



Whose University? – The Rocky Road to Equity and Equality

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In the program for the inauguration of Chancellor Birgeneau on April 15, 2005, this quotation appears:

People are the new 'gold' to be mined in California. The challenge of this opportunity is how to develop one of the most diverse populations found in any nation-state in the world. To remain competitive in the new global economy and provide for the common good of our citizens is the mission of public higher education and of the Land Grant university in the 21st century.

This is a vision of the University shared by the Chancellor and the author of those remarks, who by coincidence is your speaker. During my lifetime there have been dramatic changes in our nation that have impacted virtually all institutions in our society, among them our universities and the school systems that send students to them. Let me list a number of the factors that I consider to have been instrumental in effecting these changes. First, the GI Bill of World War II; The Civil Rights Act and the Supreme Court decision in *Brown vs Board of Education*; the Presidential Executive Order establishing affirmative action; the Supreme Court's decision in the *Baake Case*; and more recently, the Supreme Court decision in the *Michigan case* and California's constitutional amendment as a consequence of Proposition 209. These factors occurred during a period of time in which the demography of our nation, especially in California, has undergone a dramatic change in which an ethnic or racial majority no longer exists. Finally, while national borders remain in the geopolitical sense, information, commerce and people now move about with relatively little reference to, or constraint from, these boundaries. With this background in mind it is my purpose to examine how the State of California, especially the University of California, has evolved as a consequence of these causative factors and identify the challenges and opportunities that it faces in continuing to carry out its mission as a public trust for the people of California.

One can begin by posing the obvious question: Why is education so important and for what purposes is it directed? A perspective that sets the stage to answer these questions is provided in a letter dated September 28, 1820, in which Thomas Jefferson wrote:

I know of no safe depository of the ultimate powers of a society but the people themselves, and if we think of them as not enlightened enough to exercise their control with wholesome discretion, the remedy is not to take it from them but to inform their discretion by education.

More than a century later Albert Einstein wrote that:

Everything has changed but our ways of thinking, and if these do not change we drift toward unparalleled catastrophe.

I would characterize these two statements as factors that "push" the importance of education and the imperative to regularly assess its focus and scope. Let me turn to two statements that further support this imperative. The first comes from Regents' Lecturer Edward Wenk, who noted:

In its connection to human affairs, technology now defines culture as broadly as philosophy and religion did in the past. It sharply alters lifestyles, and reinforces or collides with values. It modulates the most celebrated passages of human existence with artificial intervention in both birth and death. It is the main engine of change. And last, technology lurks behind our most agonizing dilemmas and our most potent threats to survival. In many ways not clearly foreseen, technology ordains our future.

Unfortunately, we are dealing with the consequences of this profound observation quite imperfectly at all levels of education. One need only reference the under-achievement of California students in math and science tests, not to forget the public debates surrounding evolution and global warming. This failure is leading us inevitably to the world of C.P. Snow's "Two Cultures", with clear social and economic consequences. In his Rede Lecture in 1959 he observed:

In our society (that is advanced western society) we have lost even the pretense of a common culture. Persons educated with the greatest intensity we know can no longer communicate with each other on a plane of their major concern. This is serious for our creative, intellectual, and above all, our normal life. It is leading us to interpret the past wrongly, to misjudge the present, and to deny our hopes of the future. It is making it difficult or impossible for us to take good action. There is only one way out of all this: It is, of course, rethinking our education.

Let me pick up on Snow's call to rethink our education. In California education is typically thought of as consisting of primary, secondary and post-secondary phases. The primary and secondary components are comprised of local school districts tightly regulated by the State Board of Education and the State Legislature and less so by the Superintendent of Public Instruction. The post-secondary components are comprised of the community colleges and public and private four-year colleges and universities. All are subject to a degree of control by virtue of accreditation, and the publics by virtue of state budget control. While post-secondary schools have profited from a near half-century old California Master Plan for Higher Education, a world-acclaimed model, no such plan exists that incorporates K-12 schools into the total educational process that a student experiences. Consequently, transitions from one phase to the next are all too often difficult and unproductive as a result of the relative isolation of the three segments from one another. Articulation agreements and faculty interaction are largely exceptions to the rule. There have been and continue to be regional partnerships among members of the three levels of institutions, but their sustained existence has not been a priority of the institutions or of the state budget. While the structure of the delivery of education in California continues to need improvement, its impact on students is probably less severe than constraints on access to quality education for large numbers of students.

