

Ending the Budget Wars: Funding the Humanities during a Crisis in Higher Education

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The year 2008 ended badly for finance, manufacturing, and the rest of the economy in the United States and abroad. The same can be said for higher education. The richest university in the world, Harvard, lost over 22% of its endowment in four months, prompting a hiring freeze that echoed those at other major universities (Fabrikant; see also Moran and Wiedeman). A series of dire reports also appeared. *Measuring Up 2008* gave 49 of 50 states an F in affordability (Natl. Center). *Trends in Student Aid 2008* noted that student borrowing has doubled in the last decade (in constant dollars) and that the market share of commercial loans has quadrupled (Coll. Board). The crisis in affordability has accelerated shocking declines in educational attainment: for the first time in United States history, younger people are less educated than their baby-boom parents (Natl. Center; Coll. Board, figs. 1–4).¹ In California, where per-student state funding for the University of California has now fallen about 65% since 1990 (corrected for inflation), the college participation rate of nineteen-year-olds fell from 43% to 30% in just eight years (1996–2004), a drop that may be one of the quickest in education in the modern history of wealthy nations (Newfield, Bohn, Moore, and Glantz; Mortenson).² Last but not least, the MLA's employment report *Education in the Balance* shows that the permanent workforce in English has continued to be supplemented with adjunct and other contingent teaching labor. The higher education funding model is

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experiencing a crisis that has been aggravated by general economic problems but that precedes and transcends it. The question now is, How are we going to react?

One tempting course of action is simply to keep our heads down and ride it out. Everybody is hurting, we remind ourselves, so it would be impolitic and pointless to start making new demands for better funding. There are two problems with this strategy: first, we have been following it for four decades; second, it doesn't work. I published a book in 2008—*Unmaking the Public University*—that tells the forty-year history of the outcomes of strategies like these. They have been useless against the culture wars that shrank or destroyed the social mission of the postwar university and useless against the budget wars that shrank the resource base of the humanities disciplines and are now shrinking the university as a whole. The lesson of that history is that, in the absence of systematic financial and intellectual strategies, our patience and politeness have been a waste of time.

Nonetheless, there are signs that a few higher educational leaders are rethinking the funding model in a sector that has been one of the most widely admired domains in the United States.³ The humanities have an opportunity to take a leading role in this rethinking. We have been silent about humanities budgeting, and our intervention is now absolutely required. I argue here that we need to take the very good work that has already been done, particularly on humanities labor, and expand our presence into writing the new funding rules—that is, writing the future of the humanities disciplines into the funding system. This step will require a better grasp of budget theory than has generally been realized among humanities faculty members.

First we must understand that though the humanities in general and literary studies in particular are poor and struggling, we are not *naturally* poor and struggling. We are not on a permanent austerity budget because we don't have the intrinsic earning power of the science and engineering fields and aren't fit enough to survive in the modern university. I suggest, on the basis of a case study, that the humanities fields are poor and struggling because they are being milked like cash cows by their university administrations. The money that departments generate through teaching enrollments that the humanists do not spend on their almost completely unfunded research is routinely skimmed and sent elsewhere in the university. As the current university funding model continues to unravel, the humanities' survival as national fields will depend on changing it.

The most important symptom of the humanities' relative poverty is its employment structure. Despite a crying social need for sophisticated textual literacy and for cultural knowledge, English and other language

departments have a job market that never clears and that for forty years has been meeting the demands of increased student enrollment by hiring adjunct faculty members instead of additional tenure-track faculty members. The MLA *Job Information List* has advertised about the same number of jobs this past year as it did in the early 1970s, at the end of a period in which national undergraduate enrollments increased about 55% (Laurence, fig. 1).⁴ Making a crude comparison between hiring in MLA fields and the growth of higher education as a whole, we can say that when corrected for overall growth in higher education, hiring in MLA fields stands at two-thirds of what it would be had it grown at the same rate as higher education as a whole.⁵ In English, only a third of faculty members are now either tenured or tenure-track (MLA, figs. 3 and 9). The trend was bad even in the relatively good economic period of 1993–2004: English language and literature lost almost 11% of its tenured and tenure-track faculty and 2% of its overall faculty totals (MLA, table 3). No other field measured in the data set has seen anything like this kind of decline in tenure-track hiring—including foreign languages, whose tenured or tenure-track faculty grew by over 25% in this period.⁶

