

Publication, Power, and Patronage: On Inequality and Academic Publishing

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In 2007, the Higher Education Funding Council in England, the government body responsible for distributing funding to universities, revealed a national system to measure and compare institutions of higher education—the Research Excellence Framework (REF). Designed to assess the quality of research in institutions of higher education in the United Kingdom, the program sought to produce "indicators of research excellence," provide a basis for the distribution of funds, produce a sustainable framework for research, and "promote equality and diversity."[1] Ultimately, the REF studied and quantified research carried out in 154 UK universities between 2007 and 2013 and reported its results in 2014. The study included, as the council puts it, over 191,150 "research outputs"—journal articles, books, or conference proceedings.

Although universities in the United States and Canada have not yet been submitted to such a national exercise, many have begun to assess themselves. Several top universities have used Academic Analytics, a database of PhD programs and departments at 385 universities in the United States and abroad. Academic Analytics primarily provides data about academic publishing: books, articles, and citations. "Objective data," claims the company, supports "the strategic-decision making process" at universities.[2]

For critics on both the political Left and Right, the increasingly data-driven nature of today's university looks to many like a bureaucratic behemoth, an overly rationalized system that expunges the personal and particular in favor of the quantifiable and universal.[3] Such assessment regimes are largely seen as the delayed consummation of a disenchanted modernity as described by Max Weber almost a century ago. Like other modern institutions and systems, universities now use technical means to control "all things through calculation," thereby ensuring, as Weber wrote, that in principle nothing remains "mysterious or incalculable."[4] In the case of contemporary university assessment, the relative value and authority of individual scholars and institutions are directly linked to "research outputs." Publications are discrete objects that can be counted and compared. They have become the academy's ultimate markers of value, especially in the humanities and humanistic social sciences where other markers of quantifiable value such as grants and private funding are less prominent.

The REF and Academic Analytics are, as the latter insists in its publicity materials, "rooted in academia." They recognize that authority and status in the modern university are bound up with publication. Reputation, status, prestige, legitimacy, and authority are related not just to the writing and uttering of words but to their publication through regulated channels of transmission. Few

aspects of academic life are as normative as publication is today—both in its quantitative expectations (tenure equals a book and a few articles) as well as in its formal qualities (In this essay, I will argue . . .). Publications are arguably, according to this logic, the most visible coins of academic social capital and institutional legitimacy.

In this sense, the REF and Academic Analytics are some of the more notable recent attempts to model the university's own system of valuation. By simply measuring publications as discrete objects untethered from the practices and norms of the university, however, such analytic exercises provide only a partial account of what they claim to study—scholarly excellence. And yet to dismiss these quantitative studies as counter to the history and norms of the university and scholarship, as myriad scholars do as they lament the *neoliberal* university, is both historically false and ethically self-interested. Scholars, especially in the humanities, know surprisingly little about the academic publication system in which they participate. Such ignorance of this system only ensures the perpetuation of patterns that when revealed might normally be found distressing. We hope, then, to steer a middle course between, on the one hand, arguments that simply dismiss quantitative studies of publishing as such and, on the other hand, arguments that simplify, reify even, publishing metrics into an absolute measure of worth.

Our essay is an attempt to correct this deficit through a quantitative analysis of contemporary publishing patterns in the humanities, as well as a conceptual account of the historical relationship of publishing practices to the modern research university. The quantitative study is based on a new, hand-curated data set of forty-five years of publishing in four leading humanities journals that encompasses just over 5,500 articles. And yet, as we argue, the publishing patterns that our study reveals only make sense when situated within a longer genealogy of academic and university publication. Specialized scholarly publications have not always been the essential academic currency or markers of authority. The contemporary norms of academic publication have a long and complex genealogy in the scholarly and institutional practices that make up the history of the university.

Historically, university reformers from the eighteenth to the twenty-first century have touted publication as a corrective to concentrations of power and patronage networks. An increased emphasis on more purportedly transparent or objective measures provided by publication have long been cast as an antidote to cronyism and connections. As we will show, however, current data suggest that publication patterns largely reproduce significant power imbalances within the system of academic publishing. Systems of academic patronage as well as those of cultural and social capital seem not only to have survived but flourished in the modern bureaucratic university, even if in different form.[5] When, as our data show, Harvard University and Yale University exercise such a disproportionate influence on both hiring and publishing patterns, academic publishing seems less a democratic marketplace of ideas and more a tightly controlled network of patronage and cultural capital. Just as output-focused advancement is older than we might expect, patronage-based advancement is more persistent than we might like to acknowledge.

This essay, then, marks the start of a larger project that studies the role academic publication plays in shaping the creation and communication of knowledge within and beyond the academy. We are especially interested in how institutional prestige and patronage networks shape intellectual spaces and whether this influence should be seen as a norm to be defended or a problem to be addressed. The broader questions we want to ask, which we can only begin to raise in this essay, are, What are the epistemic effects of a system in which academic prestige is so unequally distributed, and, How might we, as an academy, foster a more intellectually diverse space of scholarly communication?

The Writtenness of Knowledge

Scholars, both within and outside the university, have of course always written. Humanists from quattrocento Italy to Erasmus and his northern European contemporaries of the sixteenth century produced a steady stream of letters, encyclopedias, disputations, treatises, and, eventually, essays. Even in seventeenth-century Tübingen, the purportedly oral culture of the early modern university

mixed well with cultures of writing and publication.[6] Even the most oral of university traditions, the disputation, had written elements.[7] In 1602, Martin Crucius, a faculty member who studied philology, described how a young Austrian student, as Kristine Haugen details, "sent him a disputation on ethics, 'On Human Happiness in this World,'" in preparation for the young man's planned oral disputation the following day.[8] Similarly, professors such as Crucius delivered countless speeches, which Crucius, at least, diligently drafted before delivering them publically.[9] The oral culture of the early modern university was also one of the written word.

The Renaissance and early modern period witnessed a proliferation of published textbooks, commentaries, and compendia that circulated among professors, students, and scholars of all sorts. [10] In late seventeenth- and early eighteenth-century Germany, university professors published and edited an array of texts, including lexica and bibliographies. In *The Charlatanry of the Learned* (1715), the Leipzig editor and university professor Johann Burkhard Mencken went so far as to mock fellow scholars as intellectual frauds for publishing so many books "empty of significance" and pumped up with false erudition.[11] Already by the eighteenth century concerns about the inverse relationship of the quantity and quality of publications were regularly voiced.[12]

Unlike the contemporary university, however, publishing was not the primary path to a university position or advancement. Until at least the end of the eighteenth century, German universities, for example, considered a broad range of abilities sufficient for granting a faculty position (see *AC*). A potential professor's eloquence in lecturing, the ability to deliver a speech, or even family connections were all legitimate qualifications.[13] The early modern university was also, as recent scholars have described it, a "family university."[14] For centuries, university chairs and faculty positions were commonly passed down from father to son (or son-in-law) in multigenerational lines of academic inheritance.

