

CONSERVATION AND RESOURCE STUDIES MAJOR:
UNIVERSITY OF CALIFORNIA--BERKELEY

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Prologue

The headline on the front page of the September 29, 1982 issue of Berkeley's The Daily Californian stated: "FACULTY COMMITTEE ACTS TO AXE CONSERVATION STUDIES PROGRAM." Since the earlier article in this journal in 1977 reviewing the history of the Conservation of Natural Resources (CNR) major and the Conservation and Resource Studies (CRS) department ended on a somewhat upbeat and optimistic note regarding the program's future, it is now appropriate to complete the story of the saga of CRS. (1) This article will sum up the many forces in conflict on the Berkeley campus in the intervening decade which led to that preliminary, ill-considered, and happily never-implemented decision to kill the CRS program.

Before moving to a description of the conflict and the current status of CRS, it is important to note here the pedagogical assumptions which underlie the following analysis and critique. We understand the importance of substance and rigor within academic disciplines. There can be no excuse at the university for any tolerance of intellectual laziness. But we also understand that truth is rarely an end in itself and that it must always enhance the human capacity for positive action. Only then can formal knowledge actually ripen into some kind of practical wisdom. From its conceptual beginning in 1969, CNR/CRS has sought to take seriously the directive first laid down by the University of California's first President, Daniel C. Gilman, in 1876.

The university must make for...less misery

among the poor, less ignorance in schools,
less bigotry in the temple, less suffering
in the hospital, less fraud in business,
less folly in politics. (2)

It was precisely this concern by CRS for academic relevance that ultimately led to the assault on the program by more traditional faculty and administrators during the early 80's. Happily, the decision of Berkeley's budget committee outlined in the Daily Californian headline was subsequently rejected. The compromise solution in 1982--to allow the CRS program to continue but only after reducing enrollments in the major from 250 to 120 (with substantial curricular revision)--was quite remarkable for an institution heretofore open to educational innovation.

From the beginning, CNR/CRS operated intentionally within the mandate first given it by the College of Natural Resources. That directive authorized the program to encourage students in developing individualized majors in order that they might study:

...the interaction between natural resources,
population, energy, technology, social insti-
tutions and cultural values.

Succeeding beyond its founder's wildest dreams, the major soon became the focus of criticism because of its readiness to apply knowledge to real life problems. Directed to study the relationships between environmental problems and existing economic, social, and political forces, the program was reduced in scope because of its faithfulness to that mandate.

Preceded in earlier years by the Berkeley administration's decision to eliminate other innovative but controversial programs (the School of Criminology, Strawberry Creek College, the Center for Participatory Education, the Department of

Interdisciplinary and General Studies (DIGS), undergraduate Health Arts and Sciences), the decision to either close CRS or push it into the academic middle seemed of a piece with these other examples of academic reductionism. It now seems clear that most of the earlier criticism of CRS had less to do in fact with a purported lack of academic structure and accountability and more with the social/political consciousness of CRS students and faculty and the department's attempt to effect a democratic pedagogy in its actual practice. Some clarification of certain of these factors seems appropriate.

Like all Berkeley students, CNR/CRS students are subject to rigorous entrance requirements, demanding on-going intellectual discipline, and extremely competitive course-work. Berkeley is not an easy place to pursue an undergraduate degree. The majority of students in the program have followed traditional academic tracking patterns and are as career oriented as most others on campus. CRS students have always been highly sought after in the environmental job market. Nevertheless, students in CNR/CRS have not limited themselves to one-dimensional academic pursuits. Many have historically been visibly involved in those other activities which while controversial nonetheless contribute to the development of a social consciousness within the campus community (and perhaps without which a university cannot fulfill its mandate): community education and action projects, on campus protests on social justice issues, direct action efforts, and student governance. Such students have from the beginning been visible to university administrators whose concerns tend to be more directed to maintaining academic peace on campus than for

pursuing justice and equity in either university or larger community. Unlike almost all other programs on the Berkeley campus, CNR/CRS students were invited to participate in the actual day to day planning and governance of the department. Such policies are only reluctantly tolerated by the central campus administration.

First criticizing the program for its "politicization", the official report of the Review Committee in 1982 (which led to the later recommendation by the Budget Committee to "axe the program"), reluctantly acknowledged that CRS had done precisely what it was originally mandated to do.

The trend of the CRS Department to expand its teaching to include the general ills of the society is bothersome to some of the faculty.... Contrary to some views we have encountered, we find that the present thrust of the major deviates in no significant way from the path originally intended.

Members of the College faculty who object that the CNR major has been politicized should recognize that, in effect, authorization to do so was granted to the major from the start. If the students have had what appears to be an inordinate influence in the governance of the major, they have exercised no more power than was planned at the beginning. (3)

CNR/CRS, thus, was reprimanded not for deviating from its intended function but precisely for fulfilling it. Some reflection on this apparent movement away from certain of the marks of a liberal educational system at Berkeley seems necessary.

In recent decades, the traditional double function of the university—preserving and passing along the moral and social traditions of the culture and training leaders for the larger

community--appear to have been substantially revised. The emergence of a professional bureaucracy within the university, more devoted to servicing the needs of industry and the state apparatus than to protecting the freedoms of teaching and learning, is everywhere apparent. The Berkeley campus is no exception.

As many educational theorists have pointed out, there is no such thing as a neutral educational process. One way or the other, value judgments are made by institutions and by teachers. Education, therefore, always has an instrumental function, used either to integrate new generations into the logic of the existing social and cultural systems or to assist them to develop that kind of critical awareness wherein they can both understand the strengths and work to correct the weaknesses of the society's status quo. The dilemma here for the university is that interdisciplinary and pedagogically democratic education can open new dimensions of reality to students and--most dangerous of all to those who wish only to preserve existing traditions--move them to develop a concern for transformation within the personal life and the social order.

Retrospectively, it does appear that the primary concern of CNR/CRS's more hostile critics over the years has been the program's unwillingness to be as classically neutral on value-related concerns as university administrators usually deem appropriate. Historically, however, the more insistent the call for moral neutrality within the university, the more possibility exists for lower level dogmas to insinuate themselves into the

value structure of academia. Surely the history of the university during the 20th century in Europe should have taught us something about the political basis of the demand for ethical "objectivity." That apparently coveted and diligently sought after norm at Berkeley--neutrality in ethical reflection and action--can finally only be destructive of the essential purpose of a great university. Many CNR/CRS students and faculty have understood this truth. For acting on it, they have been punished.

