Scientists Under Suspcion
Government charges hurt morale at a national nuclear weapons laboratory

By Carl Irving

Los Alamos, New Mexico

The Research Here, in a jumble of laboratories on a high, lonely mesa, has been both famed and feared for 57 years. Today, nearly 12,000 people work on many important unclassified projects, while maintaining the world’s most formidable stockpile of nuclear weapons.

Work on the weapons and other secret military and intelligence projects takes place in widely scattered, heavily guarded buildings, some of them surrounded by imposing rolls of barbed wire. But in mostly unguarded buildings, from World War II “tempo” to modern multi-story structures, others labor on such matters as espionage charges, followed by months of interrogation, many foreign-born scientists and engineers believe they have come under suspicion solely because of their ethnic backgrounds.

Many foreign-born scientists and engineers here believe they have come under suspicion solely because of their ethnic backgrounds. Congressional and federal investigators have charged that the Chinese People’s Republic stole nuclear weapons designs, and have heaped blame on the university and its federal sponsor, the Department of Energy.

The DOE reacted by sending hastily-assembled squads of agents to impose massive security here and at the other U.C.-managed national weapons laboratory in Livermore, California.

Suddenly, scientists were faced with what they say were voluminous, confusing and sometimes contradictory new security directives. Thousands of lab employees underwent interrogations. Many foreign-born scientists and engineers here believe they have come under suspicion solely because of their ethnic backgrounds. To one point, lie detector tests, with their questionable veracity and potential for probing into personal matters, were to be required an order that was modified later.

Perhaps the most serious were visa and hiring delays and denials for scientists and students born in China, India and other countries labeled as “sensitive” by the State Department. Like many of the nation’s campuses and industries, Los Alamos has come to depend increasingly on younger staff scientists—most of them naturalized American citizens—with advanced training from such countries—among the most difficult year in Los Alamos’ history,” lab director John continued on page 14

The City Colleges of Chicago

“Last Chance U” is also the college of first choice for many citizens of Chicago

By Kathy Witkowsky

Chicago, Illinois

Imagine Walking into a classroom filled with two dozen students from 15 different countries, several different races and religions, ranging in age from early twenties to senior citizens.

Imagine further that most of them can’t write very well—at least not in English. What’s more, most of them work at least part-time. Many of them are parents. Most of them are poor. A couple probably have dropped out of a four-year school or transferred from another community college or technical school, while a couple others may already have earned an advanced degree—though not necessarily from an English-speaking institution.

Now imagine that your job is to teach them a college-level humanities course.

That’s the challenge that greets Jeffrey Gibson, an adjunct instructor at Harry S. Truman Community College, twice a week. Located in Chicago’s Uptown neighborhood, a racially and ethnically mixed area near Lake Michigan, Truman boasts the most diverse—and poorest—student body of the seven City Colleges of Chicago, with students from 110 different countries who speak 58 different languages.

Like the neighborhood, the school is a gateway for immigrants, but it also plays a key role for the city’s minorities: 13 percent of the students are black (half of them are African American, half are from other countries); 44 percent are Hispanic; 13 percent are Asian. Nearly three-quarters of the students have incomes below the federal poverty level. Then again, about 18 percent have attended a four-year institution, and some of them already have degrees.

Yet during a recent Humanities 201 class, the Oxford-educated theologian seemed unfazed by the task ahead of him. “Today,” Gibson announced in his clipped British accent, as he paced around the classroom, “we’re actually going to attempt to do philosophy!”

Then Gibson made a brave move, considering the class makeup: one Kosovar Albanian, one Bosnian, a young Islamic woman dressed in traditional head-covering and skirt, several devout African continued on page 4

In This Issue

University Centers, where several colleges and universities form partnerships to offer courses and degree programs at a single location, are becoming popular as Sun Belt states try to cope with rapidly growing enrollments. Nellie Carr Thorogood, a vice chancellor of the North Harris Montgomery Community College District, was instrumental in starting one of these centers in the Houston suburbs. (See page 8.)
ELEVEN MID-CAREER PROFESSIONALS have been selected as the first Program Associates by the National Center for Public Policy and Higher Education. The A associates program, supported by the Ford Foundation, is designed to engage scholars and leaders interested in addressing current public policy issues in higher education through involvement in the work of the National Center.

The A associates will attend two policy symposia a year and will contribute in other ways to the National Center’s agenda and activities.

The first group of A associates includes faculty members, postdoctoral students, graduate students and early- to mid-career professionals in policy-related positions in state government and foundations.

NATIONAL CENTER PERSONNEL helped to plan the annual education finance seminar of the National Conference of State Legislatures, which was held in Napa Valley, California, last February 18-20.

Among the speakers were Patrick M. Callan and Joni Finney, president and vice president of the National Center, and David W. Breneman, dean of the Curry School of Education at the University of Virginia, who has worked with the Center frequently.

A PROSPECTUS that describes the National Center’s forthcoming state-by-state report card on higher education is now available. The report card, which will be released this fall, will be the first to compare and evaluate each state’s higher education performance.

The goal of the report card is to assist state leaders in assessing the performance of higher education in their state compared to other states, and to promote public policies that enhance opportunity and achievement in higher education. The report card will emphasize state performance because it is at the state level that the most significant higher education policy decisions are made.

The prospectus can be downloaded from the National Center’s Web site at www.highereducation.org. Single copies also can be obtained by faxing a request to (408) 271-2697.

Innovative Leadership Award

This award has been established by the Council for Adult and Experiential Learning (CAEL) and the National Center for Public Policy and Higher Education to encourage and support leadership and innovation in American higher education. It recognizes individuals who have demonstrated the potential to foster major changes in higher education that will result in improvements that benefit students. It is named for, and honors, Virginia B. Smith, who has made extraordinary contributions as an innovative leader.

The Steering Committee overseeing the annual competition seeks a wide and diverse range of applications and nominations.

For further information on the award, application procedures and criteria, please consult either of the following web sites: www.cael.org or www.highereducation.org.

The award recipient will be selected in the fall and announced in November. A stipend of $2,500 will accompany the award.

LETTER TO THE EDITOR

Editor:

Unfortunately, in the article titled "A Baffling Achievement," that appeared in your winter, 2000, issue, Cliff A delman, senior researcher at the U.S. Department of Education, misrepresented the mission and purpose of the TRIO Upward Bound Program. The number one objective of the TRIO Upward Program is not the development of social skills, and the turnover rate is not as horrendous as referenced in the article.

Upward Bound helps young students from low-income families prepare for higher education. Participants receive instruction in literature, composition, mathematics and science on college campuses after school, on Saturdays and during the summer. Currently, 772 programs are in operation throughout the United States.

Mathematics Policy Research is in the process of following 2,800 students who were randomly selected to participate in 67 Upward Bound projects nationally. At the time of their last report, about 22 percent of the students in the study had entered college, while most remained in high school. Sixty percent of the students who had been enrolled in Upward Bound, an were of an age to have graduated from high school, had enrolled in college. This is more than double the college enrollment rate of low-income students nationally.

The TRIO Upward Bound program has been helping low-income, disadvantaged students overcome class, social and cultural barriers to education since 1965. These programs have strong bipartisan support in Congress and are held in high regard throughout the higher education community.

Arnold L. Mitchell, Ph.D.
President, Council for Opportunity in Education
Washington, D.C.
African American and Hispanic parents value higher education even more than their white counterparts although their children participate in it less, a new national survey has found.

When parents of high school students were asked what is most vital for a successful life, 65 percent of Hispanics, and 47 percent of African Americans said a college education was the most important factor, while only 33 percent of white parents agreed. White parents placed almost equal importance on “knowing how to get along with people” and “a good work ethic.”

Two-thirds of white parents surveyed said there still are ways to succeed in American life without a college education, but 68 percent of African Americans, said a college education was as important as a high school diploma.

Deborah Wadsworth, president of Public Agenda, which conducted the survey, warned that this disparity exists despite the fact that African American, Hispanic and white parents of high school students agreed. The report was written by John Immerwahr, who is a senior research fellow at Public Agenda and associate vice president for academic affairs at Villanova University. It is available through the Public Agenda Web site: http://www.publicagenda.org.

“In our conversations and surveys with African Americans from all parts of the country, it has become clear that in today’s booming high-tech economy, a college education has replaced the high school diploma as the gateway to the middle class,” Immerwahr wrote.

