

The University Library and the Problem of Knowledge

Charles A. Schwartz

The problem of knowledge, on the broadest level, is that the scope, specialization, and cross-disciplinarity of the research enterprise have long surpassed any overarching framework. The key question, on the campus level, is whether the development of research collections by the library is aligned with the university's strategic aims and overall institutional development. A straightforward (though uncommon) way to make the university/library relationship more effective in this regard is for the library to have a meaningful role in the academic program review process. This essay describes such a role, singling out the particular situation of some 40 predominately undergraduate institutions that have been reclassified as research-level in the Carnegie scheme. As a rule, when a university's institutional identity or ambition outstrips its library's capability, collection development is bound to become a campuswide concern.



Little is known, in a systematic way, about the effectiveness of the university/library relationship. Among the chief concerns is the library's dual ability to support advanced research and doctoral programs. Underlying such concerns and pervading higher education is the general problem of knowledge: learning about and having access to scholarly information, which has been subject to rapid growth and increasing specialization since the 1970s or so. On campus, the key question is whether the development of research collections by the library is aligned with the university's strategic aims and overall institutional development. Although this is an area in which means and ends are complex, there is a straightforward way to make the uni-

versity/library relationship reasonably effective (coherent and productive).

The main complexities involve money and attention along with knowledge. Money is complicated by the uncertainty of optimum levels of investment across the disciplines. Attention is complicated by the inconsistency of faculty spans of interest in the library. The problem of knowledge, however, is more fundamental and intriguing. The scope, specialization, and cross-disciplinarity of the research enterprise have long surpassed any overarching framework.

Such complexities heighten when a university is at an uncertain stage of institutional development. The broadest example involves some 40 large but predominately undergraduate universities that have found themselves reclassified

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as research-level in the changing Carnegie scheme since 2000.¹ In general, when a university's institutional identity or ambition outstrips its library's capability, collection development is bound to become a campuswide concern.

The straightforward way of aligning the university/library relationship with the problem of knowledge and its attendant complexities of money and attention is for the library to have a meaningful role in the academic program review process.² Such a role is uncommon. Although program review has become the standard framework of institutional development, the library's presence in it is rare or perfunctory nationwide.

This essay does not lead to precise prescriptions for structuring university/library relations (so much depends on local institutional cultures). Nor does it delve into the array of collection-development specifics for particular fields (for that matter, library reports and program self-studies at the author's institution are online).³ It makes some observations that, when combined with a university's own needs and ingenuity, may be generally useful for judging whether a standard process to assess research collections would strengthen program review and refine institutional development.

The Problem of Knowledge

The problem of knowledge is expansive, leading to various approaches. Readers may recognize it in terms of the recurrent call—harking back to Alfred North Whitehead's classic dictum on the “fatal disconnection of subjects that kills the vitality of the modern curriculum”—for a more coherent undergraduate education.⁴ A few years ago, Stanley N. Katz, in an essay on the “pathbreaking, fractionalized, uncertain world of knowledge,” extended that call to the need for a more coherent relationship between the university and society.⁵

A different aspect of this diffuse problem is that studies of the university system are unable to provide an overall

account of its most distinctive contributions: scholarship and scientific discovery. This knowledge gap is rarely articulated (the main description of it is the first footnote to Derek Bok's 1986 treatise on *Higher Learning*).⁶ Nonetheless, its general parameters—the key dynamics of growth and complexity in the research enterprise—are well known. One is the shift from physics to biology (allied with mathematics, computer science, and engineering) as the crucible of innovation in the sciences.⁷ Another, older dynamic is the rise of centrifugal forces in the humanities that are represented by special studies programs: women's studies, ethnic studies, cultural studies, and so forth.⁸ In the social sciences, however, there is no particular pattern, other than Clifford Geertz's broad postulate of a “reconfiguration of social thought [in] our notion not so much of what knowledge is, but of what we want to know.”⁹

An accumulation of details about such dynamics would simply dissolve in the notorious difficulties that sociologists of science encounter when trying to map patterns of influence and interaction in the scholarly communication system. Yet, explorations may be gainfully handled at the campus level: in library-faculty collaborations to develop research-level collections. The success of such collaborations depends on the library's ability to provide assessments that have practicality or useful simplicity. Practicality stems from the structural properties of the various literatures. Notably, such properties show why the problem of knowledge for the library is less severe in the social sciences than in the sciences or the humanities, though the social sciences have undergone the same kinds of transformations of specialization and cross-disciplinarity.

