We need conceptual assistance in thinking about access to higher education, systematic categories that will help us analyze and compare the national academic structures that condition problems of access and solutions thereto. An approach that centers on basic structure directs attention to the heavy historical momentum of massive systems of higher education and encourages a long-run view of innovations, releasing us from the need to write the latest chapter on current events. Even small advances in the system ordinarily require time spans of five to ten years, or even a quarter of a century, instead of the one- and two-year periods within which political and administrative thinking is so often cast. A structural view that is informed by a sense of historical development also points to country-by-country variation in solutions to current problems. Questions of access must be located in the broad matrices of different national structures.
PROBLEMS OF ACCESS IN THE CONTEXT OF ACADEMIC STRUCTURES

by

Burton R. Clark*

YALE HIGHER EDUCATION PROGRAM
WORKING PAPER
YHEP-16

February 1977

*Burton R. Clark,
Professor of Sociology and
Chairman, Program of Comparative
and Historical Studies of
Higher Education

The research reported in this paper has been part of the Yale Higher Education Program. It is a draft of a paper on problems of access to higher education presented at the Fourth International Seminar on Higher Education of the International Council for Educational Development, Aspen, Colorado, July 12-30, 1976. Papers from the Seminar will appear in an ICED publication in early 1977. It has been supported by research funds from the National Institute of Education and the Lilly Endowment for the comparative study of academic organizations and governance.

In the interest of fullest possible circulation of information and ideas, the Institution for Social and Policy Studies reproduces and distributes these Working Papers at the request of authors who are affiliated with the ISPS. They are not edited or reviewed, and the views in them are those of their authors.

Content of this Working Paper is not for publication or for quotation without permission. A list of the Working Papers of the Program may be obtained from the address below.

Program of Comparative and Historical Studies of Higher Education
Institution for Social and Policy Studies,
Yale University
1732 Yale Station
New Haven, Connecticut 06520
devolution of government to regions or for the taking of the risks that are
tenailed in turning over "a public good" to private enterprise. As a second
example, Swedish innovations are usually not transferable to other countries'
on grounds alone of special characteristics of Sweden. The country is very
small (only eight million), culturally homogeneous, politically sophisticated
in social planning, and has had until recently a system of higher education
that contained all of four or five institutions. The solutions that work are
embedded in the integration of a small country well into state planning.

How different are the conditions of system-wide innovations as soon as we
observe nations of 50 million population (France, Germany, Italy, Great
Britain), let alone Japan with over 100 million and the United States over
200 million, all of which have educational authorities and interest groups
that are more numerous, more fragmented, and, in many cases, more ideologically
contentious than those of Sweden.

DEMANDS UPON MODERN HIGHER EDUCATION

Before turning directly to academic structure, we need to say a word
about modern forces that play upon them. From the outside and from within,
national systems of higher education are subjected to a proliferation of
demands. The student clientele becomes more heterogeneous, as higher education
moves from elite to mass numbers. Labor-force demands become more numerous and
varied: the division of labor proceeds steadily onward, subdividing old occupa-
pations, creating new ones, and upgrading still others, giving higher education
a preparatory connection to many more fields of endeavor than in the past.
At the same time, the fields of knowledge that are rooted inside higher
education fracture into more specialties, and more fields are brought in from
the outside and made a part of the vast mixture of fields. Thus, the internal
knowledge base is itself a third major source of greater variety of demand.

All these fundamental forces that press for appropriate structure also
now operate at a pace that is more rapid than in the past. Thus each system
as a whole, but not every part of the system, is under pressure to adapt more
quickly. The rate of change in itself becomes an important force and struc-
tural adaptiveness, in the sense of quickness of response, becomes a major
concern of macro-administration. But here we shall require long-time spans
as frames within which to choose among current policy alternatives, since every
current change, once institutionalized, becomes a source of rigidity that might
block innovations in the future. There is little doubt that those who are
currently fashioning systems, e.g., the Department of Education and Science
in Britain, are creating future rigidities. The problem is to shape systems
to answer current requirements while minimizing the resistance to future
changes that will be as much needed in their day. For example, adaptability
in the future is probably helped if current changes are effected by adminis-
trative or collegial discretion rather than written down in national law. But,
with West Germany leading the way in the West, the trend is in the opposite
direction, toward an elaborate jurisprudence of higher education that will
weigh heavily against experimentation and adjustment in the future. In
producing such long-term effects, current change-minded interest groups that
proceed through law may quite literally not know what they are doing, or, if
they do, care overwhelmingly that their own special interest become more strongly
vested in the structure at whatever the cost in later adjustment.
education fracture into more specialties, and more fields are brought in from the outside and made a part of the vast mixture of fields. Thus, the internal knowledge base is itself a third major source of greater variety of demand.

