ISSUES IN INTEGRATIVE STUDIES
No. 12, pp. 169-180 (1994)

Overcoming Barriers: Interdisciplinary Studies in Disciplinary Institutions

by
Jerry G. Gaff

Vice President
Association of American Colleges and Universities, Washington, D.C.

Keynote address presented at the Association for lntegrative Studies 1993 Annual Conference, co-sponsored by The College of Lifelong Learning, Wayne State University, Detroit, Michigan, October 8, 1993

I AM VERY PLEASED to be with you today for this 15th Annual Meeting of the Association for Integrative Studies. I have long admired this Association in part because—as we will explore later—it flies in the face of the mainstream of American higher education. AIS is inherently audacious and courageous, and I like that. Also, since my graduate education and career have been steeped in interdisciplinary studies, I share your basic values and commitments. And I have also respected the work of many leaders of this organization. So when the Program Committee asked me to speak today, it was easy to accept.

Like many of you, my entire career has focused on academic improvement and innovation. Unfortunately, colleges and universities are in many respects like people; as President Bill Clinton has said repeatedly, change is frightening and difficult for individuals and organizations. Change in academic institutions is notoriously hard.

For example, academic folklore holds that changing the curriculum is more difficult than moving a cemetery.

Irving Kristol. the social critic, asserted that colleges and universities are the social institutions most resistant to change—with the possible exception of the Post Office. And in case you haven't noticed, the Post Office is in the midst of a major overhaul these days.

A young professor was quoted in a 1911 book on the curriculum as saying, "The progress of this institution ... will be directly proportional to the death rate of the faculty."

Frederick Rudolph, the academic historian, commented, "The professor was an optimist. College faculties by the late 19th and early 20th centuries had developed an authority that made the course of study a jealously guarded compound of special interests. By then, it seldom mattered who died."

Despite these warnings, let us push ahead and consider the barriers to integrative thought and ways of overcoming them. My intention is to concentrate my remarks on three topics: 1) the strengths and weaknesses of academic disciplines; 2) the need for greater integration in undergraduate education; and 3) several models for achieving it. I will conclude with a modest proposal.

Let's start by noting that academic disciplines, contrary to some assumptions, were not etched on stone by God and carried down the mountain by Moses. As Rudolph implied, they came into being during the latter part of the 19th and early 20tb centuries as a means to organize and facilitate the intellectual work of scholars. That was a time characterized by the growth of specialization, notable breakthroughs in science, the adoption of the Germanic ideal of the research university, and the elective principle encouraging 1,000 curricular flowers to bloom. The adoption of these bold academic innovations at Johns Hopkins. Cornell, Harvard, and other leading universities gave them a good start. Specialization after specialization grew new limbs on the tree of knowledge. New leaves of learning blossomed throughout the 20th Century, and the process continues today, as old fields of knowledge divided and others combined.

Professors learned that the way to establish a new field was to insist that it was an academic discipline, with its own distinctive subject matter, methodology, and perspective. The process of growth by specialization is satirized by J. Harris Purks, former Provost of the University of North Carolina, in his modem parable called "Academic Planning in Alligator Farm Management." Among the steps he noted are these:

> A professor gets approval to offer one course in Alligator Farm Management at an institution. A professional association of alligator farm managers is organized, and it pushes for more courses, such as 'The Alligator and the Modern World' and 'The Exceptional Alligator.' Fellowship funds from the field lead to the appointment of a full-time professor with assistants. The staff win begrudging permission for a program leading

> to a Bachelor of Science in Alligator Farm Administration. The institution's president discovers the existence of the field, but by this time things are out of hand: competing programs at rival institutions arise; the National Accrediting Association for Schools and Departments of Alligator Farm Administration is organized; and ultimately—in order to prepare professors for the new programs—the institution establishes a graduate department of alligator farm education. (Cited in JB Hefferlin, *Dynamics of Academic Reform*, 1969, p. 25).

The result of all of this branching and recombining of academic disciplines is that today we have a glorious, mature academic oak tree, perhaps even a redwood, that is far different from anything in the academic landscape of a century or so ago that nurtured the modern university.