Since a large portion of humanities professors have lived their entire professional lives under these conditions, many of us have become resigned and fatalistic. One can point out correctly that a higher percentage of college and university faculty members overall is untenured and working part-time: a recent report sponsored by the American Federation of Teachers found that only 35% of all higher education faculty members were tenured or on the tenure track, and so the employment problems of English and foreign languages look fairly normal (JBL, chart 1). There is a national issue here for higher education overall and growing evidence that fewer tenure-track jobs cause lower levels of educational attainment (Jaschik, “Evaluating”), but one could argue that the MLA disciplines aren’t necessarily doing so much worse than others. In addition, total bachelor’s degree awards in English and other languages declined by 12% from 1970 to 2006, so on the surface it might look as though we are doing almost exactly as well—or as badly—as our mild but steady bachelor’s degree award declines deserve.

Perhaps. But the more important case for higher education and for society involves the humanities as an ensemble of disciplines. When we turn to the data from the National Center for Education Statistics presented in table 1, we can detect a fascinating trend in fields adjacent to literary studies.

Since 1970, business degrees have more than doubled, communication degrees have increased by a factor of 7 (from a very small starting point),

TABLE 1
 BACHELOR'S DEGREES CONFERRED BY DEGREE-GRANTING INSTITUTIONS, BY
 DISCIPLINE DIVISION, 1970-71 AND 2005-06

Bachelor's Degrees by Division	1970-71	2005-06	Percent Change
Business	115,396	318,042	176
Communication, journalism, and related programs	10,324	73,955	616
Multi/interdisciplinary studies	6,346	32,012	404
Visual and performing arts	30,394	83,297	174
English language and literature or letters	63,914	55,096	-14
Foreign languages, literatures, and linguistics	20,988	19,410	-8
Area, ethnic, cultural, and gender studies	2,579	7,879	206
Liberal arts and sciences, general studies, and humanities	7,481	44,898	500

Source: National Center for Education Statistics, *Digest of Education Statistics, 2007*, table 261

and the somewhat unclear category “multi/interdisciplinary studies” has increased by a factor of 5 (also from a small base). In addition, visual and performing arts degrees nearly tripled, from a much larger base than communications. Setting business aside, the other three categories might be seen as the humanities disciplines’ complementary competition, and these contemporary cultural disciplines, focused more on the media than on literature, have boomed since 1970.⁷ This growth appears to have offset declines in English and related language disciplines: data analyzed by the American Academy of Arts and Sciences’ Humanities Indicators project suggest that overall humanities degrees have recovered from their drop through the 1970s and 1980s (“Indicator II-1”).⁸

Interestingly, two other humanities categories not centered on the media have also done very well, and those are the last two of the four in my second grouping, cultural studies and the liberal arts. Even as both of these were being demonized by conservative pundits and politicians, their degree output was greatly expanding, especially for the liberal arts. In fact, the only humanities categories to decrease were the MLA core disciplines—English and foreign languages. When freed of the labels English, literature, or foreign language, the humanities and the liberal

arts have been very popular with undergraduates: they have grown between 4 and 10 times more rapidly than bachelor's degree granting overall. And the liberal arts category has a growth rate more than twice that of business.