Seventy-seven percent of those surveyed said that a college education is more important now than it was ten years ago, and 87 percent said a college education was as important as a high school diploma used to be.

“Today you don’t even question whether you are going to college,” said a New Jersey woman who participated in one of eight focus groups that helped to shape the survey questions. “It’s the sign of the times. When I was growing up, what was important was to make the home front, with marriage and children, but today it is college.”

If anything, minority parents feel even more strongly about the need for education beyond high school. “Why is college important?” asked an African American woman attending a Chicago focus group. “It is the way that society is set up. We are the underdog already, so if you don’t have a college education, it is another thing against you.”

At a focus group in El Paso, a Hispanic father of a high school student said, “Every time I spoke to [my kids] after they were babies, I said, ‘After you finish college, then you can start thinking about what you want to do.’ I think it served me well. It did open doors.”

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Other key findings of the survey include:

• Ninety-three percent said the nation should not allow cost to keep qualified and motivated students from attending college.

• The general public believes financial aid should be provided for students who cannot afford college, but they also think students should pay for part of their education and that financial aid should go only to those “who work hard and seem to take individual responsibility,” in the words of the report.

• Seventy-three percent believe that colleges and universities must do more to cut costs and improve efficiency, while 60 percent think administrators should keep tuition fees from rising.

• A through 69 percent of parents surveyed said they were either “very” or “somewhat” worried about paying for college. 93 percent said they “will find a way to work out the costs.”

— William Trombley
Instructor Louise Fredman teaches English as a Second Language to recently arrived immigrants. Truman Community College students speak 58 different languages.

Chicago continued from page 1

A merican Baptists, others from Vietnam, Russia, Turkey, Ethiopia, El Salvador, Ukraine, Nigeria, Yugoslavia, China, Liberia, Pakistan, India, Uzbekistan—many of them places that had suffered massive destruction and death as a result of religious and ethnic wars, in some cases between one another.

Nonetheless, Gibson plucked ahead. “Does God exist?” he asked them. All but two of the students raised their hands to indicate yes. But when Gibson pressed them on the details—Is God omnipresent? Does God have a gender? Does God have emotions? If God is all-knowing, then why did he create evil?—they weren’t nearly so clear about their beliefs.

Reeling off references and citations from Thomas Aquinas, St. Augustine, the Bible and the Koran, as well as historical information about various religions with a few jokes thrown in for good measure, Gibson pointed out that many of the students’ beliefs came from later writings and interpretations. He taught them terms—omnipotent, omniscient, theist, deist and heretic. A t the end of the hour-and-twenty-minute class, he summed up his point: “To simply say God exists or doesn’t is rather naive.” To argue the existence of God, he said, you have to consider all of the questions he had introduced.

That was a new concept for Nazni Ban-gai, a 20-year-old Sikh Indian American studying computer programming. Nazni was too shy to contribute to the class discussion, because she said most people had never heard of the Sikh religion. But after class she acknowledged she never had thought about those questions, and said she planned to discuss them with her mother that night.

That’s the kind of thing Jeffery Gibson likes to hear. He knows that few of his students actually will graduate from Truman, but he considers himself successful when he sees his students engaged in a discussion after class, or if they take the time to ask him questions. Last year, fewer than ten percent of the school’s 2,756 students who were enrolled in the college credit program earned associate degrees; and their 459 earned one-year certificates.

The statistics generated by all seven of the City Colleges of Chicago appear even more dismal: of 48,684 students enrolled in credit courses receive financial aid. A student who has the ability to take advantage of what it offers. But she said there are things that are beyond the school’s control.

“To work in this kind of environment, you have to love what you do,” said Suggs. “Because there are so many disappointments along the way.”

Sandra Rowe is one of the bright spots—an example of what the school and its students can do for a student who has the ability to take advantage of what it offers.

Once a sia is fully awake, Sandra carries her up the back stairs of the graystone, past the first-floor apartment the family rents out, and up to the small, second-floor apartment where Sandra’s parents live. Her father, a retired factory worker, is still in bed; A. J. and his cousin are asleep in a hide-a-bed in the living room; her mother is at the sewing machine in front of the television with Sandra’s two young nieces, who live next door but come over every morning for breakfast. The state pays Sandra’s mother, Lillie Rowe, to provide child-care for Sandra’s children and five of Sandra’s nieces and nephews.

Lillie Rowe finished tenth grade; Sandra’s father finished seventh. Only one of Sandra’s 12 siblings attended college, and he never graduated. If Sandra has her way, she will be the first in her family to graduate from college, and that pleases her mother. “I feel that she will be able to take care of her family in the future,” said Lillie Rowe.

That’s Sandra’s hope, too. “The education that I have now—at best I would be able to make 28, 30 thousand dollars a year,” noted Sandra. “I got three kids. Thirty thousand isn’t enough money.”

In May, she’ll complete her nursing
credit programs only, 1,931—less than five percent—earned two-year degrees last year; 1,041 others completed a one-year advanced certificate. During the previous fall, only 2,082 former City Colleges students—also less than five percent of the district’s total credit enrollment—transferred to four-year schools in Illinois. The district does not keep figures on students who transfer out of state.

The experience of the Chicago city colleges is not much different from that of urban two-year colleges across the country. Critics point to paltry graduation and transfer rates as proof that these systems are broken and need a serious overhaul.

“We call it ‘pretend college,’” said Gary Orfield, a professor of education and social policy at Harvard University. In the late 1980s and early ’90s, Orfield wrote several comprehensive studies of the City Colleges of Chicago. All were highly critical of the system, and one was so negative that the agency that commissioned it never published it. The result was that nobody really asks. And if they did, they think they’d be appalled.” Wuest, Orfield and others say a degree is the best measurement of success because of the strong link between educational achievement and increased earnings. But defenders of the City Colleges of Chicago cry foul. Given the system’s multifaceted mission, as well as its “woefully uneducated” student body, as one administrator described it, it is unfair—and elitist—to measure the system’s success by graduation rates alone, they say.

City Colleges Chancellor Wayne Watson actually laughed at the mention of Orfield’s name. “He would always come up with some theoretical research,” Watson said by way of dismissing the former University of Chicago professor. “It had no contact with reality.”

The reality, Watson said, is that “my students are running a 120-yard race and his students are running 100 yards. We start 20 to 40 yards back from where his students start.” Nearly a third of all credit students at the City Colleges have to take one or more remedial classes. The numbers are worse for students coming directly from Chicago public high schools. Their high school diplomas notwithstanding, 90 percent of them can’t place into a college-level math class.

“The thing about the City Colleges that has to be remembered is that we do have to serve a greater developmental role than other colleges do,” said B.J. Walker, one of Chicago Mayor Richard Daley’s deputy chiefs of staff. “If you have an emergency room it’s kind of like blaming you for people coming in and bleeding to death. Some of its role is to stop people from bleeding to death.”

A university’s mission is to graduate people, Watson said. But that’s only one aspect of the City Colleges of Chicago mission, he said, and therefore not a very successful one.

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from preceding page

accurate measure of its success. "I don’t have the luxury of being a university, where my goal is just one thing,” said Watson. Besides its so-called “transfer” mission, once its main focus, City Colleges also must provide vocational and occupational training, remedial education (now known as “developmental”), A d u t t Basic Skills, and “value-added” education in non-credit courses, he said.

Wandering in and out of the classrooms in the two glass, steel and brick buildings that make up the Truman College campus, you can find a staggering array of subjects being taught. There are the usual English, History and Math—subjects generally associated with a college. There are also courses designed for students who plan to join the workforce with two-year degrees in nursing, marketing and business.

Then there are the vocational offerings, like a six-month course in M a j o r Home A ppl iance R epair. On a recent spring day, 14 students, all men, were sitting at their desks surrounded by malfunctioning fridges washing machines and dryers, looking at an overhead projection of an oven circuit. “If you’ve got to rely on voltage measurements, folks,” instructor R icha rd A bra h a mson told them. “If you don’t force a conclusion with your voltmeter, you’ll be ordering the customer the wrong part.”

Graduates of this particular program have a nearly 100 percent employment rate, A bra h a mson said. “In six months I’m able to get them a job that can make them good money,” he said. A few three to five years in the field, his graduates can earn between $30,000 and $40,000 a year. Truman’s Technical Center also offers automotive mechanics and cosmetology programs, in both English and Spanish.