Somewhere along the way, like-minded individuals banded together for their intellectual stimulation and scholarly encouragement. That is, the disciplines eventually became departments, administrative units to conduct the business of the university. This was a fateful change, because disciplines ceased to be merely a variety of intellectual approaches: they started to have vested organizational interests to protect. The disciplines, as departments, recruited, reviewed, and promoted faculty members; they provided the primary paths for career advancement and mobility; and they constituted a good part of the professional identity of inhabitants. Professors tend to identify themselves primarily as a biologist, historian, or nurse rather than as the more generic "college professor" or "faculty member at Wayne State University," for example. Each clan developed a technical language that set themselves apart from other clans, and increasingly became what today we call separate "communities of discourse." Today the disciplines/departments are king of the hill in the universities, offering not just perspectives on the world but also allocating the resources and rewards to those who advance the particular interests of the departments.

Not only that, professors have created a curriculum that mirrors the disciplines. Today's curriculum is made up, primarily, of the academic disciplines and their sub-specializations, rather than human dreams, issues, struggles, or problems. The process of dividing and dividing again has created a veritable cornucopia of specialized disciplinary courses that appear to have something to say about virtually any topic. Today's students, especially in large universities, have access to a truly amazing array of specialized courses in many, many academic disciplines.

But like any success story, this one has within it some serious flaws. C.P. Snow asserted that there were two sharply polarized academic camps, the literary and the scientific. He claimed the differences between these groups were so great that they constituted "two cultures," with little common "intellectual, moral, and psychological climate." Now. over 30 years later, the divisions between communities of discourse are deeper, and the subcultures much more numerous. Whitehead observed the danger in this state of affairs: "It produces minds in a groove. Each profession makes progress, but it is progress in its own groove. ... But there is no groove of abstractions which is adequate for the comprehension of human life" (*Science and the Modern World*, 1925).

Simply stated, every discipline has inherent limitations that need to be corrected by the presence of other disciplines. As a discipline defines itself by outlining its scope, it separates itself from other specializations. Barriers of structure, language, interaction, and even style tend to cut each field off from all others. But we know that every field of study is enriched by concepts, theories, knowledge, and methods from other fields. An old adage holds that a specialist is a person who knows all there is to know about his field except where it fits in the universe. This is one of the intellectual arguments for the interdisciplinary approach: it is a necessary corrective for the limits of every single discipline.

There is also a social argument for an interdisciplinary approach. Social issues and problems are not organized according to the categories of scholars. Solutions to every significant human problem—health care, justice, environment, national and international security, or some other—can be solved only with the knowledge and perspectives of multiple disciplines. Yet, precisely because of the way we have organized the university, it is difficult to bring the perspectives of various academic disciplines together to focus on a single problem or issue. It requires special structures, strong leadership, clever strategies, and adequate resources to bring academics together to work on any topic that cuts across disciplines.

There is also a pedagogical argument. Just as faculty members tend to concentrate their attention on their specializations, students tend lo concentrate on their majors, to the neglect of whole areas of the spectrum of human knowledge. The upshot is, as many critics have scolded us, that many students graduate without acquiring a broad general education. Too often they graduate without bearing the marks of a generally educated person, such as possessing knowledge of history and culture as well as science and mathematics; familiarity with the major fields of study; understanding of other cultures and how people vary in terms of ethnicity, race, and gender; skills to think critically and to express themselves clearly; the abilities to work independently and with a diversity of other people; and sophisticated personal attitudes, sensibilities, and tastes.

The value of connecting knowledge of a field with other fields, then, is needed to get beyond the limits of the disciplines. It can remove the blinders structured into the work of individual disciplines. This is not news to many of today's professors. Because even while the university typically is organized along departmental lines, scholars are collaborating across fields, many

of the disciplinary boundaries are becoming blurred, and cross fertilization is bringing new fields into being, such as genetic engineering, cognitive science, and linguistics. Much intellectual excitement is at the margins. The historian John Higham commented on the disparity between the traditional university structure and the behavior of many scholars: the university, he says, is like:

> ... a house in which the inhabitants are leaning out of the many open windows gaily chatting with the neighbors, while the doors between the rooms stay closed.