The continuance of the CRS program in the future is still, as the following essay will suggest, uncertain. That, after all, is finally not all that important. Berkeley--a remarkable and in many ways a quite wonderful university--will survive, regardless of what it finally decides to do with CRS. That a great university, however, should fail to understand the symbolic importance of maintaining disciplined but relatively free and unfettered educational alternatives is unfortunate. That the University of California at Berkeley should have listened so closely to those with closed and traditional rather than open and innovative minds, is a real tragedy. It is so very important for all of us, wherever we may be, to constantly pressure our universities to live up to their own principles. Those who are concerned for the maintenance within the university of democratic pedagogy, interdisciplinary education, and the joining of knowledge to action, may wish to take note of the experience of CNR/CRS.

Introduction

It is hard to believe that it has now been nearly ten years since the previous article about the CNR/CRS program was written. Major changes have occurred since 1977 in the Conservation and Resource Studies program. Some changes were unforeseen and threatened the survival of the major. Some which were expected and needed have not yet materialized.

This essay provides a unique opportunity to compare the current state of the major with the program as it existed ten years ago and to develop the comparison from two quite different perspectives. The first view is that of the Senior author, who authored the first article and was a central figure in the saga ten years ago but who has not participated in the program during the past six and one-half years. The other perspective is that of the co-author who has been a central figure in the major continuously since 1975.

The following treatise then represents an integration of both outside and inside views of events and their interpretation over the past decade. Although the authors do not always agree, the basic analysis is shared by each. We will not burden the reader with points of disagreement. Because of particular involvement at certain times and in differing aspects of the program, the Senior author has provided the primary input for the Introduction and sections 1 and 2. The co-author is largely responsible for the Prologue and Epilogue and for section 5. Section 3 reflects shared concerns and Section 4 is largely descriptive.

When the original article about the CNR major was written in 1977 the Senior author was optimistic about the future of the major and its administrative department. There seemed good reason for such optimism at the time, although retrospectively it seems now to have been naive. Within one year from the date of publication, the basis for optimism had begun to erode and the future looked grim indeed. What happened between 1978 and 1980 would provide the basis for some of the senior author's cynicism about the University's administration and its motives.

The beginnings of the CRS department go back to 1970 with the launching of the experimental CNR field major. CNR was approved as a regular major in 1974 and placed in the newly created CRS department, along with the new Political Economy of Natural Resources (PENR) major. By 1977, CRS had been approved for full departmental status, had developed two academically sound undergraduate majors, and had been authorized to begin planning for both graduate and research programs. By 1980, however, the PENR major had been transferred out of the department, full departmental status had been delayed, and the proposals for graduate and organized research activities had been put on hold. Today, the CRS department administers only the renamed CRS major, and because of new mandatory quotas has been reduced in size from around 250 majors in 1980 to 120 today. Although the program is stronger in some ways, its ability to retain its flexibility and innovative curriculum continues to be tested daily.

1. A Brief History of CRS Through the End of 1977

The following account highlights the history of CRS which was presented in detail in the previous publication.

A review of environmental programs at universities throughout the country reveals that the motivation and timing of their establishment were similar to those of CRS, and that the CRS program includes elements in common with many such programs at other universities. However, the establishment of CRS was also strongly influenced by the history of conservation programs, by the long involvement in instruction and research in conservation and ecology at Berkeley, because it came into being on a campus previously noted for relatively high tolerance for academic innovation and experimentation, and especially because in the late 1960's there were large numbers of concerned Berkeley faculty available to participate in such a program. This was particularly true in the College of Agricultural Sciences and the School of Forestry and Conservation.

So it was that in the spring and summer of 1969, plans were made by these two units to form an environmental studies major for undergraduate students. Drawing upon momentum built up during the past several years, in attempts to establish a broad-based graduate program in ecology, and taking advantage of the rapidly accelerating "environmental movement," the plans were quickly expedited. The program was launched by first developing, and then offering in the fall quarter of 1969, a three quarter interdisciplinary course sequence (IDS 10) entitled, "Man and His Environment--Crises and Conflicts" (a course still offered today although with reduced scope as CRS 10, "Environmental Issues").

From the beginning the course has been extremely important to the CRS program, serving as a required course for CRS majors, as a general interest course campus-wide, and as the primary recruiting arm for the major. The second step was the accepting of 100 students, for initial enrollment for Winter quarter 1970, into the new Conservation of Natural Resources experimental field major.

The basic framework and essence of CRS were well established during its first three years (n.b. "The Early Days of the Major: 1968-70 through 1970-72")¹. The founders and leaders of the program were careful to establish a foundation that would insure that CNR would be able to retain its purposes, flexibility, and innovativeness with the passing of time. Even so, it was clear to the founders that great care and diligence would be required to prevent the program from becoming institutionalized along the lines of traditional academic majors and departments. It will be suggested in this essay that the basic design of the major allowed CRS to maintain its educationally innovative integrity until the early 80's. Following the critical academic review of the major, the program came (even while maintaining more flexibility than most majors on the Berkeley campus) to more closely resemble a traditional program. It will also be suggested that since the basic structure of the original program still exists, it should be possible to retrieve and/or maintain much of the essence of that program even under current pressures. Given the major changes occurring on the Berkeley campus regarding reorganization of biology and other primary disciplines, even the

new and more traditional CRS program of today may be again threatened in the not too distant future.

During these first years none of the faculty participants in the experimental program, including the chairpersons, were officially assigned (budgeted) to it; and no base support budget, space and facilities, nor non-academic staff were provided. More than thirty faculty volunteers taught or helped teach the few new courses in the program and served on committees. Twenty-five of them served as academic advisors. In addition, more than 100 other faculty volunteers and a similar number of off-campus volunteers made other contributions to the program: lecturing, participating in seminars and field trips, serving as information resource people for students, or serving on ad hoc committees. With no assigned base budget the program had to rely on salary savings, which almost completely negated any long-range planning which necessarily depended on reasonably certain budgets. In spite of this, the program was able to support several part-time teaching assistants and to provide small amounts of funding to support course activities. The program was also able to hire a secretary to run the single donated office (which served as program office, chair's office, course office, student affairs office, resource center, and base of operations by the teaching staff.)

A few more courses, all but one designed specifically for the CNR major, were developed and offered during this period. Thus, by the close of the 1971-72 academic year, the program was offering IDS 10A-10B-10C, IDS 120, and CNR 49, 149, 197, 198, 199 (see course listing in original article pp. 191-192).

By the end of this period, it was clear to the most active faculty participants that the experimental major should be established as a regular program on the campus. However, how this should be done and the kind and level of permanent resources needed was not so clear. It was evident that the most important need was a way to officially credit faculty participation, either through budgetary assignment or other means. The faculty dilemma eased a bit during the next two years. Faculty participants who had started in the early days of the major were now veterans who could continue their CRS involvement with greater efficiency. More importantly, many became increasingly convinced of the value of the program and consequently reaffirmed their commitments to it, compensation or not.

