MARGINALITY, SURVIVAL OR PROSPERITY: INTERDISCIPLINARY EDUCATION IN LARGE RESEARCH UNIVERSITIES

Paul Von Blum
UCLA

> Almost any proposal for major innovation in the universities today runs head on into the opposition of powerful vested interests. And the problem is compounded by the fact that all of us who have grown up in the academic world are skilled in identifying our vested interests with the Good, the True, and the Beautiful, so that an attack on them is by definition subversive.
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> Nowhere can the operation of vested interests be more clearly seen than in the functioning of university departments. The average department holds on like grim death to its piece of intellectual terrain. It teaches its neophytes a jealous devotion to the boundaries of the field. It assesses the significance of intellectual questions by the extent to which they can be answered without going outside the sacred territory. Such vested interests effectively block most efforts to reform undergraduate education.
>
> - John Gardner
> No Easy Victories

John Gardner's depressing observations about the prospects for serious institutional change and educational reform were written in the mid-1960's, a time of enormous political ferment and educational experimentation in American colleges and universities. Since that time, there have been many impressive efforts at curricular change in American institutions of higher learning. Several schools have established and supported outstanding educational alternatives to the standard disciplinary fare,[1] while a few institutions such as Hampshire College and Evergreen State have totally

eliminated traditional educational structures in favor of a total commitment to interdisciplinary education. The spirit and turmoil of the 60's doubtless has had some beneficial effects upon the course and direction of contemporary higher education. Many of today's innovations that seek more integrative approaches to knowledge and that explore the political, social, and ethical implications of academic work would never have been initiated without the agitation of the 60's and early 70's. At the same time, Gardner's gloomy remarks about the problems and prospects of academic change are still disturbingly relevant to most large, prestigious universities where research and graduate training are the dominant priorities.

The research-oriented multiversity has played an increasingly powerful role in American higher education since World War II.[2] The proliferation of extramural funding from government agencies, foundations, and corporations has had profound consequences for universities. It has strengthened research priorities and has contributed to the decline of undergraduate general education. It has also reinforced the hegemony of departments within the multiversity.

While many academics were delighted with a system that provided professional status and pecuniary rewards for narrow and often trivial research production, others realized that these priorities could result in widespread student dissatisfaction. Even before the events of the 1960's, they saw that universities were becoming increasingly blind

to some major educational deficiencies.

President Clark Kerr of the University of California, for example, identified many of these educational problems in his book written revealingly only a few years before the student eruptions at Berkeley and elsewhere:

> (T)here are some problems still to be fully faced; and they are problems of consequence.
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> One is the improvement of undergraduate instruction in the university. It will require the solution of many sub-problems: how to give adequate recognition to the teaching skill as well as to the research performance of the faculty; how to create a curriculum that serves the needs of the student as well as the research interests of the teacher; how to prepare the generalist as well as the specialist in an age of specialization...; how to treat the individual student as a unique human being in the mass student body; ...how to establish a range of contact between faculty and students broader than the one-way route across the lectern or through the television screen; how to raise educational policy again to the forefront of faculty concerns.[3]

Events would shortly reveal that Dr. Kerr's concerns

were largely theoretical and rhetorical. In the autumn of 1964, the Berkeley campus of the University of California exploded into a series of massive student protests unprecedented in the history of American higher education. The Free Speech Movement began initially as a response to a stupid and unconstitutional regulation that prohibited political advocacy at the entrance to the university. As the confrontation intensified, other fundamental issues affecting the character and quality of university life emerged as prominent features of the conflict on campus. In due course, many of these educational and political issues spread throughout the country and throughout much of the Western world.

At Berkeley, thousands of students began to focus on the educational inadequacies of modern university life. They questioned the impersonal character of teaching and campus administration, institutional complicity with the military, CIA, and other governmental agencies, exploitation of graduate students, unfair patterns of university governance, and indeed, the whole concept of the "multiversity." As important as any other issue was the comparatively low priority of undergraduate education at the University of California (and by implication at other large and prestigious institutions). Closely related was the growing consciousness that knowledge was being presented in absurdly fragmented packages and that the organization of learning into minute disciplines worked powerfully against the goal of a genuinely liberal education.

The FSM was the major catalyst for a more general

national consideration of these complex and troubling problems. In the ensuing decade, there were hundreds of student demonstrations about a wide range of political, social and educational issues. Racism and the growing escalation of the war in Vietnam, of course, were central to these conflicts. Still, the focal point of much of the activity was the movement for educational innovation and reform. The post-FSM era saw countless proposals for educational change and interdisciplinary alternatives to academic orthodoxy at large research universities. The era also generated scores of official commissions, investigations, and committees as well as a massive barrage of public rhetoric about the subject of improving higher education.

Some of this activity was instrumental in effecting serious change. The record in major research institutions, however, has been far more modest. Undergraduate education remains a relatively low priority while departmental domination in shaping institutional policies continues to be the norm. In many schools, the educational problems identified during the 60's remain unsolved; many, indeed, have been exacerbated during the past decade. All too often the results have been little more than the establishment of a few token programs and projects. Sadly, many of these are designed more to provide public relations gloss than to improve serious educational problems. In many universities since the 60's and early 70's, interdisciplinary programs have been created, permitted to endure for a few years, then phased out and replaced by new programs. Often the entire process is repeated.