Library Centrality in Institutional Decision-Making

Although university aims for program reviews have had shifting emphases with changing times—from curtailing costs in the 1970s, to improving quality in the

1980s, to refocusing and repositioning the institution's civic engagements since the 1990s—the essential purpose should be to set budgetary priorities. Successful “program reviews are more for resource reallocation than program improvement” since curricular issues tend to get exercised rather than resolved.¹⁰ Where reviews are not accompanied by budgetary reallocations, the criticism is that the review process reflects merely a *logic of appropriateness* (that such things ought to be done) rather than a *logic of consequences* (in which programs are asked to justify activities and their costs in relation to institutional objectives).¹¹

The library's goal is to be in the centrality of institutional decision-making for academic affairs. Centrality is broadly defined as the “quantity and intensity of a department's relations with other departments on campus” on the theory that “central departments survive better than peripheral ones in times of financial stress.” For our purposes, it means specific inclusion of research-level collection assessments in plans to align programs with the university's strategic aims and overall development. In reality, university administrators seem to have little interest in librarians' participation in activities associated with high-level institutional decision-making.¹²

Useful Simplicity and Scholarly Significance

As noted earlier, the library's success in the program review process depends on its ability to provide collection assessments that have useful simplicity. At odds with that is the library's inclination to produce reports that compile all information resources that might bear on a program. Such exhaustive accounts serve as symbols or signals of organizational competence. They suit accreditation statistics but fail the “so what?” test for institutional planning. Reports of useful simplicity lay the groundwork for such decision making by identifying resources that are evidently significant in the schol-

arly system but not in the collections, for consideration by the faculty.

Significance in the scholarly system is gauged in part by citation-impact journal rankings. This approach to structuring scholarly literatures leads to contrasting patterns of library-program collaborations. In the sciences, the sheer numbers of ranked journals, together with their narrow specializations and high prices, require the faculty's expertise in title decisions. For example, engineering has some 800 citation-ranked titles spread over 14 literatures. The proportion of those titles that are held by the library is not a useful finding for institutional planning. The practical outcome is the number and aggregate cost of the remaining titles that are identified by the faculty as priorities for collection development.

Across the sciences at my university the same parallel patterns emerged: the library holds about 40% of all the journals in a given citation-ranked literature, and the faculty selects about 10% of the journals not held as acquisition priorities. In our experience, a library journal collection in the sciences of roughly half the ranked titles per relevant program is a reasonable benchmark of cost-effectiveness for research productivity. An essential consideration is whether the faculty would be as selective if assessments were initiated solely by the library rather than under the aegis of program review (the office of the provost).

In the social sciences, library/faculty collaborations are eased by the less demanding properties of the citation-ranked literatures. The fewer numbers of journals, along with their broader subject ranges and lower prices, enable the library to operate rather autonomously. Indeed, against the general ambiguity of the problem of knowledge, a project to complete the holdings of all ranked social science journals relevant to campus programs would be a plainly intelligent move to faculty and university administrators. Even a budget-constrained university library could afford such a project by

limiting it to the subset of journals that have rankings in multiple fields.

It is in the humanities that the library and the faculty are most dependent on each other. The library is even more reliant on the faculty's knowledge of the specialized journal literatures than in the sciences, given the lack of measures of publication significance in the humanities. For its part, the humanities faculty nationwide must regard the library profession as an unreliable costakeholder in the scholarly communication system, since library expenditures for scientific and technical journals have displaced book acquisitions in the humanities to the extent that some fields are considered "endangered species" in publishing circles.