There was also an increase in the number of faculty volunteers so that even in an expanding program the average workload remained about the same. Furthermore, even though the base budget remained at zero, substantial increases in support from salary savings and in assignment of space and facilities, indicated increased commitment to the program by the administration. There was also a growing feeling among the most active faculty that a predominately volunteer faculty, with proper recognition and credit, might be a serendipitous strength in the program that should be retained regardless of future developments in its formalization.

Still, the problems of almost total reliance on a voluntary faculty, contributing their services with no compensatory release time, and with little accountability or recognition, continued to

plague the administration and long-range planning of the program. This was compounded by the growing realization that, in the absence of "officially sanctioned" assignment, little credit toward promotion or tenure was given to the faculty volunteers. Promotion was based, in most cases, solely on activities related to the faculty member's formal disciplinary appointment.

Notwithstanding these problems, a number of new courses were being offered by the end of 1977. They were: IDS 10L, 10M, 10N, CRS 40-40L, CRS 101, CRS 110, CRS 115, CRS 131, CRS 132, CRS 133, CRS 150, CRS 151, CRS 180, and several experimental courses which were not continued (see course listing as noted above). The increased need for teaching support was met in part by the increase in numbers of faculty volunteers and in part by an increase in allocations of teaching assistants and provision of new positions for hiring temporary lecturers. The allocation of the latter not only provided much needed immediate increases in the teaching staff but also provided the basis for future permanent positions through conversion of temporary to permanent FTE. This mix of faculty volunteers and assigned faculty, together with off-campus appointees without stipend provided a good opportunity to develop an innovative model for the future staffing of the department.

The external review of the major, which began officially in January 1974, provided a much-needed opportunity for students and participating faculty to thoroughly assess the program. By June it was clear that the review committee was going to recommend that CNR be continued as a regular major. It was equally clear that many needs and shortcomings in the major were discovered and

that the committee would be submitting a long list of recommendations for future departmental implementation.

As this review was in process, the College of Agricultural Sciences and the School of Forestry and Conservation submitted the long awaited proposal for merger, reorganization, and creation of the new College of Natural Resources, which was approved effective July 1, 1974. This merger proposal officially ratified the creation of the new department of Conservation and Resource Studies which was to include the new major (PENR) and the ongoing CNR major.

It was clear to the faculty who had participated in the CNR program that the new major was having a profound impact on the College. Evidence of this was overwhelming. For example, combined undergraduate enrollment in the two units (Agricultural Sciences and Forestry) was 244 students in Spring 1969. Spring 1974 enrollment in the CNR major had grown to 305 students, while combined undergraduate enrollments in the other majors had grown to 630 students. Thus, the new College of Natural Resources was launched with an undergraduate enrollment approaching 1000 students--a four-fold increase over a period of five years. Furthermore, the design, composition, and structure of the new College was strongly influenced by experience with the CNR major, particularly with regard to undergraduate elements.

Over the next two years (n.b. The Early Days Within a New Department and a New College: 1974-75 through 1975-76) perhaps the most significant event affecting the CNR major was the release of the external review committee report. This committee conducted an exceptionally scholarly and thorough examination of the major and, as noted earlier, provided a cogent commentary on both the strengths and shortcomings of the major. That committee's recommendations (perhaps of value to other similar majors around the country) were listed in the previous publication. In the Fall of 1974 the Review Committee's report was accepted by the College faculty and the CNR major was formally approved retroactively to July 1, 1974. Within the next two years those recommendations dependent on departmental initiative were instituted. The failure of the College to complete its own reorganization plan made it impossible for CNR to complete some of its mandate.

In the new college three new departments, including CRS, were created to administer the undergraduate teaching programs, while previously existing departments and school (Forestry) were designated as departments of graduate instruction and research. However, budgets for undergraduate instruction and FTE assigned to the teaching of undergraduate courses remained in the graduate/research departments, to be transferred to the undergraduate departments at a future time. The impending transfer would, of course, result in joint appointments for all faculty members who taught undergraduate courses.

It soon became apparent that there was strong opposition in the College to the transfer of budgets and FTE to the

undergraduate departments. As a result, the promised transfers did not take place. Consequently, budgets and FTE remained with what were now graduate and research departments, while the bulk of instruction took place in the undergraduate departments. Thus, the undergraduate departments were faced with the same situation that the CNR program had coped with during the previous five years and would now continue to face: operating with a zero base budget, inadequate space and facilities, and a "borrowed" faculty.

The new PENR major was designed along the lines of the CNR major, but with more specific course requirements and less flexibility. The framework of study combined the perspectives of economics, sociology, political science, and law. Requirements were structured to provide opportunity for specialization in one discipline or in one area of resource management.

By the close of the 1975-76 academic year, the department was offering 49 courses under four different designators: CRS (departmental courses), IDS (interdepartmental courses), CNR, and PENR (courses for the major). The number of students in the department had by now climbed to a peak of nearly 550 in Spring 1976, with 453 students enrolled in the CNR major and 95 in the PENR major. Overall course enrollments were several times larger than the number of enrolled majors. (Retrospectively, it now seems clear that an all volunteer faculty could not adequately handle this number of students and that certain problems that were later to arise were related to this fact.)

Although the promised transfer of budgets and FTE's to the

undergraduate departments did not occur, the CRS department received substantial increases in temporary budget support. In 1975-76, the department for the first time was given a small base support budget and, more importantly, authorization to recruit for its first permanent faculty position. Overall support, however, in budget, staff, space and facilities, remained woefully inadequate.

The favorable reception by the administration of the department's first five year program development and faculty recruitment plan was very encouraging, and the recruitment authorization was the first step toward its implementation. This plan was strongly influenced by the recommendations of the external review committee, particularly with regard to faculty recruitment. As this committee pointed out, faculty participants in the CNR major, and subsequently the CRS department, were dominantly biological and physical scientists, and both this major and the department were designed to broadly integrate the natural and social sciences in dealing with environmental and renewable natural resources issues. It thus recommended the recruitment of faculty members from outside the biological sciences to correct this imbalance. The inclusion of the PENR major helped immediately to correct this imbalance, and the recruitment plan, which gave priority to recruitment of social scientists and people in the humanities, went even further. Additionally, there were increased efforts made to seek more faculty in these categories from the campus-wide faculty as volunteers to the program.

The next year and one-half (n.b. The Period of

Institutionalization: 1976-77 through the end of 1977) was characterized by a "settling down" of the CRS department and its two majors. Student enrollments were stabilized by self-imposed ceilings (CNR:300-350; PENR: 100-125). The number of courses increased by only four, to 53 (see course list). Substantial increases in support and in space and facilities were obtained; although a small base budget still hampered long range planning. For the first time, support for course activities and instructional assistance closely matched needs. The establishment of a departmental Resource Center/Library was a significant advance.