Returning to the employment question, I have not been able to find data on these other humanities categories that is nearly as good as the MLA's data on its home disciplines. But it appears as though these emerging disciplines are not hiring more tenure-track faculty members than are the MLA's core fields.⁹ Meanwhile, overall demand for humanities degrees has recovered from 1980s lows and in some cases has boomed. In one of the two major classification schemes used by the Humanities Indicators, the number of humanities degrees awarded is "appreciably higher than the 1971 zenith" (Amer. Acad. of Arts and Sciences, "Indicator II-1"). At the same time, the quality of humanities graduates is good: humanities majors have the best verbal skills of any degree grouping and mathematics skills that are higher than those of social science majors and just below those of majors in the life sciences (Amer. Acad. of Arts and Sciences, "Indicator II-8"). In short, these data do not suggest that the humanities (including literary studies) are subject to a hiring austerity that either reduced student interest or reduced student quality might have justified. The data suggest instead that humanities fields are being held to levels of growth in tenure-track or tenured employment well below what is merited by both student demand and educational results.

I have written at length about why universities would quietly downsize their humanities fields: culture wars and budget wars undid much of the work of the 1960s and 1970s, when college grads were becoming politically independent, economically powerful, racially diverse, critical of corporations, and culturally antagonistic to traditional conservative leadership (Newfield, *Unmaking*). In addition, the academic humanities had a long history of rejecting economic reductionism and the social control of human development (Newfield, *Ivy and Industry*) and had come to offer criticisms of cultural and epistemological principles that both drew on and validated the demands of social movements that, if successful, would redistribute economic resources and political power. Few academic humanists were activists or otherwise deeply radical, but that didn't matter: they represented a parallel world not governed by conservative axioms, and the culture wars discredited this world by denying that the humanities produced valid research knowledge with genuine social value. But how does this humanities downsizing take place and how have budget actions been even more effective than their cultural counterparts at limiting the potential of these disciplines with much to say about where society has gone wrong? My case

study comes from research universities, where the proportion of adjunct instruction is higher than at colleges and where the downsizing of the humanities is, by this measure, ironically more advanced.¹⁰

The current funding model generally works like this: state funding and tuition monies are supposed to flow in a general way to course enrollments, since both taxpayers and students are paying first and foremost for undergraduate instruction. Thus states normally appropriate money to public universities according to instructional load. They generally track the number of degrees conferred—the measure I used in the previous section—but in annual or biannual budgeting mostly define workload through overall campus or system enrollments.¹¹

Some of this workload money pays direct costs of instruction, like faculty and staff member salaries, and some pays indirect costs, like the amortized annual costs of construction, routine building maintenance, facilities administration, academic administration shared by a number of researchers with federal grants, shared equipment, utilities, and so on (see “Facilities and Administration” in Office). Private universities do something similar with tuition money: most have formulas to enhance the fair funding of teaching workloads. As a result, departments that have many majors or overall enrollments (factoring here is also variable) would normally be thought to receive proportionally more money for faculty and staff member salaries, more money for new hires, more funds for teaching assistants, and so on. The formulas can be arcane, but the basic idea is that allocations should generally reflect instructional load, especially since instruction has long been seen as the university’s core service to society.

Thus we can roughly calculate what individual departments or divisions “earn” by looking at their student enrollments. We can also—with much greater difficulty—find out what their actual budgets are. We can then see whether the university is paying each department what it earns through teaching or more or less than what might be expected for its teaching effort.

Table 2 offers one example of such a calculation from the year 2001–02.¹² The numbers are actual, though simplified, and from a flagship state university with a complement of professional schools that I exclude here. I should add that the arts and humanities division includes high-growth visual arts fields, as well as several departments of literature.

