This discussion of the transfer function of California's community colleges focuses on the problems of obtaining reliable information, research findings on factors affecting transfer success, and ways of accurately assessing transfer rates. After affirming the importance of the transfer function of community colleges, the paper examines flaws and inconsistencies in the data on student transfers and estimates that 5% of the students who enter community colleges complete a two-year program, transfer to a four-year institution and earn a baccalaureate degree, with an additional 7% to 8% transferring prior to completing a two-year program. The argument is presented that cooperative arrangements among all segments of postsecondary education in California will be required to obtain reliable information about transfer, and incipient efforts in California and more developed programs in other states are highlighted. Next, allegations that community college enrollment adversely affects students' chances of obtaining baccalaureate degrees are counterposed with evidence of the colleges' success in helping students achieve their goals. Research findings are then presented, focusing on articulation of curricula and transfer information, course numbering systems, the paucity of second-year courses, and activities that enhance transfer. Finally, it is suggested that a common entry form be used by all postsecondary institutions in California and that studies of baccalaureate degree recipients be conducted. (AYC)
THE TRANSFER FUNCTION IN CALIFORNIA

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REMARKS PRESENTED TO THE CALIFORNIA POSTSECONDARY EDUCATION COMMISSION AD HOC COMMITTEE ON COMMUNITY COLLEGE TRANSFER, SACRAMENTO, CALIFORNIA.

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."
I am pleased that the Commission has organized a committee on Community College Transfer. The issue of transfer has attained prominence recently and people look to the Commission for some information on it. This activity is one of the most important that the Commission will perform this year.

My own knowledge of transfer stems from my activities in a number of projects studying the issue. These projects began in 1974 and have continued for the past 10 years under grants from the National Endowment for the Humanities, the National Science Foundation, the Ford Foundation, and the Andrew W. Mellon Foundation. My colleagues and I have collected data on transfer education in community colleges nationwide, including student enrollment patterns, faculty attitudes, curriculum presented, and administrative concerns. We also have information about the connections between the community colleges and the sending and receiving institutions, the secondary schools and universities in their immediate area. And, as director of the ERIC Clearinghouse for Junior Colleges, I have ready access to the numerous reports flowing into that document base, many of them coming from CPEC's own files. Your staff, particularly Dorothy Knoell, have been generous in sharing their reports with us, and indeed with the nation.

I should begin with the premise that I am an advocate for transfer education in community colleges. The function is important because the community college serves as the point of first entry to higher education for many people who would not otherwise be able to attend college. More
than one-third of the people beginning college in America begin in a community college and the figures are much higher for members of minority groups. The community colleges attract low-income students as well. The institutions are an essential component of a democratic system of higher education, one that seeks to acculturate the citizenry and to make opportunity for further education available to all. In this the community college has its roots in the idea of the common school, one that would be attended by nearly everyone in the community so that they would develop the shared understandings so necessary for the maintenance of social cohesion.

The issue of transfer has come to the fore only recently. Five years ago the rhetoric emanating from the community colleges centered on the theme of access: access for all people of any age and for any purpose. More recently, outcomes have become a matter of concern as educators at all levels have realized that attracting people to their institution is only the first part of the task; the people must be provided with an education that reveals itself in their having gained knowledge useful to them as thinking individuals, productive citizens, and members of their community.

One of the questions swirling around transfer as a general theme is on the community college's effect on different segments of the population. The median age of community college students is 21\frac{1}{2} years; the population is heavily skewed toward people just out of high school who are beginning their college career. Have these matriculants jeopardized their chance to gain the baccalaureate by beginning their career in a community college? The data are incomplete and scanty.

The first problem is that no one knows exactly how many students begin in a community college and eventually transfer. The pattern is confounded by people who transfer after one semester; people who begin at the university,
return to the community college for a time, and then transfer to the university once again; people who take courses at a local community college and university branch concurrently; those who start at a community college and stop out for a couple of years before entering the university, and so on. Nationwide, probably fewer than 5% of the students who begin at a community college complete two years there and then transfer to a university. Probably another 7 or 8% begin at a community college and transfer without completing two years. But those figures are merely educated guesses based on incomplete data from various states. This committee would do a great service if it recommended ways that CPEC could improve the collection of data regarding community college transfers in California.