We should rethink education by asking proper questions: Who are being given the opportunity for education, what is the quality of their education and how well are they doing? Sadly, the answers to these questions are strongly dependent on family income level and race or ethnicity of a particular student or an affinity group of like students. Recognition of this fact led to the genesis of affirmative action, which at Berkeley and elsewhere has now been replaced by programs aimed at equity and inclusion, as a consequence of changes in the law. The terms equity and inclusion take us back to the title of my remarks, Whose University? The Rocky Road to Equity and Equality. The public discussion of the question of "whose university" is typically focused on admission criteria, which constitute the gateway to the University. Left out of the discussion is the educational pathway to this gate, i.e., the preparatory K-12 educational experience, as well as the socio-economic environment in which an applicant for admission lives his or her daily life. For all too many students in California this pathway is strewn with boulders and potholes and dead-ends that seriously jeopardize the chances to reach the gateway to admission, let alone pass through it. If one characterizes passage along the pathway as "educational opportunity", the terms "equity and equality" provide useful measures of the quality of this educational opportunity. A student whose educational experience is marked by inequitable allocation of qualified teachers or other resources has a high likelihood of achieving an academic record unequal to that of a student who has enjoyed an equitable share of educational resources. UCLA Professor Jeannie Oakes characterized this issue of educational equity and equality in terms of "education gaps":

Opportunity Gaps – Disparities in schooling resources and connections between schools and families.

Achievement Gaps – Disparities in the degree of the mastery of the content and cognitive skills taught in A-G preparation courses; disparities in scores in achievement tests, A-G course completion, UC eligibility.

Access Gaps – Disparities in access to A-G courses, disparities in information about college, financial aid and in the "social capital" that open college doors.

And,

Attainment Gaps – Disparities in high school graduation, admission to college, persistence to degrees and graduate and professional school participation.

In what follows I will give a brief picture of the breadth and depth of these education gaps in California today. The Governor's Advisory Committee on Educational Excellence, the Mitchell Committee, conducted an extensive study of how California governs and funds public education. Unfortunately, its critically important recommendations have been shelved as a result of the State's current budget crisis. However, their findings illuminate the difficult problems that we face in "mining the gold" of human potential in California. The 2005 National Assessment of Education Progress ranked California 7th lowest in eighth grade math among the 50 states, 3rd lowest in reading and 2nd lowest in science, ahead of only Mississippi. Why is this a matter of importance for California and what are its likely causes? Earlier in my talk I cited the importance of education in a democracy. An international poll of corporate executives found that 75% of them ranked human talent and training ahead of productivity and technology in strategic importance. I think the why is self-evident. Let me turn to the

probable causes. About 13% of California's population lives in poverty. However, this masks the differential impact of poverty on certain groups: The poverty rate for Hispanics is 21%, for African Americans 25% and for American Indians 25%. Recalling that these groups together will soon constitute the majority of the population, along with the correlation between success in college and family income, should be a wake up call. Add to this the fact that the poverty rate for children under the age of 18 has been near 20% for 25 years further increases the seriousness of the impact of poverty on student success.. If one places these facts next to a study of student achievement based on math test scores in grades 3-5, an understanding emerges. This study found that student achievement depended primarily on two factors: teacher qualifications (43%) and home and family factors (49%). Interestingly enough, class size accounted for only 8%! This study supports numerous other studies based on correlating student achievement with family income. Home and family factors are beyond the reach of school districts, but teacher qualifications are not. The California Department of Education employs the Academic Performance Index (API) to measure an aggregated level of student achievement at a school. Students attending schools in the lowest API quartile are four times as likely to be taught by an underprepared teacher as compared to students in the highest API quartile. This situation is amplified by the fact that during their elementary grades they are 8 times as likely to have more than one underprepared teacher. Studies have shown that this classroom experience leads to devastating impacts on a student's motivation to learn.

