism education. It is not uncommon for provosts to wonder not simply if their programs are meeting standards but also what those standards should be. The reasons for this hazy view of journalism education can be attributed to a number of factors.

Few provosts or their staffs have had any direct involvement with journalism education prior to assuming their positions. A historian-turned-provost certainly would have taken a science course as an undergraduate, and a biologist would have taken English and history. It is not routine for history or biology majors to take a journalism course. Furthermore, working their way up the ranks of academe, most provosts would not have interacted extensively with journalism professors. Journalism professors are mostly absent from the ranks of upper administration.

Once a provost assumes the position of chief academic officer, contact with journalism is likely to remain limited. At most major universities, provosts pay attention to programs that generate large amounts of research funding, such as in the sciences; teach large numbers of students, such is the case with colleges of arts and sciences; or have been designated as high priorities, such as when state government mandates focus on biomedical research or coastal restoration. Journalism brings in modest grants and contracts, at best; it never rivals arts and sciences in the number of credit hours it produces; and it goes without elaboration that governors are not inclined to designate improved journalism as a key to their state's development.

In any event, given the array of academic units on most campuses, provosts cannot be deeply familiar with all of the most important programs, let alone the lesser ones. They compensate (and insulate themselves against charges of bias, even if they find ways to act on their prejudices) by relying heavily on reviews done with teams of internal and external faculty, on national rankings, and on accreditation reports for professional programs. As Jonathan Cole noted in his history of higher education, the great Stanford University Provost Frederic Emmons Terman viewed himself as the "ultimate gatekeeper of quality" and to do that relied on advisors and "had an obsession with quantification that would become part of his arsenal for dispassionately (some would say ruthlessly) evaluating departments and individual scholars."[3] Especially with professional programs, provosts also assess quality based on what they hear from alumni and people in allied industries. This evidence can be useful, but it is not always.

Also clouding provosts' understanding of journalism education is vagueness about its professional base. Journalism was one of the earliest business endeavors to make a claim on being a profession, but as any provost can see, it does not meet the standards of a profession the way law, medicine, and architecture do.[4] Adding to the confusion is the current upheaval in journalism. New technologies make it possible for anyone to claim the title of journalist, and some news media pursue business strategies that shove aside traditional respect for fact-based evenhandedness.

"I don't think very many provosts understand what journalism is all about," said Del Brinkman, reflecting on his time as a dean and later a provost at the University of Kansas.[5] Many administrators had a negative opinion, he recalled, one usually based on a poor journalist they had known, or a single, unfortunate episode they had experienced, or on the quality of the student newspaper. Many deans have a story about the time the university president called up to complain about a story that students had run: "What the hell is going on over there," a University of Kansas president asked Brinkman once, "yellow journalism?" Today provosts have much more than the student newspaper to choose from in forming negative examples of journalism. Few provosts automatically conclude that bad journalism calls for strong journalism education.

Just as working journalists fret about finding ways to maintain high-quality journalism, provosts wonder what journalism programs should do to respond. As Provost B claimed proudly, his journalism program was doing a good job of helping the industry. Another had a different take: "My frustration is that our college has been slow to evolve in the marketplace as forms of communication have changed." Newspapers will not be printed to the end of the time, he said, but the college acts as if that were so. "It's hard to get traction on new ideas" in the college. This latter view is more prevalent.

What those new ideas should be is debatable. Part of the answer will be shaped by the research journalism educators undertake. Here, too, a muddled picture presents itself to provosts.

## The Research Dilemma

Research is the coin of the realm of any major university. Highly visible researchers bring national attention to themselves and to their institutions. "I brag about my doctoral degrees," one SEC provost told me. "When I am at academic meetings, I would never talk about [professional] degrees," said another; research is essential for "credibility." Both provosts had professional backgrounds, one as an engineer and the other as a lawyer.

To understand such attitudes about journalism research, it is useful to look at the evolution of journalism education. Journalism emerged from colleges of arts and sciences, often beginning in English departments with a few courses, then forming into departments of their own, and finally, in many cases, becoming free-standing college-level units. This foundation in the humanities and social sciences helped journalism education do something the professional schools find difficult. In most of the academy, liberal arts education is divorced from professional education.[6] Not so with journalism. A broad liberal arts education is an integral part of undergraduate journalism study. Working journalists have encouraged this because they quite rightly want students who not only have news skills but also understand the world they have to explain as reporters and editors.