Two major activities preoccupied the department during this period. The first was in recruitment of new permanent faculty, developing and refining long-range recruitment plans, seeking partial appointments for principal faculty volunteers, and developing a system of accountability and recognition for faculty volunteers. The second major preoccupation was in development of plans and official proposals for a CRS graduate program and in establishing the department as an organized research unit. Both these major activities, together with appropriate expansion of the base budget, were directed toward investment of CRS with full departmental status, as promised by the administration in 1974.

A second permanent faculty position was authorized for recruitment just prior to 1976-77, followed by authorization for two more during 1976-77. The first two positions were filled before the end of 1977, and both appointees would join the department by July 1, 1978. Moreover, recruitment was well

underway for the third position, and it was subsequently filled during the 1978-79 academic year. Recruitment for the fourth approved position was delayed until 1978, but as will later be explained, was never filled. Five more positions were also requested for the period 1979-1983. In spite of initial administrative encouragement, none of these positions were ever authorized.

In October 1976, the department officially submitted its proposal for a graduate program. The CNR major served as the academic model for the proposed program, just as it did for the CRS department. The proposal requested an interdisciplinary CRS program as a graduate sequel to the CNR and PENR undergraduate majors. It was designed for students with Bachelor's degrees in conservation or environmental areas or in any major or course of study dealing with aspects of natural resources. The graduate program would be characterized both in its research and instruction by a focus on interdisciplinary problem-solving, particularly in the area of renewable natural resources. There was then reason to believe that the program might be approved as early as Spring 1978 and that it would be launched by the 1979-80 academic year. Retrospectively, this hope now seems to have been overly optimistic. Graduate programs at Berkeley simply do not gain approval this easily.

Before the end of 1977, the department had also submitted to the Dean its proposal for an organized research unit, with assurances that the College administration would do everything in its power to get it approved and implemented. It was intimated that approval might be obtained as early as June 1978. By the

end of 1977, there were approximately 50 members of the Berkeley permanent faculty who were teaching courses or serving as undergraduate advisors in the department. Functionally, they were the department's faculty although none as yet had official appointments.

The inability or unwillingness of the College administration to transfer budgets and FTE (as mandated by the 1974 reorganization plan), left CRS and the two undergraduate departments in an untenable situation. Hoping to partially rectify certain inconsistencies, the College faculty in January 1977 requested that the administration develop a system of accountability and control of faculty teaching activity, whereby faculty appointments could remain entirely in the graduate teaching and research departments, (as an alternative to joint appointments which the administration clearly opposed). A college-wide procedure for the assignment of teaching responsibilities was called for, with ex post facto accounting of courses actually taught with each staff member suitably recognized and rewarded for his or her total involvement in undergraduate and graduate teaching, student advising, and research. This suggested procedure, however, was never implemented. Had it been approved by the College administration, it would probably have alleviated most of the accountability problems associated with teaching in the undergraduate programs, with the added benefits of improved articulation and understanding between the departments.

It soon became clear why the College administration was

ignoring the wishes of most faculty and why it had not implemented the full reorganization plan approved by the University in 1974. In a rapid series of events, the College administration presented to the faculty, in May 1977, a revised reorganization plan calling for the retention of the CRS department but the dissolution of the other two undergraduate departments, with transfer of all undergraduate majors, except CNR and PENR, to the graduate/research departments. At its June 1977 meeting, the faculty approved the revised plan which then was quickly implemented by the College.

At this meeting, the faculty also approved a resolution that the CRS department should be given full departmental status with authorization to offer undergraduate courses, graduate courses, and to conduct research. The resolution also stated that the CNR major would be retained by the CRS department, but the PENR major would be jointly administered by CRS and the Department of Agricultural and Resource Economics (ARE). The only part of the reorganization resolution never implemented was that granting full departmental status to CRS. Shortly thereafter, the PENR major was transferred in toto to the ARE department.

Thus, after several years of academic charades, the College of Natural Resources had essentially the same composition as the previous College of Agricultural Sciences except that there were now two new departments: Forestry and Resource Management (which had lost its earlier autonomy) and Conservation and Resource Studies (which, after the removal of PENR, would be essentially the same as the previous CNR program).

Although these results were all disappointing, there were

still grounds for optimism at the end of 1977. CRS had now been technically approved for full departmental status, it was filling new permanent positions, there were indications that its proposal for a graduate program might soon be approved, and there was the recent promise that it would soon be accepted as an organized research unit. These hopes were temporarily bolstered when, in November 1977, the College faculty approved a resolution stating:

The Department of Conservation and Resource Studies does not now have an adequate number of ladder-rank faculty FTE to perform its assigned functions. It has already received authorization to jointly recruit to several open positions. A survey should be made to identify current ladder-rank faculty members of other departments of the College who are voluntarily willing to have--and interested in having--a portion or all of their FTE transferred to the Department of Conservation and Resource Studies. Once identified and with proper concern for current teaching and research function, administrative steps should be taken to transfer an appropriate number of ladder-rank faculty FTE to this department.

Little did any of us understand then the storm that was soon to break!

2. Interdisciplinarity Under Attack: 1978-1980

At the end of the Senior author's previous article about the CNR major, the author expressed the hope that faculty volunteers from throughout the campus and from a variety of disciplines would continue to make significant contributions to the program even though new permanent faculty members were then being recruited and faculty members from other departments were beginning to take on regular departmental assignments. He went on to warn that the institutionalization of the CNR major and the CRS department through increasing support, assignment of permanent FTE, and with new graduate instruction and research programs might lead easily to the department's slipping into the rigid, self-centered, stereotyped mold that has come to characterize most departments on major university campuses. Continued vigilance and concerted effort would be required to prevent this from happening. Previously it had been easy to maintain the openness of the program; with unreliable budgets, inadequate space and facilities and a volunteer and temporary faculty, there had been little choice to do otherwise. The greatest challenge for the future would be the development and maintenance of structures and procedures which could protect the innovative start-up of CNR/CRS.

One factor that ironically contributed to the inevitable "institutionalization" of the program was the recruitment of the three permanent faculty positions. Desperately needed, the new faculty quite properly brought to the department professional concerns of a different nature than those of most of the

volunteer faculty. What had been essentially an educational experiment now had an aura of permanence. Some volunteer faculty now felt that their contributions were no longer needed.

As it turned out, exceptionally thorough searches for these positions were carried out. All three appointees turned out to be women. During recruitment for the second and third positions, the department chair was subjected to pressure from senior faculty and administrators questioning the appointment of women to these positions. Berkeley has always lagged far behind in filling faculty quotas for both women and ethnic minorities. In this case, one woman appointee could hardly be protested. Two or three was something quite different, however. Whether these appointments in fact adversely affected the future of the department is unclear. What is certain is that no further recruitment authorizations were ever approved for CRS. Affirmative action in faculty recruitment most certainly did not help the CRS image on campus!