Let's make a transition and look at the need for greater integration in undergraduate education. Let's consider general education, the academic major, and approaches to teaching and learning. We have heard charges that the general education curriculum is weak and incoherent and calls for greater quality and coherence. For decades, the conventional pattern has been a loose distribution scheme in which students choose from among a large array of courses in the natural and social sciences, humanities, and fine arts. Such a program is based more on a political compromise rather than a considered educational philosophy or conviction of what students should know to live in the 21st century. Given this situation, it should not be surprising that:

- curricula are fragmented;
- faculty are not interested in teaching what they despairingly call "service courses"; and
- students don't see the point of requirements and try to get them out of the way so they can get to their majors.

The fact of the matter is that an array of independent courses collectively does not provide a coherent education—even when the distribution requirements are tightened, as many institutions have done recently, A distribution scheme consisting largely of introduction to the disciplines is inherently unable to provide coherence. The whole is simply not able to be more than the sum of the parts—even when the parts are excellent.

Curricular fragmentation is the natural result of governance by disciplines/departments. Departments protect their turf so strongly that the curriculum, more often than not, is a political, not an educational document. A further reason for fragmentation is that general education, typically, is an organisational orphan. Whereas even the smallest academic department has a chairperson, a faculty, and a budget, general education usually has none of these. The general education curriculum, therefore, is the result of more or less independent curricular decisions made by separate colleges and departments. The dispersal of authority to the disciplines/departments—originally made to empower faculty, support specialized study and promote educational excellence—often operates in practice to produce gridlock and a jumbled educational experience for students.

For at least a decade colleges and universities all across this land have been revising their general education curricula to give it higher quality and greater coherence. My current research shows that large numbers of colleges and universities are making substantial progress in strengthening their general education programs. They are taking such steps as:

- emphasizing the liberal arts and sciences and a broad general education for all students;
- stressing the importance of intellectual skills;
- incorporating global studies and cultural pluralism: and
- adding more purpose and structure to the curriculum.

Some are creating whole integrative studies programs as an alternative to the distribution model.

Institutions with a new. more coherent curriculum, often strengthen its oversight by appointing an administrator whose sole or primary responsibility is general education. (When the word was more fashionable, I used lo refer to this position as a czar for general education.) This person is often assisted by other part-time administrators, overseeing writing, freshman seminars, an interdisciplinary core sequence, or other components. Further, an institution-wide faculty committee provides academic leadership for the program.

It is noteworthy that these curriculum reforms typically place greater emphasis on the integration of knowledge. According to Harlan Cleveland, integration is what is higher about higher education. Interdisciplinary study is being used to hitch the disciplines to the personal concerns of students and to the real world problems that they face. It also provides some connective glue that is beyond the capability of individual disciplines.

Everybody acknowledges that students should integrate the knowledge from their various courses. But most are content lo let them do it on their own. A very different approach is called for by Jonathan Smith. While Dean of the College at the University of Chicago, he proclaimed an "iron law": "Students shall not be expected to integrate anything that the faculty can't or won't!" The rationale behind his proclamation is that integration of knowledge is not likely to occur *unless* the faculty model it in the classroom, they help students to acquire the skills to do it on their own, and they award credit for its achievement.

Or consider the academic major. AAC issued a report on the major that it prepared with the assistance of 12 professional societies, such as the American Chemical Society and the American Historical Association. Entitled *The Challenge of Connecting Learning*, it said the major should provide a "home" to students. Like any home, it should provide sustenance and support for students, but it should not make them home-bound. Indeed, the report declared that study of each major is not complete until it makes a series of connections—with other fields of knowledge, with social issues and problems, and with the

personal lives of students. How many of your majors actually achieve these expectations? Many departments are conducting reviews to incorporate these ideas, but frankly such efforts are too few and too meager.

A similar suggestion was made by Ernest Boyer (1987. p. 110); he calls for the creation of an "enriched major." An enriched major would not only allow students to learn a field in depth but also put it into perspective. Students, and, by implication, faculty members would respond to three questions:

> What is the history and tradition of the field to be examined?
> What are the social and economic implications to be understood?
> What are the ethical and moral issues to be confronted?