Even more common than outright nepotistic inheritance were the complex networks of family ties and personal relationships through which faculty chairs were awarded. As in other early modern institutions such as royal courts or guilds, universities were often closely associated with high status families that used their contacts with kings, princes, and government officials to exercise influence over appointments and advancements. Universities in Gießen, Marburg, and Tübingen remained under the influence of such familial networks well into the nineteenth century.

This system of patronage and patrimony helped support the early modern university's game of academic chairs. Professors regularly sought to climb the hierarchy of the faculties: from a chair in the arts or philosophy faculty to chairs in the higher, and more prestigious and lucrative, faculties of medicine, law, and theology. A chair or professorship was, in part, a matter of inheritance and family relationships, akin to a guild-based entitlement [Zunftberechtigung].[15]

The early modern university was primarily a local corporate body of masters and students, and it had its own traditions, norms, and practices that enforced its social hierarchies and feudal structures.[16] The authority and legitimacy of academic knowledge was embodied not in disciplinary communities that floated above individual universities but in the personal and local knowledge of particular collegial bodies.

When early modern university professors did publish, they didn't just publish specialized articles and books. Throughout the eighteenth century, university leaders encouraged professors to publish a broad range of literature that would be widely read—sermons, encyclopedias, disputations, and more generally popular literary work. But over the course of the eighteenth century and into the nineteenth, especially in Prussia, there was a gradual shift from a "family university"—organized around local relationships and the university as a corporate body—to a "performance university" [Leistungsuniversität]—organized around productive, specialized scholars as personae in their own right. They published "research"—work that didn't merely display or organize knowledge as erudition but created it by building off previous work in a never-ending process of production.[17]

The ideas and structures for this transition were first articulated and partially implemented at the University of Göttingen in the early eighteenth century and furthered elaborated at the University of

Berlin in the early nineteenth. Founded in 1734, the University of Göttingen was one of the first universities to place a distinct and systematic emphasis on writing and publishing when hiring or advancing professors through the faculty ranks. And yet Göttingen, as the dean of the philosophy faculty Johann D. Michaelis put it, encouraged its faculty to publish not "narrowly focused" writings but writings with a broader appeal. Fame (broad recognition) was valued over prestige (specialized recognition) (see *AC*).

Göttingen's coupling of scholarly production and academic advancement was a key element of the university's more general system of academic mercantilism.[18] Göttingen's founding rector was the state minister Gerlauch von Münchhausen, who led the university for almost four decades. Münchhausen was not a scholar. He was a state official. And he viewed universities like mines or forests, economic resources to be cultivated and exploited for the state's financial gain. Universities, as Johann Justi, a Göttingen professor of *Policeywissenschaft* (an early form of German political economy), put it, were the greatest "commercial locations of the learned Republic."[19]

Printed publications were one of the university's key commercial goods. In a reform tract addressed to Prince Ludwig of Hessen-Darmstadt, the minister and jurist Friedrich Carl von Moser extolled the Göttingen model of the university as a "learned factory." [20] Professors, he exhorted Prince Ludwig, should be "focused more than ever on writing and the development of individual works of excellence so that the University remains fresh in the minds of the public and they can see that talented and hard-working men are employed there." As states became increasingly interested in the economic benefits of universities and, thus, assumed more financial responsibility for them, they insisted on more visible proof of a university's value. The "public" required more precise, discrete, and tangible means of accounting for professors' activity and the universities' contribution to a public good, understood primarily as financial return on investment. The value and authority a professor enjoyed within his home university were rooted in relationships with local colleagues and influential families. But these collegial values were not easily converted into a "public" value and authority. Professors had to become productive.

A former Göttingen student, Friedrich Böll, likened his alma mater to a factory owned by the king: "You, Mr. Curator, are the factory director; the teachers at the university are the workers; the young people studying and their parents . . . are the customers; the sciences taught at the universities are the wares. Your king is the master and owner of his scientific factory" (quoted in *AC*, pp. 379–80). The ideal "academic wares" were printed publications that circulated both within and outside universities as academic currency. Publications boosted the status of the university generally. They also enabled Göttingen to identify and evaluate professors from rival universities—poaching rising academic stars has a long history. Göttingen helped develop a system of norms and practices that made scholarly, discipline-specific publication a key feature of the modern research university. It was a system of norms designed, in part, to regulate patronage and patrimony, to replace the personal with the universal.

The Visibility of Knowledge

Underlying this broader shift to a publishing model as a measure of academic excellence were several epistemological and ethical assumptions. First, advocates of a new university model assumed that written and, most importantly, published material had a higher value than oral exchange or other less broadly public media. In his magisterial history of the research university, William Clark describes how the emergence of the modern research university helped establish what scholars have long recognized as a key feature of modern institutions and knowledge: the "dominion of the visual and legible over the oral and the aural" (*AC*, p. 402).[21] Within the modern research university in particular, the increased authority of visible, more publically legible forms of knowledge gradually established the "author and reader over the orator and the audience, as well as the triumph of the academic 'I' as charismatic individual over the corporate, collegial, collective bodies of academics" (*AC*, p. 402).[22]

Whereas the early modern university primarily valued collegial cooperation and membership, the modern research university came to value broader recognition beyond the local university. Legitimacy and authority increasingly came to be tied to published material, which was more visible and less susceptible to other, less modern forms of authority and value such as familial ties or patronage systems (see *AC*, p. 377). In the light of being published, the value of a scholar's work was visible to all because it was subject to more public and, therefore, so went the reasoning, more rational standards. Published writing could be accounted for, whereas charismatic teaching or speaking was more difficult to evaluate and compare. Texts, as Simon Shaffer and Steve Shapin put it in another context, constituted "a virtual witness that was agreed to be reliable." [23] The authority of printed writing lay in its capacity to circulate more freely, unencumbered by the idiosyncrasies of the local and peculiar.

Second, the intellectuals and bureaucrats who first articulated the norms of the research-based scholar increasingly assumed that published material was the product and possession of a unique, single author. Published material reflected the scholarly abilities, industriousness, and personal genius of an academic persona. These gradual shifts to public personae grounded in publication were not, of course, limited to the modern research university. Early modern humanists, such as Erasmus, had for centuries carefully crafted public and charismatic personae through publishing.[24] But beginning in Göttingen and continuing with the founding of the University of Berlin in 1810, university-based academics began to adopt and adapt these publicity models to university norms and practices.

As minister of education, the Prussian aristocrat Wilhelm von Humboldt was not the first bureaucrat to articulate the imperative to publish. But he was one of the first to attempt to institutionalize it and make it a standard feature of the university. Drawing on the institutional success of his alma mater in Göttingen, Humboldt helped institutionalize hiring practices and institutional structures by rationalizing them. He established a faculty committee to change traditional hiring practices by identifying candidates who were already established in particular sciences as evidenced, in particular, by their publications within a particular academic field or *Wissenschaft*. He tried to dispense with older practices that privileged family relationships or other local, corporate considerations.