Meanwhile, little of permanent value remains, while hundreds of committed interdisciplinary teachers suffer additional insecurity in a depressing academic job market.

The University of California is an interesting case in which this phenomenon has occurred. As an institution, it epitomizes the enormous range of problems faced by academic innovators, especially those who seek to create and instuitutionalize interdisciplinary entities. For many years its international reputation has been predicated on the quality of its faculty's research and on its excellence as a center for graduate and professional training. In the years following the Free Speech Movement at Berkeley (and similar if somewhat less publicized eruptions at many of the other campuses), the entire institution came under severe attack by many students, some faculty, and certain members of the State Legislature and Board of Regents for failing to address its pressing educational problems. Critics argued persuasively that its research prestige, based as it was on narrow disciplinary accomplishments, often defeated the objective of a more integrative education for undergraduates.

In response to such pressures, University officials generated some actual curricular change as well as the usual commissions and reports. Many of the critics, however, maintained that most of these changes were mere window dressing, particularly at Berkeley. Two scholars who investigated this situation at Berkeley as part of a broader inquiry into the politics of educational innovation concurred:

> Berkeley is perhaps the prototype among American univeristies, of frenetic activity, grandiose planning, dramatic pronouncements, and virtually no change.[4]

A decade later, the University of California continues to be an excellent source and focus for an examination of the severe problems and limited prospects for interdisciplinary innovation at large and prestigious research universities. The multifaceted activities of the University of California have a powerful influence in scholarship and education throughout the entire world. The possibilities for serious educational reform in this institution therefore have significance far beyond the boundaries of its nine individual campuses. Clearly, of course, there are important differences among large research universities. Local conditions are always crucial and the presence or absence of faculty members and administrators with educational vision and strong leadership capabilities is a major variable in the long-term success of interdisciplinary innovations. The fortuities of time and place cannot be overemphasized.

Nevertheless, a careful assessment of both the broader barriers and opportunities within the University of California can have implications for similar institutions throughout the country. A useful approach to such an assessment involves an investigation into three currently existing interdisciplinary programs at Berkeley and UCLA, the two most powerful units within the University of California system. All three programs have been deemed educationally outstanding in

repeated student evaluations. The Berkeley program, however, has been politically beleaguered and has been constantly faced with threats to its existence. The UCLA programs, conversely, appear to enjoy, at least for the present, some impressive institutional stability.

Using the Berkeley Division of Interdisciplinary and General Studies[6] and the UCLA Program in Medicine, Law and Human Values and the UCLA Freshman/Sophomore Professional School Seminar Program as comparative examples, it is possible to identify and analyze some major historical, political, financial, and psychological differences between the educational ferment of the 1960's and early 1970's and the present. The analysis of the three University of California cases can be used to draw more general conclusions about the prospects for interdisciplinary education in the essentially conservative world of research universities.

The division of Interdisciplinary and General Studies (DIGS) was created in the wake of the Free Speech Movement. It was one of the results of the numerous reports on improving undergraduate education at Berkeley arising out of the turmoil of the era. Although it continues to survive in a diluted and marginal fashion, it is a clear and dramatic example of a quality educational program that could never receive full institutional support. Created originally by the College of Letters and Science in 1969, its original charge was to be a place for courses that could not find a home in any one department and for field majors in humanities, natural science, and social science. In its first years it

underwent numerous transformations. There were several changes among the junior faculty and in due course the natural science field major was eliminated. Shortly thereafter, the original emphasis on classical knowledge was reduced and a relatively stable group of faculty members emerged.

Almost from its inception, the social science field major established itself as the dominant unit within the broader Division of Interdisciplinary and General Studies. Its faculty and its particular educational programs soon became the focus of significant controversy at Berkeley. Operating with no more than four or five instructors, the major attracted over 300 students, each of whom devised an individual program combining core courses in social science theory and methodology, historical courses from the ancient and modern eras, and a personal area of concentration that cut across traditional disciplinary lines. With careful and detailed assistance from faculty advisors, students combined courses in the program itself with offerings from throughout the College of Letters and Science.

DIGS social science students were drawn from a wide diversity of backgrounds. Despite the widespread impression among the faculty that DIGS constituted a ghetto for marginal students seeking an easy degree,[7] the level of student performance was high, even by Berkeley standards. Indeed, a significant percentage of DIGS students entered the program precisely because they wanted the challenge of taking personal responsibility for the course and direction of their own

educations. Furthermore, a large percentage of social science majors subsequently entered graduate and professional school, where many compiled exceptional records.

From the start, DIGS was perceived as encouraging academic superficiality and contributing to a general decline of intellectual standards. It is worth mentioning here that such accusations by orthodox academics have been frequent in the recent American history of educational experimentation. It is also worth noting that while the allegations against non-traditional colleagues have sometimes been true, they are often the defensive response of the members of a guild, mindful of their own interests and fearful of change and disorder. At Berkeley, the accusations against DIGS were omnipresent. They were expressed in public and even more often in the private conversations in dining rooms, office corridors, and social gatherings that, despite official denials, have enormous consequences for academic policy in all colleges and universities. Without doubt, DIGS had a "bad press" on the Berkeley campus and only a handful of prestigious regular faculty members spoke publicly or privately in its defense. Subsequent analysis reveals that a convergence of historical, political, and psychological realities made this condition virtually inevitable.