All these fundamental forces that press for appropriate structure also now operate at a pace that is more rapid than in the past. Thus each system as a whole, but not every part of the system, is under pressure to adapt more quickly. The rate of change in itself becomes an important force and structural adaptiveness, in the sense of quickness of response, becomes a major concern of macro-administration. But here we shall require long-time spans as frames within which to choose among current policy alternatives, since every current change, once institutionalized, becomes a source of rigidity that might block innovations in the future. There is little doubt that those who are currently fashioning systems, e.g., the Department of Education and Science in Britain, are creating future rigidities. The problem is to shape systems to answer current requirements while minimizing the resistance to future changes that will be as much needed in their day. For example, adaptability in the future is probably helped if current changes are effected by administrative or collegial discretion rather than written down in national law. But, with West Germany leading the way in the West, the trend is in the opposite direction, toward an elaborate jurisprudence of higher education that will weigh heavily against experimentation and adjustment in the future. In producing such long-term effects, current change-minded interest groups that proceed through law may quite literally not know what they are doing, or, if they do, care overwhelmingly that their own special interest become more strongly vested in the structure at whatever the cost in later adjustment.
FOUR FORMS OF STRUCTURAL DIFFERENTIATION

With these pressures in mind, I turn to the concept of differentiation in order to develop a scheme that can frame discussion of problems of access. My basic proposition is: the possibilities of changing modes of access are heavily conditioned by the structural differentiation of academic systems. We can distinguish four kinds of differentiation, as occurring vertically and horizontally, within institutions and between them.

Differentiation Within Institutions: Horizontal

Horizontal differentiation occurs within the individual university or college chiefly in the form of a division of labor among fields of study. The basic structure shows numerous chairs, institutes, departments, and faculties, arranged side by side, that organizationally express the fields and disciplines. In apparently every system, these organizational units and fields exhibit differential access: no matter how much access to the entire system is opened up, there are some highly selective fields and some relatively open fields. Medicine generally manages to be selective, as do the natural sciences, while the social sciences and the humanities are much less so. The reasons for the differences are often expressed in such pragmatic terms as limited laboratory space and professional need. But we may note that the structure of knowledge in the various fields also has much to do with it. For example, most of us find at some point that we cannot go on in mathematics; for some, the stopping occurs in the secondary schools, for others, the washing out takes place in the first several years of tertiary education. It turns out that there are individual differences in capacity to handle mathematical
knowledge, something that has become fairly well measured. There is a definite sequence of progression into and through that body of knowledge, and most of us either voluntarily remove ourselves from the progression at a relatively early point or the mathematicians see that we stop by denying entry to courses for which we have not fulfilled the prerequisites. So access is limited, either at the door of the institution, the door of the major, or the door of the classroom. There is much self-selection out of the field, in anticipation of a formal denial, and lateral movement to other fields.

Thus, open-access systems and open-door universities and colleges will continue to have within them limited access to certain fields, de jure or de facto. Then the crucial matter becomes the ease of lateral movement within the institution: internal transfer is part of the access problem. If a student wants to become a physicist and enters the appropriate program only to find after two years that the path to that goal is barred, what then? If lateral movement is easy, as in changing majors in American undergraduate education, then the student rotates on to economics or political science, or sociology or education or business. Most American campuses have at least a handful of majors in which persistence alone will bring completion, and career choices are made accordingly. In contrast, lateral movement may often be extremely difficult, as in the case of highly autonomous Faculties within European universities or at the graduate level of American universities, and, indeed, it must be, once advanced levels of specialization are reached.

In sum: imbedded in the horizontal differentiation of universities and colleges is differential access to constituent units. While the institutions may vary greatly in the magnitude of the differentiation, the most
fateful difference is the ease or difficulty of lateral movement. Access
tensions are thereby increased or decreased: one way to reduce such tensions
is to make internal mobility easier.