But that’s not all. Nearly one third of all students in the City Colleges of Chicago—more than sixty thousand students—are in the non-credit A d u t t L earning S k i l l s Program (A L S P), which includes grammar and high school-level classes as well as English as a Second Language.

So, in another classroom, a couple do-zen immigrants are learning to say, “My English is not so good.” Some of them have only been in the United States a week or two, and they’re as fresh and eager as the Robin Williams character in “M o scow on the Hudson.”

In yet another, instructor E arl Silbar is explaining how to structure an essay according to General E ducational D evelop-ment (G E D) testing standards so his students can pass a high school equivalency exam.

“You have to be sensitive about how you approach things,” said Silbar, who has been teaching G E D courses for more than 20 years. Twice Silbar has used the police as a topic of classroom conversation, and twice students left his classroom and never came back. Later he found out why: Both had family members who had been shot and killed by police. Silbar learned his lesson. Today he uses more non-controversial topics, like “Is it better to be an only child?” to demonstrate how to take and defend a position in an essay.

If it sounds like the school is trying to be all things to all people, you’re not far off. Originally designed to provide the first two years of a four-year education, community colleges have in many cases become a refuge for students who can’t succeed—or afford to go—elsewhere.

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By the Numbers

City Colleges of Chicago

Number of colleges: seven (R ichard J. D ailey; K ennedy-K ing; M aclom X; O live-H arvey; H arry S. Truman; H arold Washington; W illbur R. Wright)

Total enrollment (1999 fiscal year): 157,655 (headcount)

College credit enrollment: 48,684 (headcount)

Racial/ethnic mix: 38 percent A frican A merican; 30 percent H ispanic; 21 percent white; seven percent A sia n; four percent “other”

O perating budget (2000 fiscal year): $285 million

Tuition, per credit hour: $47.50 for Chicago residents; $140.36 for Illinois residents who do not live in Chicago; $210.45 for out-of-state and foreign students

Chicago, though only 49,000 of them were taking college credit courses. The system is of crucial importance for minorities. More than half of the state’s black and Hispanic community college students are enrolled at the City Colleges.

The broad mission complicates the colleges’ task, and makes it a challenge to measure their success. For instance, the number of students in Jeffrey Gibson’s Humanities 201 class are simply “course-takers” uninterested in a degree, according to a questionnaire Gibson handed out at the beginning of the semester. Some want to transfer to a four-year institution. But others indicate their goal is to improve their English. One he said he just wanted “to gain knowledge.”

“T he use of the community colleges for ad hoc purposes,” noted Clifford A. delman, a senior research analyst at the U.S. Department of Education, and an ardent defender of community colleges, “is a nd that reflects the nature of our society.”

A delman said studies now show that 60 percent of undergraduate students attend two or more schools, and that 40 percent of those students cross state lines in the process. Community colleges don’t have any way of tracking this highly mobile student population, he said, so judging schools based on institutional data is outdated. Instead, he said, the only way to acquire accurate information is to follow students through a lifetime of education—something that community colleges don’t have the ability to do.

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“I love my students!” enthused Elise Gorun, who has taught at City Colleges since 1971, and currently teaches an Afri- can A merican literature class at Truman. Gorun said she had tremendous respect and admiration for her students, many of whom, she said, are pursuing their education despite tremendous obstacles: finan- cial, family- and health-related.

“A gainst all the odds—some of them barely have money in their pocket—they get up and come here,” said Gorun. During her course, she not only introduces her students to a wide range of African American authors through poems and short stories, she also teaches them about African American culture. In M arch, for instance, she arranged to take her class to an African American exhibit at the A rt Institute of Chicago, where she offered to hire a guide with her own money. She suspected that many of her students had never been there before.

“I see [the community college] as a gateway, as a place where people have hope,” Gorun said. “Some of my students do very well and will get their degrees. A few will not. But whatever length of time they’re here is meaningful for them.”

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should not be limited to graduates. Instead, experts should look at a wage database of all so-called "leavers" that is, anyone who's taken classes at the colleges. No such database exists, but Helm is convinced that it would show a strong correlation between increased wages and amount of education—even if the person never graduated. For instance, she said, "If I get into a taxicab and ask where the driver learned English, nine times out of ten they learn it here." That's an example of how the system improves people's lives in a very real way, she said. But the colleges don't get credit for it because the students aren't counted as graduates.

There are success stories at the City Colleges of Chicago. One of them is Truman College alumnus Steven Luong, who graduated from Truman in 1997, and now earns $40,000 per year as a computer programmer.

In 1989, Luong immigrated to Chicago with his parents and four of his five siblings from their native Vietnam. The family was so poor that they didn't even have the $14 bus fare they needed to get to the public aid office. For years all seven of them lived in a three-room apartment in Chicago's tough, multietnic Uptown neighborhood in the city's Northside. But his father was determined that the family should get an education, and soon they all were enrolled in classes at nearby Truman College.

Luong offered high praise for Truman College. "I am very proud to be a student at Truman," he said, in his heavily accented, but precise, present-tense English. "That's why I'm a success," he said. "As long as you know how to work hard, study hard, that's why I have what I've got today." Luong and his wife, also a computer programmer, were the youngest couple on their block when they purchased their home in the neat, middle-class Chicago neighborhood of M'fair, a few miles west of Uptown.

But not every student has the drive and determination, nor the family support, of a Steven Luong. Critics of the system say it has to do better for all students.

The problem, said Harvard's Orfield, is a lack of accountability. Because the City Colleges are funded based on enrollment, not graduation rates, there's no incentive to improve them, he said. "Everybody can collect their money, and keep their jobs, the students can come in and go out, and everybody can feel they're doing something about education," he said. "Students can vanish without anyone knowing what happens to them."

Privately, others agree that the system needs a serious overhaul, but are afraid to alienate the current leadership with any public criticism. The City Colleges administrators have earned a reputation for being extremely defensive, described by various people familiar with them as "paranoid," with a "fortress mentality."

"A cess to the system has been cut off in the past when outside groups and individuals have criticized it," said one advocate of reform, explaining the reluctance to be quoted. "Criticism of the system is interpreted as an attack. And that makes discussion and debate very difficult."

But some critics have high hopes that the City Colleges are on the brink of change. Chicago Mayor Richard M. Daley has focused heavily on his highly touted elementary and secondary school reform, and at least some education watchdogs feel that he is poised to focus now on changes needed at the City Colleges.

"Historically, there has not been a big connection between City Hall and the City Colleges," acknowledged B.J. Walker, mayor-oral aide. But Walker, who has a daughter attending Truman College, added, "Once you decide that education K-12 is important to you as a mayor, you decide the whole spectrum is.

"In order to have a viable city these days...you've got to have a workforce that companies can tap into that has the skills they need," Walker said. "And in order to have that workforce and therefore to support economic development in the city, you have to go back to the beginning and develop the workforce."

During his two years as chancellor, Wayne Watson has implemented several changes. For instance, students can't earn graduation credits if they earn a grade in general education or core classes. The colleges also are participating in a statewide articulation initiative aimed at facilitating transfer from two-year schools to four-year institutions. So far, 51 articulation agreements have been signed.

A ambitious K-16 initiative seeks to devise a seamless curriculum to ease transitions from Chicago public schools to City Colleges, and from City Colleges on to four-year institutions. As part of that initiative, faculty are working on articulation standards and curricula that are in sync with four-year schools.

The City Colleges also are working to heighten their profile in the Chicago public schools. A program called Project Excel, for example, allows public high school students to enroll in City Colleges vocational courses while still in high school, while the College Bridge Program allows qualified high school juniors and seniors to earn college credit in general education courses. So far, those programs are relatively small, with 825 and 54 students, respectively, enrolled in the 1998-99 school year.

Watson boasted that he has "far exceeded" his goals for his first two years, but reform advocates say Watson must go much further. Anne Ladkey, executive director of Women Employed, a non-profit organization that works to advance women's economic status, said, "What we would like to see is that employers in Chicago feel that they can rely on the City Colleges as a supplier of skilled workers. I don't think that's a widespread perception."

Ladkey thinks that the adult learning skills programs should be better integrated with workforce preparation. And she said that the schools need to better integrate their transfer, vocational and basic educational missions.

