Under the Master Plan of 1960, California was the first state to provide universal access to higher education for all high school graduates. Despite great success at all levels, higher education in California is now facing a crisis. National and state-wide recessions have reduced resources while potential enrollment is sharply increasing from three sources: first, "tidal wave II" as the grandchildren of World War II veterans reach college-age; second, the increasing number of adults entering or returning to college; and, third, increasing minority group participation. Demand continues to increase, resources continue to decline, and the per student cost is still rising. A response to the immediate needs is not enough, a new Master Plan is needed. As the Plan of 1960 looked ahead to 1975, a new Resource Master Plan must be developed now for the future. Issues to be addressed include: (1) the highest priorities for higher education; (2) the best mechanisms for implementation; (3) greater access to state resources; (4) more effective use of student time; (5) fairer competition for higher education in obtaining state resources, and more control by the governor and legislature over all state expenditures; (6) redistribution of resources among segments; (7) better use of resources within segments, under leadership by the segments; and (8) careful study of new facilities. (JLS)
PRESERVING THE MASTER PLAN

by Clark Kerr

An Occasional Paper Published by

THE CALIFORNIA HIGHER EDUCATION POLICY CENTER

October 1994
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What is to be Done in a New Epoch of More Limited Growth of Resources?

by Clark Kerr

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The California Higher Education Policy Center

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Preserving the Master Plan is one of a series of occasional papers published by The California Higher Education Policy Center to stimulate discussion of issues important to the future of higher education. The views expressed are those of the author and do not reflect official positions of the Center. The Center welcomes the responses of readers.
Public higher education in California, and in the nation to a somewhat lesser extent, has entered a new epoch defined by (1) more limited resources coincidental with (2) expanded needs. The more limited resources are not because of any lack of merit by higher education. Higher education has not been a failure. In fact, it has been and is a great success.

The Success of Higher Education

Among major segments of American society, only two can be said, without qualification, to be the best in the world: our military establishment and our higher education system; not any longer our steel industry, our automobile industry, our electronics industry, our health care system, our child care system, our primary and secondary schools, our system of criminal justice, nor our network of physical infrastructure. Take note of the following:

- We offer higher education to a greater proportion of our youth than in any other nation.
- We provide the greatest range of choices of colleges and universities.
- Our community colleges stand open to elsewhere unheard of numbers of citizens.
- Our state colleges and universities serve the labor market in its totality more responsively than anywhere else.
- Our research universities are preeminent in the world, and one-half of all new research output is American in origin.

And California leads the way within the United States. California, under the Master Plan, was the first state (or nation) to provide universal access to higher education for all high school graduates or persons otherwise equally qualified. California has five of the top twenty research universities, private and public, in the United States, and five of the top thirty in the world. No nation in the world, other than the United States, has that many. The California State University system is the nation’s leading source of teachers, engineers and other highly skilled workers. Our community college system, for over 50 years, has been a model for the nation.
Yet higher education in the United States and in California—particularly public higher education—is even more depressed than the economy. In 1992–93, support for higher education by the 50 states had gone down by about seven percent nationwide in real dollars compared to two years before, and in California by 18 percent. The gross national product, however, went up one percent on the same basis of real dollars for the same period. When and where else in American history has such comparative great success ever been followed by such comparative deprivation?

The Failures of the Economy

What we face in the economy is currently putting great pressures on state authorities, on trustees and regents, on academic leadership. Is this current crisis just a temporary blip on the academic seismograph? I doubt it. This is what we face:

- Nationally, a prolonged recession.
- In California, a necessary restructuring of the economy beyond that in any other major industrial state.
- Worldwide, the greatest stagnation of productivity growth since acceptable statistics have been available. Recently, in the United States and roughly paralleled worldwide, the record of output per person has been:

<table>
<thead>
<tr>
<th>Period</th>
<th>Growth Rate</th>
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<tr>
<td>1950–1960</td>
<td>+3 percent</td>
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<tr>
<td>1960–1970</td>
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<td>+2 percent</td>
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<td>1980–1990</td>
<td>+1 percent</td>
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- At three percent growth, we double our standard of living every 25 years; at two percent, every 40 years; and at one percent, every 75 years. In an effort to prolong the expectations built on a three percent growth rate, we have nearly doubled the proportion of women in the labor force, and we have turned this nation from the greatest creditor to the greatest debtor nation in the history of the world. Neither of these adjustments can be so available in the future.

The Crunch

The demand side for resources is equally ominous, with explosive increases in the cost of health care, the cost of welfare, the cost of corrections, and the burdens of an aging population—all competing for resources with higher education.