Resolving Dilemmas of Program Review

Such problems in the humanities were resolved with one program at my university. It is an interesting case in being the exception to an otherwise general dilemma. On the university level, the ground rule of the program review process nationwide is that reallocation is the main source of flexibility in the face of budget constraints. Yet, for the library, nearly any reallocation of acquisition patterns—to create cost savings to afford new resources—gets mired in the cross-disciplinary gridlocks of programs and literatures. The exceptional case is religious studies. Being the one nonscience discipline with certain sizeable intradisciplinary literatures, it has the singular freedom to reduce large segments of domestic book acquisitions to afford more journals, international books, or other resources.

Another general dilemma of the program review process lends itself to a unique library solution. Program review is not intended to provide immediate buys for an academic unit. It is all about benchmarking and strategic planning the next fiscal year. Yet any review effort should be consequential, not merely a matter of appropriateness. The library

alone is in a position to deliver, in the midst of some program reviews, concrete results through cost-effective initiatives. Given the gridlock of cross-disciplinary literatures, the main source of budget flexibility is to cut print subscriptions to afford an online-journal package or a more comprehensive database.

The Complexity of Attention in Academic Affairs

While the case for the library's role in program review is clearest for universities where collection development and institutional development are badly in need of alignment, established research universities might well consider putting collection assessments under the aegis of the overall academic planning process. A principal factor is the problem of multiple, changing claims of attention in campus affairs. It is not likely that the library can summon on its own—for scores of programs, without a formal university structure—the involvements of the faculty necessary to develop research collections.

No faculty of any program or field is expected to be impartial or altruistic in the resource allocation process. Nonetheless, the faculty everywhere has an overriding interest in moderating and prioritizing its needs when the program review is held under the auspices of the office of the provost (or a similar authority)—for fear of appearing unreasonable or unwise in such a public setting. It is the library's job to combine the programs' disparate needs into a collections budget or plan that addresses the university's strategic aims within the overall need for equity among the sciences, social sciences, and humanities.

Collection Development and Organizational Adaptability

Moreover, the typical pattern of library-faculty relations—a lot of brief encounters about specific things that crop up—is not a good strategy for gaining broad comprehension of research interests and needs. *The problem of knowledge calls for a strategy*

of increasing the scale of discussions.¹³ Indicative of that strategy, the Computer Science department in its program review recommended that the library focus on a series of collection development projects in emerging fields (starting with bio-informatics). Accreditation bodies, for their part, tend to be more interested in such regular patterns of library/faculty collaboration than in the library's ability to acquire everything.

Any series of program-review collection assessments will lead in a few years to a fairly comprehensive plan. Such a plan will address optimal levels of investment for the various disciplines and the associated challenges of research productivity and Ph.D. production. It will be reasonably cost-effective, given the faculty's evident selectivity of priorities for acquisition in their respective fields. However, this is one of those areas of management in which specific outcomes are less important than the ways that the process gives meaning to an ill-structured problem. The real value of any long-range plan is that it promotes organizational adaptability and fosters an evaluation ethic.

Collection Development and Institutional Maturity

An appreciation for financial complexity in collection development may well depend on institutional maturity. Whereas libraries with a traditionally undergraduate orientation regard collections in terms of a curricular "service," research libraries understand the loosely coupled nature of means and ends in what James G. March terms knowledge inventories: "Does society 'overinvest' in library books? In research? In information? Optimizing on investments in knowledge is particularly troublesome because the costs and benefits of knowledge are distributed quite differently over time and space."¹⁴ Such diffuseness invites biases and blind spots in resource allocations, such as reactions against specialized resources for unidentified users

or future generations. Indeed, without an appreciation for research collections as knowledge inventories, developing libraries are likely to put new funds into old, undergraduate routines.

