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Centers and institutes, or organized research units, can play a significant role in metropolitan universities by providing bridges to the community. The article includes discussions of the limitations of traditional university organizational structures and of the potential advantages centers and institutes offer. It addresses the administrative complexity and shortcomings of centers and suggests mechanisms for dealing with them. Arguments are also made regarding the locus of control over centers and the implications of centers for the university at large.

Bridging the Gap: Centers and Institutes

Centers, institutes, bureaus, specialized laboratories and clinics have become such familiar fixtures in the academic household that they are accepted as one of the defining characteristics of the modern university. Recent estimates place the number of "organized research units" (ORUs) at over 5,000. The ubiquity of ORUs, widely ranging in size, organization and purpose, indicates that universities have found these structural innovations very useful. Centers, institutes and the like have contributed greatly to the hegemony of American science by providing a common focus for the research of diverse faculty and professional staff. They often furnish a way of luring and retaining star faculty, and are useful as well in attracting the attention of funding agencies. For metropolitan universities they are of particular importance because they can deal with multidisciplinary activities and also be excellent bridging mechanisms between the institutions and its constituencies.

However, too often ORUs are created in a vacuum, without a well-articulated role within the university as a whole. Basic questions remain unasked:

- How does the proposed ORU fit into the overall mission of the university?
- How does the unit relate to cognate, discipline-based departments? Will there be joint appointments? How and by whom will faculty activity in the ORU be evaluated and rewarded?
- How should the ORU be organized, and where is the locus of responsibility for oversight and assessment?
- By what criteria should it be evaluated?

- To what problems should it be applied and what should be the range and limitations of its activities?
- What are the anticipated direct and indirect costs, and how much of these should be borne by the university?

This article will address some of these issues, with particular emphasis on the role of centers and institutes in the outreach mission of metropolitan universities.

ORUs in the Metropolitan Universities

The first of what today would be called ORUs were established during the late nineteenth century in the guise of observatories, academic museums and agricultural extension stations. Then, in the post-World War II period, ORUs proliferated at an extraordinary pace. In part, this growth was triggered by expanding opportunities for external research support. ORUs provide funding sources with some assurance that grants will be systematically directed toward the intended purposes, rather than being swept up in the general operation of the university. The units also give additional visibility to a defined area of study important to the university, provide a focus for and pool the expertise of a group of faculty members, often from diverse disciplines, who are concerned with the same subject, and furnish, as well, a convenient way of assigning responsibility for costly equipment and other facilities not properly housed in any existing department.

In addition, ORUs in recent years have grown in response to calls for more direct university response to societal needs. Increasingly, universities are being perceived as important engines of economic and social development by closing the gap between knowledge production and knowledge utilization. Lynton and Elman, Boyer and Rice, and others have pointed out the need for a broader definition of research and scholarship that includes technological innovation, technology transfer and integration, and the transformation of information into knowledge. A more inclusive view of scholarship and an expanded mission for the university are central to the concept of metropolitan universities, as Hathaway, Mulhollan and White described in the first issue of this journal.

ORUs furnish excellent means of bringing about interdisciplinary efforts as well as collaboration with agencies and individuals outside the university that are needed to fulfill this expanded university mission. Conventional disciplinary departments are not well-suited to these tasks. They are intended to foster specialization, to promote theory-driven, non-directed research, to provide insulation from external forces that might interfere with these pursuits and to maintain a supportive environment for independent

scholarship. In a very real sense, the autonomy of the university is premised upon the success of the department in doing so.

In addition, issues and problems in the world outside do not come in neat bundles, corresponding to academic disciplines and research paradigms. Tackling applied problems may not contribute to the advance of basic knowledge—the *raison d'être* of the department—as directly as traditional scholarship. Even the language of discourse in the academic department hinders interaction with the external community. The gap between the cultures of town and gown is most evident in an encounter between an academic department and a community group with a problem.

Adjustments are needed within the structure of the university to allow both cultures to enjoy the fruits of interaction without damaging the corpus of the university or short-changing the community. There is a need for boundary-spanning mechanisms as intermediaries between the discipline-oriented units of the university and an external community in need of applied research and services. ORUs have proliferated in recent years because they can be extremely effective linkage mechanisms. Marshall Kaplan's article in this issue of *Metropolitan Universities* provides some specific examples of ORUs that have effectively bridged the gap between university and community. Throughout the country, examples of centers and institutes that have proven successful extensions of metropolitan universities are increasingly common. The record shows that when it comes to public service and applied research, these units work, and often work very well.