M ore than half of the state's black and Hispanic community college students are enrolled at the City Colleges of Chicago.

Chancellor Watson has his own ambitious set of goals. He wants to increase academic standards; increase the number of students who enter the workforce from the vocational program; increase the number of students who pass the GED, or high school equivalency exams (In fiscal year 1999, 1,771,1 of 4,435 GED students passed); and he wants to double the amount of customized training the schools do (This year, City Colleges trained between 12,000 and 14,000 people for 144 companies). Watson was not specific about how he planned to achieve those goals.

Meanwhile, the City Colleges face another problem: declining enrollments. Credit courses are an important source of revenue for each of the colleges, which keep the tuition they generate. But enrollment in credit courses has declined from 66,948 in 1985 to 48,684 in 1999. (Total enrollment also declined during the same period, from 209,016 to 157,655.)

A diministrators suspects that the enrollment decline is due in part to the strong economy, which keeps potential students employed and removes incentives to go to school. Charles Guengerich, president of Wilbur Wright College on Chicago's northwest side, also speculated that the decrease in enrollment is an indication that the City Colleges haven't done enough to market themselves.

"We have to be more aggressive in our communities, reaching out saying, 'This is the value we bring to this community,'" said Guengerich, who noted that several private institutions in the Chicago area have started to lure students with expensive radio and television advertising campaigns. During his recent State of the College speech, Guengerich implied faculty to help recruit potential students, especially from area high schools.

But that's not going to be easy. "City Colleges has not enjoyed such a wonderful reputation," noted E llena M uchay, who is in charge of Truman College's high school-college partnership program, an attempt to convince more Chicago Public High School graduates to matriculate at City Colleges. "The best kids are going to be encouraged to go somewhere else."

That might be one point on which both critics and defenders of the system could agree: The City Colleges play a different role than, say, the University of Illinois, the state's flagship research university, or a prestigious private school like Northwestern University.

"If you don't buy into the mission of a community college, and your only framework is a regular university, then it isn't going to fit," said Truman College President Phoebe Helm. "If you buy into the mission and then measure performance in relation to that mission, then you find we're doing a superb job."
The Woodlands, Texas

Six O’Clock on a spring night, the sky is darkening over Houston’s northern suburbs, and students are parking their cars and scurrying to the University Center, a handsome building that stands in the midst of Southern Pine groves. Here, six different universities offer 50 bachelor’s and master’s degree programs under the auspices of the North Harris Montgomery Community College District.

The unusual collaboration between two-year and four-year institutions allows students in this booming suburban area, 30 miles north of downtown Houston, to complete their degrees without driving through the region’s massive traffic congestion to reach one of the six campuses.

“I was all about access,” said Gail Evans, executive director and dean of the University Center. “These are people who might not finish their degree work if we weren’t here.”

Barbara Johnson, a 54-year-old business administration major who lives nearby, agreed. Johnson worked as a bookkeeper while raising two daughters and “never thought of going back to college—money was tight and you just never thought about it,” she said.

Now the children are grown and Johnson, with urging from her husband, decided “I didn’t want to go back to the kind of job I had before.” She enrolled at Sam Houston State University in Huntsville, 40 miles north of The Woodlands, but has been taking classes at the University Center, close to her home. Johnson will graduate in June, and a job in computer information systems with a local high tech company awaits her.

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The $12 million University Center in The Woodlands, Texas, has the latest in educational technology for both campus classes and distance education.

By William Trombley
Senior Editor
The Woodlands, Texas

Six universities share a common campus in the Houston suburbs

Higher Education Center in downtown Denver, where 33,000 students attend classes on a 127-acre campus. Participating schools are the University of Colorado at Denver, Metropolitan State College of Denver and the Community College of Denver.

Mandated by the Colorado legislature in the late 1960s, Auraria went through years of turf battles. “There was all kinds of petty stuff,” said Jerome Wargtow. From 1980 to 1986, Wargtow was executive director of the agency that manages the enterprise. “Each institution wanted its own name on buildings. Nobody would answer the phone. Auraria. That kind of stuff.”

But Dean W. Wolf, vice president for administration, says things are better now. “The concept was so unique, it took a number of years for everything to jell and for people to understand what it takes to make this work,” Wolf said. “Now the institutions have come to understand their role and now they work together pretty well.”

Unlike Auraria, many university centers are in geographically remote areas, far from any four-year campus. For example, in Bend, Oregon, just east of the Cascade Mountains, nine public and private institutions have formed the Central Oregon University Center, on the campus of Central Oregon Community College.

This semester, 550 students are enrolled in 26 bachelor’s and master’s degree programs. The center has ten full-time faculty members, some of whom live in Bend while others commute from their home campuses. A Though he considers the center a success, Dick M. Arkwood, who has been director for six years, said “local politics” are troublesome.

“The community is absolutely committed to having a free-standing, degree granting institution,” Arkwood said. “A long as that’s out there, it’s going to be a problem. Nothing we do is ever quite enough and every mistake we make is magnified.”

James Mingle, executive director of the State Higher Education Executive Officers, said many university centers have encountered this problem. “They don’t satisfy over the long term,” he said. “There are local pressures for a full-blown campus with a football team and all that.”

This is not likely to happen at the university center north of Houston.

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The Woodlands University Center is one of five in the state of Texas, with more planned.

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In addition to Sam Houston State, the consortium includes the University of Houston, the University of Houston-Downtown (which is a separate institution), Prairie View A&M, Texas A&M and Texas Southern University. Both Prairie View and Texas Southern are historically black institutions. Enrollment at the University of Houston-Downtown campus is 31 percent Hispanic.

A bout 1,800 students have enrolled at the University Center this spring. Most have jobs, so they take late afternoon and evening classes. Last fall, more than 70 percent were 25 or older. A bout 65 percent are upper-division (junior and senior) undergraduates, the rest are graduate students. Most of the degree programs are in areas of business, computer science and education.

“Many of our students are making career shifts,” Dean Evans said. “We offer the kinds of things people need to move forward in their lives.”

Fifty-three-year-old Calvin Robertson had “always worked with my back,” he said, doing landscaping jobs, until arm and neck injuries made that impossible. Two years ago he enrolled at Sam Houston State as a business major and has been taking most of his coursework at the University Center.

“At my age, I know my (job) choices will be limited,” Robertson said. “But most businesses need a finance person and at least I’m not going to be involved in physical labor.”

The Woodlands center is one of five now operating in Texas A sixth, in San Antonio, was approved recently by the Texas Higher Education Coordinating Board. Some have both public and private partners, while others include only public campuses. The state calls them MultiInstitutional Teaching Centers (MITC’s, pronounced “Mitz’s”). Only the center at The Woodlands is managed by a community college district.

Like other Sun Belt states, Texas faces explosive growth in higher education enrollments over the next decade. Both the coordinating board and the Texas legislature are encouraging the formation of these centers as a less expensive option than building new stand-alone, four-year campuses.

“I hope we see more of them,” said Don Brown, Texas commissioner of higher education. “They look like a promising way to get the most out of the facilities and resources that we put into higher education.”

“In the 1970s and 80s the board resisted the notion of off-campus sites because we were concerned about their quality,” Brown added. “But now we’re so concerned about our low (college) participation rate and about the geographical and racial gaps that exist, that we’re much more flexible in our attitude toward ventures such as these centers.”

Many other states are encouraging the creation of university centers, and other kinds of partnerships, as they seek alternatives to building expensive traditional campuses.

This idea is really taking off,” said Joe Champagne, dean of the university center in Macomb County, Michigan, which was one of the nation’s first. “We’re getting calls and visitors from all over the country.”

Largest of the centers is the Auraria higher education center in The Woodlands, Texas, has the latest in educational technology for both campus classes and distance education.
Officials of the 22,000-student district, fifth largest in the state, decided to explore the possibility of a university center, after a 1995 survey showed that there are empty buildings in the district’s service area had some college experience but had not completed a bachelor’s degree.

Thorogood and district Chancellor John E. Pickelmann visited several locations and decided they liked the M acom County, M ichigan, model best. There, nine public and private four-year universities are in a consortium that is managed by the local community college district.