Differentiation Within Institutions: Vertical

Vertical differentiation of the location of activities and programs
within individual institutions is even more interesting than the horizontal.
The differentiation centers on levels of training and certification, and
more precisely on the organizational units that are responsible for the
levels. To simplify, we may speak of one-tier and multi-tier systems.
The one-tier system has been found in the European mode of academic organization
in which the professional school is entered directly after completion of the
secondary level. The student enters immediately into medicine, or law, or
architecture or other professional fields; or, enters one of the natural
sciences, social sciences, and humanities on a similar basis that he is
entering into a field of specialization. The first major degree certifies
professional competence: in some countries it is the only degree that counts
for much, as in the case of the Italian Laurea; and, in others, a second or
third degree is available to only a few, as in the Japanese case where a
graduate level has had a very low ratio of students to the undergraduate
level. In such structures, historically, strong units of organization above
the first degree have not been needed and still today are either absent or
only weakly developed. In Italy, there is still a problem of differentiating
a second and third degree. In other countries where there is something like
the Ph.D., it is handled by the same faculty unit that concentrates its
energies in first-tier operations. The "Faculty" does all.
The contrasting situation is a clearcut two-tier where the first level is largely involved in general or liberal education with limited specialization available as students choose a major in a field of concentrated study. Here the first major degree generally does not certify professional competence, as in the case of the bachelor's degree in the United States, and it does little to open doors to specialized lines of work. Specialization finds its home in a second tier that is clearly set off in a distinctive graduate school and in separate professional schools that can only be entered after completion of the first level. This structure developed in the United States in part because we had the undergraduate college in place before the university mode of organization came along in the second half of the nineteenth century. The second tier offers professional certification and certification of capacity in specialized fields.

In multi-tier arrangements we find a parallel to the way in which the secondary level has served traditionally as a screening device for higher education. As the secondary level has become universal, the screening function moves up a level: then the first level within higher education must screen for second, third and fourth levels. One can imagine this process moving up and up. Just as the American high school diploma became virtually an automatic award, so may the American bachelor's degree in time be assured to those who persist. If that takes place, then graduate schools will use a first tier within their own operation to screen more for advanced work. Screening is always in the picture: the Ph.D. screens for a postdoctoral level that is now embryonic in several societies; the Medical degree screens for advanced medical training.

Thus, the multi-level system can combine open and limited access, face in different directions, and handle different functions. But in a single-tier
system, the one level has to do everything and the tensions have to be much greater. In addition, all the tensions of access of the whole system are typically recapitulated inside each institution. All the tensions of access to the entire national system of Italy are recapitulated in the University of Rome, or the University of Naples, or the University of Milan, and, in each case, at essentially one level of organization.

Single-tier systems, facing the demands earlier set forth, are now strongly inclined to "innovate" by turning the first year or two years of study into a screening device, implicitly if not formally. As a result of the European version of the open door (all who navigate their way through appropriate secondary schools are automatically admitted), large waves of students wash into the first year. But testing hurdles are now increasingly placed at the end of the first year or the second year to wash out many students and reduce the wave to manageable size. We can predict that single-tier systems will tend to become multiple-tier systems in one way or another, in order to couple open access with limited access. They will move into multiple degree levels, including a short-cycle arrangement that gives a degree below what historically has been the first professional degree. They are likely to find advantage in setting off graduate work distinctively in an administrative unit of its own, and more post-graduate work will gradually evolve beyond what is currently the highest professional degree. We can imagine at least five-level systems, since the United States already exhibits four: a two-year Associate in Arts degree, tended to mainly by the community colleges; the historic Bachelor's degree, well supported in undergraduate units; the Master's degree and the Ph.D. degree, both rooted in graduate-
school units (with a single professional degree that is the business of
the postgraduate professional schools). But more on this: when we come to
speak of vertical differentiation among institutions.

In sum: the nature of vertical differentiation of programs within
academic institutions conditions their problems of access. In current
decades, an increased degree of differentiation is a fundamental response
to the problem of coupling open and limited access. When we ask of certain
national systems, now preeminently the American, how come they are able
simultaneously to perform contradictory and even irreconcilable operations,
part of the answer is found in extensive vertical differentiation. Different
interests? Then, different levels.