In spite of these pressures, there still seemed to be little real concern about the future. The College had now all but completed its reorganization and all that remained was implementation of full departmental status for the department. During 1978-79, CRS focused its attention on developing the programs and resources necessary to achieve and maintain departmental credibility.

During this period, the graduate program proposal was turned down by the Graduate Division of the university. Optimism still was not dampened, however, because the department was urged to revise and resubmit the proposal. Now the new faculty could also

participate in the development of the graduate proposal making it more realistic and reflective of their talents and research interests. As it was learned, however, that a primary reason for the Graduate Division's turn-down was the negative report from the College's own representative on the ad hoc committee, a new element entered the picture. As the only representative of the College on the committee, the Graduate Council had no option but to temporarily reject the CRS graduate proposal.

At the same time, the department was constantly frustrated by the College administration's reluctance to approve CRS as an organized research unit. Revision after revision of the research proposal were submitted. Meetings were held regularly with the College administration and new shortcomings in the revisions regularly found. After two years of study, the Dean informed the department that no further consideration of the organized research proposal would be given until the graduate program was approved. "Catch-22" came to be the symbol of the College's demands and responses to these various CRS proposals. Finally, in 1980, the complete transfer of the PENR major to the Agricultural Resource Economics department was effected.

In the Fall of 1979, the Chairman of CRS opened discussions with the Dean of the College about the possibility of a replacement by the end of that academic year so that he could take a sabbatical leave. By early 1980, the CRS department had identified several suitable candidates for CRS Chair from within its ranks, whose names were presented to the Dean. All CRS recommendations for the Chair were rejected and the decision made

by the Dean to appoint a Chair from outside CRS. Facing another impasse with the College administration, the CRS faculty and student organization requested that the Dean continue the appointment of the current Chairman until a mutually agreeable replacement could be found. After extensive discussion both in and outside the department, CRS presented another list of candidates to the Dean. This, too, was rejected and--against the desires of the CRS faculty and student body--a temporary directorate of three non-CRS faculty was appointed to chair the department. (4) At the same time, a formal academic review of the CRS program was ordered to be chaired by an emeritus Professor historically hostile to everything CRS represented.

Thus, by the end of 1980, the CRS department was essentially placed into receivership, to be administered by a directorate, facing a third major review within a period of seven years (an external review had been conducted in 1974 and an internal review in 1978), and with other clouds visible on the academic horizon.

3. From CNR to CRS: 1981 through the Present

Beginning in 1974, a great many complaints and criticisms of the CNR/CRS program were heard. Some were related to the newness of the program. Some reflected institutional antagonism toward interdisciplinarity in an institution where rigid disciplinarity was almost the password to success. Many legitimately questioned whether a program of individualized majors, based on relative student autonomy in the development of academic programs could be academically sound. Most were concerned about the intrepid social consciousness of almost everyone in the program. At Berkeley it is quite acceptable to be verbally critical of racism, classism, sexism, and militarism; but it is definitely inappropriate to take action on any of these issues.

The Committee charged with conducting the academic review of the CRS program was forced to deal with all of these issues. After an investigation spread over several months, the Committee presented a series of recommendations that are here briefly summarized:

That the CRS major be continued if the following directives are implemented:

- that the major be moved rapidly in the direction of a small, rigorous program under the governance of the core faculty
- that enrollments be immediately reduced to a level that can be served by the regular faculty (i.e. a reduction to approximately 120 students)
- paid lectureships be terminated (prior to the appointment of permanent faculty, many courses were taught by temporary annually appointed faculty)
- governance of the major be vested solely in the budgeted faculty under the guidance of the College Executive Committee (no students to be permitted to participate on departmental committees)

- that a new statement of mission be prepared and that the statement reflect the overall mission of the College of Natural Resources and that the CRS statement of mission be reviewed and approved by the College

- that if a mission statement acceptable to both the College and the faculty cannot be developed, the College initiate action with the Academic Senate to close the program

- that an annual review of the program be conducted by the College Executive Committee

- that a member of the CRS faculty be appointed to the Chair "as soon as conditions permit"

Certain direct quotations from the report suggest the drift of the Review Committee's concerns:

...the college faculty who, with some justification, view CRS as a quasi-political operation of uncertain goals and permissive standards (p. 4)

...the meaning of the term "environment" shall be understood [to refer] to renewable natural resources and shall bear a biological connotation (p. 13)

...the subject matter of IDS 10 is not related to natural resources...and the following subjects are not within the expertise of our faculty: infant mortality, occupational health, minority problems, colonialism, the media, baby bottle disease, silicon valley, feminism, racism, mental and physical health, the ideologies of science (p. 22)

The Resource Center is so small and is so heavily used as a student meeting place and activity center that it cannot be looked upon as an effective center for scholarship (p. 42)

There is a universal agreement in the College faculty that CNR is a "problem" and, some say, an embarrassment to the College....The view is widespread that a "party-line" ideology is central to the core of required courses and that this takes precedence over scholarship (p. 50)

It is evident that if CNR/CRS has failed to meet expectations, it has not been, with minor exceptions, from acting contrary to instructions originally granted by the faculty of the College (p. 53)

CRS has come to its sabbatical year and needs a period of release from past pressures and a quiet time of retrospection, retrenchment and refreshment. It needs the blessings of obscurity from which it can emerge on its merits. The small size of the faculty is the most fortunate factor in the entire picture. This seeming weakness, properly exploited, can be a great strength, and indeed the salvation of CRS (p. 65)(S)

Certain suggestions and comments in the Review document were clear and accurate. The program had undoubtedly erred at times in providing too much flexibility to students in the development of individualized areas of interest. Independent study courses were sometimes too broad and improperly monitored. The CRS definition of "environmental problem" may at times have been too broad.

Of primary concern to supporters of CRS, however, was the fact that the recommendations seemed to provide only two alternatives for the future: either a complete transformation of the CRS program as it had been conducted under the original mandate and direction of the College or the abolition of the program. The Review Committee criticized every innovation in the CRS program: internships, field studies, independent student research projects, student organization of Berkeley's Earth Day and other community observances, the close advising relationships of students and faculty, the conduct and content of departmental courses, and the integrity and competence of both students and faculty.

In official response to the report, CRS faculty and students said that the review was biased and itself unscholarly. Procedural errors and factual mistakes abounded in the final committee report. Interviewing procedures were haphazard at

best. Few CRS faculty or CRS supporters were interviewed. Every member of the Committee was hostile to CRS or indifferent to its program. Although the review report was not rejected by the College, it was clearly an embarrassment even to some of CRS's harshest critics. Accordingly, the College Executive Committee was directed to submit its own report, based on the Review, and to include its own recommendations in order to determine the future of the program.