George P. Mitchell, the wealthy oil man who developed The Woodlands, was holding land open for a possible four-year campus. But M itchell was persuaded that a partnership of several universities made more sense and he agreed to donate ten acres of land and to contribute $2 million toward construction. In 1995, district voters approved a $78 million bond issue, including $95.5 million to build and equip the University Center. It opened in fall, 1997 with 886 students and has grown steadily.

The three-story, 78,000-square-foot building has some of the latest technology available, including a dozen two-way video voice interactive classrooms and seminar rooms; an 84-seat “smart” lecture hall, with data, Internet and power at each seat; and a 24-station computer classroom.

For several months in 1994, Nellie Thorogood met with representatives of Houston-area colleges and universities, both public and private, looking for partners for the new center. “Everybody said it looks like a great idea, if you can get it worked out,” she said in an interview, “but I don’t think any of them thought we could do it.”

But Thorogood was able to persuade the four major public institutions in the Houston area—Texas A & M, Sam Houston State, the University of Houston and the University of Houston Downtown—to become partners in the center. These schools were quickly followed by Prairie View A & M and Texas Southern.

For some time, the discussions also included Rice University, the best-known private institution in the Houston area, but in the end Rice dropped out. “We worked and worked at that,” G. A. Evans said, “but they couldn’t get a college to get systematic education out of the off-campus... It was just not possible to work it out within their culture.”

Slots also were held open for Houston Baptist University and Our Lady of the Lake University, in San Antonio, but so far they have not joined the partnership.

After a long, hard negotiations, the community college district and the six universities agreed that the two-year district would manage the new facility, but that each governing board would retain policy-making authority over its institution.

A steering committee—the University Center Council—was established, with representatives from each partner. “Very early in the process,” said Gail Evans, “we had to define what central services such as registration, financial aid counseling, building mainte-
The Opportunity Gap

Campus diversity and the new economy

By Anthony P. Carnevale

In The Twenty-First Century, electronic mail messages can flash from Tokyo to New York in seconds, hundreds of millions of people around the world can watch the same news cast, and political uncertainty in Russia can send stock markets tumbling from Kuala Lumpur to Kansas City. D. I sley's message—It's a small world after all—was never more on target.

And the United States has never been more diverse. At a single public high school in Annapolis, Virginia, for example, there are 2,200 students speaking 34 different languages from 72 countries. Even the fictional “Betty Crocker” has been updated. The “new Betty” is dark-haired, dark-eyed and olive-skinned to reflect the composite American woman of today.

In response to the growing numbers of Hispanic, Asian and other minorities in America, along with the growing numbers of children born to people in mixed-race marriages, this year's census is allowing respondents to identify themselves as being a member of one or more racial/ethnic groups.

The emergence of a truly global marketplace and the increasing diversity of the United States population are having a tremendous effect on the economy.

Diversity at home and abroad has affected hiring patterns. Many, if not most, U.S. companies quietly use affirmative action hiring policies—some because they recognize that it makes them more effective, creative and flexible; some because they believe in it; some as a defense against possible lawsuits; and others because they have federal contracts and must reach certain hiring targets.

But affirmative action policies for the most selective institutions will not be enough. A affirmative outreach by non-elite colleges and universities also is necessary if there is to be diversity in the vast array of American workplaces.

Beyond the most selective schools, the key to increasing minority enrollment is affirmative development (improving minority achievement and attainment, in elementary and secondary education) and affirmative outreach (doing a better job of getting qualified minorities to apply and enroll in the first place and, once enrolled, to provide the necessary financial, academic, and social support to ensure graduation and access to college education).

The Economic Promise of D I sity

Despite the current strength of the U.S. economy, some 41 percent of African American men and 33 percent of Hispanics live in households with incomes below the “minimum but adequate” level set by the U.S. Department of Labor.

How can this be, in an economy with more good jobs than it can fill? We are not becoming a nation of hamburger flippers as many fear. High-skilled, services-oriented positions such as office, teaching and health care jobs are the fastest-growing sectors in the economy. But they require college degrees.

In 1995, more than 62 percent of both men and women in the economy's most elite jobs (managerial and professional jobs paying men more than $59,000 and women more than $34,000) had bachelor's degrees and another 23 percent had associate degrees or some college. By contrast, few elite job holders (only 14 percent) had not gone beyond high school. Moreover, more than one-half of those holding good jobs (industrial supervising, crafts or clerical jobs paying men more than $35,800 and women more than $21,400 a year) had at least some college.

But imagine if the African American and Hispanic communities had the same distribution of college education as the white community. We would fill more of those college jobs that may otherwise go begging to undereducated American workers or go to foreign workers.

The difference in national wealth that would result from this infusion of human capital would be startling. An additional higher incomes would substantially raise the standard of living of minority families and increase the quality of their lives in countless ways that cannot be measured.

The Value of D I sity in the Workplace

Structural changes in the economy suggest that more U.S. workers will need to learn to value diversity during their college years if they are to be successful on the job. The growing need to interact successfully in diverse groups is deeply rooted in a complex web of profound occupational shifts, the movement toward team-based organizational format and new competitive requirements and technological changes at work.

African American workers have largely replaced their hard hats with briefcases. Today's U.S. workforce, once defined by industrial might, is now driven by high-skilled services. While office jobs and jobs in education and health care are growing, factory jobs are declining.

Today, the U.S. economy is more a high-wage high-skilled services provider than a good producer. Diversity affects performance in this new economy in crucial ways. Because people from different backgrounds and cultures approach things differently, a diverse workforce increases the probability of innovation. Diversity also forces team members to remain flexible and open-minded.

Including diverse staff members in brainstorming sessions can send the conversation in directions it may never have taken before. “The very nature of the discussion is different when one of us is in the room,” said former Illinois Senator Carol Moseley-Braun, an African American, describing her experience in the predominantly white, male U.S. Senate.

A extensive body of research by Charlan Nemeth testifies to the flexible capabilities of diverse work teams. Nemeth's work finds that the mere presence of a minority viewpoint even when the minority view is proven suboptimal, stimulates creativity among other group members. Research also suggests that diverse groups make better decisions because they have a broader base of experience from which to draw.

The global economy is ubiquitous, and African American exports of goods and services have tripled since 1986. But entering foreign marketplaces can be risky, especially if companies aren't familiar with a country's culture, values or business practices. For this reason, havin a diverse workforce can help U.S. companies compete around the globe.

Cause for Concern: Disturbing Trends and a Cloudy Future

A economy that values diversity and increasingly draws its workers from postsecondary schools puts stresses on education institutions. For the U.S. educatio
system, the challenge will be to ensure that all students, majority or minority, have access to higher education and have the opportunity to learn the skills they need to succeed.

This means both providing more access to college for minorities and placing more focus on critical thinking, reading, writing, public speaking and working as part of a diverse team. And, in fact, creating a diverse classroom helps develop these skills naturally. This is not to say that math and science are no longer important, only that the so-called “liberal arts” skills that have been largely devalued on college campuses in the 1980s and 1990s also are important.

When looking at efforts to close the gap between the college enrollment of white and minority students, there is mixed news. The good news is that growing proportions of African American and Hispanic students are attending colleges and universities. And the trend will continue. The combination of rising educational performance and a surging demographic wave of minority youth will ensure more diverse campuses and, ultimately, more diverse workplaces.

The bad news is that these successes are found to be more apparent than real. Unless we increase the proportions of minorities attending college—the so-called participation rates—the gap between the proportion of minority enrollees relative to the minority share of 18- to 24-year-olds will not change.

In addition, these optimistic educational and demographic trends shouldn’t result in complacency. While minority students are gaining the quest of college degree in increasing numbers, so are white students. If the recent upward ratcheting of educational attainment in response to increasing skill requirements on the job continues, minorities will have to keep running faster just to stay in place.

The race to college will continue. Thus, to ensure they have an equal shot at the economy’s best jobs, and to ensure that employers can create diverse work teams, especially among their elite workers, minority students must go to college and graduate. But the social and economic disadvantages they must overcome—at every step along the way to a four-year degree—are greater than those faced by most white students.

In many cases, African American and Hispanic students are academically qualified to go to a four-year college, but don’t go. Or they settle on a two-year program instead. While there is no clear preference for community colleges—they provide access to good jobs, and they are a low cost community-based “on ramp” to the higher education highway—too many potential four-year graduates are lost at the end of two-year programs. Finally, a fair number of minority students who do enroll in four-year college programs never graduate.