Differentiation Among Institutions: Horizontal

Horizontal differentiation among institutions mainly takes the form
of sectors. We can note empirically three arrangements. One is the single
sector found when a nationalized set of universities monopolizes higher
education in a country. The second is a binary or multi-type differentiation
of institutions -- the university, the teacher-training college, the technolo-
gical school -- with all types under the same public purse and serving as
major parts of a single system. The third is a mix of sectors that includes
one or more private ones together with state-sponsored ones. Italy is an
example of the first, England of the second, and the United States of the
third.

In comparative perspective, the differentiation of institutional types
in the American system, the most extreme in the world, is staggering. The
simplest mapping still produces five or six types: the private university,
the public university, the private college, the state college, the two-year community college, and "all others" -- a melange of detached theological schools, medical schools, art schools, etc. An effort of the Carnegie Commission in the early 1970s, to be a little more precise, produced over ten important categories, even leaving the public-private distinction aside. And with some 2,800 to 3,000 institutions to be encompassed, most primary categories contain great variation. For example, the "private university" sector contains not only the high-endowment research universities to which we typically point but also, in greater number, both secular and Catholic institutions that have little or no income from endowment, do little or no research, and, much as in the Japanese private institutions, operate with high student-teacher ratios that allow most costs to be covered by income from student tuition.

Japan also exhibits considerable differentiation of sectors: the imperial universities; other public institutions; private universities; private colleges. The Japanese have astonished all of us who have assumed that mass higher education will naturally fall upon the public purse by having moved into mass higher education mainly by expansion of the private sector. They went more "mass" by going more "private," so that now some 75% to 80% of student enrollment in Japan is in the private sector, financed by the tuition payments of the Japanese middle class. However, the Japanese have worried increasingly about low quality in this sector -- apparently a case of "more meaning worse" -- and in the 1970s the national government has increased the flow of public monies to it, with, of course, some "guidelines" to raise standards. But even as the private institutions become more quasi-
public the ever before, they retain meaningful differentiation from the several types of public institutions, especially the imperial universities in which high status has been imbedded.

Whatever their problems, the American and Japanese systems have found sectorial differentiation advantageous in helping to plunge so far into mass higher education. The most difficult problems occur when differentiation of sectors is minimal. When countries have largely a single sector, the nationally-supported public university, that sector must handle all the heterogeneity of modern mass higher education. It must absorb all the students, whatever their diverse interests and capacities, perform all the functions, and respond to all the expectations that are laid on modern systems.

Our European colleagues find so many of their central universities plagued with overload. The universities are whipsawed by contradictory functions, with a gain in one function producing high costs, high negative effects, in another function. For example: Torsten Husen has expressed deep concern about the fate of the research function within the Swedish university, as the attention of government and its central educational ministry becomes heavily concentrated on another function, that of preparation of the undergraduate.

What, then, are the "solutions" to problems of mass access in the systems with little or no differentiation of sectors? One is to go on calling everything a university but to allow and encourage the variation that already exists under that label to widen. Anyone who knows the Italian or French scene knows that under the same label and official stamp of institutional equality there are significant institutional differences: attending a hilltown
university in Italy that has only a faculty of pharmacy and a faculty of law is not the same thing as going to the University of Milan or the University of Rome. Such de facto differentiation can be manipulated by public policy, and, indeed, by local ambition and entrepreneurship. Different mixtures of programs at different places, with even some universities becoming more specialized while others become more comprehensive, can be a partial counterpart to explicit separation of sectors and is very likely to occur in systems where tradition and politics dictate the use of essentially one label for units that educate beyond the secondary level.

A second solution is to move some of the traditional university functions to the outside as the new ones crowd in. Sweden might well decide to move research increasingly outside the university, "managing" research in a separate structure of research institutes. After all, there has been much experience with this form of differentiation in France, Eastern Europe, and the U.S.S.R., with great variation in the specific patterns. Specialized training can also be more assumed by industry, enlarging the educational sector composed of classrooms in the factory and the firm. Or, specialized training may be more assumed by schools supported by ministries other than the ministry of education, units of government that have different missions, constituencies, and responses than those of the mainline educational bureau. One need not be cynical to assume that various governments have, and will, consider these ways of protecting valuable operations, when participation and politics come to absorb the energies of university faculties and point their development in directions not desired by those occupying positions of central governmental power. The response is: "Let them have their playpens -- but we will funnel
research monies into separate institutes isolated from the madding crowd and train for top grades in the civil service by means of special schools."