California has approximately 17,500 teachers who teach science and 22,500 who teach mathematics in middle and high schools. At the middle school level, 10% of these teachers are underprepared (teaching without a credential); further, 30% of first and second year (novice) teachers of math and science are underprepared and 12% of math teachers are teaching out of the field of their credential. Underprepared teachers are concentrated in low performing schools – strongly correlated with zip codes. Requiring Algebra 1 of every 8th grade student has recently caused quite a stir. Last year 73,000 students were taking Algebra 1 from teachers who were either underprepared or teaching out of field – this, when only about half of 8th grade students were taking Algebra. Among the 747,00 students who took the Algebra 1 STAR test in 2008, only 25% scored at the level of proficient or above. It is not clear to me how or when it will be possible to comply with the Governor's mandate.

Stepping back from this picture describing the state of student learning, let me note that among the 50 states California ranks 8th in terms of median family income; at the same time only 21 states have a higher level of families living in poverty. The maldistribution of wealth in our state, together with the maldistribution of underqualified teachers, has a demonstrable, serious impact of student achievement in K-12 schools, therefore access to higher education. Let me quantify the impact that this has on our society. Using data from the 2007 American Community Survey, the median annual earnings for males ranked by level of educational attainment is as follows:

Highschool dropout -	\$22,000
Highschool graduate -	\$32,400
Baccalaureate degree -	\$57,400

Graduate/professional degree - \$77,000

A serious consequence of an under-educated population is not only the lost opportunity for employment in the workforce but a significant loss of taxable income accompanied by an increased level of needed social services - consider the consequences for California.

Students who are in classes with underprepared teachers and who often do not enjoy the level of support for educational achievement found in high performing schools, quickly lose the motivation to learn and find no reason to continue. This phenomenon is starkly portrayed by attrition and graduation rates of students from high school. Overall rates for the State are comparable to the national average, about 70%. However, the average masks the differential among groups of students. The largest percentage of students, Hispanic, graduates at a rate of 57%; African Americans at 55% and American Indians at 50%. Only 35% of those who do graduate meet the A-G requirements for admission to UC or CSU; only 25% of Hispanic or African American graduates meet the A-G requirements. The socio-economic consequences of this educational failure are dramatic. Dropping out of high school at a time when information technology and technically based service businesses are growing in importance, increases the probability of unemployment, and worse yet, admission to prison. Returning to the pathway of educational opportunity, there is clear evidence that the current pathway is littered by the consequences of inequity and inequality in educational opportunity. Given this situation, the question "Whose University is it?" has more than rhetorical importance. As an engineer it is obvious to me that a process cannot overcome quality and quantity failures that supply the process. The University cannot, indeed must not, take the position that it can ignore the consequences of inequity and inequality in K-12 schools. For me the words spoken by President Daniel Coit Gilman on November 7, 1872, at his inauguration, take a special meaning today.

*...the charter and the name declare that this is the University of California. It is not the University of Berlin nor of New Haven which we are to copy. It is not the University of Oakland nor of San Francisco which we are to create; but it is the University of this State. **It must be adapted to this people**, to their public and private schools, to their peculiar geographical position, to the requirements of their new society and their undeveloped resources. It is not the foundation of an ecclesiastical body nor of private individuals. It is "**of the people and for the people**" -- not in any low or unworthy sense, but in the highest and noblest relations to their intellectual and moral well-being.*

True to its Land Grant Charter, UC faculty, staff and alumni have developed the natural resources of our state to a level unmatched in our nation. Whether gold, silicon or agriculture is the measure, UC has succeeded exceptionally well in its mission. Yet, the University remains challenged that it should be "*adapted to this people...and to the requirements of their new society and their undeveloped resources*" - what I earlier termed the "new gold" of California. We must find the will to reconceptualize our Land Grant Mission to focus on the requirements of the people who will comprise the new society of the 21st century. Development of sustainable use of our natural resources must be accompanied by a full-scale effort to develop the vastly underutilized pool of human resources that reside in the people of our state. While this is a primary driver of the

economy in California's future, there is an equally compelling downside - loss of political support for the mission of UC accompanied by staggering social costs for the under-educated and unemployed.