The Problems of ORUs

Then why do ORUs also seem to generate such controversy and contention on individual campuses? They have been known to incite fear that core structures of the university are at risk of becoming obsolete, to awaken latent concerns over academic freedom, and to animate beliefs that the university is selling out to industry. Still others claim that ORUs create a new class of academician, the research professionals who find themselves in organizational limbo, considered neither faculty nor staff. Are any or all of these misgivings based on real or imagined risks? Experience suggests that, indeed, there are good reasons to take care when creating ORUs.

ORUs are, by design and function, at the margins of the university. They adopt neither the core values of a single disciplinary focus nor curiosity-driven scholarship as their sole function. They rarely have control, or even substantial influence over the two most valued prizes of academe, degrees and tenure. Their personnel structures and administrative activities do not blend easily into the rest of the institution. Indeed, they often become administrative white elephants. They are *at* the university, but seldom *of* the university.

This marginality is both the strength and weakness of ORUs. Like Proteus, ORUs have the ability to change and respond quickly to new situations or opportunities, thereby giving the university the ability to override its inherent conservatism. They are also not bound to conventions of scholarly language and culture, and thus are able to meet the community halfway between the academic department and the city hall. These characteristics allow an institution to deploy its resources in creative and effective ways through ORUs.

At the same time, marginality has its costs. ORUs usually lack continuous base funding enjoyed by departments. Life on “soft money” is notoriously uncertain. Nor do they enjoy the intellectual domain of a shared discipline. Participants in centers and institutes are rarely bound together by a common disciplinary focus. They also are not tied to the professional associations attendant to the disciplines. Additionally, many of their members are not allowed into the exclusive society known as the faculty, nor its associated orders, such as the faculty senate. The status of ORU staff is often in question. In short, ORUs just do not fit very well. And this is the crux of the problem. Centers and institutes have demonstrated their potential to be extremely useful in the service of the metropolitan university’s applied research and public outreach mission, yet extremely unwieldy in the context of traditional scholarship, teaching, and administration.

Centers and institutes involve very real trade-offs. They often compete with academic departments for human, financial, and physical plant resources. Attracting star faculty with a well-funded ORU promotes a division of attention between a “home” department and an interdisciplinary center. Funds used as “seed money” to initiate a new institute will not go to the library for new acquisitions. Space allocated to a bureau as an in-kind match to a funding agency may no longer be available for unfunded research projects. And ORUs tend to grow and to increase their demands. As a provost recently told his deans when discussing the creation of several new centers, “You know the problem with these little puppies is that they grow up to be hungry dogs.”

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ORUs also involve linkages with the external community that have the *potential* for compromising independence and restricting the unfettered search for knowledge. Many partnerships between universities and industry have generated substantial anxiety about the incremental erosion of institutional autonomy when faculty energy and effort are redirected in response to external demands. As the resource commitments on both sides rise, so should the level of caution. Control over the role and mission of ORUs can rapidly shift away from the university and its faculty toward the funding agencies and clients.

Another phenomenon also recommends the exercise of caution. ORUs, like any organizational unit, seek formality, growth, and security. As they age and grow they often displace their original mission with that paramount goal of survival. Institutional dynamics often tend to reinforce this metamorphosis. Predictability and stability have more psychological appeal than uncertainty and freedom. ORUs can, within short order, shed the very traits that made them desirable in their youth: flexibility and the capacity to change and respond. As they become institutionalized they also ossify.

Their threat to existing academic structures and the status hierarchy becomes increasingly real as they become decreasingly dependent upon the remainder of the university. They move toward becoming "free agents," dependent upon funding agencies, but not on academic departments. As ORUs reach this critical juncture in their maturation any number of paths are open. The center can spin off into an independent entity. It can continue to grow and flourish at the university, but with only minimal contribution to the broader mission of the university. It can be directed to a course consistent with the university's goals. Or, it can be terminated. A metropolitan university, confident that it is pursuing its mission, can easily ignore this creeping defection, or it can provide the support and administrative practices needed to assist ORUs, while assuring they remain good corporate citizens.

It is also true that ORUs impose new requirements on the personnel systems within a university. Individuals assigned to centers and institutes often lack faculty status, require unique appointment, reward and promotion systems, and do not enjoy the full benefits of university life. Despite the common requirement that their academic credentials meet the standards of the faculty, ORU directors and researchers most often fall into a different category in the university hierarchy. Clark Kerr decades ago referred to professional research staff as the "unfaculty," while describing their distinctiveness. Expansion of ORU professionals who do not have faculty appointments invites the creation of a new class of employees that brings different values and aspirations than faculty. Additionally, faculty who join ORUs typically experience role conflict between the expectations of the center and those of their home department, adding yet another concern to the long list of complaints regarding faculty reward systems.