In the annual report of the Ministry of Culture, Humboldt proudly announced to the king of Prussia that F. A. Wolf, renowned philologist from Halle, had been offered a position at the new university "because with respect to philological erudition no one can measure up to him."[25] Similarly "capable" men, he reported, would be sought for theology, jurisprudence, and medicine. In subsequent reports, Humboldt clearly subordinated collegiate and corporate virtues—"of effective teaching, versatility, social and intellectual acceptability, and family ties"—to more strictly research-oriented virtues. Berlin was one of the first university institutions to emphasize in its hiring practices not merely "erudition and eloquence" but a potential faculty member's contribution to a particular scholarly field as evidenced through publication.

German universities first crafted these norms and institutionalized them over the course of the eighteenth and nineteenth century, but European and American universities gradually adopted and adapted these publishing models over the course of the nineteenth and twentieth centuries. When Daniel Coit Gilman was assembling the first faculty members for the newly established Johns Hopkins University in 1876, he placed a great deal of emphasis on the "scientific and literary renown" of prospective candidates.[26] In Hopkins's first few decades, almost all of its fifty-three faculty had studied in Germany, and thirteen had earned their PhDs there. Under the leadership of president Charles Eliot (1869-1909), Harvard gradually adopted a similar model and expected faculty to publish as members not only of their local university but as members of discipline-specific, international communities of scholars.[27]

Over the course of the nineteenth century in Germany and the United States, the research university emerged as a system of paper and publishing. Its advocates, from Humboldt in Berlin to Gilman in Baltimore, cast its relationship to print as a primary source of its objectivity and, thus, the internal and external marker of prestige.

In many ways, then, the research university emerged as the consummate modern bureaucracy. Its institutional legitimacy and authority rested on the universal "calculability" [Berechenbarkeit] of published knowledge.[28] Its bureaucratic authority helped loosen the hold of older structures of patronage and familial relations. It operated, as Weber put it describing the authority and legitimacy structures of modern bureaucracies more generally, "without regard for the person." And publications fit perfectly into such a system. They provided an "objective," calculable, and impersonal form of legitimacy that circulated within and among universities.

Today's REF exercise is, then, not simply a reinvention of the modern university under neoliberal terms. It is the culmination of institutional norms and practices that have long characterized the modern research university. To frame, as some contemporary critiques do, neoliberalism as a usurpation of the university and its otherwise disinterested values is to obscure the long history of scholarly investment in the very qualities that are supposedly being imposed.[29]

Publishing Patterns and Academic Inequality

And yet as we will show, our study of publishing patterns in top humanities journals over the past half century doesn't align well with the image of the modern research university as a fully rationalized institution. Despite its veneer of rational structure and bureaucratic organization, the modern research university is also a place deeply marked by patterns and practices of patronage and patrimony and the tight circulation of cultural capital. The very medium that was designed to correct for these imbalances, publication, appears to be equally adept at keeping inequalities largely in place.

Several recent studies have shown a high degree of concentration of academic hires from a small number of PhD-granting institutions. One recent study of placement data on nearly 19,000 tenure or tenure-track faculty in history, business, and computer science departments found that faculty hiring "follows a common and steeply hierarchical structure," reflecting "profound social inequality."[30] Only 25 percent of institutions produced 71 to 86 percent of all tenure-track faculty. And the top ten institutions produced 1.6 to 3.0 times more faculty than the second ten. Another study of political science programs in the United States found that the top five programs placed 20 percent of all academics at research institutions;[31] a different study found that graduates of eight universities were hired for half of all tenure-track jobs.[32] These studies have demonstrated the role of institutional prestige and the dominance of a very few institutions in academic faculty hiring.

Our study considers whether and how institutional prestige and certain forms of cultural capital carry on after new faculty members are first hired. Are there discernable patterns in publishing with respect to institutional affiliation? Does a scholar's institutional affiliation give any indication of her or his success in publishing?

To begin to answer these questions, we surveyed over forty-five years (1969-2015) of publication data from four leading journals in the humanities—*Critical Inquiry*, *New Literary History*, *PMLA*, and *Representations*. Our data set was primarily drawn from the JSTOR Data for Research service, which provided metadata on authors, titles, and publication dates for all four journals, which we then manually augmented to bring publication data up to 2015.[33] For the purposes of this study, we defined an article as a document with six or more pages in order to distinguish articles from letters or book reviews, for example. We then hand-tagged each author-article pair for PhD institution, institutional affiliation at time of publication, and the author's gender.

In sum, there were 3,510 total authors, 5,593 total articles, 341 PhD-granting institutions, and 741 author institutions represented in the data. *PMLA* accounted for more than one-third of the articles in our data set at 35 percent of the total; *New Literary History* and *Critical Inquiry* accounted for roughly a quarter each; and *Representations* accounted for 13 percent. *PMLA* is by far the oldest of the journals, established in 1884. We limited our data, however, to the period 1970–2015. Data for the other journals begins with their first issue and runs almost to the present: *New Literary History*, 1969–2015; *Critical Inquiry*, 1974–2015; and *Representations*, 1983–2015.

Institutional Affiliation

As figures 1 and 2 show, there is a strongly unequal distribution of PhD-granting institutions represented in the publication data. The top 20 percent of institutions account for 86 percent of the articles, while the top ten PhD-granting institutions, which represent less than 3 percent of all institutions in our data set, account for just over half (50.7 percent) of all articles published. As we can see in table 1, authors with PhDs from Yale, Harvard, University of California–Berkeley, Columbia University, University of Chicago, Cornell University, Stanford University, Princeton University, Johns Hopkins University, and Oxford University wrote 2,837 of 5,593 articles.

PhD Institution	No. Articles	Author Institution	No. Articles
Yale	606	UC Berkeley	329
Harvard	505	University of Chicago	246
UC Berkeley	318	Harvard	181
Columbia	314	Yale	156
Comell	215	Columbia	154
University of Chicago	214	University of Virginia	142
Stanford	212	Princeton	127
Princeton	180	Stanford	110
Johns Hopkins	140	Johns Hopkins	106
Cambridge	133	Cornell	101
Oxford	131	NYU	97
University of Pennsylvania	104	UCLA	92
University of Virginia	102	Duke	90
UCLA	99	UC Irvine	89
University of Michigan	90	University of Michigan	89
University of Wisconsin, Madison	80	University of Penn.	79
Duke	70	Northwestern	72
Indiana University	63	Rutgers	71
University of Texas, Austin	63	University of Toronto	57
University of Toronto	59	Indiana University	52

Table 1. This table shows the number of articles published by authors who were either trained at a given PhD institution or were employed at that institution at the time of publication.