The handling of contradictions between open and limited access is easiest in the multi-sector systems — a point touched upon in earlier discussions by Boyer and Husen — since differential access among sectors can be established, maintained, and legitimated more readily than visible differentials within a single system. Here again, however, the key to viability may be the ease of transferring from one sector to another, the systematic provision of some avenues of lateral movement. Some years ago Warren Willingham referred to transferring as the number two access problem in the American system.\(^3\) The movement of students from one college to another, we may note, is largely movement from one sector to another, from two-year places to four-year places, from four-year places to universities, etc. That movement, in the 1960s, amounted to over 500,000 students a year. This inter-sector mobility abates some of the tensions of differential access, since it offers later alterations in the sorting occasioned in the first cut of entry.

**Differentiation Among Institutions: Vertical**

The question of vertical differentiation among institutions within national systems brings us to the difficult and sensitive problem of a prestige hierarchy of institutions. Official or not, there will usually be some such prestige differential, usually heavily traditionalized and deeply embedded in the social structure and culture of a nation. With the differences in prestige, there are commonly also differences in amount...
of financial support. This is the most difficult kind of differentiation to grapple with, especially as we attempt to reconcile it with egalitarian interests.

The vertical differentiation initially comes from the horizontal. If there is only one sector in horizontal differentiation, then there is a possibility of having relatively little vertical hierarchy in the system. If a country works for a century or century and a half at trying to equate institutions, and have a national degree instead of an institutional degree, and elaborate an ideology that the state-awarded degree has the same value for professional employment no matter where one studies, then the hierarchical tendency can be diminished. While if a country has multiple sectors of horizontal differentiation, a steeper hierarchy is more likely. Why must this occur? Because the different sectors will be handling different functions and those functions will vary in social esteem. A unit that leads to high-status occupations will be ranked by the general population above a unit that leads to lower-status occupations. A unit that does research will, in most countries, rank above a unit that does not do research.

Differential prestige among institutional sectors has received some attention in research, particularly in the work of English sociologists, who, in studying the traditional secondary level of the British system, have made the point that a parity of esteem cannot be achieved among institutions that perform different functions. So long as different schools performed different functions, with some routes vocational and terminal while others lead on to the university, there will be a major degree of institutional hierarchy. The move toward the comprehensive school in England has been an effort to reduce the hierarchy of sectors.
Thus, horizontal differentiation will lead to some vertical ranking or placement. The questions become how much hierarchy exists in each system, what are the functions and dysfunctions of the vertical ranking, what can policy do to effect changes, and what will be the benefits and costs of proposed changes. Official policy can work to reduce a high degree of vertical ranking and democratic doctrine can be used in education to blur and soften sharp edges of invidious distinction. But it is not to be supposed that hierarchy can be eliminated, a search that is on a par with the ideal of a classless society. No society has figured a way to effect equal status for all occupations, nor for the training institutions that, above the level of common education, must provide specialized routes to occupations that require advanced preparation. Even if we could equate all colleges and universities in their social ranking in an advanced industrial society, the price in dysfunction would probably be too high. For there is so much that higher education is involved in and does that is well-served apparently by some hierarchy of institutions -- and especially the freedom of institutions, like individuals, to try to better themselves, even if this means asserting a persistent claim that in regard to a certain function -- liberal education, a scientific research, community service -- we do it better than others. Purposes and functions are inordinately complex and cannot be reduced to just one, which is the basic mistake of the paper by Astin that appeared in the background reading of the first week of this conference. Astin's logic makes the simplifying assumption that the purpose of public systems of higher education is to improve the performance of the individual, which then allows a value-added approach to how much institutions improve performance,
which then can show as much gain for a year of study by mediocre students in mediocre places as by outstanding students in outstanding places -- and therefore differential prestige is simply self-serving and mischievous and policy should move to eradicate it. But all the many functions of higher education cannot be subsumed under that simplified version of what higher education is about. It does not speak to the evermore elaborate institutional arrangements constructed in modern society for research -- the cultivation of new knowledge as a means of social progress and even, within the disciplines, as an end in itself. Nor does it speak to the institutionalized arrangements in higher education for protecting and disseminating the historically-received knowledge component of a society's culture. Similarly, community services are not readily subsumed under the single purpose of improving the performance of the individual.