Notwithstanding, closer scrutiny of the program in a series of official inquiries and reviews indicated the existence of an enormous gap between the public image and the educational reality. Faculty review committees determined that DIGS was responsible for some outstanding educational contributions at Berkeley. The specific comments of one

of the review committes are particularly revealing both about the gap itself and about the broader character of academic life in major American research universities:

> [T]hanks to the devoted service, fine teaching, and superb advising of its Chairman, faculty, and staff, it can now proudly make the claim that it has survived. And it has done something more than survived; it has established its credentials as a serious academic enterprise... ...DIGS has been the prey of rumors of its immediate demise, and even if the reports of its ill health have been erronious and ill-founded, the suspicion continues to exist the DIGS is not long for this academic world.[8]

The committee concluded by offering a variety of recommendations that would, if implemented, have strengthened this form of interdisciplinary education at Berkeley. The report affirmed vigorously that DIGS had earned a place as a permanent part of the continuing undergraduate program on the Berkeley campus. It argued that the program should not be perceived as a pious extra by faculty members who were totally immersed in their departments. It urged the university to support the program as part of a serious commitment to educational pluralism. Most important, it recommended the allocation of modest permanent resources in order to ensure programmatic stability and continuity:

> A university as great and varied as this should have a place for a small number of ladder appointments devoted to DIGS...[9]

DIGS faculty and students were understandably elated when their report was presented. For the first time, there was optimism that the program would survive and that its faculty would receive some formal institutional support for its educational accomplishments. These hopes were quickly dashed. In spite of its academic successes and its increasing reputation beyond the Berkeley campus for its interdisciplinary innovations, the program remained in serious political trouble.

The College of Letters and Science declined to provide any permanent resources, a major blow to the highly vulnerable junior faculty in the program. Regardless of their teaching and other academic achievements, neither tenure nor any other form of recognition was made available. Repeated attempts to convince the administration to implement the recommendations of the review committee proved fruitless. The controversy soon broadened and the atmosphere became tense and unpleasant. Political lines were drawn, with militant students, organized parents, and sympathetic Regents and State Legislators on one side and a resistant administration spearheaded by a strong and hostile Dean on the other.

The sustained political activities of DIGS supporters probably served to preserve its existence if not its essence.

At present, its faculty are all part-time appointees who must be reappointed yearly. Its enrollment has declined and reports suggest that the character and quality of its students have changed in negative ways.

While it is tempting--especially for participants who expended time and emotional energy in constructing and defending the Division of Interdisciplinary and General Studies--to bemoan the fate of a valuable interdisciplinary program, it is more important to explore the underlying reasons for its difficulties at Berkeley. The results of such analysis can reveal much about the recent history of higher education and can be useful to educational innovators and reformers who wish to avoid similar problems in comparable universities.

The major factors in the precarious marginality of DIGS are historical, political, psychological, and institutional. These variables transcend the important but local vicissitudes of power on the Berkeley campus. The failure of DIGS to establish a permanent institutional foothold is a function of its perceived association with 60's radicalism; its use of confrontation tactics; its threatening implications for the emotions of orthodox scholars; its status as a degree-granting unit relying on its own faculty; and the widespread indifference of prestigious research universities in the 60's and early 70's towards enrollment and student satisfaction.

From the beginning, the Division of Interdisciplinary and General Studies was tainted by an association with the political ferment at Berkeley and elsewhere during the 1960's. Ironically, its actual educational activities were surprisingly

conservative, with a strong emphasis on historical background, a modest integration of traditional academic fields, and a heavy focus on written and oral communication. Its premises were not unlike those propounded by Robert Hutchins, and its courses used Plato even more than Marx. Nevertheless, the program would never have been created had Berkeley not erupted a few years earlier.

It is important to emphasize that an extremely large percentage of faculty members at Berkeley and elsewhere found the events of the 60's to be traumatic. Accustomed to the tranquility of the scholarly calling, these men and women saw those events as an attack on academic order and thus as a frontal assault on their most intimate personal values. For many, the 60's were nothing short of a major life crisis.

Many Berkeley opponents of the DIGS innovations were unable to separate educational experimentation from the broader political radicalism. The emotional consequences of many years of building occupations, tear gas, street fighting, mass arrests, and extreme polarization of opinion were enormous. Antagonists of DIGS often saw it in the same mold as those who would burn buildings and destroy academic life. While this attitude was uncritical and often astonishingly simplistic, it had immense significance for the creation of a hostile campus attitude toward academic experimentation in general. This phenemenon, of course, was hardly confined to the University of California at Berkeley.

The specific Berkeley situation was exacerbated because most of the DIGS social science instructors had themselves

been graduate student supporters and participants of major campus protests such as the FSM. Some continued their commitments to broader social change, even though this was far from their daily concerns as interdisciplinary university teachers. Furthermore, the DIGS controversies themselves, while never violent, were frequently characterized by forceful and articulate student advocacy. Clearly, any form of student protest reminded people of earlier violent demonstrations. In a basic way, therefore, all such advocacy on behalf of DIGS was doomed to failure because of the powerfully negative effects of the entire turbulent decade.