Conclusions

We should distinguish between *scholarly assessment* and the *scholarship of assessment*. Scholarly assessment is micro level; it focuses on specific fields and collections. By contrast, the scholarship of assessment is macro level; it is a systematic and rather abstract inquiry into the knowledge infrastructure of such inquiry.¹⁵ This essay falls in the latter category. It does not cover the subtleties of the problem of knowledge for particular fields. It focuses more broadly on the general need for university/library institutional arrangements to manage the problem of knowledge (without attempting to cover all aspects of this diffuse problem, such as the role of the library to transform student learning or the sea change of financing and preserving scholarly information in the networked environment).¹⁶

No essay can lead to precise prescriptions for structuring university/library relations. Just as all politics is local, each university will use its own needs and ingenuity to find an appropriate role for the library in program review. The essential point is that, while much depends on local institutional cultures, *some* universitywide structure is needed to provide the kind of collective expertise that the complexity of research collections warrants. Beyond that, the tenor of library/faculty collaborations will be as varied as the academic programs, their literatures, and resource markets.

Nonetheless, certain patterns are likely. In the sciences, the faculty will want to focus on acquisitions of unranked as well as ranked journals in emerging fields (since the citation-impact methodology is somewhat biased in favor of established journals). In the humanities, the faculty will want more international books. And in the social sciences, the faculty will

likely press for complete holdings of the ranked journal literatures.

While no institutional arrangement can actually resolve the problem of knowledge and its attendant complexities of money

and attention, program review is the structure that is best suited to improving university/library adaptability and making research-level collection development a more intelligent process campuswide.

Notes

1. The classification scheme of higher education by the Carnegie Foundation for the Advancement of Teaching (www.carnegiefoundation.org/classifications) was reformulated in 2000 and again in 2006. The 2000 version was more striking in terms of tensions between institutional identity and library capability. In that version, 40 formerly Doctoral-II universities were lifted into the top Doctoral Research-Extensive category. The median library collections budget of those 40 is barely \$2.8M, whereas the median of the 113 other, more established universities in that tier is over \$7.2M. A more telling demarcation is that only the 113 are members of the Association of Research Libraries. Thus, the bottom-quartile position of the 40 was stark. The 2006 reformulation of the Carnegie scheme was intended to get away from overt rankings. Nearly all ARL institutions are in the new top-most tier of Research Institutions—Very High Research Activity category. The 40 universities once in the bottom quartile of the former Research-Extensive category are mostly in the new second-top tier of Research Institutions—High Research Activity category, with a few in the new third-top tier called just Doctoral/Research. While the 2006 version may blur the tension between institutional identity and library capability, the conventional ambitions of any large-scale university—for expanded doctoral programs, for increased Ph.D. production, and for greater research productivity—will continue to make collection development a campuswide concern when problems arise. On the 2006 Carnegie redesign, see Audrey Williams June, “College Classifications Get an Overhaul,” *The Chronicle of Higher Education* 52, 26 (March 3, 2006): A25–27.

2. The massive literature on program review completely overlooks the role of the library. A few studies that may be of interest include David D. Dill et al, “Accreditation and Academic Quality Assurance,” *Change* 28 (September/October 1996): 17–24; Alan E. Guskin and Mary B. Marcy, “Dealing with the Future Now: Principles for Creating a Vital Campus in a Climate of Restricted Resources,” *Change* 35 (July/August 2003): 10–21; Karl E. Weick, “Management of Organizational Change among Loosely Coupled Elements,” in Paul S. Goodman, ed., *Change in Organizations: New Perspectives on Theory, Research, and Practice* (San Francisco: Jossey-Bass, 1982), 375–408; and Jon F. Wergin, “Waking Up to the Importance of Accreditation,” *Change* 37 (May/June 2005): 35–41.

3. Library reports and program self-studies at the author’s institution, Florida International University, are archived at www.fiu.edu/~opie/progreview_archives.htm and summarized at <http://library.fiu.edu/files/about/Long%20range%20plan.pdf>. While collection assessment methods have remained fairly consistent over the years, there have been some changes in topical emphases: less attention now goes to benchmarking comparisons with other universities; more attention is accorded distinct resources and services (e.g., the digital collections center and geographic information systems); and a previous section on inflation in the scholarly communication system was dropped for the sake of brevity.