Structure and Control of ORUs

Anxiety over the role of ORUs within the university is not unwarranted. It is inherent in the marginal position they occupy. Moreover, we tend to reinforce many of these shortcomings through our notions of what constitutes a successful center or institute. As long as success in ORUs is defined predominantly by external funding levels, growth, and political support, difficulties will arise. Instead, successful centers and institutes must be

defined as those that serve the service and research mission of the university, that support the academic departments, that integrate into the educational programs of the university and that do not lose track of their reason for being.

Policies and structures need to be established that harness the creative potential of ORUs and that simultaneously provide the oversight needed to keep them on track. Organizational structure and policies affect the behavior of centers and institutes. Their internal organizational structure needs to be tailored to the idiosyncrasies of each ORU, and so must the external administrative practices, structures, and processes that govern ORUs. There exists no single blueprint, but existing studies and experiences yield some useful guidelines.

University policies should acknowledge that not all ORUs are created equal. They range in complexity and formality from very large, university-wide research centers to modest project teams and small informal faculty groups. How one effectively governs ORUs is a function of what kind of center is being governed. Yet interviews of administrators show that the structure of ORUs typically evolves by chance. This *ad hoc* approach is not effective. Experienced administrators recommend formal categorization of ORUs with distinctions in terms of policies and governance structures. The titles center, institute, bureau, and laboratory should be given distinct, explicit meanings. Policies and procedures within the university can be adjusted accordingly. Increased formality, size, and longevity might bring with them more formal control and oversight. Smaller, shorter-lived units might be freed from administrative burdens to the extent possible. The breadth of proposed program activities could determine the approval processes and oversight mechanisms.

A second issue is the failure of ORUs to coordinate activities among themselves. ORUs tend to be atomistic and independent. Only rarely do they integrate to take advantage of economies of scale or coordinated program agendas. In many cases this independence might be appropriate, even desirable. In others it can be nothing short of irresponsible. A number of mechanisms can be used to foster cooperation where appropriate. Perhaps the most common is the formation of umbrella structures, or holding companies, to consolidate smaller ORUs. These organizational structures can provide common managerial, accounting, clerical, and related support services. A combined clerical pool, for example, can serve as a buffer for the uncertainties of external funding by maintaining services for some ORUs during slack periods. Similarly, holding companies in which the partners in the company share a broad academic focus can generate critical mass and, thereby, allow the ORUs to take on larger scale projects.

Another structural issue is the location and direction of reporting lines. Again, experience indicates that there is no sole answer to the question:

“Who’s in charge?” There are, however, trends that can serve as guides. Whether an ORU reports to a dean, department head, or university-wide administrator (e.g., a vice president for research) is largely a matter of its relative affiliation with a discipline. The more tightly linked a center is to a single discipline, the more likely it will report to a department head or dean. The more interdisciplinary, the greater the likelihood it will report to a university-wide administrator. Similarly, as administrative complexity increases so does the probability that the ORU will report to central administration. Linkage to a dean or department has the advantage of providing an institutional advocate in budgetary and internal policy debates. It also tends to decrease the marginality of the ORU, keeping it more in line with departmental values and behaviors, for better and worse. On the other hand, role conflicts arise when centers lacking a clear disciplinary focus report to a department or dean. Similarly, an ORU with a dominant disciplinary bias may suffer from reporting to a central administrator who encourages the unit to take on interdisciplinary work or act in ways at odds with the discipline. Confusion resulting from reporting lines is a primary source of administrative difficulties, yet very few institutions have policies that define the relationship between centers and academic departments. In establishing reporting lines the intended relationships between departmental faculty and the center must be fully considered, as well as the administrative complexity of the individual ORUs. And, lines of authority must be made explicit early in the formation process and consistently followed.

There is no sole answer to the question “Who’s in charge?”

Programmatic Control

Structures and reporting relationships also determine programmatic control and oversight, issues that are seldom explicitly discussed when ORUs are proposed. The question, however, is central to a viable system of centers and institutes that supports the role and mission of the metropolitan university. Who will initiate programs and projects? Who will determine the congruence of center activities with university objectives? How will projects be evaluated and by whom? How will the institutional administration know if a center or institute is no longer serving the interests of the university? Each of these oversight issues begs the question: “Who is in charge here?” Too often the answer emerges from the dynamics of the moment rather than a thoughtful strategy. In order to avoid ad hoc decisions the role of three actors, or sets of actors, needs to be resolved. Specifically, what will be the program authority of the ORU director, the funding agencies, and the central administration?