Psychological factors in general are immensely important in assessing the problems and prospects of academic innovation. At prestigious research universities, many faculty members appear unusually defensive about their academic specializations and research. They often seem threatened by educational activities that depart from their own training and disciplinary outlook. Underlying John Gardner's pessimistic prognosis for educational change are some hard truths about the attitudes and emotions of departmentally-bound professors. These personality variables played a powerful role at Berkeley and continue to have enormous political significance throughout higher education.

Intellectual synthesis and interdisciplinary education apparently are disconcerting enterprises to large numbers of research-oriented academics. Human beings in general view anything different and unorthodox with suspicion. The identities of many university professors revolve heavily

around their academic specializations. Like most professional people, they acquire a strong emotional interest in their work. Similarly, they develop strategies, often unconsciously, to rationalize their basic activities. A concomitant effect is the development of defensive attitudes towards those whose educational and scholarly outlooks proceed on different assumptions.

The implications of these natural processes are sometimes striking. At large research universities, status and professional recognition depend on expertise and publication in specific academic fields. In practice, this means production in relatively narrow sub-areas of knowledge. Scholars already trained as graduate students in a culture of extreme specialization adapt easily to this norm. Such powerful specialization is quickly internalized, with significant emotional consequences. For many academics, greater academic breadth is outside their ken, and therefore subject to a priori rejection.

The occasional harsh verbal attacks by traditional scholars on interdisciplinary colleagues are reflections of these emotional consequences. These attacks sometimes mask feelings of personal inadequacy. Allegations of complicity in reducing academic standards may indeed be attempts to convince themselves of the value of their own intellectual contributions. While psychological variables cannot explain the totality of faculty hostility to interdisciplinary education, their importance should not be ignored.

One other dimension of this scheme of explanation is worth elaboration. In major research universities, faculty members are selected among persons who are often more comfortable in the library or laboratory than they are in personal interactions--especially with undergraduate students. At Berkeley and similar institutions, large numbers of students often report difficulties in communicating with such professors, particularly if the subject matter transcends specific course content. The major and overriding strength of the DIGS social science program was its student-centered perspective. Formal evaluations of the program repeatedly noted that students felt extremely comfortable in talking with DIGS faculty. This close student-faculty relationship clearly evoked hostility among members of the traditional faculty. A harsh but obvious explanation was that some persons resented a form of personal education of which they were apparently incapable.

A variety of institutional factors also contributed to the beleagured status of DIGS at Berkeley. An examination of these factors is useful in determining some significant historical differences between the 60's and early 70's and the present. One important variable was that during much of the DIGS controversies, a relatively stable enrollment base existed. This reality, in turn, had a powerful influence on general campus attitudes, including those about educational innovations. Specifically, this meant that university officials were confident that they would always have substantial numbers of students. Thus, they were confident of a relatively

secure funding base. There was--and is--a strong foundation for such attitudes. Regardless of demographic changes in the nation as a whole, Berkeley always receives applications from many thousands of college-age men and women. The very prestige of the Berkeley name encouraged officials to believe that they could avoid the catastrophic implications of declining enrollment for higher education generally.

Such attitudes inevitably influence campus policies and priorities. At Berkeley during the 60's and much of the 70's, there was little concern about retaining students. Similarly, there was no systematic institutional commitment to ensure student satisfaction with the quality of undergraduate education. Confident that dissatisfied students could and would be replaced by other students, the university showed general indifference in this realm. The consequences for DIGS were powerful and negative. Arguments about a cost-effective program generating widespread student satisfaction fell on deaf ears. Conversly, the dissatisfaction of DIGS students in response to official hostility to the program had little impact under the circumstances. The view was that Berkeley would always attract first-rate students and that the unhappiness of a few hundred students in a marginal program could be easily ignored or abosrbed with minimal trauma.

Another significant institutional factor ensuring the marginality of the DIGS social science field major was its degree-granting status. Students completing the major were awarded the B.A. in social science. Although DIGS students might otherwise have selected majors in such

traditional disciplines as political science, history, sociology, economics and psychology if the field major had not existed, there is no evidence to suggest that they eroded enrollment figures in these departments in any material sense. Once again, the existence of a degree-granting interdisciplinary interloper seemed to have immense emotional significance for orthodox academics at Berkeley.

That DIGS could award bachelors degrees from the University of California apparently seemed, in the minds of many, to confer an unacceptable status and legitimacy to the program. In additon, it seemed to place it in direct competition with traditional departments, an image it sought unsuccessfully to avoid. It is significant to note too that the program has never had a graduate component and therefore no specific mandate to conduct research. Its responsibility instead was nothing more--and nothing less--than the improvement of undergraduate education. In a research university like Berkeley, only educational activity closely associated with research is perceived as fully respectable. The existence of a uniquely undergraduate program offering Berkeley degrees, therefore, was untenable to many faculty members and administrators.

A closely related factor underlying the precariousness of DIGS was its almost exclusive reliance on its own faculty. Most of its courses and almost all of its advising were done by men and women with no formal connections or affiliations with regular social science departments on campus. This further exacerbated the estrangement of DIGS

from the mainstream of academic life. Unfortunately, however, recruitment of regular faculty into DIGS was almost impossible. Since rewards and prestige were derived through research within specific disciplines, there was little incentive for faculty members to participate in a politically suspect interdisciplinary program.