Authors with PhDs from just two universities, Yale and Harvard, accounted for one-fifth (19.9 percent) of all articles. Authors trained at these two institutions were in the top two spots for every journal except *Representations*, for which scholars with PhDs from Berkeley accounted for 98 of 729 total articles, although authors from Harvard and Yale were in second and third place with 86 and 75 articles respectively.

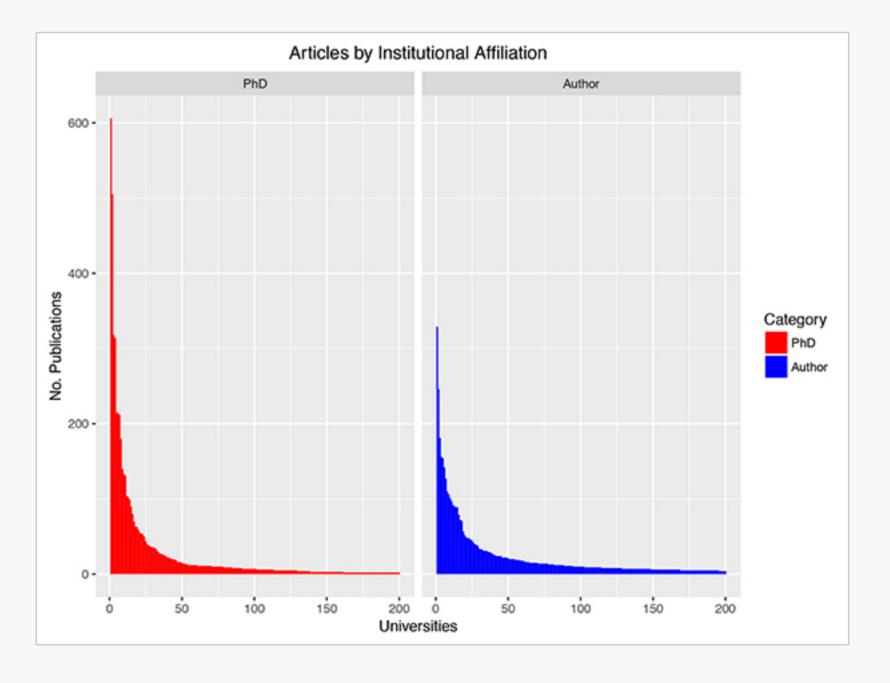


Figure 1. Number of articles published by authors who received their PhD from a given institution (left) or where those authors were employed at time of publication (right). The y-axis represents the number of articles published per institution. Only the top two hundred

institutions are shown.

Considering just the past twenty-five years of publishing data, from 1990 to the present, didn't significantly change the results. Counting from 1990 to 2015, there were 2,522 authors, 3,708 articles, 288 PhD institutions, and 629 author institutions. The top ten PhD institutions accounted for 49 percent of all articles. And Yale and Harvard this time accounted for slightly less than one-fifth or 16.9 percent of all articles.

The institutional affiliation of authors at the time of publication presents only a slightly different story (figs. 1–2). While the top 20 percent of institutions still account for over 80 percent of all articles, the top ten institutions now only account for 29.5 percent of articles (compared to just over 50 percent for PhDs). The distribution of institutional affiliations was thus not as unevenly distributed as the author's PhD affiliation but nevertheless still represents significant unevenness.

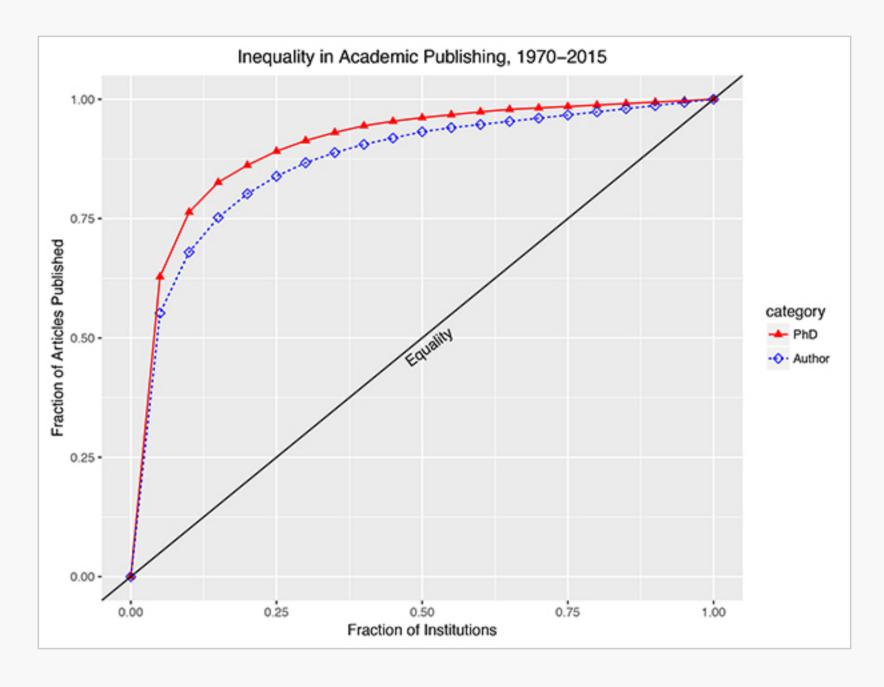


Figure 2. Lorenz curves showing the fraction of all articles published as a function of PhD and author institutions. Here we see how 25 percent of the institutions are producing between 84–89 percent of all articles.

We also measured the institutional heterogeneity of each journal in a given year (fig. 3). For our purposes, we defined heterogeneity as the total number of authors' institutional affiliations divided by the number of articles in a given year. A score of 1, for example, would mean that of twenty-two articles published for a journal in a given year, twenty-two different institutions were represented among those authors. A higher score indicates a higher degree of institutional difference, while a lower score suggests more institutional homogeneity. In essence, it is very similar to the notion of type-token ratio in the study of vocabulary richness (more word types relative to the number of words used represents a more diverse or richer vocabulary). Our aim in accounting for institutional heterogeneity was to ascertain the degree to which journals published authors with similar institutional affiliations, whether it be at the time of publication (where an author worked) or the institution where the author received his or her PhD.[34]

