As digital technologies continue to transform the environment for teaching, learning, and research, faculty information needs are evolving steadily. To best serve these needs, colleges and universities need to understand how faculty's needs have been changing—and how they are likely to change in the future.

In the summer and fall of 2006, Ithaka (http://www.Ithaka.org) commissioned an outside research firm, Odyssey, to conduct surveys of the attitudes and perceptions of academic collection development librarians and faculty toward the transition to an increasingly electronic environment. These studies received 4,100 and 350 responses, respectively, and were cosponsored by JSTOR and Portico and in part by Aluka and NITLE. The studies build on similar faculty studies conducted in 2000 and 2003; by examining the librarians' perspective as well, we can gain a fairly balanced perspective of the dynamic environment. Considered together, the findings suggest the need for libraries to take leadership in helping academia's transition to the new environment.

Relationship between the Library and the Faculty

When the findings from 2006 are compared with those from 2000 and 2003, it becomes evident that faculty perceive themselves as becoming increasingly dependent on the library for their research and teaching needs. Libraries provide critical information goods and services for faculty members, but if these goods and services are not appreciated, libraries may face political challenges on campus in gaining the funding necessary to do their work. Yet though most faculty members expect the library to become less relevant for them in the next years, virtually none believe their institutions should redirect library expenditures to other campus needs. Indeed, the vast majority view the librarian's role just as important now as it has been in the past.

Faculty also generally view the services typically offered by libraries as providing tremendous value. Faculty understand the importance of having libraries pay for research and teaching resources and support the idea of the library's preservation function. Librarians also view the purchase of electronic resources as a critically important function of the library, with over four-fifths believing that the library plays a more important role than any other source in providing this service. The consultative role of the librarian in helping faculty in their research and teaching is viewed as an important function by most librarians, but most faculty members do not put the same emphasis on this role of the library.

In the future, faculty expect to be less dependent on the library and increasingly dependent on electronic materials. By contrast, librarians generally think their role will remain unchanged and their responsibilities will only grow in the future. Indeed, over four-fifths of librarians believe that the role of the library as the starting point or gateway for locating scholarly information will be very or extremely important in five years, a decided mismatch with faculty views.

Perceptions of a decline in dependence are probably unavoidable as services are increasingly being provided remotely, and in some ways, these shifting faculty attitudes can be viewed as a sign of the library's success. The mismatch in views on the gateway function is somewhat more troubling: if librarians view this function as critical but faculty in certain disciplines see it as declining in importance, how can libraries, individually or collectively, strategically realign the services that support the gateway function?

Disciplinary Differences

As our faculty studies have evolved since 2000, we have made methodological choices to develop our ability to study the responses of individual disciplines. Such stratifications add costs, but they have allowed us to develop significant intelligence on how faculty members' attitudes and perceptions are evolving in different disciplines. Some of the findings from these disciplinary stratifications are unsurprising: laboratory scientists make extensive use of electronic resources, whereas text-based humanists remain more dependent on primary sources, monographs, and other traditional library collections. From some perspectives, the fundamental differences between disciplines may appear to be static, with the impact of new technologies only echoing underlying frameworks. But it is important to recognize that there are many significant variables that contribute to the methodological and cultural underpinnings of a given discipline. Some of these variables, such as what digital content and which tools are available to scholars and students in a given discipline, are quite dynamic.

The field of economics is a case in point. In 2000, economists' attitudes and perceptions were, broadly speaking, remarkably similar to those of humanists, with economists depending on the print journal and library resources. In 2006, economists appear to have moved decisively to the electronic environment, relying exclusively on electronic formats...
and no longer perceiving the importance of the campus library. A key question for us is whether the evolution of needs and practices among economists is specific to the discipline or whether it can be understood as a leading indicator that reflects more general forces.

E-Books
Given that e-books have had only a mixed impact to date, we wanted to understand what might be expected of them in the future. The reading technologies and collections available at present are limited, and at this time, there seems to be little sense among librarians and faculty that e-books will have the same transformative effect as electronic journals. Only a minority of faculty members use e-books (16% reporting often or occasional use, and 36% reporting rare use), and they expect the importance of e-books to grow only slightly greater in the future (13% viewing them as very important for research or teaching today, and 24% expecting them to be very important five years from now). Librarians are more enthusiastic: half view the provision of e-books as an important function today, and more than two-thirds expect it to be important five years from now.