The “Earned Instructional Revenues” figures multiply the division’s instructional load by the amount of public money that is sent by the state per student. The private university equivalent would be the tuition revenues generated by student enrollments. “Actual Revenues” figures reflect what this university administration then really gives each division. “Research

TABLE 2
EARNED VERSUS ACTUAL INSTRUCTIONAL REVENUES, AVERAGED BY
DIVISIONS

Division	Earned Instructional Revenues	Actual Revenues	Ratio of Actual to Earned Revenues	Research Awards	Funds Generated (Total, including Gifts)	Funds per Faculty Member, FTE
Professional school	\$869,000	\$2,433,369	279.8	\$2,668,012	\$4,075,309	\$251,562
Arts and humanities	\$56,684,987	\$25,665,591	45.3	\$1,542,992	\$60,942,496	\$230,922
Social sciences	\$40,820,389	\$15,732,870	38.5	\$1,673,422	\$43,194,634	\$294,743
Natural sciences	\$40,336,121	\$30,309,471	75.1	\$55,437,901	\$97,870,016	\$400,811
Engineering	\$11,398,652	\$24,348,696	213.6	\$43,382,033	\$64,420,069	\$530,250

Source: Newfield, *Unmaking the Public University*, ch.13

FTE = full-time-equivalent

Awards” amounts refer to extramural contracts and grants from all sources, including industry. These amounts also include money for both direct and indirect costs, at various rates.

Looking at the last column, we see that arts and humanities faculty members generate the smallest amount of funds per person, which leads to the standard view that their relative poverty of condition derives from their poverty of earning power. When one adds teaching revenue to research revenue and then divides by the number of full-time or full-time-equivalent faculty members (not shown), one may reach the standard conclusion that both sides of campus contribute in their own ways. The humanities and social sciences contribute with more teaching; the sciences and engineering, with more research. As seen in the last column, engineering faculty members generate double the funds of the professional school faculty members and more than double those in the arts and humanities. Natural and physical science faculty members generate funds between these extremes but closer to the engineering amount. Hence, we seem to have learned yet again that sciences and engineering faculty members earn the bulk of the money and then have to share a piece of it with their low-income relations in the humanities and social sciences. Any administrator trying to maximize return on investment would think, according to this

logic, about ending the hiring of literature professors in order to hire more engineers.

But if we look at the column “Ratio of Actual to Earned Revenues,” we see data that contradict the standard view. Were the sciences subsidizing the social sciences and humanities, one would predict larger budgets for these departments than what they earn through their teaching. A department like English or art history would, according to this standard assumption, keep its teaching money, hang on to the tiny scrap of indirect cost recovery it may generate with its minute grants, and then extract some indirect cost recovery money from a science or engineering grant on top of that. In this case, reality is the opposite. At this public university, humanities and social science departments keep only a portion of their enrollment money, about one-half and one-third, respectively. The sciences do somewhat better but are not at 100%. In comparison, engineering receives double its teaching workload money. The professional school receives closer to three times its workload money. Were this a medical school, the gap would be far larger.

It is worth reflecting on the main lesson of the ratio column and not just on the more familiar lesson of the final column. Instead of getting a piece of the science and engineering action, the humanities and social sciences disciplines are sending a piece of their action to the sciences and engineering. The reason for this transfer is straightforward, though largely unknown outside administrative circles: science and engineering research loses money for universities when one considers the large but underfunded indirect costs that modern research incurs (Newfield, *Unmaking*, ch. 13; Newfield, “Public Universities”). Universities have very limited funding sources for filling the gap between what extramural funders are willing to pay for the indirect costs of the research they fund and what those costs actually are. Donors, including many admirable not-for-profit funders, will not pay for indirect costs. Industry generally pays rates on indirect costs that are lower than those paid by federal agencies, and the portion of funding that arrives on campus as gifts generally pays little or no overhead at all. This policy is logical from industry’s point of view, since it funds university research to reduce its own direct and indirect research costs, not so it can support equivalent costs at universities. Though the sciences and engineering fields have much higher per-capita extramural “incomes,” the even higher overall cost of their research forces them to spend all extramural support on research and to absorb supplemental university funds to cover the remaining indirect costs.