Reliable data sets can be established but the community colleges themselves cannot do so; they are not equipped to collect such information. A few years ago the California Statewide Longitudinal Study offered an example of the way such data could be aggregated but that took an extramurally funded effort. All three sectors of higher education must cooperate in organizing a system to collect transfer information. CSU has begun such a data collection system that could be encouraged. It provides the community colleges with at least an estimate of their students transferring to one or another CSU branch. It does not include UC or the private universities and it has other weaknesses, for example, a student may have attended a community college for a year, taken one course at another college, put that latter college down as the "college last attended" and thus confounded the data set. Because of California's liberal admissions and transfer policies, it is difficult to organize a system that provides reliable data on a statewide basis. In order to organize such a system decisions will have to be made about the relative importance of reliable, comparable statewide...
data and data gathered and presented in a fashion that best suits individual sending and receiving institutions.

Some states are further advanced in their data collection efforts. Washington and Maryland aggregate data across their higher education system. The Florida university system and the Florida State Department of Commerce prepare a tape each year which contains the social security numbers of students who have entered the university or who have obtained employment. The tape is made available to community colleges so that they can run it against their own records and at least get an estimate of the number of their students who have transferred or who have gone to work. The tape is incomplete because it does not include students who have transferred to private universities within state or to any universities out of state but it offers a step in the right direction.

Some groups have questioned whether the effect of the community college on a student's chances to gain a baccalaureate is different for minority and majority group students. Allegations of differential treatment or at least differential effects on minority students have been made but here again the data are scanty. Many of the reports assume a black box: since more minority students enter community colleges than universities, and since fewer community college matriculants eventually receive baccalaureate degrees as compared with students who begin their career as freshmen in a university, then the community college must be doing something that militates against minority group student transfer. No one has documented exactly what that something might be. Most who have tried have contrasted community college and university environments. However the researcher studying the question of community college effect should compare differential treatment across community colleges, not between community colleges and universities.
The reason is that for most of the people who begin their higher education career in a community college, the university freshman class is not an option; hence to say that the community college treats its students differently from the university makes for interesting but useless comparisons. Furthermore, it is not possible to duplicate the university environment in a community college. No community college has a library with a million plus volumes; a faculty comprised of doctoral-level people engaged in scholarly inquiry; a selective admissions policy that ensures a student peer group of high academic achievement. In sum, to say that the university environment is different and that this difference may account for the higher proportion of university freshmen going on to the baccalaureate makes no sense at all.

Another question relates to the community colleges' success in assisting people to achieve their goals. How many students enter the community college with intention of obtaining a baccalaureate degree? Surveys asking that question reveal incredibly high numbers, as high as 80%. Further examination of the data reveal that students who are obviously taking only a few courses preparing them to obtain immediate employment still say that they intend getting higher degrees; no one wants to admit that he or she has closed off life's options. Accordingly, relating degree attainment with declared intention is precarious.

A different kind of question regarding transfer education can be put, this time in an examination of college procedures: What is the "transfer program?" To qualify for the definition, "program," a set of activities should have coherence, direction, support services, internal monitoring procedures, and so on. This form of organization applies most directly to the occupational programs in community colleges but not to the activities designed to lead students to transfer. The occupational programs have
selective entry, sequenced curriculum, enforced prerequisites, especially
designated staff, coordinated student job-placement functions, and usually
some form of student followup. The transfer-related activities are by no
means so organized. This may account for the fact that since 1975, com-
munity colleges have awarded more Associate Degrees to graduates of occupa-
tional programs than to graduates of so-called transfer programs.

For these and other reasons it is important to separate the trans-
fer education and the liberal arts in any view of the community college.
The liberal arts, studies in science, social science, humanities, math-
ematics, and fine arts, have a long history in the community college and,
of course an even longer history in the senior institutions. Sixty years
ago 75% of the community college curriculum centered on the liberal arts.
Currently just over 50% of community college enrollments are in liberal
arts courses. These course are usually designated as meeting general re-
quirements for academic credit awarded by the local institution and by the
senior college to which the student may eventually transfer. The courses
are similar to those offered in the lower division of universities; the con-
tent and instructional media are often modeled on those presented in the
senior institutions although many community colleges have modified course
requirements to fit their own students. Many of the courses are presented
at a remedial level; in six of the largest community college districts in
the nation, sixty percent of the mathematics taught is considered remedial
and 35% of the English is similarly below college level.