Happily, the Executive Committee's report and recommendation judiciously took a middle-of-the-road position. This final report, released in the Spring of 1982, essentially took the position that CRS needed to make some changes, but did not need to alter its flexible, interdisciplinary, and "real-world" problem-solving approach. This generally supportive attitude of the Executive Committee toward CRS went a long way in quelling the initial fears that the program might be eliminated. The main areas of criticism in this report concerned CRS's lower-division requirements, grading standards, its "narrow distinction between academic and non-academic activities," and its advising program.

In fact, most of the curricular changes suggested in the report had been underway for some time. Everything was in place by the summer of 1982. The changes included the long awaited establishment of a regular CRS faculty (all with FTE appointments to the department), a newly developed core curriculum, revised and restrictive admissions procedures, changed grading in "non-traditional" courses to pass/not pass, new lower and upper division curricular requirements (including a Senior Plan for all students), revised internship and independent study procedures,

and^a total overhaul and standardization of the advising system.

All the while, however, as CRS was adopting and implementing the Executive Committee's recommendations, it was learned that the Academic Senate's Committee on Educational Policy had, unbeknownst to CRS, issued a memorandum following the release of the Executive Committee's report recommending that the CRS program be eliminated if changes recommended by the College were not made. This was followed in early August by a memorandum from the Senate's Budget Committee (the final arbiter of political and academic morality on campus) citing once again all of the historic criticisms of CRS, ignoring changes made and in process, and concluding that the best solution would be to disestablish the major and re-establish alternative majors in the College of Natural Resources which could then absorb students and faculty from the existing program.

CRS quickly reminded these committees that it had already adopted and implemented the appropriate changes and that apparently the two committee's were unaware of this. Interestingly, a top administrator responded to CRS that indeed the actions had been taken because there was no awareness at the university level of all the changes made--even though they had been in process and regularly reported on for more than a year.

Apparently now content at all levels that reforms in CRS had in fact been effected, the different assaults on the structure and function of CRS ended and the program in effect at the end of academic 1982-83 essentially reflect the undergraduate program as it is today. These are then good dates to reflect the end of CNR

and the beginning of CRS.

One final note regarding the CRS advising system must be stated since, ironically, this has been one of the more criticized elements of the CRS program. The criticisms undoubtedly stemmed from the many unsubstantiated comments by political critics regarding "permissive academic standards," "loose requirements," "political activism," and allowing students to "get away" with a minimum of core science requirements. Throughout its history, CRS has probably put more effort and concern into academic advising than any other program in the history of the campus. In every instance where campus-wide academic advising was evaluated, CNR/CRS was consistently rated as one of the best and most effective on campus.

Advising was identified from the beginning as the heart of the CNR major. It was clear that a major with so few specific course requirements and with the onus on the student for planning and defending individualized programs of study, would require a cadre of able and well informed advisors, representing many disciplines and with interest in interdisciplinary education and research. Thus, the advising system was established with care, foresight and flexibility including an Advisor's Coordinating Committee, development of a descriptive advisor's directory, and regular access by students to all faculty in the department. A self-imposed enrollment ceiling was established of eight times the number of advisors.

The most challenging aspect of advising in CRS is assisting students with appropriate lower-division preparation leading to development and implementation of the "area of interest" and

selection of the eight upper-division semester courses that constitute the primary academic focus within the area of interest. The advisor encourages advisees to utilize all available resources and seek all available advice (including meetings with "adjunct" advisors) pertaining to the area of interest, and assists the student in the identification of resources, both on and off-campus. The advisor requires that the student carefully define and describe the area of interest and defend the eight courses selected. This is now done in writing, in active consultation with the advisor and through the Senior Plan.

Given the traditional strength of the CRS advising program, the university's decision to reduce the enrollment in the major to 120, a decision based in part on the supposed inadequacy of the advising system, made little sense. CRS has several times appealed the cuts, stating that the reductions were not necessary and were not fair to students who wished to major in CRS--even today an absolutely unique program at Berkeley. The advising system was capable of handling up to 180 students, suggested the department, and given the large unmet demand from students desiring to major in CRS a quota increase seemed reasonable. By 1987 the College recommended that the major be increased to 170 but the request was turned down at the university level. One of the prime indicators of the success and value of an advising program is student satisfaction. Surveys over thirteen years regularly indicate that students feel the CRS advising system to be one of the best on the campus with a very high proportion of graduates finding employment in their declared areas of interest.

4. Description of the Conservation and Resource Studies Major

The following is a current description of the CRS major. For perspective on how it has evolved, the reader is referred to the description given in the earlier publication.

The CRS major is an interdisciplinary program designed for those who are interested in environmental issues and in areas of interaction among natural resources, population, energy, technology, societal institutions, and cultural values. Students draw on the course offerings of the entire campus and appropriate community resources in the development of individual programs of study.⁽⁶⁾

The major's orientation is toward flexibility and an individualized educational approach to understanding the structure and dynamic functions of complex environmental systems within our society and biosphere. It encourages interaction among students, faculty, and community.

The departmental offerings are designed to help each student formulate an area of interest, but are not in any way meant to limit the range of options available. The sequence of courses offered through the department augment the courses of the College and those of the campus and define the academic subjects germane to the field of conservation and resource studies.

Within the requirements of the CRS major, students develop individual programs of study in close consultation with their faculty advisors. The flexibility of the major requires that students accept the responsibility to become active participants in planning their courses of study.

During the first two years, the CRS major requires that students acquire a broad foundation of courses in the natural and social sciences as well as fulfill basic skill requirements and begin preparation for the upper division area of interest. Specific courses are chosen in consultation with the student's advisor, in some cases from within a restricted list.

The two required courses (CRS 10 and CRS 90) introduce the student to the major and provide a broad survey of major environmental issues from an interdisciplinary perspective.

All upper-division CRS majors are expected to take CRS 100 as soon as possible and, in the final semester, to complete CRS 194, in which they will prepare senior syntheses and present seminars based on the academic content of their areas of interest.

Students begin developing and clarifying their interdisciplinary areas of interest as soon as they enter the major. As upper-division students, they implement their particular area of interest statements with specific programs of at least eight courses chosen in consultation with their advisors. This requirement may include graduate courses, but may not include work completed before reaching junior status. Although no more than two area of interest courses may be independent or special studies courses, the CRS department encourages students to consider opportunities to gain practical experience through field studies or internships. Independent research courses and a Senior thesis are also possible, as are student initiated courses on topics not covered in regular courses.

During the semester in which 75 units are accumulated, each student must submit a revised area of interest statement and a list of all courses planned for the senior year. This Senior Plan is then reviewed by a faculty committee and must be approved before final graduation plans are completed.