A firmative Action

Clearly, there is no one way to reverse the reasons both cultural and economic, that many minority students get left behind in their quest for a college degree and the opportunities it brings. But continuing affirmative action programs, especially at the country’s most selective colleges and universities, is a necessary component of any strategy. Even with affirmative action, neither African American nor Hispanic students get their fair share of seats at the nation’s most selective schools.

African American and Hispanic students represent 12 and 11 percent, respectively, of the nation’s population, but each represents fewer than six percent of students at the nation’s 120 most selective colleges and universities. By way of comparison, whites and African Americans represent 73 and 3.5 percent, respectively, of the nation’s population and have 77 and 115 percent, respectively, of the seats at the most selective schools.

True, affirmative action’s impact on the diversity of college enrollments is limited when looking only at the number of minority enrollments at the most selective colleges. But the fact is that a disproportionate number of America’s corporate leaders, lawyers, and political officials come from these schools. To ensure diversity among future leaders—vital to the future of the country—there must be diversity on these most selective campuses.

But affirmative action at the nation’s most selective schools will not be enough. If we don’t extend affirmative action and outreach beyond these schools, there will not be a sufficient number of college-level minorities to create diversity, especially in the crucial managerial and professional jobs, in the vast majority of American workplaces.

Ultimately, it is going to college—not just one of the most selective colleges—and graduating that matters most for most minorities. Consequently, affirmative recruiting of minorities for the full range of postsecondary institutions is critical.

A large share of Americans are more comfortable with preference when it is associated with income class rather than race alone.

If we were successful in giving minorities access to their share of seats in college, there would already be another 185,000 minority students with bachelor’s degrees in America. And, in a labor market where projections suggest an ongoing increase in the demand for college-educated workers over the current supply, these new students and graduates would not be taking jobs away from other college-educated workers.

Recruiting Minorities and Low-Income Students

The current resistance to traditional forms of affirmative action suggests a need for alternatives. The current dilemma is that the public supports diversity but is opposed to admissions based solely on minority status. In general, available opinion data suggest that a large share of Americans are more comfortable with preference when it is associated with income class rather than race alone.

In response to these public attitudes, many colleges are attempting to identify “strivers”—students who have higher grades and score higher on standardized tests than would be expected based on their less advantaged individual, family, school, and academic characteristics. Strivers are young people who have overcome economic and educational disadvantages, and who arguably should receive preference in admission to the nation’s most selective schools.

This strivers approach to admissions, if supported by further research, could engender greater public support than traditional affirmative action because it rewards students who exemplify the American dream—beating the odds through hard work and perseverance.

Both two- and four-year schools need to reach out for minority students. A firmative outreach policies also are needed to ensure that minorities who go to college actually graduate. A mong 25- to 29-year-olds who went to college, half of whites graduated, compared to fewer than a third of African Americans and Hispanics.

For all these students, across the broad range of American schools, we will need more pervasive and subtle forms of affirmative development and affirmative support beyond those discussed in the current debate over “preferences.”

A striving economic equality among the nation’s diverse populations is not just a “nice” social or political goal. It is a necessity—for both social and economic reasons—that must be conveyed to elected leaders and the public.

To achieve workplace diversity, more must be done by education institutions at every level to ensure that qualified minority students are entering college. What’s more, these students must finish four-year college programs—including those offered by the country’s most elite schools—if they are to succeed.

At the beginning of the 21st century, we have a pretty good idea about the economy that lies across the threshold. Our diversity is a unique advantage. To maintain our competitive edge we will need employees who are increasingly creative and agile. To meet that need, we must have diverse workers with the education to match.

By Michael W. Kirst

T HE END OF AFFIRMATIVE ACTION for competitive admission to universities has created a search for new admissions criteria that will enhance equity and access.

If any universities have included new concepts such as persistence, overcoming handicaps, first in family to attend a university, and attending a high school that has sent few pupils to any college or university. But the most visible solution has been to automatically accept students ranked at the top of their class, regardless of the high schools they have attended or the courses they have taken.

Public universities in Texas now admit the top ten percent of each graduating class and, beginning next fall, Florida universities will accept the top 20 percent. The University of California admits the top four percent to one of the eight general campuses in its system but specifies the courses that must be taken.

The Pennsylvania state university system is considering a proposal to automatically admit the top 15 percent from each public high school graduating class.

While the impact upon minority enrollment from these policies is unclear, they should help to increase both geographic representation and the numbers of students from high schools with historically low university enrollment rates.

Defining the top of the class appears to be straightforward, but it has proven to be more complex and elusive than originally thought. This new admissions game will produce winners and losers, as well as students, parents and school districts who learn how to play the game better. What counts is not merely good grades, but better grades than one’s peers.

A survey of 2,000 high school students by Patricia Riordan, dean of admissions at George Mason University, concluded that some schools give extra weight to certain courses but others do not. The policies run the gamut, and inequities are created. For example, for decades Illinois has been using high school class rank (HSCR) as one-half of an admissions index, with ACT scores for the other half. But Illinois universities and the Illinois Board of Higher Education have never specified how high schools should compute class rank.

Consequently, high schools use a variety of techniques and weighting systems to determine HSCR. High schools include different courses in their calculations—some schools continued next page
A Mandate for Change
Business and university leaders seek to work together
By Milton Goldberg

I N R E C E N T Y E A R S a national debate has centered on improvements to K–12 ed-
cation. In this new millennium, our treasured system of colleges and universities de-
serves similar attention.

The business community, in particular, has a special interest in the quality of high
education. A according to “Spanning the Chasm,” (a study conducted by the Business
Higher Education Forum, which is co-sponsored by the National Alliance of Business an-
the American Council on Education) American college graduates are entering the
workplace ill-equipped to effectively contribute in a fast-paced world econ-
y. In fact, serious gaps now exist between the skills possessed by graduates and those
required by today’s high-performance jobs. The majority of students are severely lacking I
flexible skills and attributes such as leadership, teamwork, problem solving, time manage-
ment, adaptability, analytical thinking, global consciousness, and basic communication
including listening, speaking, reading, and writing.

This is forcing both businesses and educators to re-examine traditional methods of
learning while seeking new methods of linking the dynamics of external growth an-
change to the established structures of higher education.

The National Alliance of Business (NA B) is the preeminent business organization
concerned solely with the quality of education and training through a lifetime. In one of
NA B’s recent Work America publications we described what business and university le-
ders seek to accomplish together:

• better equipping college and university students with the knowledge and skills the
  need to succeed in the changing world of work;
• strengthening the role of higher education in improving K–16 student achievement;
• providing support at colleges and universities for basic and applied research that
  is critical to the ground-breaking, fundamental advances that fuel long-term econ-
omy growth;
• better preparing all students and workers to understand and work productively with
  people of diverse cultures, languages, religions and ethnicities.

Today at NA B we speak of a knowledge supply chain where companies get employee
with appropriate knowledge and skills, at the right time and in the right place—where an
when they are needed for innovation, improved productivity and competitive advantage.
Leading companies are propelling the adoption of knowledge supply chains. Their
chains will have a considerable influence on college and university education which seek
be responsive to the needs of students and the larger society.

A Nation at Risk

Business concern about the quality of education is not new, of course. But it is fair to sa-
that the last two decades received far more direct attention than ever before.

The University of California has chosen a different and better route than Florida or
Texas A & M in Florida, students who rank in the top ten of their high school class will
be eligible for a place somewhere in the UC system but will not be guaranteed
admission to their first-choice campus. The university also has revised its policies governing
admissions— as opposed to eligibility— at the most over-subscribed UC campuses to add
high school class rank as a selection criterion. But this is only one of many criteria and does
not guarantee automatic admission to those campuses

State supporters of the top-20-percent policy contend more minorities who attend
inner-city or rural high schools with lower grade point averages will now be eligible for
university admission with an equal standing. ACT and SAT scores. The
top-ten-percent policy in Texas could produce a class of freshmen who have taken an
extremely wide range of courses, but a recent U.S. Department of Education study stresses
that specific course-taking patterns in high school lead to higher college graduation rates.
This study finds that taking specific courses, especially one math course beyond Algebra II,
leads to university graduation. The goal, after all should be to graduate students, not simply to
admit them.