The liberal arts courses are taken by community college student expecting
eventually to transfer, by students in occupational programs fulfilling grad-
uation or program requirements, and by adults seeking such courses for their
personal interest. The courses may carry academic transfer credit but this
points up why the liberal arts and transfer students must be conceptualized separately. In the six large districts we are studying, 56% of the students say that their primary purpose for attending college is "preparation for transfer" and 52% of the enrollments are in liberal arts courses. Thus just over half the students are taking liberal arts classes. But those two groups are not the same; just as half the students are not preparing for transfer, at least half that group is taking the transfer courses. And at least half the students who are taking the transfer course are not intending to transfer. To understand the liberal arts in the community college one must look to the content and presentation of courses in the transfer program, the occupational programs, and in the community education or non-credit areas. To understand the transfer function one must look to the students intending to transfer and actually transferring, not just to the liberal arts course enrollments.

Our studies of the transfer function nationwide have yielded other findings. We have learned that articulation of curriculum and transfer information varies considerably from institution to institution and from district to district. Some community colleges have clearcut articulation agreements with senior institutions and articulation committees comprised of staff members from both levels who meet regularly to work out curriculum and transfer information agreements. But in others there is total silence and lack of agreement of what is transferable and what is not. Furthermore the articulation of curriculum between community colleges and high schools in their region is typically much worse than between the colleges and the universities; we found no regularly functioning committee working on curriculum articulation and transfer between high school and community college.

In some states common course numbering systems have been adopted as as way
of enhancing the process of students transferring from one institution to another. Naturally, a common course numbering system helps, but as long as the staff in any academic department at a senior institution has the right of acceptance or refusal of courses for graduation credit in that department, common course numbering is by no means enough. As an example, students who transfer from Richland College in the Dallas Community College District to the University of Texas at Arlington may have their courses accepted at full value whereas transfer from Mountain View College in the same district may not.

For students to stay for two years at a community college and then transfer, a full array of second year, sophomore-level courses must be offered. However, in most community colleges those courses are severely attenuated because of the shortfall in enrollment at that level. As long as students may transfer without obtaining an Associate in Arts or Sciences degree, as long as they may transfer after having only taken introductory courses at the community college, the two-year institutions will have difficulty in attracting enough second-level students to fill the courses. Accordingly they offer fewer sophomore-level courses and fewer students stay for the second year. A downward spiral takes effect. This shows up in examining curriculum data.

In the Los Angeles Community College District, enrollment in courses for which there is a prerequisite in the same discipline accounts for 14% of the humanities enrollments, 14% of the social sciences, 17% of the sciences, 11% of the mathematics, and 7% of the English. Nearly all the enrollments in those areas is in introductory and remedial classes.

We have learned also that any review of faculty characteristics or of instructional expenditures in community colleges sheds little light on issues pertaining to transfer. Faculty tenure policies, the ratio of full-time to
part-time instructors, and whether or not collective bargaining agreements are in effect show no relationship to patterns of student transfer. Similarly faculty salaries, the prime component in the cost of instruction are not related. There is a relationship between class size and transfer rates but that seems to be because second-level courses are almost always smaller than introductory classes.

The most effective activities enhancing transfer seem to be those in which a single institution works out transfer agreements with the senior college in its immediate area. Instead of statewide articulation agreements which almost always fall short of enhancing transfer, transfer has been made more feasible in areas where pairs of institutions work out arrangements at the department or program level. An example of these types of agreements is afforded by reviewing the process operating in Phoenix between Arizona State University and the Maricopa Community College District. There, committees comprised of members of both institutions meet program by program to design curriculum and student information systems that enhance the flow from one institution to another. Their success is suggested by the fact that 40% of Arizona State University's junior class is comprised of transfers from the Maricopa District. The university limits the number of freshmen it will take and because the alternative for students living in Phoenix and environs is to go to one of the seven colleges in the Maricopa District, those colleges enroll a high proportion of freshmen and sophomores who will transfer. Furthermore—the university anticipates receiving those transfers and makes special provisions for them. Curriculum in some of the paired programs is so designed so that the university does not even offer the freshman courses in those programs but insists that the student transfer in having already had such intro-
ductory courses. In sum, articulation agreements work best when they are arranged at the program level between pairs of institutions in the same neighborhood. This suggests that transfer would be enhanced in California to the extent that Pierce College works with CSU Northridge, Chabot College with CSU Hayward, and so on. Santa Barbara City College and the University of California at Santa Barbara are well along with such agreements and jointly conceived programs.