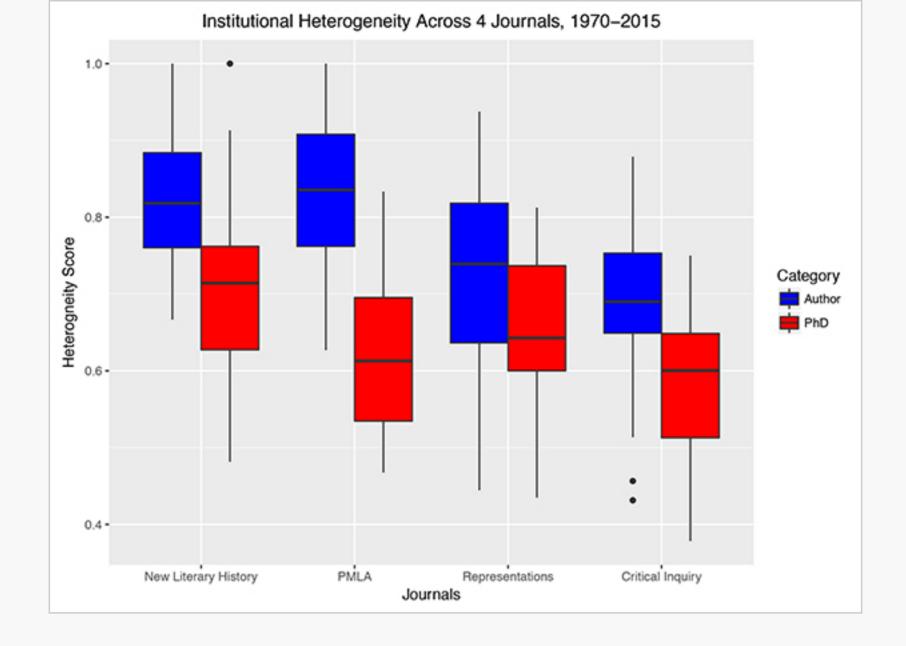


Figure 3. This graph represents the range of heterogeneity scores for each of the four journals in our data set for both PhD and authorial institutions. Higher scores represent more institutional diversity on a yearly basis. The dark lines in the middle of the boxplots represent the median values for each journal.

PMLA had the highest median heterogeneity score for authors' institutional affiliation at 83.5 percent, meaning just under 20 percent of articles published in a given year are generally by authors from the same institutions. *NLH* was a close second at 81.8 percent, with *Representations* and *Critical Inquiry* relatively similar to each other at 74 percent and 69 percent respectively. An analysis of variance test suggests that we are seeing two distinct subpopulations at work here ($F_{3,164} = 20.8$, p = 1.81e-11), which we surmise may be tied to differing principles of peer review among the two groups. Both *PMLA* and *NLH* maintain blind peer review throughout their entire process, while *Critical Inquiry* and *Representations* do not, resulting in higher and lower levels of institutional diversity respectively.

When we looked at heterogeneity scores for authors' PhD affiliation, however, we found that they were significantly lower as a population. (A Wilcoxon signed rank-test showed significant difference in the values for PhD heterogeneity V=11594, p-value < 2.2e-16, with the PhD median = 0.630 and Author median = 0.783.) What this suggests is that for a journal in a given year just under 40 percent of articles published will on average be by authors trained at the same PhD-granting institutions, while only about one-quarter of articles will be published by authors working at the same institution. If we aggregate our data, meaning we combine all four journals into yearly counts, we find that the average yearly heterogeneity for PhD institutions is 42 percent, suggesting that in any given year a majority of articles in our combined prestige journals are published by individuals with overlapping PhD institutions.

The largest gap between institutional and PhD heterogeneity was found in *PMLA* with a 22 percent difference. The smallest was *Critical Inquiry* with an 8.9 percent difference between the two scores. These results suggest that while the model of blind peer review appears to account for increased diversity at the level of authorial institution, it does not significantly increase PhD diversity among its published pool of authors. Similarly, it suggests that the opposite approach of nonblind review does not necessarily depress the level of PhD diversity below the norm. There is in other words something more structurally stable and independent at work here. Based on our data, editorial practices alone cannot explain PhD heterogeneity or, as the case may be, homogeneity. The relative lack of PhD heterogeneity appears to persist regardless of editorial policy.

When we looked at our data over time (fig. 4), surprisingly we find a significant decrease in the yearly

heterogeneity of authorial institutions, an effect that disappears however if we look only at the period post-1990. [35] PhD heterogeneity, on the other hand, has not increased significantly since levels seen in the mid-1970s. We should point out however that while our measure correlates quite strongly with the use of a Gini coefficient to measure inequality (r = 0.979 for authors and r = 0.888 for PhD), using a different measure such as the Herfindahl-Hirschman Index (HHI) discusssed in note 37 above suggests a different trajectory for the pre-1990 data. [36] According to this measure, prior to 1990 there was a greater amount of homogeneity in both PhD and authorial institutions, but no significant change since then. In other words, while there is some uncertainty surrounding the picture prior to 1990, an uncertainty that is in part related to the changing number of journal articles in our data, since 1990 there has been no significant change to the institutional concentrations at either the authorial or PhD level. It is safe to say that in the last quarter century this problem has not improved.

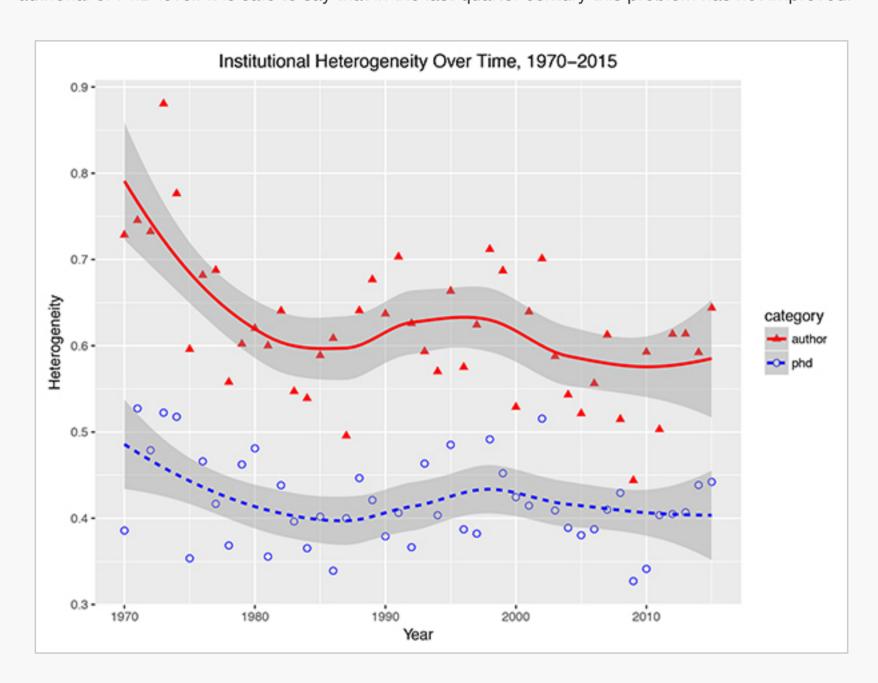


Figure 4. Heterogeneity scores from 1970 to 2015 using aggregate yearly data. A "loess" smoothing parameter was used to estimate trend lines.

It is also important to note that at least some of the effect of what we are seeing is a product of the hiring skew reported by other studies. Since so few institutions train such an outsized proportion of those graduate students who get jobs, it makes sense that we would see something similar when it comes to publication. And yet the bias in publication towards a smaller number of institutions is somewhat higher for the prestigious journals we studied than it is in the field of hiring. Recall that in one study 25 percent of institutions produced 71 percent to 86 percent of all tenure-track faculty. In our study, however, we find that 25 percent of institutions account for 89 percent of all articles published. And while another employment study shows that five institutions accounted for 20 percent of hirings, in our study we find that just two institutions account for close to 20 percent of all publications.