The development of the discipline in this positive way, however, has paradoxically led to research that is not in touch with professional journalism. In keeping with the genesis of their undergraduate programs, journalism professors are trained in the liberal arts tradition. Their research inclinations are to describe and analyze journalism

rather than to undertake work designed to improve it. Exceptions exist, and journalism professors are doing more applied research today. But the research of the average faculty member in veterinary medicine, accounting, and engineering is much more practical than that of the average journalism professor.

One may wonder what would have happened if the pioneers of journalism education had taken a different course and favored research, or if professional journalists in those early years had pressed for research of use to them. But as usually happens, professors did what came naturally given their backgrounds, and they trained succeeding generations of faculty to be like them. For their part, professionals did not pay care about research because they did not think they needed it. Everything was going just fine in their newsrooms and counting rooms. They were making lots of money without having to ask sophisticated questions about their industry. R&D was as foreign to newspapers in those formative years of journalism education as typewriters are today.

The result is a series of disconnects that provosts cannot miss. One of these is that working professionals generally have a low regard for research. This tension carries over to faculties where professional and scholarly faculty often coexist begrudgingly. Another divide exists between journalism scholars and scholars in departments of political science, history, English, and the like from whom journalism acquires many of its research tools. Although journalism scholars have an affinity for those disciplines, they are not readily accepted by them. Questions arise about the lack of rigor and original theory building in journalism.

All of this can be confusing, if not troubling, for senior academic administrators. Other professional programs have practical and respectable research. Why not journalism? When faculty disagree on standards, provosts know it and wonder about program quality. Provosts look for clear, consistent visions in the units they oversee. This difficulty for journalism may become more difficult still as a result of another divide that is emerging.

In recent years, journalism scholars have engaged more frequently in quantitative research, a trend that is found in social science generally. Figure 1 demonstrates this in two leading publications in the field, *Journalism and Mass Communication Quarterly* and the *Newspaper Research Journal*. Quantitative methods provide a powerful research tool, and they can be used to explore practical problems in journalism. It is a positive that many undergraduate journalism programs provide deeper instruction in data collection and use. But the steep increase in faculty inclined to do numbers-based research has an unfortunate impact on undergraduate instruction. While undergraduates benefit from greater instruction in the use of numbers, their professional needs remain grounded in the presentation of information—and for the most part that means communication with words. Quantitative researchers often do not have the talent for or interest in teaching writing, as is readily apparent by reading the work published in academic journals. Also, many scholars who gravitate to statistical methods have little background in the history and practice of journalism. This limits their teaching as well their ability to do research that produces richly meaningful conclusions. This trend threatens to widen the gap with professionals and raise more questions among provosts about the professional nature of journalism education.

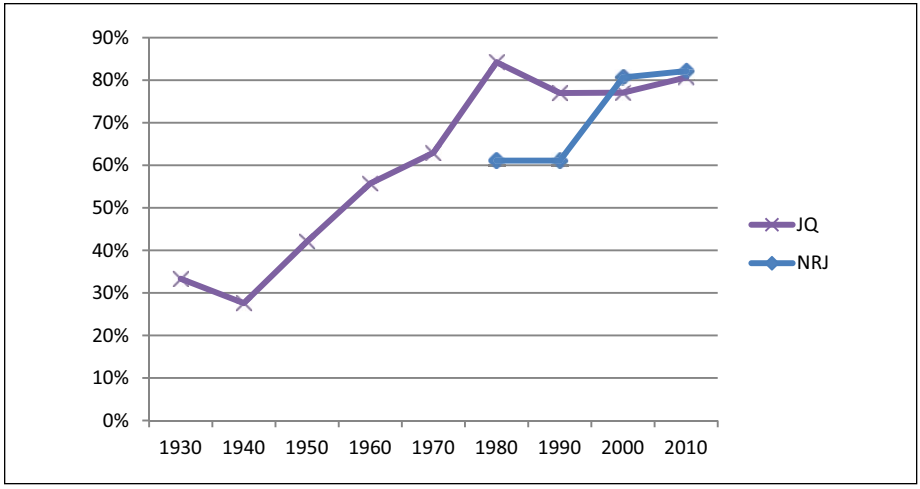


**Figure 1.** Percentage of *Journalism Quarterly* and *Newspaper Research Journal* articles based on quantitative research.