Higher education also faces an explosion of its own. It needs additional resources to support expansion deriving from three sources:

- Tidal Wave II will start in 1997 or 1998, when the grandchildren of the GIs enter college.
- The high rate of people returning to a college education carried us through the expected “demographic depression” of the 1980s with an actual increase in enrollments, and this high rate still continues. (The earnings premium for a college education over high school rose from 40 percent in 1980 to 85 percent in 1988.)
- In California, the numbers of minorities in general are growing and minorities are on their way to being a majority. In particular, minorities are increasingly participating in higher education.
The new epoch—fast growth in the demand for higher education contrasted with slow growth in the prospective supply of new public resources available for higher education—is characterized by the following crises:

Crisis One: the general recession in the nation. The worst of this is probably over now.

Crisis Two: the specific recession in California. The worst of this is probably still to come as defense industries and installations decline.

Crisis Three: Tidal Wave II and related developments in enrollment. This is still to come. Lasting for perhaps 15 years, it will be at least equal in absolute amount to Tidal Wave I but much lesser in proportion to base levels and spread over a somewhat longer period of time. The peak of Tidal Wave I was from 1965 to 1975.

Crisis Four: the stagnation of economic productivity. This started about 20 years ago and still continues, with future prospects uncertain.

Crisis one, two and three are inevitable and, in their total consequences, will last at least to 2010.

The fourth crisis is more problematical, but there are several favorable possibilities: successful further use of existing knowledge in electronics; new knowledge including in biotechnology and the use of new materials (perhaps particularly ceramics); and better ways of creating and using energy. But there are also unfavorable possibilities: The productivity rate of research and development, as measured by new patents in relation to research-and-development expenditures, has fallen over one-half since 1975 (AEA Papers and Proceedings, May 1993). Employment in the more productivity-prone segments of the economy (including manufacturing, agriculture and transportation) was only 30 percent of total employment in 1990 as against 60 percent in 1950, while “handicraft” employment (as in education, health care, service trades, construction, and government), where there is no mass production, has gone from 40 percent in 1950 to 70 percent in 1990. The historically more “stagnant services,” as they have been called, with their low productivity increases, now dominate the economy.1

Higher education faces the new epoch with four internal handicaps and these must be understood:

1. Except for short periods, as in the Great Depression and the OPEC crisis in the 1970s, systems of higher education have never had to be so highly cost conscious. For example, real expenditures per student in 1990 dollars rose from $2,700 in 1930 to $7,800 in 1990.

2. Many of the decisions concerning the delivery of higher education—as, for example, class size and teaching loads—are set at departmental levels far removed from the presidential level which is under the most direct pressures in the procurement of resources.

3. “Crass” considerations of effective use of resources have not traditionally been highly regarded in the academic community, and a few elements of that community do not yet accept the new realities of scarcer resources.

4. Academic decisions are mostly made by consensus and it is difficult to get a consensus to cut spending.

These handicaps need to be acknowledged and accepted as facts. The academic process of adjustment to resource constraints can be a traumatic experience. However, higher education needs to

acknowledge that many other segments of American society are also experiencing similar adjustments.

At this point I should like to enter two notations in advance of the succeeding discussion.

**Multiple Assignments of Higher Education.** One notation is that higher education serves the economy and improves the chances for equality of opportunity, as the preceding and subsequent comments emphasize, but it also has other important purposes, including: strengthening the effectiveness of the democratic political system; making it more possible for more people to cope adequately with decision making in the conduct of their lives; and enabling more people to participate more fully in the cultural life of society.

**Labor Force Deficiencies.** The second notation is that the labor force of the nation has great strengths (it is overall the most productive in the world), but also some specific weaknesses, including: many high school graduates who lack high-school-level competencies in language and numerical skills; a deficit of training opportunities for the skilled crafts; the absence of all-around skills to participate in “team” approaches to the management of production; the shortage of highly qualified persons in “social firing line” positions, as, for example, policemen; and the inadequacy of academic concentration on “polytechnic skills” in actual performance “on the floor” by teachers, engineers, managers, and others. The latter three are the particular responsibility of community colleges and of four-year colleges and universities. All levels of higher education need to develop much greater coordination with the high schools.

What Is To Be Done?

Alternative approaches that have worked well in the past include:

- Take it year by year and hope for the best. This works well in good years.
- In individual bad years, cut expenditures on an ad-hoc basis where there are the fewest immediate powerful protests (plant maintenance, book acquisitions, new hires, early retirements), as we mostly did across the United States in the 1970s. This has its long-run costs, and works acceptably only if the bad years in succession are limited—perhaps not more than five as in the 1970s—and are not all that bad.