It is interesting to note that the 1868 Organic Act which created the University contained this statement:

...it shall be the duty of the Regents, according to population, to so apportion the representation of students, when necessary, that all portions of the State shall enjoy equal privileges therein.

In 1988 the Regents reaffirmed a commitment to equity of access in the following resolution:

UNIVERSITY OF CALIFORNIA POLICY ON
UNDERGRADUATE ADMISSIONS

The undergraduate admissions policy of the University of California is guided by the University's commitment to serve the people of California and the needs of the state, within the framework of the California Master Plan for Higher Education...

Mindful of its mission as a public institution, the University of California has an historic commitment to provide places within the University for all eligible applicants who are residents of California. The University seeks to enroll, on each of its campuses, a student body that, beyond meeting the University's eligibility requirements, demonstrates high academic achievement or exceptional personal talent, and that encompasses the broad diversity of cultural, racial, geographic, and socio-economic backgrounds characteristic of California...

It is useful to trace some of the history that explains how this commitment to access to the University has evolved over time so *that all portions of the State shall enjoy equal privileges therein*. On March 6, 1961 Executive Order 10925 made the first reference to "affirmative action". President John F. Kennedy issued the order which created the Committee on Equal Employment Opportunity and mandated that projects financed with federal funds "take affirmative action" to ensure that hiring and employment practices were free of racial bias. This was followed on July 2, 1964 by the Civil Rights Act signed by President Lyndon Johnson, constituting the most sweeping civil rights legislation since Reconstruction. It opened the door to consideration of the question of who should have the right and privilege of higher education in our nation, i.e., whose university is it? Clark Kerr once remarked to me that he allocated \$100,000 dollars to begin programs in UC. Actually, the first affirmative action in the University occurred during the years of the College of California in Oakland, the predecessor of UC. In order to qualify Spanish speaking Californios for UC admission a so-called "fifth class" was established to prepare them. This program was dropped after a few years under pressure from the faculty. . One of the first programs at Berkeley was the Educational Opportunity

Program, a creation of a faculty committee in 1966. Few students in this program entered sciences or engineering, a matter of concern to my late colleague and friend, Bill Somerton, Professor of Petroleum Engineering. Bill, with the help of others, notably Mary Perry Smith at Oakland Tech, was successful in securing sufficient funds from oil companies to launch at Berkeley the now renowned MESA Program. The Early Academic Outreach Program (EAOP), originally housed in the Office of Relations with Schools, was a first attempt to take direct steps to contact and encourage students in high school to prepare for UC admission. It was initiated by Katie Haycock at UCOP in 1976. Katie is now the Executive Director of Ed Trust in Washington, DC. One of the lessons learned early on was that efforts to bring underrepresented students to UC, while necessary, were far from sufficient. Programs were required to provide assistance for students to deal with the hidden agenda of university life – both from an academic and a social perspective. At Berkeley Engineering was a leader in developing an undergraduate extension of MESA in the 1980's, the Minority Engineering Student Program, later renamed MEP and then Center for Underrepresented Students (CUES). This program was instrumental in increasing minority graduation rates in Engineering. A number of similar programs, notably in Biology, and Puente, followed in this era, which persisted into the 1990's. A notable achievement was the development of a state-funded resource base for part of the MESA effort, which by now had expanded to CSU and other UC campuses. So-called affirmative action programs, ie, programs that depended upon admittance by virtue of being a member of an underrepresented group, were demonstrably successful, particularly in professional schools such as law and medicine as well as in engineering. Although far from reaching any semblance of representational equity, they reflected a serious start at addressing educational access. Such programs were not affected by the Baake decision for UC Davis.