The single most influential actor in ORU program control is the director. ORUs often spring, full grown, from her or his brow, rendering program

control and initiative largely a matter of the director's initiative and ambition. Indeed, there is reason to believe that aggressive leadership on the part of ORU directors is an essential part of success. Reducing direct program control runs the risk of diminishing the director's ability and motivation to lead the center. Yet, failing to provide proper oversight is tantamount to an abdication of administrative responsibility. ORU director program leadership must often be more direct, more entrepreneurial than in the case of academic department chairpersons, but simultaneously consistent with institutional goals and objectives.

External funding agencies exercise programmatic control second only to that of the ORU director. Indeed, the original programmatic goals of a center or institute may quickly fade in the light of a sizable grant. Such goal displacement is often the result of "temporarily" setting aside initial objectives in order to establish relations with a desirable client or to take advantage of a "special" situation. The result is often the "working-for-the-sponsor syndrome" that brings with it an array of dysfunctional behaviors.

Institutional mechanisms must, therefore, provide oversight and integration so that external relationships do not become asymmetrical, with program control and loyalties flowing toward the deep pockets outside the university. Bargains that are struck must be consistent with both the short and long term interests of the university. Specifically, universities should first promote institutional integration of ORU staff and encourage the development of a sense of commitment to the whole university and its mission. Second, policies can encourage cross-fertilization among projects by rotating faculty and staff among programs and even centers. ORU staff can, similarly, be used for classroom instruction or as partners in traditional scholarship to further integrate them into the university. Finally, and perhaps most importantly, performance appraisal and reward structures should be based upon contributions to university mission and contributions to the whole institution, not just the center or institute.

Governance policies seeking coordination between ORU programs and university mission must serve two purposes. They should establish the rules by which ORU's are approved or "licensed," and they should formalize systematic review of ORU programs and activities. Goal congruence can be promoted through prenuptial agreements that require ORU proposals to specify how its activities:

- relate both to the solution of societal problems and to the institutional mission;
- contribute to the learning experience of students;
- will be integrated into the university community as a whole;
- will provide quality control and oversight;

- might include opportunity cost by displacing other activities that the university might engage in.

Too often consideration of a proposed center focuses on the resource commitments almost to the exclusion of programmatic issues. One should not be surprised when review and oversight is then largely a matter of fiscal audits rather than program review, and when directors and staff report their success first and foremost in terms of funds received.

Inputs and outcomes need to be clearly differentiated. External funds are inputs. Programs and projects and outputs. Confusion between the two is a great source of disruption. A primary emphasis on cash generation or return on investment skews both the behavior of ORU staff and university administrators away from programs and mission and toward the search for the ultimate "cash cow."

A more effective set of criteria for evaluating centers and institutes is being applied at Colorado State University. It includes:

- accomplishment of programmatic objectives;
- contribution to a body of knowledge;
- implementation of results;
- educational impact in the university (including the direct impact on students);
- economic efficiency of the operation;
- compatibility with university goals and policies;
- compatibility with professional goals of individual faculty involved in research.

Oversight and control of ORUs are essential if they are to serve the best interests of the university. But it is equally important that the mechanisms which are developed for these purposes strenuously avoid the imposition of mindlessly bureaucratic procedures. ORUs function most effectively and bring the greatest benefit to their institution if they retain the maximum procedural flexibility compatible with the cautions and issues discussed in this article.

With proper consideration of these matters, centers, institutes and other ORUs will serve metropolitan universities well as these institutions intensify their attention to social, economic and cultural development and intensify their interactions with partners outside the campus. Interdisciplinary teamwork and boundary spanning functions will become increasingly important. At the same time, there are risks attendant to such external relationships with regard to the loss of objectivity, of curiosity-driven scholarship, and the erosion of institutional autonomy. With appropriate oversight, ORUs can excel as problem-centered units and as boundary spanners with the outside.

ORUs function most effectively with the maximum procedural flexibility.

They have proven their worth time and again. They are not temporary guests in our academic home, but permanent residents. And it is time metropolitan universities treat these units as such. The institutions must make accommodations to the needs of the ORUs as the latter, in turn, do so to the needs of the university. Properly nourished and guided, ORUs can become the key elements in the growing outreach activities of the metropolitan universities.

Suggested Readings

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