4. Vartan Gregorian, “Colleges Must Reconstruct the Unity of Knowledge,” *The Chronicle of Higher Education: The Chronicle Review* 50, 39 (June 4, 2003): B12; and Susan Frost and Rebecca Chopp, “The University as Global City,” *Change* 36 (March/April, 2004): 44–51.

5. Stanley N. Katz, “The Pathbreaking, Fractionalized, Uncertain World of Knowledge,” *The Chronicle of Higher Education: The Chronicle Review* 49, 4 (September 20, 2002): B7.

6. Derek Bok, *Higher Learning* (Cambridge, Mass.: Harvard Univ. Pr., 1986), 2, note 1, cited in David Damrosch, *We Scholars* (Cambridge, Mass.: Harvard Univ. Pr., 1995), 46.

7. Joel E. Cohen, “Mathematics Is Biology’s Next Microscope, Only Better; Biology is Mathematics’ Next Physics, Only Better,” *PLoS Biology* 2, 12 (December 2004): e439; and Lynn Arthur Steen, “Mathematics and Biology: New Challenges for Both Disciplines,” *The Chronicle of Higher Education: The Chronicle Review* 51, 26 (March 4, 2005): B12.

8. Louis Menand, “The Marketplace of Ideas,” American Council of Learned Societies, *Occasional Paper No. 49* (2001) at www.acls.org/op49.htm; Marjorie Garber, *Academic Instincts* (Princeton, N.J.: Princeton Univ. Pr., 2000); Peter N. Sterns, “Expanding the Agenda of Cultural Research,” *The Chronicle of Higher Education: The Chronicle Review* 49, 34 (May 2, 2003): B7; and Ken Wissoker, “Negotiating a Passage Between Disciplinary Borders,” *The Chronicle of Higher Education: The Chronicle Review* 49, 34 (April 14, 2000): B7.

9. Clifford Geertz, *Local Knowledge: Further Essays in Interpretive Anthropology* (New York: Basic Books, 1983), ch. 1.

10. Clifton C. Conrad and Anne M. Pratt, "Designing for Quality," *Journal of Higher Education* 56 (November–December, 1985): 601–22, at 609.

11. James G. March, *A Primer on Decision Making: How Decisions Happen* (New York: Free Press, 1994), ch. 2.

12. Deborah J. Grimes, *Academic Library Centrality: User Success Through Service, Access, and Tradition*, Publications in Librarianship no. 50 (Chicago: Association of College & Research Libraries, 1998), 44, 101, 107. On the importance of linking investments in information resources to the effectiveness of particular academic programs, see Bonnie Gratch Lindauer, "Defining and Measuring Library's Impact on Campus-wide Outcomes," *College and Research Libraries* 59 (November/December, 1998): 546–70; and Sarah M. Pritchard, "Determining Quality in Academic Libraries," *Library Trends* 44 (winter 1996): 572–94.

13. March, *A Primer on Decision Making*, 243ff.

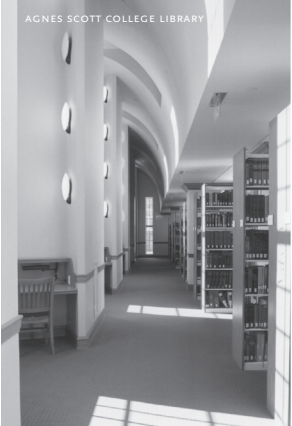
14. March, *A Primer on Decision Making*, 247.

15. Trudy W. Banta, *Building a Scholarship of Assessment* (San Francisco: Jossey-Bass, 2002), x.

16. Institute on Higher Education, *Project on the Future of Higher Education* at www.pfhe.org/; and Gertrude Himmelfarb, "Revolution in the Library," *The American Scholar* 66 (spring, 1997): 197–204 on our now confronting "two revolutions—an intellectual one and a technological revolution, which bear an uncanny resemblance to each other and have a symbiotic relationship to each other."

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