All this changed dramatically in 1995. It began in 1994 when a family challenged the rejection of a son for admission to the UCSD Medical School. Regent Connerly called for a special report at the December 1994 Regents Meeting. Michael Drake, then Associate Dean of Medicine at UCSF and now UCI Chancellor, gave a brilliant presentation documenting the positive impact of affirmative action in admissions. At the end of which Connerly stated, "It is time to take off the training wheels." That was the beginning of end of affirmative action in admissions at UC.

With the support of Governor Wilson, then a presidential candidate, Regent Connerly introduced two resolutions, SP-1 and SP-2, for action at the July 1995 meeting of the Board, which subsequently voted 14-10 in approval. SP-1 removed any consideration of gender or race in making admissions decisions, effectively ending affirmative action. But this was only the beginning. In November 1996 the people of California passed Proposition 209, represented to be an anti-discrimination piece of legislation, which placed in the California Constitution the same consequences as the Regents' action.

Given the political consequences of the Regents' resolution and Prop. 209 for the University, in which there was still a Regental policy that stated that the University should admit a student body that reflected the ethnic, social and geographical diversity of the State, a covering action was called for. This took the form of a Regental Outreach

Task Force, a broadly representative group of both UC insiders and outsiders. Their report of July 1997 was accepted by the Board with a mandate for President Atkinson to implement its recommendations, which included a four-point strategy:

1. **School –centered partnerships:** Each campus should create regional partnerships with high schools and their feeder schools, selection to be based upon evidence of significant educational disadvantage.
2. **Academic Development Programs:** Expansion should occur in existing programs such as EAOP, MESA, Puente. In addition the same models should be applied to community college, undergraduate and graduate student outreach.
3. **Informational Outreach:** Launch an aggressive program of informational outreach to provide better information to students, families, teachers and counselors to improve planning and preparation for college.
4. **University Research and Evaluation:** Engage the research capability of UC to systematically identify the root causes of educational disparity from K-12 through postsecondary education and evaluate the effectiveness of the University's outreach programs and suggest modifications.

The last budget submitted by Governor Wilson in 1998, thanks to major pressure from a few Regents, contained an augmentation of \$32 million for outreach efforts to implement the Task Force recommendations. In passing I should note that during the last days of the Wilson administration UC had to fight strenuously to save the California Subject Matter Projects, which had been removed from the budget, thanks to the Secretary of Education. In January 1998 at the time President Atkinson informed the Regents of my responsibility for outreach, the Wilson budget had only a \$5 million augmentation. When the final budget was approved at the \$32 million level, the imperative for more aggressive action was obvious. I was subsequently given responsibility for allocating this budget and working with the campuses to implement the Task Force strategy.

During the academic year 1997-98 my task was to work to convince campuses of the importance of outreach in the mission of UC. But who is the “campus” when it comes to mission responsibility? It is of course the faculty, with staff assistance. Historically in UC outreach had been carried out by staff with relatively little faculty assistance. My challenge was to engage the faculty in addressing the importance of outreach, both to the State as well as ultimately to the survival of the University itself in a rapidly changing ethnic and social environment. With my staff I made regular visits to campuses to discuss the importance of placing outreach in the core mission of the campus. We began the practice of holding annual conferences of outreach staff to assess and recommit our efforts. Our emphasis was placed on student academic programs (EAOP, MESA, Puente, UC Links and SAT preparation) together with School-Centered Programs, which included K-12 partnerships, Subject Matter Projects, Charter Schools (Preuss at UCSD) and teacher professional development programs. The 1997-98 base budget for these programs was slightly more than \$137 million dollars.