Florida’s top-20-percent calculation is left to the
each district or high school to determine, but all
students in the top 20 percent must complete 19
college prep courses including three units of math (Algebra I or higher), three units
of science (two lab), and two units of foreign language. Some Florida minority groups are
concerned that the language requirement will keep many minority students out of the top
20 percent because community colleges do not emphasize language preparation.

The fact that districts use differing methods for calculating class rank will lead to signi-
ficant differences in determining which students are considered to be part of the top 20
percent, especially when electives, honors and Advanced Placement courses are given extra
weight.

State supporters of the top-20-percent policy contend more minorities who attend
inner-city or rural high schools with lower grade point averages will now be eligible for
university admission with the knowledge and skills the need to succeed in the changing world of work;

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The university is asking each high school to forward the transcripts of the top ten
percent of their graduating seniors based on grade point average, as defined at the school.
University staff then will analyze the transcripts to determine the top four percent of each
school, based on the students’ performance in specific academic courses. These include four
years of English, three years of math, two years of history/social science, two years of
laboratory science, two years of foreign language and two years of college elective courses.
Beginning in 2003, one year of visual or performing arts also will be required.

Since some students in the top four percent will be identified at the end of the junior
year, only 11 of the 15 courses will be required at that time. Top-ranked students must com-
plete the remaining five of the 15-course sequence during the senior year, and maintain an ap-
propriate grade point average, in order to complete their eligibility for UC. This is expected
to result in more students passing their university courses and proceeding to graduation.

At the time, Rushmore released another report from the Department of Education, “The
Nation Responds,” documenting a “tidal wave of reform” in the schools. Among th

elements of this reform movement which continue to this day are:

• raising of high school graduation requirements;
• the standards movement—creating assessments aligned with standards;
• consideration of longer school days and a longer school year, and efforts to make bette
use of time in school;
• improving teacher certification procedures, performance incentives and teacher status;
• providing report cards to the public about education progress, school by school; and
• increased public interest in quality education, as represented by PTA membership an
corporate involvement with schools.

What generated all this fuss? A deceptively thin little "Open Letter to the American
People," in which a panel of distinguished Americans, most of them professional educator
would have liked a reply in April 1983 that the "educational foundations of our society are presently being
eroded by a rising tide of mediocrity that threatens our very future as a nation and

leadership of David Pierpont Gardner, then president of the University of Utah and later president of the University of California. It was Mr. Gardner's idea that the report be a "clarion call" to the American public, to remind the nation of the importance of education as the foundation of leadership in change and technical invention.

**Essential Messages**

The Commission intended that three essential messages be heard by the American people.

First, that our once unchallenged preeminence in commerce, industry, science and technological innovation was being overtaken by competitors throughout the world. A third of the Commission, chaired by Milton Goldberg, is executive director of the National Commission on Excellence in Education. A second essential message was that mediocrity, not excellence, had become the norm in American education. A through the Commission cited "heroic" examples of dedicated individuals excelling throughout American education, they argued that "a rising tide of mediocrity" threatened to overwhelm the educational foundations of a meritocracy.

The third essential message was simple: We don't have to put up with it; we can, and must, do better. In a report section entitled "A Merica Can Do It," the Commission cited the remarkable success of the American educational system in responding to past challenges as evidence of its optimism that the current challenges could be met.

Higher education played a significant but somewhat overlooked role in shaping the American educational system. The Commission intended that three essential messages be heard by the American public. Although the Commission conceded that education was only one of many causes and dimensions of the problem, they may have been the first national body to insist that attention to the schools puts the very well-being of the nation at risk.

Milton Goldberg is executive director of the National Commission on Excellence in Education.

**K-12 education has over the last two decades received far more direct attention than has higher education.**
The common usage of acronyms is almost exclusively a phenomenon of the 20th century.

A nother very old acronym that still is in common usage is A.D., often printed in small capital letters much like a.m. and p.m. (which stand for ante meridiam, before midday, and post meridiam, after midday, by the way). AD is derived from A nno D omini (year of our Lord), not from “A fer Deah.” But A.D. isn’t as old as it sounds. It is clear that the ancient Romans did not use it, and the Oxford English Dictionary’s earliest citation is from 1579.

The earliest recognized American acronym is “O.K.” It first showed up in print in the Boston Morning Post on March 23, 1839, where it appeared as “O.K.—All Correct.” In the context of the times, deliberate misspellings were considered very funny, and were a common part of humorous writing. So, while other theories abound, it generally is assumed that O.K. originated as an abbreviation for the intentionally misspelled “Oll Korrec.”

Part of the reason why acronyms were relatively rare prior to the 20th century is that people have to be literate to understand and use them. The growth in literacy and the proliferation of the printed word in the 19th century created a much more fertile environment for all sorts of abbreviations.

Still, it was not until the World Wars and the explosion of government programs in the 1930s that the Amercan penchant for acronyms truly took off. A large number of acronyms quickly became well known.

A given acronym becomes a part of the language through repetition. Some, like CIA (Central Intelligence Agency), clearly reveal their alphabetic origin, and most people know what the letters stand for. Some, like TNT, become so familiar as acronyms that their origin is all but forgotten. Everyone knows what TNT does, but few are aware that it stands for TriNitro Toluene. (Some might invoke Turner Network Television, a more recent expansion.)

Finally, in some cases an acronym is so firmly ingrained in the popular culture that it literally becomes a word. E ditors stop capitalizing its letters, in resignation to popular trend, and people forget that it ever was an acronym in the first place. Words like laser, radar, scrub and snafu are good examples. (Light amplification by Stimulated Emission of Radiation, R adio Detection A nd R anging; Self-Contained Underwater B reathing A pparatus; Situation Normal All F ouled-Up, respectively.)

Today’s stock market offers a perfect example of how this works. NA SDAQ (National Association of Securities Dealers Automated Quotations) has become a common word, and many publications have begun printing it simply as Nasdaq. A few in the media, who pride themselves on being “hip,” have started referring to it as “the Nazz.”

If the printing press started the acronym ball rolling, the personal computer has turned it into a runaway freight train. The rise of typography has led, understandably, to a desire for abbreviation. And as the keyboard becomes an increasingly popular medium for communication, growing numbers of people will embrace and use acronyms, both for convenience and for entertainment. (IRC (Internet Related Communication) is all the rage today. Entire Web sites are devoted to glossaries of “chat acronyms,” symbols and abbreviations such as IRC—“Internet Relay Chat.”)

Familiar expressions such as FYI (for your information) and ASAP (as soon as possible) are examples of this. They are currently in common use, and are part of the language. The proliferation of abbreviations makes it more difficult to gain approval for whatever is being shipped. Moreover, in the past year, Guzik said, an indefinite hiring freeze has been imposed, just when an aging group needs to add fresh recruits. “Younger scientists with recently earned doctorates, other scientists with less experience, or people who have been working on brain imaging, cardiac and cancer research, said that a Russian-born colleague told her “now is the time to be a foreigner.” E spy is nearing the end of her two-year trial period, after which he is expected to return to the lab, where he will be a foreigner, or return to the lab, where he will be a foreigner.

W hite, a 25-year veteran at Los A lamos, joined other interviewed scientists in strongly rejecting charges about rampant security violations and espionage. “I would have walked out of sessions and done more harm than Wen Ho L ee,” said White, who formerly managed nuclear design work. “No guard can tell, nor can any security measure. If I’m of ill will and willing to spill what’s in my head. It’s ultimately a matter of trust.

“If you look at what Congress is saying, there’s one side says we ought to be tough, because we won the Cold War,” White said. “We should restrict travel and export controls. But others say we need collaboration as much as possible. Instead of debate, we get conflicting directions. We’re caught in the middle.”

Joyce Guzik, deputy leader of a weapons design unit, said her staff also has been distracted by “repeated audits,” while having to cope with voluminous new and confusing sets of security rules. “I mean, there’s a big drop in inquiries and a drop in recruiting. This is a legacy we will live with for a lifetime.”

Reflecting the sentiments of other young post-docs here, E.spy, who earns his Ph.D. in nuclear physics from the Univer sity of M innesota in 1996, finds the uncertainty “disheartening” because he’s a foreigner. People really work hard here an d are proud of what they do, yet they’re discouraged by outside perceptions.”