At Berkeley, it was often said that interdisciplinary efforts needed to be rooted in specific academic disciplines. Indeed, opponents of innovation turned this into an almost ritual refrain. Although the content of this refrain was questionable, its political implications were clear. More participation from sympathetic senior members of regular departments would have strengthened DIGS' case on the Berkeley campus. The severe imbalance of research versus educational priorities and the strong disincentives against association with all such programs combined to eliminate that potential.

The climate for interdisciplinary experimentation at the Los Angeles campus of the University of California is an interesting contrast to the Berkeley experience. While UCLA shares the research orientation of its Berkeley counterpart, certain interdisciplinary innovations have been able to survive and, in a limited sense, even prosper. Noticeably, absent in the recent past has been the overriding institutional hostility encountered by DIGS. It is useful to examine why such differences exist and to assess their significance for educational change more generally in comparable institutions.

A major specific variable at the moment is that there are persons with greater educational vision in positions of leadership at UCLA. Partly this is fortuitious; partly it is itself a function of some dignificant historical, demographic, and psychological differences between the mid-1960's and the present. These differences have combined to make UCLA a more hospitable setting for certain kinds of carefully constructed educational alternatives.

Two UCLA examples give rise to some cautious optimism in this domain. The UCLA Program in Medicine, Law, and Human Values and the Freshman/Sophomore Professional School Seminar Program are limited enterprises that have been well regarded on campus for approximately five years. Both programs operate out of the same office and many of the same personnel play important roles in both. The first program was designed in order to engage the attention of members of the professions, professional school students, undergraduates, and the general public in legal and ethical issues in health care. The major objective is to inquire into the underlying issues of value found in such controversial topics as abortion, genetic screening and counseling, DNA research, the use of placebos, euthanasia, informed consent, and many related problems. The program seeks to identify the perspectives of the major actors in these controversies--doctors, nurses, lawyers, ethicists, the clergy, and so forth. An important goal is to analyze and illuminate the conflicting values and postions and to promote a context for responsible value clarification and decision making in both individual cases and broader

public policy areas.

These ends are accomplished through a variety of mechanisms, all of which necessarily cut across the traditonal disciplines of contemporary academic life. In addition to public forums, conferences, research projects, and bioethics seminars in the schools of Medecine and Law, program faculty teach a variety of undergraduate courses existing outside of the regular campus departments. The major feature of the undergraduate program is a core course entitled "Medicine, Law and Society." The program also offers several seminars for small groups of students who have completed the core course. Invited faculty from professional schools and Letters and Science as well as program faculty have offered courses on such topics as Constitutional Issues in Health Care, Ethical Issues in Human Experimentation, The Language of Suicide in Literature, Law, Ethics, and the Mental Health System, and many others.

The program is highly respected at UCLA and elsewhere for its academic stature and accomplishments. Program personnel are regularly invited to regional and national conferences and to serve in various consultant and advisory capacities. Educationally, Medicine, Law and Human Values courses are consistently rated highly, with many students reporting that the courses have permanently altered their understanding of the intimate relationships between scientific and human values and of the complexities entering into decision-making in medicine and health care.

The other UCLA innovation, the Freshman/Sophomore Professional

School Seminar Program, is more specifically directed to improvement in undergraduate education. It is a small, high quality effort designed to meet a variety of instructional needs particularly of lower division students. Drawing on the resources of UCLA's 11 professional schools, faculty members offer seminars that provide the opportunity to learn about the nature of professional work and about the relationships between scholarship, basic research, social problems, and legal and ethical standards of professional life. Seminars are designed to enable students from all fields to understand more fully how professionals' values affect society and the economy. Enrollment in the seminars is generally limited to 15 students in order to provide the opportunity for close contact with faculty and fellow students--an urgent necessity on an enormous campus of 30,000 students.

The courses themselves are not small-scale or diluted versions of professional education and training. Neither are they intended to be vocational or pre-professional in nature. Rather, they are broad, interdisciplinary efforts that deal with social, political or ethical implications of various features of professional practice. Faculty members combine intellectual breadth and theory with their experiences as practitioners and professional educators.

During the past five years, the program has offered courses such as the Ethics, Art and Science of Medicine; Law, Literature, and Politics; Interpersonal Violence in America Today; Information, Computers and Society: The Social Impact of Computerization; Social Change and Social Welfare;

Engineering: Its Role and Function in Society; and numerous other topics that cross professional and disciplinary boundaries. The seminars are taken by students on an elective basis. There is no set of core offerings. Instead, topics vary from term to term and year to year. Some faculty members teach regularly in the program while others offer courses on a one-time only basis. The program as a whole is thus a shifting series of interdisciplinary courses oriented to some general thematic concerns.

Like the Program in Medicine, Law, and Human Values, this effort is well regarded at UCLA. In formal faculty evaluations, the Freshman/Sophomore Professional School Seminar Program has been favorably reviewed. Students show unusual enthusiasm for both the quality of instruction and for the breadth and diversity of the seminar topics. Furthermore, program faculty, professional school deans, and some influential administrators have expressed considerable satisfaction about this innovative educational arrangement.

Although neither UCLA program is fully and permanently institutionalized, the prospects for long-term survival in some form are good. This is of course a striking contrast to the example of DIGS at Berkeley. There are several reasons for these different conditions at the two most powerful and prestigious campuses of the University of California.