Connecting learning and an enriched major would transform the ways academic majors are conceived and operated.

Next, consider our approaches to teaching and learning. As I look over most courses of study today, specialization, not integration, seems paramount. Diversity, not unity, appears to be the guiding principle. Analysis, not synthesis, is the preferred pattern of thought. Yet. almost everyone 1 know who works has a job that requires them to think through and solve large, complicated problems that call for creative syntheses.

Where will our students learn the integrative habits of mind? These are precisely the abilities that will equip them to think through the problems that have not yet surfaced but which are bound to confront them, as they go through the seasons of their lives.

The individual course is the basic building unit of instruction. Occasionally one sees efforts to link two or more courses together. I have heard professors report that the linked courses are far more valuable than the same courses taught separately. Almost to a person they report that students work more efficiently and effectively; they perform at a higher level; and they are more satisfied with their courses. The faculty members also learn from each other, gain intellectual excitement from exploring (sometimes old) topics from fresh perspectives, and are more satisfied with their own and their students' learning.

Linking several courses around a common theme also seems to be a winning combination. The faculty still teach their separate courses, but they are designed to illuminate the overarching theme. LaGuardia Community College in New York, for example, offers clusters of three courses. For liberal arts students the theme is The Concept Freedom, which joins courses in philosophy, composition, and one other general education field. For students in professional areas, the theme is Work in America, that relates courses in economics, business, and composition. Roberta Matthews writes,

> Because (interdisciplinary learning clusters) encourage continuity and integration in the curriculum, students learn more from courses experienced within the community than they would from taking each course as a discrete entity ...

Students taking the composition courses within the liberal arts cluster have a higher completion rate and about half the failure rate, and they receive 10-20 percent more A's and B's. In the business cluster students are more likely to complete both the economics and business courses, and the instructors award about 25 percent more A's and B's. Despite the consistent success reported with the alternative approaches, such efforts to coordinate courses remain the exception, not the rule, in higher education.

The work of Patrick Hill, Barbara Leigh Smith, Jean MacGregor, Faith Gabelnick, and Vincent Tinto, among others, document the power of deliberately created learning communities. This is a lesson that was given expression in the 1920s by Alexander Meiklejohn at the Experimental College at the University of Wisconsin and in the 30s by Robert Maynard Hutchins at the University of Chicago. It is replicated today at the Classic Learning Core at North Texas University, the Planned Alternative General Education Program at George Mason University, and the School of Interdisciplinary Studies at Miami University. But, these, too, remain outside the mainstream. They remain vulnerable.

This whole speech about the importance of the academic disciplines, and the need to go beyond them to foster integrative thinking, is leading to a conclusion. It begins with the Humpty Dumpty conclusion—it is hard to put together the university once it is fractured. All of the efforts to promote coherence and community in undergraduate education face an uphill struggle, given the way we have conceived and organized the university. Even when interdisciplinary programs have shown their educational value, perhaps because they have, they are threats to conventional disciplines/departments.

It is a truism that no university today can be truly "comprehensive"; each one must select what areas it wants to feature. In the words of former president, Donald Kennedy, "Stanford can be anything it wants, but it can't be everything." Several are developing areas of selective excellence. This is usually code for supporting well known individuals to conduct research, publish extensively, and bring fame and glory to the university. Another way to define a center of excellence is in terms of learning communities, which provide more coherence and higher quality in undergraduate education.

Consider the case of Columbia University, which has had a distinctive general education curriculum since the end of World War I. A commission appointed to review the program recently issued a report that posed the issue sharply. Professor

Theodore deBary, the Chairman, wrote:

> On the whole we have found students, faculty, and alumni strongly supportive of the core curriculum as representing the best and most distinctive element in a Columbia College education. Nonetheless, general education faces unparalleled challenges today, and its value needs to be vigorously reaffirmed against the erosive effects of several powerful trends in academic life today—the ever more intense specialization and fragmentation of learning; the entrenchment of departmental structures in university administration; the stress on research and publication at the expense of teaching (as shown in the constant pressure to reduce teaching loads, especially in core courses), and the widespread assumption that 'the selective excellence' is to be found in individual displays of highly visible scholarship rather than in shared programs of collegial instruction based on a coherent educational philosophy.