We also explored whether program size had an impact on publication numbers. Here we did see some correlation between the size of the graduate program—calculated as the number of dissertations produced per year in the field of literature—and the number of publications. For data since 1990, the correlation coefficient—which measures the statistical relationship between two or more random variables—is 0.358 between program size and number of articles published. In other words, some but not all of the effect we are seeing is due to the more elite schools also having larger programs, but only a little more than a third of this effect can be explained by program size alone. For example, there were plenty of large programs that did not have significantly high levels of publication; seven of the top ten schools that had published the most articles in prestigious journals were *not* in the top ten for program size. Simply having a larger PhD program does not guarantee more

publications in prestigious journals. Overall then, our study suggests that the concentration of power and prestige only intensifies as we move from hiring to publishing.

Gender

All four journals also have a history of publishing articles primarily by male contributors (fig. 5). Patrimony and prestige continue to be integrally related to one another. Before 2004, for example, there were only two years in which one journal, *Representations*, had more than 50 percent of contributors who were female (1991, 1997). *PMLA* had its first year of gender parity among authors in 1994, when it published twenty-two total articles with a 50 percent gender balance. Neither *Critical Inquiry* nor *New Literary History* have had a single year in which female authors accounted for at least half of all articles published.



Figure 5. Percentage of female authors published per year in the four journals in our data set. In 1991, *Representations* became the first journal to surpass the 50 percent mark.

The year 2004 marks a turning point of sorts, at least for *Representations* and *PMLA*. Since 2004, *Representations* has had four years in which at least 50 percent of its authors were female, while *PMLA* has undergone an even sharper change, with nine out of twelve years showing at least 50 percent or more female representation. The overall average for *PMLA* since 2000 is an impressively balanced 50.1 percent, while for the four journals together it is only 37.8 percent.

In order to test whether a wider number of journals would tell a different story about contemporary gender representation in humanities publishing, we collected data on author gender on a further sixteen journals for the previous five years. This included another 2,828 articles. Table 2 provides a portrait of the field by journal title. Overall, we see an average ratio of 42.4 percent of articles published by women in the last five years for all journals and 43.2 percent for our supplementary sixteen, which is roughly 3.8 percent higher than the average for our four primary journals (39.4 percent).

Journal	% Women
French Review	59.3
Renaissance Quarterly	56.0
PMLA	54.4
French Forum	52.8
Studies in the Novel	51.1
German Quarterly	46.8
MLN	44.3
Representations	43.5
18C Studies	42.4
Studies in Romanticism	42.3
Modern Philology	41.1
Bulletin of Spanish Studies	40.7
Hispanic Review	39.9
ELH	38.9
Shakespeare Quarterly	38.9
MLQ	36.7
New German Critique	36.2
NLH	30.8
Critical Inquiry	28.0
Diacritics	20.0

Table 2. Percentage of articles published by women from 2010 to 2015 in twenty humanities journals. The overall average for this period was 42 percent.

Our data suggest that gender equality in academic journals is moving slowly toward parity, though not universally across the field, nor is the process close to completion. In at least the case of one flagship journal (*PMLA*) and a few others from our supplementary data, real gender balance has been achieved. This suggests, first, that academic publishing is moving faster than public venues such as book reviews to be more inclusive towards women. As the counts by VIDA—a volunteer organization dedicated to revealing gender patterns in contemporary literary culture—have shown, while some book reviews have moved towards greater gender parity, most have not.[37] The overall average of women represented in ten of the most important US and UK book review platforms in 2015 was 32.5 percent, well behind what we are seeing in academic publications.

But, on the other hand, these changing trends suggest that while we have improved one kind of disparity within academic publishing, we have not been able to make any impact on the institutional concentration of academic prestige through publication. Concerted effort on the part of feminist scholars has made major inroads into the gender imbalances that have historically surrounded academic publication. But either due to a lack of awareness or something more intractable, our profession has not addressed the overwhelmingly hierarchical institutional structure of intellectual capital known as publication.

Prestige, Publishing, and Epistemic Authority

Studies such as ours suggest that the hegemony of a few elite institutions continues well beyond who gets the tenure-track jobs right out of graduate school. The influence and power of a few institutions also extends to publishing—and so to the creation and transmission of knowledge more directly. If graduates from only a few elite institutions account for an outsized proportion of high-profile published work, it stands to reason that their work will exercise more influence in the field (though we are also aware of the complex relationship between publication and influence, which are not necessarily synonymous). The prestige of training continues on into the prestige of publication, as institutions like Harvard and Yale, which have unparalleled financial means to shape higher education but also have an outsized influence on what counts as knowledge.

Scholars who have studied faculty hiring patterns have drawn sharp conclusions. In their study, Clauset and his coauthors conclude that such patterns have "profound implications for the free exchange of ideas. Research interests, collaboration networks, and academic norms are often cemented during doctoral training. Thus, the centralized and highly connected positions of higher-prestige institutions enable substantial influence, via doctoral placement, over research agendas, research communities, and departmental norms throughout a discipline."[38]

By framing academic hiring in terms of intellectual equity, Clauset and the authors of related studies raise a fascinating, if confounding question: What would epistemic equality look like? And is it something that ought to be aspired to?

For many in the academy today, epistemic inequality—understood here in the rudimentary sense of our data concerning disproportional institutional representation—would surely be no less undesirable than economic inequality. The more we move in the direction of the so-called knowledge economy, the more the two become linked. Knowledge is a key form of capital. It consolidates power. And yet some might argue that prestigious universities are simply fulfilling their cultural role by filtering knowledge. Our reflexive distaste of academic inequality belies the very nature of the institutions within which we work. Universities might be thought of in this sense as akin to institutional search engines; they produce the people who produce knowledge, and thus their, perhaps undemocratic, epistemic effects help organize and sort out knowledge. Google would be useless were it to treat all links equally. According to this line of thinking, the concentration of knowledge within elite institutions is not necessarily a sign of the system's failure; it may even be a sign of health and the power of systems of cultural capital and patronage to separate the chaff from the wheat.

And yet how can we be certain that such imagined epistemic quality is not in some way contaminated by those very networks of influence and patronage that produce it? Harvard, Yale, and other elite institutions surely train talented and highly qualified academics. (As graduates of two such institutions, Berkeley and Columbia, we can anecdotally attest to the acumen and talent of our colleagues and of the faculty members who trained us.) But the observed hierarchies are so pronounced that it would be naïve to assume that elite institutions are disproportionally better at filtering knowledge than all other universities. Our assumption, unproven at this point but the real concern of our broader project, is that these levels of influence and control adversely affect the broader system of scholarly communication.