Other efforts to enhance transfer can be made. Structural changes in community colleges attempt to enhance student flow are particularly effective. Miami-Dade Community College has received much publicity for its rate of student retention and transfer. Since 1975 the college has had a distinct commitment to enhance its transfer numbers and to hold students for the full two years or more, as long as it takes, to prepare them for transfer. This past year Miami-Dade awarded Associate Degrees to around one-fourth of its student population, a ratio considerably higher than that seen in any other large public institution. They were able to boast also that they provided one-sixth of all the transfer in the state of Florida, a number made all the more notable by viewing the geography of the state; Florida's major state universities are between 250 and 500 miles from Miami. A comparable figure for California would be revealed if the Los Angeles Community College District provided one-sixth of the transfers entering the University of California campuses at Berkeley, Davis, and Santa Cruz, and the California State University campuses at Hayward, San Luis Obispo, and Fresno.

How did Miami-Dade do it? Curriculum reformation is part of the story. The college built an honors program to attract the better students from the Miami high schools and offered full tuition scholarships to students from the top 10% of their graduating classes. Miami-Dade enrolls nearly 40% of that top student group.
But the college also built a support system that has had even greater effect.
By designing a full complement of remedial courses and testing students at
entry, they were able to place students in courses where they had a chance for
success. They imposed a limitation on drop-in students who, after having en-
rolled in four courses, are precluded from enrolling in the fifth until they
have taken a placement test in English and mathematics and entered a program
leading to a degree or certificate. They invoked standards of academic progress
and enforced probation and suspension on students who were not making satisfac-
tory progress toward completing a degree. They designed a computer-generated
response system with variable prescription that informs students each semester
of their progress toward completing the program in which they are enrolled.

They built an academic graduation information system that shows students exactly
which courses are required for transfer to each branch of the state university
and each department within that branch. This latter system is readily accessible
so that a student may walk into a counseling office, have his or her record placed
on a screen, and see exactly which courses are needed to complete the transfer
requirements in any program.

To return to California and the work of this Committee, the Committee may
have asked too much too soon. The Committee interim report dated June 11 shows
a plethora of concerns, few of which can be addressed adequately because of the
limited data base. As an example, considering a student a transfer based on the
student's own statement of the college last attended is too unreliable a definition.
Might the definition be better the college where the student earned the majority
of his or her lower-division units? What is the minimum number of units a stu-
dent may earn at a community college and still be called a transfer student when
he or she enters the university?
One thing that might help in obtaining better data is for the Committee to recommend a common entry form so that students applying for admission at any community college, university branch, branch of the CSU would state name, age, social security number, ethnicity, primary reason for attending college, career aspiration, program choice, and so on. The form could have a dozen or so common data elements which could be accommodated on a half page or on one card. That card could then be forwarded to a central receiving station where a data tape could be generated and sent back to the colleges. Any college wishing additional information on its students could request that its students fill out separate forms.

The Committee might also recommend studies of Bachelor's degree recipients at various UC and CSU campuses. Here the transcripts of the students receiving degrees could be analyzed to see how many units were earned at which of the state's institutions. One such study done as a doctoral dissertation at UCLA in 1980 showed a high proportion of UCLA's Bachelor's degree recipients with units earned at various community colleges. Such studies would assist in gathering answers to questions such as the programs successfully completed by community college transfers, the length of time that transfers take from college entry to receiving the baccalaureate degree, and the pattern of dropping in and out of various of the states' publicly supported institutions of higher education that cannot be answered with the information currently available.