Both UCLA programs operate without many of the burdens and constraints faced by DIGS. Perhaps above all, the UCLA efforts have no connection whatever with the political disorder of the 1960's. They were not created in response to political

pressures emanating from the events of that era. That the Program in Medicine, Law, and Human Values and the Freshman/Sophomore Professional School Seminar Program are not even remotely perceived as associated with 60's agitation makes it much easier to survive among numerous academics for whom the entire 60's were deeply traumatic. The irony is that perceived separation from the specific historical conditions that made such educational experimentation possible is a dominant variable in the institutional standing of given innovations.

An additional advantage for the Program in Medicine, Law, and Human Values is that an entire field of bioethics has emerged during the 1970's,[10] adding further legitimacy to the various public and campus features of the program. The proliferation of academically rigorous enterprises in this area engenders a more receptive environment for specific programs on individual campuses. Once again, there is virtually no association with the field of medical ethics and the violent disorders that dominated university life only a few years before.

Finally, few of the personnel involved in either UCLA program are identified in any major sense with 60's activism. And since neither program has had to engage in a campus struggle for survival, there has been no rancorous activity or student-based confrontations that could evoke the fears generated by the earlier militancy. One other distinction is significant in this domain. While UCLA had its share of civil disorder, it was rarely as shattering as that of its sister campus in Berkeley. The consequence is that while deeply ingrained

fears and memories of the 60's exist at UCLA, they are not quite as traumatic as they are at Berkeley.

Although both UCLA educational programs have the advantage of no direct association with political and social radicalism, they must still operate in a psychological context similar to that of Berkeley and comparable research institutions. The same types of narrowly based researchers are selected to join the UCLA faculty. Research priorities dominate the campus, as they do throughout the entire University of California system. Despite the presence of some historical and institutional variables more encouraging to educational innovation, interdisciplinary activity still carries a heavier burden of proof than more orthodox academic enterprises. It still evokes suspicion among traditional academics, if somewhat less openly than before, certainly in the more private councils of daily academic life. This condition is likely to persist as long as the patterns of graduate instruction and faculty selection remain the same. John Gardner's distressing observations, once again, are rooted in the basic fabric of contemporary academic existence.

Certain fiscal and demographic realities, either not present or not properly comprehended a decade ago, now operate to keep some of the underlying psychological factors in modest check. The effect is to encourage the survival of various interdisciplinary innovations at UCLA. It is well known that financial conditions have changed drastically since the prosperity of the 1950's and 1960's. Even at prestigious universities, there is considerable anxiety about the decline

of various funding sources. Reduced support has generated severe cutbacks in campus programs and projects. It has also generated considerable concern about student enrollment and retention, major variables in future competition for scarce and declining resources.

For all its international stature and recognition, UCLA still labors somewhat in the shadow of Berkeley. This awkward self-image imposes some limits to its generally vigorous self-confidence. An intriguing consequence is that it appears to be far more concerned about its capacity to attract students in the future and to retain these students, many of whom are likely to come from diverse cultural and ethnic backgrounds and to have some serious academic deficiencies at the time of matriculation. Indeed, UCLA officials seem acutely aware of demographic realities affecting higher education now and in the future.[11] Enrollment and retention are thus far more important than they were even a few years ago, because nothing less than institutional survival in the first rank is at stake.

This new consciousness has significant implications for both traditional and innovative educational programs. The basic irony is that bad times may promote a more favorable climate for educational efforts generally. The desire to retain students elevates the importance of student satisfaction. When students express approval and enthusiasm for specific academic programs, they cannot be as easily dismissed or ignored as they had earlier been, even during the era of militant agitation. Greater institutional attention to

students works to the advantage of regular and interdisciplinary units that evoke positive student response.

At UCLA, both the Program in Medicine, Law and Human Values and the Freshman/Sophomore Professional School Seminar Program do well in this context. Both draw impressive numbers of students given the limited character of their offerings and the limited structure of a seminar format. More important, they have an enviable and impressive level of consumer satisfaction, a factor that should be advantageous in future determinations about resource allocation and programmatic survival.

The crisis in enrollment and the resultant concern about retaining students has had some beneficial consequences for large research universities throughout the United States. It has forced them to realize that they have educational as well as research responsibilities and that research too will deteriorate on a declining base of enrollment. The present crisis in higher education has been valuable in forcing universities to pay more attention to bridging the serious gap between instructional rhetoric and reality. External political, demographic, and economic pressures have therefore ironically been more important than the earlier agitation in propelling research-oriented universities in progressive directions. It is wise, however, to realize that movement in this direction is often grudging, and that good results may occur in the absence of good motives.

The two UCLA programs also operate without some specific disadvantages faced by the DIGS social science major at Berkeley. Neither UCLA effort offers degrees. Their instructional

contributions consist entirely of optional, elective courses for students who typically major in traditional disciplines. Neither the Program in Medicine, Law and Human Values, nor the Freshman/Sophomore Professional School Seminar Program draws students away from established departments. Equally important, neither is even remotely perceived as a competitive element on campus.

The psychological and political ramifications of this arrangement are as positive at UCLA as the opposite situation has been at Berkeley. The UCLA programs are both in fact and in popular perception an adjunct to the primary educational operations on campus. In large research universities, an adjunct relationship is far more acceptable. It is less threatening to orthodox academics and easier to support by sympathetic administrators. The political and emotional advantages are underscored even further when program personnel themselves proclaim their adjunct role in public and in the decision-making councils of academic life.