A summary of the plan of study and requirements for the major is as follows:

LOWER DIVISION REQUIREMENTS:

UNITS

Core Requirements

25-35

- CRS 10: Environmental Issues (4)
- CRS 90: Introduction to CRS (1)
- Two courses in Biological Science (6-10) (minimum total of 6 units). One course must be in introductory biology and include a laboratory (selected from a restricted list) and one must be in ecology (selected from a restricted list)
- Two courses in Social Science (6-10) (one course must be selected from a restricted list)
- Two courses preparatory to the area of interest (6-10)

Skills Requirements

11-13

- Two courses in Reading and Composition (8 units)
- One course in Mathematics and Statistics (may be applied to the Analytical Reasoning requirement: 3-5)

Breadth Requirements

12-20

- At least two courses in each of two of the following areas: Physical Sciences, Humanities, and Analytical Reasoning (minimum of 3 units each)

UPPER DIVISION REQUIREMENTS:

Core Requirements

6

- CRS 100: Principles and Methods of

Analysis (4)
CRS 194: Senior Seminar (2)

Area of Interest Courses 24-32

Eight upper division courses (selected
in consultation with the advisor)

Electives 14-44

Total Semester Units Required 120

The department provides a friendly and supportive social environment for its students, and maintains facilities designed to assist them with their studies and activities. An active student organization and an alumni organization augment the overall program.

The CRS Resource Center maintains information files and a modest library focusing on environmental issues, projects, and career opportunities. Internships and research projects are encouraged and arranged on an individual basis. A student published newsletter, the CRS Review, keeps students, staff, and faculty in close touch with developments in the program. The department also maintains a demonstration urban garden and solar greenhouse on land adjacent to the main campus.

Employment opportunities depend largely on the student's area of interest. Although the general program is not designed to prepare the student for specific graduate studies or employment opportunities, specific programs are often designed, through the area of interest, to assist the student toward particular career goals. Approximately 1/3 of CRS graduates go on to advanced study. Career fields include agriculture, architecture, biological control, biological science, business

administration, city and regional planning, community development, ecology, economics, education, environmental analysis and planning, environmental science, forestry, geography, health and nutritional sciences, humanities, international development, journalism, landscape architecture, law, medicine, political science, psychology, public policy, resource conservation and management, soil science, and wildlife management. Some 1500 students have now graduated from CRS programs.

The following is a current list of courses offered by the CRS Department. The reader is encouraged to refer to the list given in the earlier publication for insight into how the department's courses have evolved during the past ten years.

General Interest Courses

CRS 10 Environmental Issues (4)
CRS 10L Special Projects (1)

Environmental Science Courses

CRS 40 Environmental Chemistry (2-3)
CRS 60 Environmental Biology (3)
IDS 80 Environmental Physics (3)

Lower Division Special Studies Courses

CRS 90 Introduction to CRS (1)
CRS 99 Supervised Independent Study and Research (1-3)

Ecosystem Analysis Courses

CRS 100 Environmental Problems: Principles and Methods of Analysis (4)
CRS 101 Urban Garden Ecosystems (3)
CRS 101L Urban Garden Ecosystems laboratory (1)
CRS 102 Agricultural Ecology (3)

Environmental Philosophy Courses

CRS 110 Ecosystemology (3)
CRS 115 Environmental Philosophy and Ethics (3)

CRS 116 Bioethics (3)

Environmental Education Courses

IDS 121A Environmental Education (3)

IDS 121B Environmental Education (3)

Environmental Planning, Analysis and Administration Courses

CRS 130 Environmental Policy, Administration, and Law (3)

CRS 131 Legal Aspects of Resource Development and
Administration (4)

CRS 132 Environmental Analysis (4)

Environmental Health Courses

CRS 140 Environmental Health and Development (2)

Environmental History and Economics Courses

CRS 150 American Environmental and Natural Resource
History (3)

CRS 151 Economic and Political History of Resources in the
Twentieth Century in the United States

Resource Policy and Socioeconomics Courses

CRS 163 Comparative Systems of Agricultural and Natural
Resource Policy (3)

CRS 166 Political Ecology (3)

CRS 168 Natural Resource Policy and Indigenous People (3)

Upper Division Special Studies Courses

CRS 190 Seminar in Environmental Issues (3)

CRS 194 Senior Seminar in CRS (2)

CRS 195 Senior Thesis (3-4)

CRS 196A Internship in CRS--Field Module (3-8)

CRS 196B Internship in CRS--Research Module (2-4)

CRS 197 Supervised Field Study (1-3)

CRS 198 Directed Group Studies (1-3)

CRS 199 Supervised Independent Study and Research (1-3)

CRS courses, in contrast with the earlier CNR period, have now been designated within specific categories intended to indicate at least to some degree area of interest pathways. The redesignation of certain IDS courses to CRS has perhaps reduced campus-wide interest in departmental offerings. Although the fall-off in campus-wide enrollment in CRS courses in the past

five years has been largely due to restrictions by the College of Letters and Sciences (L & S) in the number of non-L & S credits allowable to L & S majors, it does seem clear that the mandated curricular revisions and criticism of the interdisciplinary nature of the CRS program have reduced interest campus-wide in CRS course offerings.

Between 1971 and 1981 faculty and students in the program were encouraged to make liberal use of directed group studies, independent and field studies, and internships. Because of the severe criticisms directed at such programs by the Review committee, there has been an ever decreasing use of such courses in the past five years. The earlier program discovered that the value of such studies far exceeded their importance to enrolled students. Faculty members solicited to lead or sponsor such courses soon became interested in the overall program and subsequently contributed to it. Many of the studies provided useful ideas for programmatic improvement. Some led to the development of other experimental courses, some of which in time became regular course offerings. Most importantly, they helped to maintain vitality in the program through the opportunities for students and non-CRS faculty to participate directly in the program. Hopefully, future developments in CRS may lead to more formal encouragement of such courses.

5. What Does The Future Hold?

In spite of the many problems and challenges that have confronted CRS in the past decade, most of the students and faculty now associated with the program continue to see grounds for optimism for the further development of the department. Professor Carolyn Merchant, current Chair of CRS, wrote in the 1986-87 College of Natural Resources Bulletin that it is her,

...hope to facilitate the interdisciplinary links between humans and nature, between past and future, between science and ethics that inspired the department's creation in the early 1970's. I encourage students who enjoy putting programs and ideas together in new and creative ways and who share a concern for the quality of human life and that of the natural environment to consider CRS as a major. As faculty and students, we reach out to each other, the community, and the globe to seek ways of resolving environmental problems. The excitement and inspiration of devising and implementing new policies, scientific approaches, and ways of thinking vitalize us. The hope that we may have some small effect on the earth of the future unifies our study and work.

A number of encouraging developments further suggest that the vitality of the CRS past may continue into the future. Student interest and enthusiasm in the major remains high. Although the forced reduction in the size of the major means that half of all qualified applicants must now be refused admission to the program, CRS still has a campus image of relevance and vitality.