Teaching enrollments are the only plausible source of revenue for filling in science and engineering’s permanent shortage of extramural support for the indirect costs of extramurally funded research. The way to find

teaching money in sufficient quantities is to take it from high-enrollment fields with low research costs. Furthermore, the enrollment money that can be used to support high-cost science and engineering fields cannot come from the odd high-enrollment natural science discipline like biology, since their teaching funds are already being used in part to cover the high indirect costs.

Although I cannot dwell on it here, I note in passing that universities have perverse incentives to minimize research in high-enrollment departments in the humanities and social sciences. The revenue surplus generated there can be used to support indirect costs in science, engineering, and medicine only if little of the surplus is absorbed by the high-enrollment departments. Federal research expenditures for the humanities in 2005–06 came to an astonishingly small 0.45% of the federal total (Amer. Acad. of Arts and Sciences, “Figure IV-10a”), so that beyond a limited number of individual fellowships and text projects there is effectively no outside research funding in the academic humanities. There are thus no preexisting research needs to compete with the sciences for teaching revenues from humanities and social sciences departments. Though I know of no administrator who has opposed much-needed improvements in humanities research funding, universities have financial reasons not to encourage such improvements.

Having seen the institutional logic behind humanities’ subsidizing sciences, do we know that the implications of figure 2 can be generalized to research universities nationwide? No, not for sure. No national study of interdivisional funding transfers has been conducted, and internal budgetary figures are hard to obtain. But I have sought informal validation of these data by showing them to administrators at about a dozen universities, private and public. Figure 2 has been in print since 2008. While two administrators have denied using such budget methods, no one has provided alternative data or calculations. No one has rejected or disproved the data or the analysis. Unless that happens, I suggest that the case I am constructing here should be the default interpretation of standard interdivisional funding transfers, while offering the usual caveats about enrollment and research funding variations across campuses.

In addition, we have good indirect evidence that this pattern is widespread. First, we know that the need for this subsidy is national, since the high costs of scientific research and the underfunding of indirect costs is a nationwide trend. Second, we have new systematic evidence on university expenditures from the Delta Project’s recent study *Trends in College Spending*. The data demonstrate that at public research universities, where state funding revenues corrected for inflation and enrollment

increases have been declining, fee increases have not gone to instruction but have been diverted elsewhere. Between 2002 and 2006, for example, spending per student on instruction at public research universities actually declined, while student fees, adjusted for inflation, increased nearly 30%. The other student-oriented expenditure, scholarships, also declined, while all administrative categories (“Institutional Support,” “Operations and Maintenance,” and “Academic Support”)—categories that cover most of research’s indirect costs—increased during this period. Finally, the fact that research universities make less use of humanities faculty members in the undergraduate classroom (as shown in the American Council on Education study) suggests that research universities, with their heavy costs in science, engineering, and medical research, are sending more of their humanities enrollment funding to the sciences than are liberal arts colleges, where much less such research takes place.

Further budget research needs to be done, and far more budgetary data need to be disclosed and discussed. In the meantime, I propose these conclusions from my case study. The humanities and social sciences are major donors to science and engineering budgets. Major dogmas about university research turn out to be wrong: science and engineering research costs money, and humanities and social sciences teaching subsidizes it. Furthermore, humanities and social sciences students receive a cheap education—that is, they get back less than they put in.¹³ Making matters worse, university officials have historically perpetuated the myth that the science and engineering fields are the generous subsidizers of the “soft” humanities and social science fields. This concealment of the humanities’ contribution to the progress of science fed the vicious cycle of the culture wars: underfunded humanities fields cannot buy respectability through the media, think tanks, or prominent science agencies, a limitation that gives free rein to assertions that the humanities produce only pseudo-knowledge. This belief has lowered the humanities’ status, which in turn has justified flat or declining funding, which further lowers the humanities’ status, which encourages further cuts. More generally, the overall financial stability of higher education—especially public higher education—has been undermined by an increasingly dysfunctional postwar research-funding model that depends on subsidies from teaching revenues that are being cut from state budgets and added to student costs. Finally, the hidden subsidy—in which high-enrollment, high-teaching-load fields in the humanities and social sciences help pay for advanced scientific research—is the primary reason why the humanities are perpetually poor.