The point is to keep the multi-purpose nature of higher education in mind in considering various recommended access policies, since so many tend to focus on equal access and treatment for all individuals in very large systems and exclude consideration of effects of those policies on other basic features. Simple approaches that assume a simple reality lead to major unanticipated and unwanted effects. For example, it is unrealistic in considering changes in access policies not to consider effects on scientific research. Certain aspects of that function are highly esoteric and expensive, and are served by concentration of resources, highly selective access, and merit-based prestige -- rather than equal distribution of resources, unselective access, and a democratization of prestige in which we are equally good because we are alive and attempting to fulfill individual potential. And the great
simplification of issues so often performed by analysts has almost nothing to do with the way decisions are actually made, as described by Boyer earlier in this conference as he depicted the "hell-fire of pressures, some legitimate, some not, that rained upon a state chancellor each day and the way that officials have to adjust their priorities from one week to the next and from one year to the next. At a minimum -- that is, with a clear head -- the official has to work with a broad profile of values and functions that need to be kept in some reasonable balance.

The vertical differentiation of sectors must be researched for its effects not only on open and limited access but also on such values as scientific progress, the transmission of traditional culture, particularly in its more esoteric and sophisticated aspects, and differential training for advanced lines of specialization. A number of important functions seem to be protected and served by vertical differentiation. In the United States, a limited number of essentially research universities group certain highly advanced activities in their graduate schools, while two-year colleges and four-year colleges have other roles that attend to other demands and activities. The logic of the analysis developed earlier in discussing tiers within institutions applies even more to tiers among institutions. Not only can different purposes and functions be given due protection and development at the different tiers in an hierarchy of institutions but also open and limited access can be more readily combined. In the United States, the first tier is open, and has been open for a long time in some states; the California mode of open access via the two-year junior or community college was developed in the 1920s and 1930s, backed by important presidents at the University of California.
and Stanford University, and was well in place by World War II. But the higher tiers are selective and in fact have become more selective in the last quarter of a century. The vertical placement of institutions in the California mode has worked relatively well—compared not only to European systems but also to "open admissions" in New York City of the post-1970 period, where political pressures permitted less vertical differentiation and the old noted four-year colleges became more directly involved in mass entry. There the backing and filling on differential access to two-year and four-year units has been great.

* * * *

Those who attend to problems of access and offer advice on solutions cannot responsibly escape the four aspects of differentiation on which we have concentrated here. Complexity of task and differentiation of structure interact in a fundamental way. A few systems that are already quite differentiated may find their main drift in reform is to tighten a loosely integrated national system, toward a happy middle ground of autonomy and coordination. But most national systems, possessing little differentiation relative to modern task complexity, will be facing increasingly heavy pressure to loosen their integration and in that way seek a new balance between autonomy of parts and coordination of wholes. Questions of access must be located in these broader matrices of differentiated national structures. If we must have a key problem, differentiation is it. Evolved structural solutions to increased task complexity will be the substructures on which "innovations" in access will succeed or flounder.
FOOTNOTES

1 Comments by Klaus von Dohnanyi in earlier discussion of a conference paper.


INSTITUTION FOR SOCIAL AND POLICY STUDIES

The mission of the Institution for Social and Policy Studies (ISPS) is to encourage and undertake multidisciplinary research and education. The ISPS is oriented to the exploration of social problems rather than to the refinement of discipline-based methodology. In recent years, ISPS research has focused on the problems of the city, education, health service delivery, and on the modeling of social systems. Currently, research is also being developed on criminal justice, governmental reform, environment, income distribution, aging, the policy-making process, and value problems in public policy. ISPS is not a consulting organization but an instrument for enriching the social sciences and related disciplines in the University.

Institution for Social and Policy Studies
16A Yale Station (111 Prospect Street)
New Haven, Connecticut 06520