General education reforms, connecting learning—an enriched major—integrated knowledge—coherent curricula—linking courses—synthesis of ideas—learning communities—shared programs of collegial instruction based on a coherent educational philosophy—all of these are ways of starting with the academic discipline–and then going beyond them. All are worthy candidates for centers of selective excellence, because they are the heart and soul of undergraduate education.

The modern university needs strong specializations and academic departments. But it also needs structures and mechanisms that cut across the disciplines to foster the integrative habits of mind. These mechanisms, whether in general education, the academic majors, our approaches to teaching and learning, or whole communities, can provide a measure of wholeness in the education of students. They can also foster faculty renewal and institutional vitality.

I promised to conclude with a modest proposal. Here it is. I propose that this organization, the Association for Integrative Studies, prepare a statement of principles for integrative education. More than any other organization, you have the experience, wisdom, and commitments that can give force to the kind of education we have been discussing. It would require that you work together to clarify your ideas and to find broad areas of agreement. It would take some work, but 1 believe that a well-crafted declaration would advance the cause of interdisciplinary education in disciplinary institutions. It could strengthen the hands of all of us.

Here are my own personal candidates for inclusion in your declaration.

1. The integrative habits of mind are essential goals for all students and should be explicit purposes of every academic program.
2. All students should have repeated opportunities for integrative, interdisciplinary studies on issues and topics that are of interest to them.
3. These opportunities must be formally structured into baccalaureate degree programs, not dependent on the hit-or-miss approach when such offerings are dependent on the personal interest and good will of individual faculty members.
4. Faculty members should be expected to model integrative thinking, and they should coach and otherwise assist students to learn these skills.
5. All academic majors should have a capstone course in which students pull together their knowledge and skills into a paper, project, or artistic-expression.
6. Every general education curriculum is deficient if it consists only of surveys of academic disciplines. Each curriculum should have an interdisciplinary component; it might consist of an alternative integrative studies program.
7. Each student should participate, at some time during his or her career, in a collaborative learning activity, in which the individual accomplishments are integrally connected to the accomplishments of the group.
8. Each student should experience, at least once, a genuine academic community. This is because learning is an individual, not necessarily solitary, activity. Indeed, learning is best when it takes place within a supportive, challenging, and rewarding community. Students should learn that they are responsible, at least in part, for the learning of others.
9. Colleges and universities should support interdisciplinary dialogue among faculty as a vehicle to foster their facility for integralive teaching and learning.
10. Institutions should encourage and reward faculty members for their involvement and success in carrying out the above tasks.

This proposal is modest—to prepare a statement. But if these principles were put into practice, their impact would be anything but modest. Since most powerful academic forces run counter to integrative education, it is important for those of us who think otherwise to generate some momentum of our own. Your newsletter and annual conference are ready forums to communicate about these issues. They could be used to fashion a statement about the principles that you hold dear.

I look forward to reading the text of your report in a future issue of *The Chronicle of Higher Education*. Even more important, I hope to hear about how you and your colleagues apply these principles in your own courses, in your own departments, and in your own colleges and universities, for the benefit of your own students.

Biographical Note: Jerry Gaff is Vice President of the Association of American Colleges and Universities. Previously he was interim President, Academic Dean of the College of Liberal Arts, and Vice President at Hamline University, St. Paul, Minnesota. Under his leadership as Dean, the faculty designed an innovative, liberal arts curriculum, known as the Hamline Plan, which relates liberal arts courses with the world of work. He has been a member of the faculties of Sonoma State University; University of Leyden, the Netherlands; University of the Pacific, and Hobart and William Smith Colleges. He conducted research at the Center for Research and Development in Higher Education, University of California-Berkeley. Dr. Gaff is the author of several books and numerous other publications on liberal and general edueation. His books include *New Life for the College Curriculum* (1991), *General Education Today* (1983) and *Toward Faculty Renewal* (1975).