In offering this analysis of budgetary myths and inequities, I am not seeking to foment a class war between the arts and sciences. I admire and

study the sciences and their sociocultural impacts and think they, as well as the arts, need even more funding than they have. Given the funding crisis for all higher education, now would be the worst possible time to set up a zero-sum competition between different sides of campus, and I instead advocate cooperation and collaboration across all our disciplines.

My analysis is intended to encourage truth in budgeting. The public has been misled into thinking that increases in science funding can come from business and private donations and has seen tuition increase at triple the rate of inflation for so long that it naturally assumes that such fees can cover the costs of a college education. These and other assumptions are wrong, and the continuation of our broken model is going to hurt students, cultural research, science and engineering, the university, and society as a whole. No field can attract greater public support without contributing to public enlightenment about the real costs of both teaching and research.

We need to disseminate and discuss the key elements of our funding reality in the hope of greater support and further clarification. First, current evidence falsifies the common view that market-oriented fields earn money while sociocultural fields only spend it. Second, the humanities and the social sciences have a legitimate claim to a larger share of the university's resources, even in market terms based on their earnings from their "customers," the students. Third, the sociocultural fields are financial as well as intellectual contributors to technological research and development and to technological progress as such, and this contribution should be acknowledged and honored—and correctly compensated. Fourth, external sponsors, industry included, should be pressed to cover in full the indirect costs incurred by their grants; state governments must share indirect cost burdens, as they have in the past. Finally, better accounting of interfund transfers will clarify the real costs of higher education and encourage correct support of faculty members and students, higher educational attainment, and a strengthening of the humanities fields that are desperately needed to resolve our multiple world crises.

The MLA has done wonderful work in most areas of our professional life. I now call on it to enter the budgeting arena. The first step would be to form research collaborations with kindred organizations. Obvious partners are the National Council of Teachers of English, the Conference on College Composition and Communication, the American Historical Association, and the American Association of University Professors. The research could also take place in partnership with organizations that have produced superb budgetary data and reports for years, including the American Association of State Colleges and Universities, the Association of American

Universities, the Council on Governmental Relations, the Delta Project, the Project on Student Debt, the National Center for Public Policy and Higher Education, and the State Higher Education Executive Officers. A next step would be to obtain systematic national data analogous to those of the case study I've presented here. A further step would be to formulate concrete recommendations about how the humanities disciplines should be supported budgetarily. For starters, we might want to recommend that the federal funding share for the humanities should double in three years to 1%. Other fundamental recommendations would involve stabilizing humanities revenues so that these disciplines can reverse the increasing use of adjunct hiring, improve educational outcomes, and create more of the cultural knowledge that would address urgent public problems.

We should be clear that this budget research will lead to a radical overhaul of the higher education funding model that has been in place since World War II. This work is going to be difficult. But now we really don't have a choice. Nearly all of higher education's various priorities are up for grabs: combining broad access and high quality in public higher education, improving affordability, reducing the reliance on adjunct instead of tenure-track faculty members in the teaching force, revaluing cultural knowledge in a time of war and crisis, renewing the university's social missions, and humanizing American politics and economics. Each of us wants at least one of these things, and fixing the higher education budget model is an unavoidable first step toward achieving any of them. The budget model must be fixed, and fixed with the humanities disciplines clearly and systematically in mind.

NOTES

1. See also American Council on Education. For a good summary of the statistics on the decline of college attainment in the United States, see Douglass: among the top thirty economically developed countries, the United States is now fourteenth in college participation, sixteenth in degree completion, and twenty-first in high school graduation rates. For a convenient overview of statistics on contingent faculty, see American Association of University Professors.