One significant example of faculty working against the professional orientation of their schools was the successful push to include mass communication in the recent National Research Council's (NRC) rankings of Research-Doctorate Programs.[7] Proponents for including mass communication saw this as a validation of their work. The NRC assessment based its finding on such factors as number of publications per faculty member, citations of that research by other academics, grants, Graduate Record Exam (GRE) scores of students in the program, and the number of PhD degrees awarded. Given flaws in the NRC ranking, including the nearly indecipherable final scores for individual programs, it is unlikely to have consequences for journalism this time. But more NRC assessments will come. In future years, assessment could do considerable damage to professional journalism instruction.

Practice and research need to coexist and reinforce each other. But the NRC rankings will likely work against that. "If you have a good research program," provosts will ask journalism administrators, "then why aren't you scoring high on the NRC rankings?" Journalism administrators can argue that the NRC rankings are not good measures of quality for professional programs. But they will have to make the case over and over with one provost after another. The way to put these questions aside once and for all is to hire faculty whose chief virtue is research.

## What Else Matters?

Journalism programs have a number of selling points beyond research that carries weight with provosts. Here are a few of them.

### Revenue

One of the most important values journalism programs have had on campus is the tuition money they bring. Journalism enrollments have been strong for a number of years and, disruptions in the industry notwithstanding, are at historic highs, even as mass communication enrollment overall has dropped slightly.[8] The cost side of journalism education enhances the value of the tuition revenue. While journalism instruction is more expensive to provide than most core humanities courses, it costs far less than science in terms of labs and technology and far less than business, medicine, or law in terms of salaries. Modest investments needed to recruit an outstanding professional have big payoffs in terms of national reputation. Emphasis on cost and revenue will not abate as university budgets rely more on tuition dollars and less on state general appropriations.

### And More Revenue

Another measure of program value is fundraising. Professional schools often have an advantage because their alumni identify more closely with those programs than liberal arts majors do with their home departments, whose missions are not as closely linked to their life's work. Journalism schools do not have as many wealthy alumni as, for example, business. Traditional media companies have less capacity to provide funding than in the past, and new media companies do not see themselves tied to journalism schools the way old-line newspapers did. But in time, revenue will emerge from old and new media companies, especially if journalism schools contribute to their success.

### Links to the Community

"For me," said one SEC provost about professional programs, "these are opportunities to do economic development activities, engage with local constituencies" with whom the university needs to have strong ties. Professional degrees "open doors for stronger relationships." This thinking is especially important for state-funded institutions, whose funding is tied to relevance and public opinion. Journalism programs, with a public service agenda, have a strong advantage in this regard.

### Status Conferral

Journalism programs are especially well equipped to win recognition because of the visibility journalism offers. "Our Grady College has always been one of the signature programs," the University of Georgia provost said. "It has been responsible for administering the Peabody Awards in New York City. . . . We get a lot of good press." Stephen Colbert, he adds, mentions the award on the air when he gets one. This status conferral comes in other forms as well: the journalism dean or faculty member who is highly respected and sought after for national comment; the media stars who are invited to campus.

## What Can Be Done?

Early in 2013, Indiana University [IU] Provost Lauren Robel, a lawyer by training, announced a plan to merge the highly thought of school of Journalism into a new unit in the College of Arts and Sciences. Her rationale was that the school had a small budget compared with other college-level units and that journalism was itself in the merger mood. "Of the hundreds of articles one can quickly find by searching the web for 'the future of journalism,'" she wrote in a position paper, "it is hard to find one that does not focus on convergence of platforms—broadcast news media with text-based mobile apps, Twitter feeds from sports journalism covering games, newspapers whose digital readership far exceeds their print."[9] Besides, Robel said, the journalism school would likely do better in NRC ranking if it were in the College of Arts and Sciences.

Anyone who knows anything about journalism knows that the convergence of news platforms is poor rationale for putting journalism in a college with auditory science and ceramics. It is equivalent to arguing that family and child studies should be merged with economics because it was once called home economics. But anyone who knows anything about provosts knows that the concept of combining units can be compelling and can be made attractive to oversight boards, which in fact approved the proposed changes at Indiana.

The merger proposal is one of many signals of vulnerability of even the best journalism programs to steps that diminish them as both academic and professional units. While upper administration may see advantages in consolidation with other disparate units, the costs in quality are high. IU's journalism school successfully sought to leave the College of Arts and Sciences in the 1970s because it was a low-budget priority. Such reduced funding can be a function of holding journalism in lower regard based on liberal arts research criteria. It also can result because journalism programs can raise money more easily than most, if not all, liberal arts units, allowing deans to shift resources to those poorer units. Furthermore, deans with no professional understanding of journalism often undervalue professional faculty and are less open to alternative paths to award tenure and promotion. A journalism dean has a better chance of persuading a provost of the value of his or her academic product than a journalism department chair does of persuading a dean in a college of arts and sciences. Free-standing independent units are essential for high-quality professional journalism education.