At long last, the College has approved official partial FTE transfers for several of the key volunteer faculty into the CRS department. Already, the Organized Research (OR) components of the four core faculty have been approved for transfer into the CRS department thus providing recognition of CRS research

activities and authorizing budgetary assistance and research assistant grants to the department. As of Fall 1987, teaching FTE in the department is approximately as follows:

Permanent FTE--Instruction & Research	3.65
Permanent FTE--Organized Research	1.0
Non-recurrent FTE	3.0
Teaching Assistant FTE	4.0
Resaearch Assistant FTE	1.0

Of perhaps greatest long-range importance, a revised Graduate Program has been presented to the Graduate Council. Should the Council choose not to approve the program at this time, the department intends to diligently pursue the graduate options at a later date.

The CRS graduate program has been designed to focus on a systematic recognition and definition of environmental and resource problems and on their possible resolution. The CRS faculty see this process as entailing four distinct elements:

1. defining situations which are or may become "environmental" problems
2. providing analysis of those ecological and natural resource systems pertinent to the problem, i.e., its physical, chemical, biological and technical basis and developing proposals for mitigation.
3. analysis of social and cultural components of these problems, i.e., the underlying historical, philosophical, ethical and political roots and developing proposals for ameliorating such causal factors
4. translation of the analysis into viable resolution through improved political management, development, and administration.

Students will choose one of three fields of emphasis for either the M.A. or the Ph.D. degree: Natural Resource Systems; Environmental History, Philosophy, and Ethics; and Environmental Policy, Management and Administration.

Although the program will be modest in its initial stages (4-5 students per year with a steady-state cap of 20 students), it is expected that approval of the proposal will be a formal recognition that after years of departmental trial and error, the university now recognizes the importance of the substance and process of CRS's instruction and research.

Finally, the program seems now to be generally recognized on campus as being academically sound and within the main stream of the university. Few criticisms are heard today. How any program in the natural science field will fare in the future at Berkeley, however, given the biology reorganization now underway remains to be seen.

Symbolically the enrollment issue and the decision on the graduate program may well provide the clearest signals regarding the future of CRS. If the reduced quota stays in effect permanently in spite of the recommendation for an increase by both the department and the College, and if the Graduate Program proposal is turned down then one can only suspect that other factors than the quality of the program may still be working against CRS. Decisions on both issues will be reached during academic 1987-88. Only then will this hopefully penultimate chapter of the saga of CRS be complete.

Epilogue

The authors recognize that many may disagree with their perhaps overly positive evaluation of CNR/CRS and of their understanding of the university's role in discouraging the interdisciplinarity and the democratic pedagogy of CRS. We

understand that, given the political reality of higher education in America today, we may have been overly critical of those who failed to support the CRS alternative. It seems appropriate then to conclude this review with a further reflection--again, perhaps naive--on what should be the role and function of the university in America today.

The basic task of the western university has always been to create an atmosphere for dialogue which will assist the human community in overcoming both primary and secondary ignorance. The double means by which this end is sought are research and instruction. The classical university was dedicated in some degree to the principle that it was to be a workshop of relatively free and unfettered teaching and research in the sciences and the humanities. Of equal importance was the protection of freedom of learning and freedom of teaching. Although class structures always limited the number of people who could participate in the educational process of the university, a reality always compromising the university and limiting the attainment of its dream, such freedoms in principle were understood to be base-line requirements if relevant scholarship was to be maintained.

Although universities in the west came in time to be used as agencies for the maintenance and perpetuation of social, political, and economic control, there was always tension between the "idea" of the university and its less than perfect practice. In the United States--more than in any other country--where much of the traditional class distinction had been left behind, the university became a powerful force for democratization. Carrying

a major responsibility for the initiation and maintenance of the social/political dialogue, the university here early on lost its isolation.

Never simply a mirror image of the ideological assumptions of its ruling class (although always reflecting those perspectives to some degree), the university was nonetheless expected to see that the primary values of the country's powerful groupings were at least minimally reproduced within its boundaries. Increasingly, the technological society demanded that its universities provide students with the tools necessary for the ongoing material development of the society. This practical reality has forced the systems of higher education in most western countries to become more technocratic and less concerned for the traditional understandings of teaching--freedom and learning--freedom that at least historically were given courteous tips of the ideological hat. So--even on the Berkeley campus--we see a reflecting pond of assumptions and contradictions between the idea of the university and its functional reality. Two illustrations suggest the current tensions between the classical understandings of the nature of the university (always paid lip service even by the bureaucratic pragmatists who run the university) and the practical funding realities now faced by administrators: (1) the almost passionate pursuit of grants for molecular biology and genetic engineering projects on campus, and (2) the continued operation by the University of the only two nuclear weapons laboratories in the U.S.--the Livermore and Los Alamos nuclear facilities.

So--whatever the contradictions may have been historically, there are still certain preemptive "marks" of the university which should distinguish it and which must continue to define both its nature and its teaching/research task. These marks include:

a recognition that the central purpose of the university is, within a scholarly community of teachers and learners, to create an atmosphere for dialogue which can assist it in accomplishing its central task of overcoming ignorance

a commitment to the principle that freedom, justice, and equality of educational opportunity must be the basis for the presentation and evaluation of new ideas

an understanding that the search for truth can never be an end in itself but must always enhance the human capacity for positive and peaceful resolution of humankind's ills.

This has been the task of CRS. Understandably, the university has not always supported such goals which must seem at times antithetical to its other role of reflecting and supporting the dominant values of the more powerful forces in the society. The authors trust, however, that enough residue of that early, essential "idea" of the university will survive so that CRS, at least, may be permitted to continue to pursue the vision.

NOTES

1. Gersper, Paul L. 1978. "Conservation of Natural Resources Field Major: University of California--Berkeley, pp. 187-220 in Schoenfeld, Clay and John Disinger, eds., Environmental Education in Action II: Case Studies of Environmental Studies Programs in Colleges and Universities Today, ERIC/SMEAC Center for Science, Mathematics and Environmental Education, The Ohio State University, Feb. 1978, 499 pp.
2. As quoted in Samuel E. Morrison, The Founding of Harvard College, Cambridge: Harvard University Press, 1935, p. 250.
3. "Report of the Academic Review Committee on the Conservation and Resource Studies Major," Professor Boysie Day, Chair, May 1982, College of Natural Resources, University of California, Berkeley, California 94720.
4. The co-author believes that the College's decision to appoint the "director" to head CRS during this transition period may ironically have helped CRS to survive. When all of a sudden well respected, conservative, traditional academics began actually seeing merit in CRS, it became more difficult for critics to assault the program.
5. "Report of the Academic Review Committee on the Conservation and Resource Studies Major", op. cit.
6. This description is taken largely from the Announcement of the College of Natural Resources 1986-87, University of California, Berkeley, Volume 80, Number 10, July 1986.

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