A closely related institutional factor lending political support to both programs at UCLA is that they make extensive use of faculty members from traditional schools and departments. This appears to be a determinative variable in the power realities confronting academics seeking to initiate and sustain interdisciplinary educational programs. The conditions at UCLA provide some advantages in this area that have never existed for DIGS at Berkeley. For example, participation by regular faculty in Medicine, Law, and Human Values provides unusual opportunities for entry into an emerging, exciting

field of inquiry. Significantly, the domain of bioethics lends itself well to research and publication possibilities. There is thus a strong incentive for involvement of regular faculty along lines that reinforce traditional values and priorities in a research institution.

In the Professional School Seminar Program, there is much less opportunity for personal research. Nevertheless, participation in the program has been seen by contributing faculty as a refreshing contrast to their traditional work with professional school students. Furthermore, since some of the most exceptional UCLA undergraduates enroll in these seminars, the teaching experience promises and delivers considerable personal gratification.

Educationally and epistemologically, it should make little difference whether faculty members in interdisciplinary programs are drawn from regular academic units or whether they are persons for whom integrative education is a full time responsiblity. What should matter is their competence and rigor. Politically, however, it makes a crucial difference in conservative research universities. It is apparently the only way to establish connections with other campus constituencies and to achieve a basis of support through well-placed protagonists in established departments.

The comparative examples of DIGS at Berkeley and the Program in Medicine, Law and Human Values and the Freshman/Sophomore Professional School Seminar Program at UCLA provide powerful insights into the problems and prospects for interdisciplinary

innovations at the University of California and comparable American institutions. What the comparison suggests most strongly is that academic quality and educational excellence are far from adequate in ensuring the survival of such educational programs. In its essence, the large research university is an awkward and generally inhospitable place for undergraduate interdisciplinary experiments. The reason simply is that priorities lie elsewhere. It is possible in America to extablish a Hampshire College or an Evergreen State, and thus create an environment totally conducive to the interdisciplinary investigation. It is even possible to establish specific interdisciplinary programs in many research universities throughout the country. At places like Berkeley and UCLA, however, it is possible to initiate and sustain such programs only at the periphery of the dominant operations. The blunt reality is that to a greater or lesser extent, interdisciplinary education will remain a marginal concern at the most prestigious large institutions.

Marginality, however, has many dimensions, some favorable, and some catastrophic. It can mean different things in different places, as the Berkeley and UCLA examples reveal. It can range from precarious existence and debilitating struggles to quiet and largely unbothered survival. Certainly, the comparative California examples provide some valuable lessons on how to achieve the kind of positive marginality that best ensures the avoidance of serious institutional conflict.

There are several strategies that can be employed to effect survival or even modest prosperity within a marginal framework.

Above all, it is essential to maintain the highest standards of academic quality. This is a prerequisite to any kind of survival and, in any case, a poor or mediocre interdisciplinary program has no business surviving. Moreover, if interdisciplinary educational programs are to endure nationally in significant ways, it is equally essential for their quality to match or exceed that of more orthodox educational efforts. Moreover, a commitment to the highest standards is strategically desirable because it generates the kind of student satisfaction that is valuable in an era of enrollment and retention consciousness.

Beyond that, it is important to separate these programs from the agitation and turmoil of the 1960's. Even though this era was instrumental in creating the conditions for educational change, its widespread perception as a tragic interlude in the life of American higher education has powerful political consequences. This disagreeable reality must be carefully considered in constructing rhetorical and institutional strategies within prestigious research universities.

The lessons of Berkeley and UCLA also suggest that more secure marginality is facilitated when steps are taken to make interdisciplinary programs complementary rather than competitive. The major variables in accomplishing this objective consist of making extensive use of traditional faculty and, perhaps somewhat less important, refraining from offering university degrees. Low visibility and repeated assurances of modest ambition are additional expedients in the psychological and political context of major research universities. Finally, it is useful to reassure traditional faculty and administrators

that research priorities are properly dominant and that interdisciplinary education is merely a small part of a pluralistic whole.

These strategies clearly elevate the probabilities that some innovations can survive and even flourish in large research settings. There is a question, however, that should not be avoided: Is it worth it?

In one sense, there are only deeply personal answers to this question. Those who have spent considerable time and effort in working for educational change in large universities know well that the personal costs can be high. It is not easy to determine whether limited results and marginal status justify the personal price. There is immense frustration in constantly explaining and justifying interdisciplinary education to university officials and review committees whose perspectives are narrow and deparmentally based. This frustration is compounded when the identical process must be repeated with new officials and new committees.

It is equally disconcerting to exist in an institutional setting as a second-class citizen. It is no secret to note that powerful status hierarchies prevail in America's prestigious research universities. Academics choosing to do interdisciplinary educational work often evoke attitudes ranging from extreme contempt and hostility to patronizing amusement. All too often, their efforts are dismissed on the groud that they are only pursued in order to compensate for research inadequacies.

To compound this unpleasantness, it is often tactically advantageous to reinforce the marginality of interdisciplinary

education through calculated and repeated verbal assurances of modest ambition, adjunct status, and research dominance. Constant pandering to political authority is unhealthy and debilitating. Once again, the determination of whether such cost is acceptable is intensely personal.