But suppose there are ten or twenty really difficult years in prospect, what then? Again there are alternatives:

- Take it year by year, delaying the harder decisions as long as possible. This has much to recommend it. The passing years are educational, and hard decisions are easier to make when the gravity of the situation has become clearer to more and more of those directly involved. Decisions are spread out over more time and over more decision-making units. Also, something may turn up.
Face the future all at once. This can overload the decision-making process but it makes possible a consideration of more alternative strategies with less attention alone to current tactics. It is easier to see solutions in relation to each other, but the process of decision making has to be greatly speeded up, and this puts heavy burdens on the traditional consultative process. This total approach takes both foresight and confidence in the capacity to find overall solutions.

The latter course of facing-the-future-all-at-once was the one chosen by higher education in California in the Master Plan of 1960. The plan helped to give California the best system of higher education of any state (even of any nation) in terms of both access and quality. We then looked ahead nominally to 1975 but actually to 2000, particularly in our decisions about how many new campuses there should be for each segment, and we made plans which actually will carry us to the year 2000. But it was not easy. At one point, the effort nearly collapsed.

I am convinced once again that a larger and more comprehensive approach to the future is needed—perhaps not 40 but 15 or 20 years ahead, and not over as wide a range of issues. Tidal Wave II, all by itself, argues for such an examination.

But the situation in 1993 is quite different from that in 1960 when we originated the Master Plan. Then the major issues were differentiation of functions among the segments, admission policies among the segments, the number and location of new campuses, and mechanisms for coordination. The availability of resources was taken for granted. It was assumed that “productivity per man hour will continue to rise at approximately the average rate of recent years”—which was three percent. It has not. That is what makes 1993 so different from 1960.

Can we maintain the Master Plan in general, and access and quality in particular, into the future? I assume that the almost universal answer is that we should if we possibly can. Access was a promise to the people of the state on which millions of parents and hundreds of thousands of young people have counted. It was a promise made by the Legislature, by the Governor, by the UC Board of Regents, and by the new CSU Trustees. Access is even more important now, not only because a promise was made but also because the labor force requires more education than in 1960, and because equality of opportunity is even more important. To slam the doors now would be a moral, economic and political tragedy for this state.

Quality is also important. New knowledge and higher skills have been two great driving forces behind rising productivity—responsible for 40 and 20 percent respectively—in the United States historically. Additional capital investment has added another 20 percent. The State of California, in particular, has demonstrated the importance of new knowledge and higher skills in agriculture, electronics and the defense industry historically, and in biotechnology currently.

And if California cannot maintain access and quality in higher education, it will be a sad omen for the future of California (and the United States). Who wants to assume responsibility for that possibility? The Trustees? The Regents? The Legislature? The Governor? We face a potentially explosive situation both politically and economically.
A Resource Master Plan

So I suggest that we may wish to consider, as a bulwark for continuation of the academic Master Plan for Higher Education of 1960, a new resource Master Plan for Higher Education of 1994. This will not be easy. There are some issues even more controversial and sensitive than those in 1960. The bottom lines of some of the most interested parties are different from each other when confronting resource issues, and these differing bottom lines add great complexities to the tasks of those in state government and in higher education who have the responsibility of trying to reconcile them. These partially inconsistent bottom lines include:

- For students and their parents: access, quality and availability of instruction, and costs that rise no faster than the general cost of living.
- For faculty members: fully competitive salaries, no substantial increases in teaching loads, full faculty participation in academic decision making, and, of course, quality.
- For the economy: a skilled labor force and the highest levels of new technology.
- For political authorities: access, quality of instruction and research, and the lowest possible reasonable costs.
- For trustees and regents: access, quality and a fully reasonable level of state support.

This variation in goals and the multiplicity of concerned parties makes a resource plan even more difficult to achieve than the academic plan of 1960. This suggests that the use of resources may best be examined by itself, leaving aside other possible issues affecting higher education; and, in any event, most of higher education in California is healthy and functioning well.

This proposal for a resource master plan is not to suggest that much has not already been done, and even more is being planned, by higher education at the campus and system levels—some of it quite impressive. Attention has been given by faculty members, by administrators, by trustees and regents. What has already been done is noteworthy since the new epoch came upon all of these participants rather suddenly, immediate adjustments had to be made under great pressures of time, and long-term prospects were less clear than they now are. I see now a clear willingness to undertake an overall look at resources at all internal levels of leadership. We are particularly fortunate in the cooperative relationships at the highest levels of the University of California and the California State University. Advantage should be taken of this highly important development. We now also have in place a coordinating mechanism at the state level—the California Postsecondary Education Commission (CPEC)—which we did not have in 1960.