Before suggesting ways to protect journalism programs against these threats, I want to step back and stress a key point: shortcomings notwithstanding, journalism education has done a good job—sometimes a very good job—of training journalists. Nor are journalism programs the only place in which reforms should take place in the university. While many provosts do not see the flaws as vividly with traditional core academic programs as they do with journalism, the whole university enterprise needs to be pulled up by the roots and examined. "For the future of research universities and their faculty," concluded a 2012 report on higher education, "we must shift and place greater emphasis on quality rather than quantity and realign our rewards systems. But first, we need to do the hard work of agreeing on discipline-specific definitions of quality."[10]

Making changes in these university structures is not easy. Nevertheless, steps can be taken to strengthen journalism education on campus without giving up its professional orientation. In fact, that orientation can be a plus in a time of industry disruption and university financial crisis.

## Shared Campus Interests

Journalism educators often see themselves fighting their campus battles alone when, in fact, they have shared interests with other professional units that they do not adequately explore. The state of professional master's degrees is a good example. Projections show that the number of jobs requiring a master's degree will increase by about 22 percent between 2010 and 2020.[11] In meeting these needs, universities are paying more attention to practical master's education along with certification programs (to which journalism also should give more attention). This involves programs that are not traditionally considered professionally oriented, for instance, the development of professional science master's programs, which could have the same impact on higher education as the introduction of the MBA.[12] Working with professional master's programs across campus will help in developing common standards that put journalism education on a firmer footing. Significantly, employers calling for more graduate training generally are interested in skills that apply especially to journalism: professionalism and work ethic, oral and written communication, teamwork and collaboration, critical thinking and problem solving, and ethics and social responsibility.[13] The time for journalism collaboration with the rest of the campus has never been better.

## Better Align Research with the Professional Mission

Journalism research is a growth industry. Fifty mass communication doctoral programs exist, and "enrollments have increased slightly but steadily in recent years."[14] In addition, paradigmatic changes taking place in news media are leading young scholars in other disciplines, such as political science, to focus on journalism in their dissertations and subsequent research. Unfortunately, the momentum of this research is in the traditional direction of liberal arts that has little concern for professional relevance.

This course is not easy to change. But it may not be impossible. It is not necessary or even desirable to remake every journalism professor into an applied scholar. The goal ought to be to enlarge the amount of practical research being done and to make traditional research more meaningful and accessible to people outside the academy—to average citizens who need to understand news media better as well as to journalists who can use the insights to make journalism work better. Journalism education has some natural advantages that can help it do this.

Journalism is a "borrowing" discipline, using the theories and methods of others. Rather than fighting this, journalism educators should embrace it as a strength and broaden interdisciplinary study still further. Journalism teaching and research can

benefit from incorporating industrial psychology, computer programming, economics, psychology, management, and other disciplines that have the tools to understand the functioning of news media and make it more effective. Neither are science, geography, and medicine, to name just a few other disciplines, outside the ken of journalism education any more than they are outside the ken of news reporting. To put this another way, journalism education should relish the opportunity to make itself into a microcosm of the university, incorporating the panoply of tools that a campus has to offer.

We can broaden faculty expertise in several ways. We can encourage hybrid PhD degrees in which doctoral students effectively have two major fields, rather than a mass communications major field and a minor one. We can recruit young professors from other disciplines who have shown an interest in news media research, although journalism educators (possibly with foundation support) will need to help them develop a solid knowledge of journalism as it is practiced on the ground. Finally, we can encourage existing faculty to broaden their research by working collaboratively outside their fields.

Provosts are likely to accept a journalism research agenda that is broader, more practical, and democratically accessible. First, provosts have used the liberal arts metric because that is the one that journalism schools have offered. Second, provosts—even those with liberal arts degrees themselves—are generally open to alternative standards for research provided *they are high standards*.