In 1998-99, the administration in Sacramento changed, and the dot-com bubble was still expanding. Governor Davis significantly augmented the outreach budget for UC. With the able assistance of his Secretary of Education, Gary Hart, programs were expanded

and new programs instituted. These included creation of Principal's Leadership Institutes at Berkeley and UCLA, creation of Teaching Fellowships to encourage more credentialed teachers and creation of summer institutes for professional development of teachers in the areas of teaching K-3 reading, middle school algebra and teaching ELL students. But this was only the beginning. Moving ahead to academic year 2001-02 the total funding for K-14 outreach programs grew to \$150 million and professional development programs for K-12 teachers reached \$163 million, providing a total of \$313 million.

But you are all painfully aware of what happened next. The dotcom bubble burst, California's economy tanked, and with it UC's outreach programs. Draconian cuts in the budget occurred. In the subsequent years UC's outreach budget was routinely dropped and only last minute negotiations restored some very modest resources. I believe that is still the case today.

Today the University is caught between a rock and a hard place. Maintaining the quality of its faculty, staff and facilities must remain its top priority. At the same time it cannot afford to stand by while the K-12 system, for a variety of reasons, is failing to prepare the majority of its students for college entrance or for the workforce. It is these students, largely Chicano/Latino and African American, whose education is vitally important to the economy of our State as well as the support of the University at the ballot box. If it is not "my University", whose is it and why should I support it?

An answer to this question can be found, more reflective of the current status is to say should be found, in a resolution adopted by the Regents in January 2005, Re-56.

As a land grant institution with a mission of teaching, research and public service, the University of California is committed to excellence and equity in education for all of California's students to secure the social well-being and economic prosperity of the individual and the State. The University affirms that a fundamental part of its mission is to engage in efforts to promote the academic achievement and success of all students, especially those students who are educationally disadvantaged and underrepresented. Toward these ends, the University seeks to work collaboratively with other key constituencies to enhance the educational capacity of California's schools, to help close opportunity gaps that separate groups of students, and enhance access to those who have been underserved by the University. To meet these public needs, it is essential that the University work in collaboration with public and private sector organizations that share these responsibilities; in particular, California schools, community colleges, universities, community organizations and students' families.

Unfortunately, the commitment externally by the legislature to implement this resolution has not found adequate support. As a consequence the University's ability to implement this resolution falls far short of the programmatic needs. Four decades ago an excellent model for executing the mandate in the resolution was expressed by Clark Kerr. His

model, based on the record of success in agriculture, envisioned what he termed an “urban grant university” that would have an aggressive approach to the problems of the cities and would make improvement in the public schools. Just as the land grant movement responded to critical agrarian demands and to problems of national economic expansion, Kerr argued, so would this urban grant model address the great national problems of the cities, including poverty, equality of opportunity and quality of life. Educational partnerships constitute one element of such a model. However, much more is required. One of the shortcomings of placing all the responsibility for educating students on schools is to ignore the role of the community in fostering a supportive environment both inside and outside a school site. For a brief period I was successful in securing resources for what were termed Community Education and Resource Centers at Berkeley and UCLA. These centers constituted partnerships between the University and community centers in disadvantaged urban neighborhoods. Their purpose was to bring resources of the University into communities to help build the capacity of individuals, families, community organizations, and schools by translating university-based knowledge into usable forms and bring it directly to the people in these communities. Funding for these centers disappeared during the economic crisis and were never restored; consequently a proper assessment of their potential was never carried out. I remain convinced that this model envisioned by Kerr can bring the University closer to the source of some of society's most pressing problems, thereby offering an opportunity to find new solutions to old problems. The model successfully transformed an agrarian State into one of the most advanced technologically based State in the world. It should be given a chance.

Neither the Regental resolution cited nor the model of the urban grant university has been fully accepted in the culture and practice of the University. Chancellor Birgenau took a significant step in this direction in creating the Office of Vice Chancellor for Equity and Inclusion, the first of its kind in UC. It will take time to assess how much influence will result from this bold action, aimed at "mining the gold" of California's people. For the good of future generations in this state it must be successful. Vayamos Ursos! Go Bears!