Last December, the time of year when the lab hires the most accomplished post docs by offering special financial induc tions and applications plummed, most because of a large drop in those who come from “sensitive” countries, according to funding for the labs. Others here attribute the problem to cumbersome new hirin requirements causing indefinite delay including clearance from the C IA and FB and the personal signature of D epartment of Energy Secret ary B ill R ichardson.

A barrage of espionage charges has damaged morale and production under Los Alamos’ first and only manager, the University of California.
A foreign student applicant.
The State University of New York's nearby security people last year to provide per-
Davis. Freeman's department was founded by famed physicist Edward Teller in 1962 to help provide first-rate academic graduate training for future employees at Livermore.

Students and faculty use facilities outside Livermore's classified research areas and share equipment Freeman says no campus could afford. They also work and consult with a wide range of specialists. Since its founding, the department has graduated 250 Ph.D.s, most of whom eventually went to work at the Livermore lab.

Freeman said he rejected requests from security people last year to provide personal information about graduate students from abroad. "I said I'd lose my job if I supplied that," said Freeman, U.C. Davis' first Edward Teller Professor of Applied Science.

The 92-year-old Teller, one of the immigrant nuclear scientists who helped develop the atom bomb, is now a fellow at Stanford's Hoover Institution. He wrote recently that "the right prescription for safety is not reaction to dangers that are arising, but rather action leading to more knowledge and, one hopes, toward positive interaction between nations."

The heightened security and visa controls also have had an impact at some of the other 12 DOE-sponsored national laboratories. Eight of them are managed or co-managed by universities.

At Brookhaven National Laboratory on Long Island, New York, managed by the State University of New York's nearby Stony Brook campus, "foreign nationals who work here certainly view themselves as targeted, and that complicates their lives and the administration's," according to Peter Bond, former Brookhaven director. Even though 95 percent of the lab's work is unclassified, Bond said new security restrictions had caused "chaos."

At Argonne National Laboratory, southwest of Chicago, managed by the University of Chicago since shortly after World War II, interim director John I. Chang said he is concerned about racial profiling throughout the DOE lab system, especially among Asian American employees. Chang also is worried about delays in arranging visits from scientists from countries on the restricted access list, even though 98 percent of the research at Argonne is unclassified.

The government's increased restrictions on admitting Chinese, Indian and Pakistani Ph.D.s or, more often, advanced students who want to earn their doctorates in the United States, is causing the "growing numbers of foreign talent to change the face of American science," according to a recent national survey by Science magazine. "Individuals making exceptional contributions to science and engineering in the United States are disproportionately drawn from the foreign born," the survey found.

By 1995, nearly half of those earning doctorates in science and engineering at American universities had been born abroad. Two thirds of these had temporary visas, the largest proportion from China, Taiwan, India and South Korea.

But that increasing vital addition of imported talent has been slowed abruptly by the fallout from Los Alamos according to Marvin Miller, senior research scientist at the Massachusetts Institute of Technology's security studies program. "We have a system to keep people out, even though it's not engraved in stone," he said.

A large number of students at MIT used to come from mainland China, Miller noted. "A few for the fun of it," Los Alamos, according to Marvin Miller, senior research scientist at the Massachusetts Institute of Technology's security studies program. "We have a system to keep people out, even though it's not engraved in stone," he said.

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dispose of plutonium.
"We are driven by an academic, inquisitive approach, to find out what's right or wrong," said Klaus Lackner, a physicist and acting associate director for strategic research at Los Alamos. "This differs dramatically from a corporation which has a product it wants to sell. The openness is critical to me."

"We've had a very open, liberal workplace and, as a result, other countries are falling farther and farther behind," said Michael M. May, former Livermore lab director and now a physicist at Stanford University. "The key to success is moving ahead and not standing still. These labs have been at the forefront of technical development in materials research, high powered lasers, and large projects on computers, such as climate research. They are part and parcel of America's technical preeminence."

Sidney Drell, former head of the Stanford Linear Accelerator Center, who helped write a White House advisory panel report that was highly critical of DOE security late June, said UC management has enabled the labs to recruit top-flight scientists and to maintain independence and high standards. "Particularly now, when we're trying to work to maintain a stockpile without underground tests, it's important for the labs to want people willing to do noble service for their country," he said.

But members of Congress have questioned whether a university should manage an operation vital to the nation's military security. California's senior senator, Dianne Feinstein, charged during a closed Senate Judiciary Committee hearing last year that free exchange of information, promoted by University of California leaders, could be damaging to national security. Her remarks were released recently by Republican members of the committee.

Feinstein said at the hearing that she had been "appalled" by UC officials' arguments that an open academic setting was required to attract able employees. "I have become very much of the view that if you have this kind of academic culture and academic discipline, that it really does a great dis-service to our nuclear secrets."

The senator did not respond to requests for an interview but staff members in Washington said she remains undecided how she will use her influential vote on contract renewal.

"The (university's) relationship began more than 50 years ago, and the reasons for that may have faded over time," said Harvey Sapolsky, a political science professor and director of security studies at MIT. "There seems to me no reason why the government needs to maintain such big facilities beyond work on the bomb. They've drifted away from their missions because they are basically done. You can get others to come. Those at the forefront of physics don't spend their time on such issues."

Sapolsky, a member of a DOE panel that studied the university ties seven years ago, is convinced that the labs should be placed under the department of Defense, "which would shrink them."

A sked to respond to Sapolsky's views, U.C.'s Rulon Linford said, "Those who say we don't need to know a lot more about nuclear weapons don't understand about problems of aging. We used to be able to replace old weapons but now we have to have them survive far longer than before. Major problems lie ahead because of aging and because the people who were experienced in doing underground tests are retiring. We have a short time frame for the challenge ahead."

Besides the need to replace an aging staff, "cutting edge research" will be required more than ever amid growing threats that include biological warfare and global terrorism, said Bob Van Ness, University of California assistant vice president for lab administration.

"The overwhelming sentiment (among scientists) is for maintaining university-lab ties and for maintaining the visiting scientist program," said Irving Lerch, chairman of the American Association for the Advancement of Science committee on scientific freedom and responsibility. "Some congressmen have indeed recommended putting the weapons labs under Department of Defense authority but this proposal has never gone far. Presidents Truman and Eisenhower refused to relinquish civilian control of the labs, and this has been the mainstream sentiment ever since."

Interviews at the labs and elsewhere indicate that the outcome of fall elections may decide the issue. A Democratic administration is expected to retain the current administrative practices, these people believe, while a Republican administration might abolish the Department of Energy and terminate university management of the labs, or at least clamp down on the relatively open research atmosphere. Aiding to the renewal: question is what Herbert Yorlets, "lack at Liver more." Last fall, it was revealed that the lab faced $35 million in cost overruns beyond the original $1.2 billion estimate to complete the National Ignition Facility, a super laser intended to test the n clear arsenal without having set off test explosions. The project lost its director last summer, after investigator discovered that he did not have a doctorate.

The Government Connection

The Department of Energy was blistered last spring in report to President Clinton about Los Alamos and Liver more. "Brilliant scientists...breakthroughs at the nuclear weapons laboratories came with a very troubling record of security administration," said the report of a four author headed by former Republican Senator Warren Rudman an including Sidney Drell. The DOE "has been the subject of a nearly unbroken history of dire warnings and attempts to reform."

The report called the DOE a "Byzantine and bewildering bureaucracy."

Pushed by Congress, the department adopted the report's advice to police the labs more efficiently through a new National Nuclear Security Administration, semi-autonomous agency within the department. Robin Staffin, DOE senior science advisor, said in an interview the congressional action required working with the CIA and FBI to clear foreign scientists from China and other Asian countries, thus creating inevitable delays in hiring or inviting scientists from such countries. He hoped that with time and increased efficiency, future delays might be avoided. Staffin, who once worked at DOE's Stanford Linear Accelerator, said he hoped that "things would stabilize and that we're soon past this difficult period."

Others are not so sure. One scientist who has dealt with the DOE for years, would only speak without attribution, sai the department "has put up with as much as possible to calm down Congress an keep their heads down during the election. DOE is always the whipping boy. Like tied down department of education, it has the pres dent's lowest interest level."

"The new Republican president will replace DOE. They have done some stupid things and Congress is working enough for U.C. to walk away. Without U.C. the labs will lose many top scientists which are there because of U.C. If L ockheed Martin comes in, they are gone." 

Freelance writer Carl Irving lives in the San Francisco Bay area.