2. The drop through 2005 was about 40%, and the cuts of 2008–10, totaling another 25% of the state's share of the University of California budget, bring the per-student total reduction to about two-thirds since 1990 (corrected for inflation; Newfield, Bohn, Moore, and Glantz).

3. For a description of the funding myths this thinking would need to reject, see Newfield, "Public Universities"; Jaschik, "For Leon."

4. English advertised 1,515 jobs in the *Job Information List* in 1975–76 and 1,826 in 2007–08; the twenty-year average from 1987–2007, including the peak year of 1987–88,

was 1,529. The *Job Information List* does not capture all hiring in its member fields, some of which is only advertised locally, if at all. The list likely captures a very high percentage of tenure-track searches but has lower rates of inclusion for teaching positions that are temporary or do not require a doctoral degree. For overall enrollments, taken from the National Center for Education Statistics, see the MLA's *Education in the Balance*, figure 2.

5. If we index overall education employment in 1970 at 100, then its 2006–07 employment stood at 155. Meanwhile, humanities employment stayed at the equivalent of 100, or somewhat under two-thirds of aggregate employment growth in higher education as a whole. Higher education employment figures are from the NCES database.

6. The law faculty has also shrunk, likely because of increased professionalization: pre-law undergraduates are counted in majors such as history or political science, since law is now almost entirely a postbaccalaureate field in the United States.

7. Visual arts—the study of film, television, theater, dance, music, and digital media—are at least as close to the humanities as they are to the social sciences. A deeper data analysis than I am conducting here might class much of visual arts with the second grouping of humanities disciplines.

8. I am using the second of the two measures graphed by the *Humanities Resource Center Online*, the Classification of Instructional Programs (CIP), because of the greater detail it allots to humanities fields compared with the older National Science Foundation classification (see “Note on the Data Used to Construct Degree-Related Indicators” in “Indicator II-1”).

9. Universities historically do little permanent hiring in new fields until they have become fully established. When the MLA does track hiring in emerging disciplines like gender studies or queer studies, their listings are very small.

10. The MLA's *Education in the Balance* shows that the proportion of adjunct or contingent faculty members is higher in research universities than in comprehensive universities or colleges.

11. Enrollment measures can in turn be divided into lower- and upper-division enrollments, major and nonmajor enrollments, headcount and full-time-equivalent, and so on. Enrollments do not coincide with degree completions but are a better measure than degrees awarded of a given unit's annual overall work effort, since a great deal of teaching is the teaching of students who are not majoring in a department in which they are taking courses. The relation between a unit's enrollments and its number of degrees granted is variable, but this point does not matter for my argument, which depends on general proportions of educational workload among standard groupings of disciplines. In my case study, these proportions are not changed by variation in the workload categories that are used to measure them. Other data I have seen suggest that this is a reasonable expectation at other universities. For the pattern of relations between enrollments and degree completions, see Delta Project (21).

12. While the state portion has shrunk since then (Delta Project 9), extramural research has increased, aggravating the problem I describe here.

13. Some of the expenditure differences are justified by the higher costs of instruction in fields like chemistry, which require laboratory equipment that fields like economics do not. This retort to the analysis I've offered is true to a point: the costs of instruction are higher in bench sciences. But much of that difference is in research costs, and the fact remains that the money flows to science and engineering, not away

from them. The higher-costs rationale can and does slide over into justifications for sometimes gross inequalities in equipment, when, for example, fields like music and art history cannot afford new practice instruments or digital projectors. The assumption, developed over many years, that the arts, humanities, and social sciences don't need great equipment guarantees that they never have it. Their students learn to do without and, in the absence of some vital forms of technology, may learn less than they otherwise would. The myth of the science subsidy underwrites the second-class education that many if not most public university students receive in humanities and social sciences disciplines.

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