Judgments of quality, value, and merit are, as Pierre Bourdieu once wrote, "always contaminated at all stages of academic life, by knowledge of the position [one] occupies in the instituted hierarchies."[39] Our findings suggest that claims about quality and excellence—which continue to perpetuate enormous institutional imbalances—may not be as value neutral as their defenders would have us believe.

What is clear from our data and other studies like it is that elite institutions continue to be the locus of the practices, techniques, virtues, and values that have come to define modern academic knowledge. These institutions diffuse it, whether in the form of academic labor (personnel) or ideas (publication), from a concentrated center to a broader periphery. What remains unclear is the relationship of this system to the quality and diversity of ideas, indeed to the ways in which the very ideas of quality and diversity might be imagined to intersect.

For many in the humanities, it is precisely the process of Weberian rationalization, embodied above all in counting mechanisms like the REF or Google Scholar, that have contributed to the ills of the current system. Only an emphasis on the "incalculable" or ineffable nature of humanistic practices and objects of study can preserve the health of intellectual inquiry into the future.[40] And yet the history of scholarly publication that we have tried to outline here tells us a different story: the recourse to measurability in exercises like the REF is not something administratively new but part of a much longer attempt to undo ensconced systems of patronage and loosen forms of institutional favoritism and cultural capital. The recourse to accounting for publication was implemented in the spirit of transparency and intellectual openness. The urge among some humanists to resist this tradition absolutely and as a matter of principle would only retard attempts to redress longstanding patterns. The invocation of incalculability has to date served as a highly effective means of maintaining hierarchy and the concentration of power, prestige, and patronage—cultural capital of all sorts.

At the same time, we interpret the data we collected from the past half century of scholarly publication in the humanities to suggest that historical and contemporary attempts to undo the effects of systems of patronage and cultural capital through systems of print and now digital publication have failed. The concentration of power and prestige within elite circles has continued,

even if in different form, from the early modern republic of letters and family universities to the contemporary academy. Invoking Clauset's and others' notions of "free" ideas—of removing all filters from a system—overlooks the very clear ways that systems of publication always encode forms of bias and selection within them. Knowledge has never circulated freely, unencumbered by institutions, technologies, traditions, and norms. The "free exchange of ideas" requires media—things, concepts, technologies, practices, institutions—that intervene and get in between. Be it the patronage systems of early modern universities, the bureaucratic systems of the German research university, or the mixed systems of contemporary universities, systems of communication and transmission are never free from mediation.

So what is to be done?

We would argue that the answer is neither a return to ideals of incalculability nor a belief in the power of free knowledge. Using new digital technologies and methods to better understand academic institutions does not necessarily make one complicit in the "neoliberal" university or exacerbate the "inequality both between 'the haves' of digital humanities and the 'have-nots' of mainstream humanities." [41] Wisely used, such technologies and methods can help reveal how longstanding, persistent, and intractable such disparities have been. What we need in our view is not less quantification but more; not less mediation but mediation of a different kind. It is not enough to demand intellectual diversity and assume its benefits. We need new ways of measuring, nurturing, valuing, and, ultimately, conceiving of it. We need alternative systems of searching, discovering, and cultivating intellectual difference. We need platforms of dissemination that don't simply replicate existing systems of concentration and patronage, just as we need new metrics of output and impact that rely less on centrality and quantity and more on content and difference.

Humboldt and other university reformers considered printed publication a powerful tool for dislodging the systems of patronage that beset German universities at the turn of the nineteenth century. Today, we have new tools at our disposal that can allow us to develop alternative ways of measuring importance beyond simply counting titles and citation numbers. Major strides have been made in the fields of content analysis and cultural analytics that can allow us to retool our measurements of impact to account for values like diversity and novelty rather than just power and prestige. It is time we used them.

While this is obviously a major research challenge for the future, we at least can begin by looking carefully at the institutional imbalances that continue to surround hiring and publication in the humanities and the historical origins that helped bring this state of affairs about. The first step, as always, is acknowledging we have a problem.

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- [2] See, Academic Analytics: Benchmarking for Academic Excellence, www.academicanalytics.com
- [3] See, for example, Wendy Brown, *Undoing the Demos: Neoliberalism's Stealth Revolution* (New York, 2015).
- [4] Max Weber, "Wissenschaft als Beruf," in Max Weber, Schriften zur Wissenschaftslehre (Stuttgart, 1991), p. 250.
- [5] We will discuss these terms more fully in the conclusion. For a now standard discussion of cultural capital in academia, see Pierre Bourdieu, *Homo Academicus* Stanford, Calif., 1990).
- [6] On the orality of medieval and early modern universities, see Walter Ong, "Agonistic Structures in Academia: Past to Present," *Daedalus* 103 (Fall 1974): 227–38, and William Clark, *Academic Charisma and the Origins of the Modern Research University* (Chicago, 2006), esp. 68-92; hereafter abbreviated *AC*. On the persistence of oral practices into the nineteenth century, see Sean Franzel, *Connected by the Ear: The Media, Pedagogy, and Politics of the Romantic Lecture* (Evanston, III., 2013).
- [7] On the disputation and its various media forms, see Alex J. Novikoff, *The Medieval Culture of Disputation: Pedagogy, Practice, and Performance* (Philadelphia, 2013), pp. 133–71.
- [8] Kristine Haugen, "Academic Charisma and the Old Regime," review of *Academic Charisma and the Origins of the Modern Research University* by William Clark, *History of Universities* 22, no. 1 (2007): 210.
- [9] See ibid.
- [10] See Charles B. Schmitt, "The Rise of the Philosophical Textbook," in *The Cambridge History of Renaissance Philosophy*, ed. Schmitt and Quentin Skinner (New York, 1988), pp. 792–804, and *Scholarly Knowledge: Textbooks in Early Modern Europe*, ed. Emidio Campi et al. (Geneva, 2008). On the proliferation of reference works, see Ann Blair, *Too Much to Know: Managing Scholarly Information before the Modern Age* (New Haven, Conn., 2010).
- [11] Johann Burkhard Mencken, *The Charlatanry of the Learned*, trans. Francis E. Litz (New York, 1937), p. 49.
- [12] For concerns about the proliferation of print and its deleterious effects on knowledge more broadly, see Chad Wellmon, *Organizing Enlightenment: Information Overload and the Invention of the Modern Research University* (Baltimore, 2015).
- [13] See Clark, Academic Charisma and the Origins of the Research University; and R. Steven Turner, "Prussian Universities and the Concept of Research," Internationales Archiv für Sozialgeschichte der deutschen Literatur 5 (1980): 68-93 and "University Reformers and Professional Scholarship in Germany, 1760-1806," in Europe, Scotland, and the United States from the Sixteenth to the Twentiethth Century, vol. 2 of University in Society, ed. Lawrence Stone (Princeton, N.J., 1974), pp. 495–531.
- [14] See, in particular, Peter Moraw, Gesammelte Beiträge zur deutschen und europäischen Universitätsgeschichte (Leiden, 2008), pp. 3–54.
- [15] For a case study, see Peter Moraw, *Kleine Geschichte der Universität Gießen 1607-1982* (Gießen, 1982), pp. 42–54. See also Marita Baumgarten, *Professoren und Universitäten im 19. Jahrhundert: Zur Sozialgeschichte deutscher Geistes- und Naturwissenschaftler* (Göttingen, 1997), p. 21.
- [16] See Moraw, "Vom Lebensweg des deutschen Professors," Mitteilungen der DFG 4 (1988): 1-12.
- [17] See Wellmon, Organizing Enlightenment, pp. 220–27.