Some actions can be taken at campus levels—and some are being taken. Some actions can be taken at system levels—and some are being taken. Other actions can best be undertaken between the CSU and UC systems together; some actions along with the community colleges and along with the private sector of higher education; some along with the state Board of Education; some along with and by the Governor and the Legislature.

The Master Plan was a plan but it was also a process. It was a process that involved UC, the state colleges (as they were then called), the junior colleges (as they were then called), the private col-
leges and universities (the chairman of the planning committee was chosen from the private sector), the Office of the Governor, and the committees of the Legislature (the act was named after one chairperson—Dorothy Donahoe). Fortunately, there was an almost universally recognized and overriding common goal, and that was the general welfare of the citizens of California. Also, everyone had something to gain, but everyone also had concessions to make. The process was more important than the plan, for without the process there would have been no plan. I think it would be wise to follow a similar all-inclusive process once again. Such a possibility was discussed with the Assembly Committee on Higher Education, under the leadership of Marguerite Archie-Hudson, this past May at a “roundtable” in Sacramento, and met a very positive reception.

I am listing below some of the major issues I have heard under discussion within higher education in California. This list of issues makes these points:

- There is much to talk about.
- There is no “magic bullet” that will solve all problems; but there are many possible remedies that, in their totality, can constitute a major cure.
- The blame for and the burden of solutions cannot be placed on any one group of participants or any one segment of higher education.
- All participants and segments can and should make contributions to the solutions: students and faculty members; the Governor and the Legislature; UC, CSU, the community colleges, and the independent colleges and universities. So we must all work together.

Potential major agenda areas covering issues already under discussion might include:

1. Consideration of the highest priorities for higher education.
2. Consideration of the best mechanisms for implementation.
3. Greater access to nonstate resources.
4. More effective use of student time.
5. Fairer competition for higher education in obtaining state resources.
6. Redistribution of state resources among segments.
7. Better use of resources within segments, under leadership by the segments.
8. Careful study of new facilities.

(A more detailed list of issues is appended.)

A Great Opportunity

The academic plan of 1960 took one year to complete. A resource plan, if attempted, might start this time by asking selected groups to set forth their concerns: the Governor’s office, legislative committees, Trustees and Regents, faculty instrumentalities, unions of nonacademic employees, and student associations, among other groups. The major participants would be, it seems to me, the four segments of higher education in association with CPEC; and with the concurrence, encouragement and consultation of the Governor and the Legislature. The two boards which meet here today, as the Board of Regents and the State Board of Education did in 1959, might wish to initiate the process by their joint actions.
Higher education is not fighting for survival—that is assured. It is fighting for its soul defined as service to equality of opportunity (student access) and to the discovery and dissemination of knowledge (academic quality), with higher education taking the main responsibility for guiding its own future (institutional autonomy). The OECD study of the Master Plan said that it was "a distinctive attempt to reconcile populism with elitism," and an effort to combine "equality with excellence." "Logic was superimposed on history" by integrating "both populist and elitist forces into one system." We did make history then by superimposing our logic on the uncertainties of unguided history. Once again, California higher education can assume charge of its future and, in doing so, not only benefit itself and the citizens of California but also become a model for the nation (and, perhaps, beyond).

Higher education earns, retains and expands its autonomy by the quality of its performance in serving society. The burdens of advancing the long-term and overall performance of higher education rest heavily on its "guardians" (the Trustees and Regents), who have the basic legal responsibility, and on its administrative and faculty leaders, along with the elected leaders of the State of California. Some years test the quality of performance more than others. It is during such times that responsibility becomes more concentrated. What now lies ahead is one of those times. It is a time for higher education to confront reality, and to take leadership in preserving promised access and academic quality within the context of slower growth of resources. If it does so, higher education in California can continue to be the best in the world. It can be done.

Sheldon Rothblatt, ed., The OECD, the Master Plan and the California Dream: A Berkeley Conversation (Berkeley: UCB, 1992), p. 36.
APPENDIX
A Summary of Issues Now Under Discussion

1. Consideration of the highest priorities for higher education.
   - In research.
   - In instruction (for example, "polytechnic" and "social firing line" occupations).
   - In assurance of long-term viability:
     - Fully competitive faculty salaries.
     - Full maintenance of libraries and laboratories.
     - Full maintenance of plant and equipment.
     - Full vitality of the most essential high utilization core departments.