At the same time, neither librarians nor faculty members anticipate that e-books will constitute a viable substitute for print books; they tend to see the two formats as complementary. Among librarians, enthusiasm for e-books is noticeably higher at research universities, where one-quarter anticipate a transformative role and two-thirds believe that licensing e-books and making them available form an important library function. Based on other findings, it often seems that the expectations of the research universities may be predictive of broader patterns, but for now, it is reasonable to conclude that library acquisitions practices are generally not responding to faculty members’ demand for e-books but rather to students’ demand or perhaps to expected future demand from faculty.

The Transition away from Print Journals
The transition away from print formats for scholarly journals has been accelerating for some time as libraries have been canceling the current issues of print journals in favor of electronic formats. Faculty members and librarians appear to support this transition: they are generally prepared to see the library cancel the print-format version of a journal so long as it remains available in electronic format (61% and 63% agree very strongly, respectively). But neither faculty members nor librarians want existing hard-copy collections to be discarded, with the faculty much less enthusiastic than the librarians (20% and 42%, respectively).

There has been a decline in the percentage of faculty members who believe that their local library must maintain hard-copy collections of journals (a belief now held by 42%, down from 49% in 2003) and also a decline in the percentage who believe that some libraries, but not necessarily their own, must do so (now 59%, down from 68% in 2003).

We believe that the elimination of the print format for current issues is a fast-arriving reality, perhaps arriving faster than some libraries recognize. Library leadership is necessary to ensure that this transition proceeds responsibly. Ithaka is presently embarking on a study to better understand actions taken by academic libraries in the transition, both for current subscriptions and for existing collections.

Preservation of Scholarly Journals
Do faculty members appreciate the importance of preservation in the electronic environment? Our study shows that faculty members believe even more strongly today (82% agreeing strongly) than they did in 2003 (74%) that the preservation of electronic journals is very important. At the same time, they express confusion and uncertainty about e-archiving and whether it is being implemented successfully. Librarians tend to agree with the importance of this priority, especially at research universities and liberal arts colleges. And they express a corresponding loss of interest in the preservation of print materials (with two-thirds currently viewing print preservation as a priority and less than half expecting to do so in five years). Research university librarians already view print preservation as less of a priority than do their colleagues at smaller colleges (with 56% and 70% viewing it as very important, respectively), and they see a greater decline in importance (only 41% of research university librarians expect to view this as a priority in five years, compared with 55% of their colleagues at smaller colleges).

Faculty members expect librarians to find a solution to the preservation needs that they view as critically important, and librarians seem to be responding to this expectation. As a result, librarians’ attention is being pulled away, appropriately to some degree, from print preservation.

Decision-making about the future of print collections is necessarily grounded in local needs. Just as we have seen with the microfilming of newspaper collections in an earlier generation, this local decision-making may threaten the community-wide imperative that an appropriate number of print artifacts survive. Some sort of collective action may be needed in order to avoid any losses. Some institutions, and their consortia or state systems, are beginning to consider their participation in shared print repositories, which supply a secure and formalized preservation framework that also allows local institutions to focus on meeting the evolving needs of readers.

Conclusion
Our surveys produced many thousands of pages of data. This is only a small sampling of the most notable findings. Throughout these findings, however, the importance of leadership emerges as a key theme: in managing complex faculty relationships in this dynamic environment; in responding to the disciplinary differences; in anticipating the future role of e-books; in ensuring that the transition away from print journals proceeds responsibly; and in providing appropriate preservation services both locally and across the community. The transition to an electronic environment poses significant strategic and management challenges for higher education. But by better understanding how faculty members’ attitudes and needs are changing, especially at a disciplinary level, academic libraries and information-services units can most effectively target their service offerings.

Roger C. Schonfeld is Manager of Research for Ithaka. Kevin M. Guthrie is President of Ithaka.