- [18] See Andrew Wakefield, *The Disordered Police State: German Cameralism as Science and Practice* (Chicago, 2009), pp. 49–80.
- [19] Johann Heinrich Gottlob von Justi, "Die Beschaffenheit und Verfassung der Republik der Gelehrten," *Scherzhafte und Satyrische Schriften*, 2 vols. (Berlin, 1760), 2:341–74, 359.
- [20] Quoted in Barbara Dölemeyer, "Die Universität als gelehrte Manufactur in Reformideen des aufgeklärten Absolutismus in Hessen-Darmstadt und Hessen-Kassel," *Reich, Regionen, und Europa in Mittelalter und Neuzeit* (Berlin, 2000), p. 365.
- [21] See also Steven Shapin and Simon Schaffer, Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life (Princeton, N.J., 2011), pp. 23–79, and Martin Jay, Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought (Berkeley, 1994), pp. 21–148.
- [22] And yet the oral ghost remained in the machine. On the increased and more complicated role of the lecture in the late eighteenth and throughout the nineteenth century, see Franzel, *The Romantic Lecture as Literary, Scholarly, and Political Form around 1800* (Ithaca, N.Y., 2008).
- [23] Shapin and Schaffer, Leviathan and the Air-Pump, p. 60.
- [24] See Lisa Jardine, *Erasmus, Man of Letters s: The Construction of Charisma in Print* (Princeton, N.J., 1993).
- [25] Wilhelm von Humboldt, "Bericht der Sektion des Kultus und Unterrichts an den König," (1809), Wilhelm Humbolts Gesammelte Schriften, ed. Bruno Gebhardt, 17 vols. (Berlin, 1968), 10:180, 182, 187.
- [26] See John C. French, A History of the University Founded by Johns Hopkins (Baltimore, 1946), pp. 33–39.
- [27] See Robert McCaughey, Stand Columbia: A History of Columbia University in the City of New York, 1754-2004 (New York, 2003), p.145.
- [28] Weber, Wirtschaft und Gesellschaft, 2 vols. (Tübingen, 1976), 1:128-29.
- [29] See, for example, Daniel Allington, Sarah Brouillette, and David Golumbia, "The LA Neoliberal Tools (and Archives): A Political History of Digital Humanities," *Los Angeles Review of Books*, 1 May 2016, lareviewofbooks.org/article/neoliberal-tools-archives-political-history-digital-humanities/
- [30] Aaron Clauset, Samuel Arbesman, and Daniel B. Larremore, "Systematic Inequality and Hierarchy in Faculty Hiring Networks," *Science Advances*, 12 Feb. 2015, advances.sciencemag.org/content/1/1/e1400005
- [31] Robert L. Oprisko, "Superpowers: The American Academic Elite," *Georgetown Policy Review*, 3 Dec. 2012, gppreview.com/2012/12/03/superpowers-the-american-academic-elite/
- [32] Natalie Masuoka, Bernard Grofman, and Scott L. Feld, "The Production and Placement of Political Science Ph.D.s 1902-2000," *PS* 40, no. 2 (2007): 361-66.
- [33] Only research articles five pages or longer were selected from JSTOR. Our manual additions were intended to include only articles and not book reviews, but these could include shorter pieces such as critical responses. Our aim was to capture as broad a profile as possible of contributors to these journals. We removed editors' introductions and interviews. We also automatically removed any documents with the words *editor's*, *interview with*, or *statement for* in the title as another filter for identifying nonarticles.
- [34] Another measure one could use here is what is called the Herfindahl-Hirschman Index (HHI),

which measures the concentratedness of an industry. It is a commonly used measure to assess how open a given economic domain is versus how monopolistic. The more the total market share is dominated by a few actors, the more concentrated it is seen to be. In our scenario, a journal would be seen as an industry and the institutions as companies. The more a journal is dominated by a few companies (institutions) the more concentrated and less heterogeneous it is. The value of this measure is it accounts for skew; our measure does not account for the fact that one institution may have many more articles in a year than another. It only counts the overall number of institutions. HHI captures this uneven distribution in a more sensitive way. The problem with this measure, however, is the way it privileges an increase in actors as an inherent good. For example, if you have ten articles represented by ten institutions this gives an HHI score of 0.1 (where 1 = absolute monopoly). If you have five articles represented by five institutions – which for us is the same scenario of an equal ratio of articles to institutions or a heterogeneity score of 1 – the HHI score will rise to 0.2 or double the previous amount! HHI correlates with the number of articles in the reverse direction as our heterogeneity score, meaning it will privilege journals with larger runs as inherently more diverse. Overall, our score shows overall lower correlations with the number of articles published per year. But the important point here is that no one score accounts for the entirety of the problem. Each score captures a different aspect of the problem while missing others. We are thankful to Scott Ganz and Jordan Brower for bringing this score to our attention as another important way of looking at the problem.

- [35] A linear regression was calculated to predict heterogeneity by year. For author institution a significant regression was found ($F_{1,44} = 13.43$, p = 0.0006614), with an adjusted R2 of 0.2165, but when we looked at only the post-1990 period the significance disappeared ($F_{1,23} = 3.487$, p = 0.07466), with an adjusted R2 of 0.09389. No significant regression was found for PhD institution.
- [36] A thorough comparison of these two measures along with the use of a Gini coefficient to measure inequality is provided in the code made available with this article.
- [37] Amy King, "Three Cheers for Three VIDA Counts!" www.vidaweb.org/2014-vida-count/
- [38] Clauset, Arbesman, and Larremore, "Systematic Inequality and Hierarchy in Faculty Hiring Networks."
- [39] Pierre Bourdieu, "The Specificity of the Scientific Field and the Social Conditions of the Progress of Reason," trans. Richard Nice, *Sociology of Science* 14, no. 6 (1975): 20. See also Bourdieu, "The Peculiar History of Scientific Reason," *Sociological Forum* 6, no. 1 (1991): 3–26.
- [40] For one of the most extensive critiques of computation in the humanities, see the special issue, "In the Shadows of the Digital Humanities," *Differences* 25, no. 1 (2014).
- [41] Richard Grusin, "The Dark Side of the Digital Humanities," Differences 25, no. 1 (2014): 83.



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