2. Consideration of the best mechanisms for implementation.
   - Selective versus across-the-board policies.
   - Discussion versus dictates.
   - Self-governance by higher education. General guidance and rewards versus line-item controls. The state supports in total what it judges essential and possible. Higher education given freedom to distribute its total resources as it judges best.

3. Greater access to nonstate resources.
   - Gifts.
   - Patents.
   - Federal support of more faculty research time.
   - Tuition—noting the high current rate of return for a college degree.

4. More effective use of student time.
   - In high school:
     - Advanced placement courses.
     - Testing out.
   - In college:
     - Summer sessions.
     - Extension courses.
   - At home:
     - Creation of an "open college" by CSU and "distance learning" programs by UC, as in engineering. (Here new technology can be cost effective. On campus, thus far, as in health care, it has added to costs and to quality.)
     - A three-year undergraduate degree for some students is a distinct possibility.

5. Fairer competition for higher education in obtaining state resources, and more control by the Governor and Legislature over all state expenditures.
   - This is the most important single item in the more effective use of resources. It is unfair to have the University of California and the California State University constitute 60 percent of the unprotected 15 percent of the state budget, and it implies a very low priority by the state for higher education—far lower than public opinion surveys indicate is desired. (Note that over the past decade funding for corrections has risen from 4 to 8 percent of the state budget and higher education has fallen from 14 to 9 percent.) Reorientation of state priorities involves not only the Department of Corrections but also propositions 13, 4 and 98, and federal controls over expenditures, among other limitations on action.

The state should be in a position to finance additional students at least at current real costs per student. (Note that real costs nationwide for all institutions per student for "education
and general” expenditures have risen historically: in 1930, such expenditures equaled $2,700; in 1960, $5,500; in 1990, $7,800. This represents an increase of 40 percent over a period of 30 years from 1960 to 1990; and nearly 200 percent from 1930 to 1990.) Holding real costs steady (based on some “normal” year or years), if that should prove possible during even a temporary period of scarce resources, would be a very significant contribution by higher education. This would mean that higher education was raising its costs parallel with those of the nation as a whole rather than at a higher rate. This has not been the record of the past.¹

6. **Redistribution of state resources among segments.**
   - More use of the private sector (via funds to state Financial Aid Commission).
   - More use of community colleges.
   - Increase cooperative efforts between and among segments, as, for example, the joint doctorate between UC and CSU.

7. **Better use of resources within segments, under leadership by the segments.**
   - Year-round operations.
   - More use of auxiliary faculty particularly in areas not oriented toward instruction and research closely related to new knowledge.
   - Faculty teaching expectations reviewed (while noting that faculty members generally now work a 40 to 60-hour week). Faculty leaders have indicated a willingness to engage in such a review both from the point of view of use of resources and of equity among faculty members.
   - More independent study outside of organized classes.
   - Coordinate actual admission eligibility levels to Master Plan commitments.
   - Reduce duplication of efforts among campuses, particularly at the graduate level; and increase cooperative use of resources among campuses.
   - Reduce expenditures on low utilization departments.
   - Reduce years subsidized by state funds at undergraduate and particularly graduate levels where deemed excessive.

**Notation One.** A period of growth can be a good time to concentrate on more effective use of resources. Areas of low utilization can be held steady in their resource support while utilization rises, and new resources can be concentrated on high utilization areas. This takes very careful budgeting. This, in turn, includes the willingness to set tough priorities.

**Notation Two.** It is absolutely essential that all academic policies be determined only after full consultation with faculty and at levels as close to the actual problems as possible; but it must also be recognized that a resource crisis concentrates responsibility at central levels of leadership where the most important decisions about resource use must inevitably be made.

**Notation Three.** It might be expected that each segment make an annual report to the Governor and the Legislature on progress in making more effective use of resources.

8. **Careful study of new facilities.**
   - As may be fully necessary, with clear designation of their academic orientations.

¹ The best discussion of the historic record, and of the explanations that lie behind it, is by William G. Bowen for the Carnegie Commission (1968). Some of the Bowen’s statistics go back to 1905. Bowen sets forth the following “fundamental point”: “In every industry in which increases in productivity come more slowly than in the economy as a whole, cost per unit of product must be expected to increase relative to costs in general.” The question now is whether, in a period of crisis, such increases “must be expected” to continue in full in accordance with this historical record.
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