For interdisciplinary educators sympathetic to the social and political ferment of the 60's and early 70's, it is especially distasteful to maintain silence or even disavow such sympathy in favor of political expediency. Regretably, a still dominant view in major universities is that the 60's were a fashionable, irrational and irresponsible aberration now best forgotten. Many academics involved in interdisciplinary enterprises see that period instead as a series of profound events in recent U.S. history. They find it emotionally distressing and intellectually illegitimate to disassociate their present educational activities from the moral sources of their professional commitments.

Even "successfully" established marginal programs can generate frustrations for interdisciplinary teachers. Programs that offer little more than a series of elective interdisciplinary courses can scarcely provide the satisfactions available from more comprehensive educational programs. These latter efforts encourage greater opportunities for sustained contact with students. They promote more advising, more intensive intellectual collabortion, more possiblities for social interaction, and, indeed, more reciprocal commitments from student populations. Such pervasive involvement in the educational lives of students is almost intrinsically impossible in limited, adjunct enterprises that merely supplement traditional educational activities in large

universities. To eschew, for political or other reasons, the establishment of degree-granting interdisciplinary entities means also to eschew the fullest range of professional fulfillment.

A strong burn-out factor exists among interdisciplinary academics seeking institutional recognition and legitimacy in prestigious research universities. There is no paucity of embittered, emotionally scarred men and women who have abandoned their commitments to educational change as a result of corrosive institutional struggles. Academic strife is as petty and vicious as any other strife in employment relationships--and perhaps even more so. To have been victimized by academic brutality can have tragic consequences for personal and family as well as professional life. The answer to the question of whether it is worth it is of necessity ambiguous. Those who undertake the responsiblity of reforming research universities should have strong personalities, thick skins, a high tolerance for frustration, a good sense of humor, a reliable personal support network, and an abiding belief in the tragic life as exemplified in the figure of Sisyphus.

Fifty years ago, the Spanish philosopher José Ortega y Gasset delivered a remarkable series of lectures at the University of Madrid on the proper role and structure of higher education. He combined trenchant criticism of exisiting priorities with a passionate call for reform. His brilliant critique of narrowness and intellectual fragmentation anticipated the similar indictment of more than a generation later. Responding

to the pervasive trivialization of knowledge and of learning, Ortega urged a renewal of an older, yet more progressive tradition of intellectual life:

> From all quarters the need presses upon us for a new integration of knowledge, which today lies in pieces scattered over the world. But the labor of this undertaking is enormous...[12]

His proposal to accomplish this objective was the creation of a radical mode of university organization:

> Personally, I should make a faculty of Culture the nucleus of the university and of the whole higher learning...
> The need to create sound synthesis and systemization of knowledge, to be taught in the 'Faculty of Culture', will call out a kind of scientific genius which hitherto has existed only as an aberration: The genius for integration. Of necessity, this means specialization, as all creative effort inevitably does; but this time, the man will be specializing in the construction of the whole...Men endowed with this genius come nearer being good professors than those submerged in thier research. One of the evils...has been the awarding of

professorships in keeping with the mania of the times, to research workers who... regard their teaching as time stolen away from their work in the laboratory or the archives.[13]

This noble ideal remains almost hopelessly utopian. Ortega's interdisciplinary faculty of Culture will scarcely replace the existing arrangements at Harvard or Yale, or Michigan or Wisconsin, or Berkeley or UCLA. But the extent to which his broader ideals can be implemented through a steady infusion of integrative programs into the curricula of these influential institutions will have much to say about the direction of higher education and of society for the remainder of the 20th century and beyond.

FOOTNOTES

1. See William V. Mayville, Interdisciplinarity: The Mutable Paradigm (Washington:American Association for Higher Education, 1978) for a useful guide to existing programs in the United States.

2. The best description of (and apology for) this model is Clark Kerr's The Uses of the University, written in 1963.

3. Clark Kerr, The Uses of the University (Cambridge:Harvard University Press, 1963), pp. 118-119.

4. Joseph Fashing and Steven Deutsch, Academics in Retreat, (Albuquerque:University of New Mexico Press, 1971), p. 33.

5. Some participants in these programs prefer to use "multidisciplinary" or "transdisciplinary." Debates on the proper terminology have been conducted for many years among academics seeking to transcend traditional disciplinary education and scholarship. For some, such debates are crucial epistemological problems. For others, such debates are frustrating and fruitless. This issue, however, is beyond the scope of the present paper.

6. This unit is now known as the Division of Special Programs, a change imposed during the height of the campus controversy surrounding its struggles for institutional permanence. The earlier designation will be used in the present text.

7. The impression was investigated and dismissed in an official evaluation of the program. See the Report of the Committee on Academic Program in DIGS Field Majors in Humanities and Social Science, University of California, Berkeley, June 3, 1975, p. 3.

8. Report presented to the Executive Committee of the College of Letters and Science by the Advisory Committee to the Chairman of DIGS, University of California, Berkeley, 1976, p. 1.

9. Ibid., p. 3.

10. For a comprehensive directory of programs and courses in this field, see the EVIST Resource Directory, published by the Office of Science Education of the American Association for the Advancement of Science, 1978.

11. This awareness is reflected effectively in The Report of the Chancellor's Conference on Undergraduate Education in the 1980's, prepared by the Office of Undergraduate Affairs, University of California, Los Angeles.

12. José Ortega y Gasset, Mission of the University (New York: Norton, 1966), p. 79.

13. Ibid., pp. 75-81.