The case can be made for the relevance of journalism without diminishing its status on campus. Stronger applied research also can lead to higher status with the professions by supplying them with better ideas and even direct assistance in newsgathering. Stronger applied research can be achieved without putting journalism education up for hire with the journalism industry. Journalism researchers are needed not only to assist news media but also to assess and critique their performance. Good and useful research is dispassionate and rigorous. "The divorce between liberalism and professionalism as educational missions," observes Louis Menand, a Harvard English professor and staff writer on the *New Yorker*, "rests on a superstition: that the practical is the enemy of the true."[15]

## *Journalism Leadership*

A third factor important for maintaining the quality of journalism programs is at once the most mundane and possibly the most important, namely, the recruitment of leaders. This is not simply a choice between hiring seasoned professionals or died-in-the-wool scholars, although people in both camps often see it that way. Professionals need to work effectively with academics and vice versa in most strong programs. What counts is the ability to bring faculties together around points of excellence and then aggressively and creatively sell that excellence to provosts, chancellors, and others on and off campus.

This requirement for strong leadership is much higher for journalism programs than other academic units for reasons already alluded to. The chairs of departments of English preside over programs that need no justification. Heads of journalism units

cannot assume that. Every time a new provost arrives on campus, they have to worry about "educating" him or her on the fundamental value of their unit. Furthermore, to get jobs for students, fundraise, and insulate themselves against threats of program merger and elimination, journalism educators must develop strong ties with professional communities. This is unlikely without leaders positioned to explain how their programs are supporting the profession. "The best journalism programs," argues Del Brinkman, "are ones that are independent and lead by a savvy dean."

There is no one model for a professional journalism program, and there should not be. Diverse approaches enlarge the possibilities for new ideas, all of which are needed to maintain the higher calling that journalism should be in a democracy. Making common cause on campus with other units, moving research unapologetically in the direction of improved practice and relevance, and working hard to educate provosts on the benefits journalism brings to universities will make programs stronger and more secure. Done well, we can move journalism closer to the center of the campus.

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## Notes

1. Abraham Flexner, *Universities: American English German* (New York: Oxford University Press, 1930), 160.
2. The SEC at that time was made up of the University of Alabama, University of Arkansas, Auburn University, the University of Florida, University of Georgia, University of Kentucky, Louisiana State University, University of Mississippi, Mississippi State University, University of South Carolina, University of Tennessee, and Vanderbilt University. The SEC did not yet include the University of Missouri, which has a widely praised school, or Texas A&M University, which has none.
3. Jonathan R. Cole, *The Great American University* (New York: Public Affairs, 2009), 121.
4. Thomas Bender, "Evolution of Universities and Their Mission," unpublished talk at Manship School of Mass Communication, Louisiana State University, June 6, 2006, 7–9.
5. Interview, May 16, 2013.
6. Louis Menand, *The Marketplace of Ideas: Reform and Resistance in the American University* (New York: W.W. Norton, 2010), 49.
7. Jeremiah P. Ostriker, Charlotte V. Kuh, and James A. Voytuk, editors, *A Data-Based Assessment Research-Doctorate Programs in the United States* (Washington, DC: National Academies Press, 2011).
8. Lee B. Becker, Tudor Vlad, Konrad Kalpen, "2011 Annual Survey of Journalism and Mass Communications Enrollments: Enrollments Decline, Reversing the Increase of a Year

Earlier, and Suggesting Slow Growth for Future," *Journalism & Mass Communication Educator*, 67 (2012): 334.
9. Lauren Robel, "Convergences: The Future of Media and Journalism at IU," n.d., 1, accessed through Andrew Beaujon, "IU provost, Merging schools puts 'educational excellent first,' 'administrative structures' second," March 13, 2013, pointer.org.
10. "The Current Health and Future Well-Being of the American Research University," report by the Research Universities Futures Consortium, Washington, D.C., June 2012, 36.
11. Cathy Wendler, Brent Bridgeman, Ross Markle, Fred Cline, Nathan Bell, Patricia McAllister, and Julia Kent, *Pathways through Graduate School and Into Careers* (Princeton, NJ: Educational Testing Service, 2012), 3.
12. Cathy Wendler, Brent Bridgeman, Fred Cline, Catherine Millett, JoAnn Rock, Nathan Bell, and Patricia McAllister, *The Path Forward: The Future of Graduate Education in the United States* (Princeton, NJ: Educational Testing Service, 2010), 32–33.
13. Wendler et al., *Pathways Through Graduate School and Into Careers*, 8.
14. Becker, Vlad, and Kalpen, "2011 Annual Survey of Journalism and Mass Communications Enrollments," 334.
15. Menand, *The Marketplace of Ideas*, 57.

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