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ABSTRACT

Coordination of higher education within national sets is discussed in this working paper. The structural bases of national coordination, the tasks of higher education and the prevailing structure of embedded power, are described. The national general patterns of coordinative organization that appear frequently among national systems of higher education are evaluated. Contemporary processes of increased coordination are discussed and include methods of bureaucratic coordination such as layering, jurisdictional expansion, personnel enlargement, administrative specialization, and role expansion; political coordination such as increased regime and party involvement, increased cooperation, and increased participation; professional coordination such as expansion of faculty interest organization; and market coordination such as increased consumer sovereignty, creeping institutional markets, and extension of power markets. (SPG)

ACADEMIC COORDINATION

by

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This working paper is a draft of a paper prepared at the request of the International Council for Educational Development as part of the Council's study of national systems of higher education in twelve countries: Sweden, West Germany, France, Poland and Great Britain; Canada, Mexico, the United States; Japan, Australia, Thailand, and Iran. The paper will appear in final form in a topical volume published by ICED (Summer 1978) that attempts to compare the twelve countries under the topic of purpose and planning, administration and management, coordination, effectiveness, and efficiency.

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COORDINATION

COORDINATION*

To coordinate, according to Webster, means "to bring into a common action, movement, or condition; to adjust; harmonize."[1] This conventional definition suggests coordinators, active agents who link parts together to produce unified movement and global harmony. Common usage of "coordination" has been similar in meaning, pointing to formal systems guided by planning and management. But to speak effectively of coordination in higher education, especially at the level of whole nations, we need a more variegated framework within which we may consider how parts are related to each other and to the whole of large systems, whether the parts are deliberately linked or not, common or dissimilar, and working in harmony or disharmony. As we shall see, it is better to assume that order is variously determined, rather than produced by administration alone, much in the fashion of economists who approach organization as a problem of markets as well as of polities and formal agencies.[2] Karl Polanyi has pointed out that economic processes have been ordered in various societies by custom, interpersonal bonds, and markets, as well as by "authority."[3] And so it is for educational processes: they may be given some definable order by tacit agreements, shared unconscious assumptions, and other non-formal elements, as well as by authoritative command and explicit rule. Indeed, academics may even be bonded closely together by hallowed symbols. It was not so long ago that the phrase "we are a community of scholars" uttered in a small faculty meeting had the bonding power of a family benediction, fraternal handshake, guild oath, and military salute all rolled into one.

The broad approach suggests that a large research agenda lies ahead if we are to achieve a necessarily complex understanding of the many ways of academic coordination. That understanding can only develop gradually as careful

inquiry probes the problems of coordination that are sited in the specific contexts of nations. The twelve country reports of the ICED study helpfully present some materials on coordination as seen amidst other features of national systems and their environments. My purpose is to place those materials within categories and conceptual frameworks that allow some comparison of systems, including the consequences of different patterns. In the flow of the sections that follow, four simple questions are embedded: What is coordinated? What--and who--coordinates? What are the basic dimensions along which forms of coordination vary? What are the processes of increased coordination that are most apparent in the latter half of the twentieth century? The units of analysis, unless otherwise indicated, are national systems--national aggregations of institutions linked in one form or another.

STRUCTURAL BASES OF NATIONAL COORDINATION

What is to be coordinated within the broad configurations of national systems is determined primarily by (a) the tasks of higher education, and (b) the prevailing structure of embedded power.

THE STRUCTURE OF TASKS

A fundamental thesis in organizational theory holds that complex demands made by a diverse environment give rise to differentiated structures in organizations. As demands become built-in as tasks, we may say that complex tasks foster the development of a complex structure.[4] This point is relevant to the difference in problems of coordination between higher education and other realms of social activity, since higher education has exceedingly complex tasks that are likely to generate unusual complex structures with problematic linkage. How can we characterize those tasks?

Exaggerating slightly, we may view higher education as a social structure for the control of advanced knowledge. In the long evolution of modern societies, higher education became differentiated as a separate sphere of activity around work that involved the handling of bodies of thought. Its basic organizational forms in the Western world, universities and colleges, were, beginning in the twelfth century, locations for conserving and refining knowledge; its main workers, socially defined as professors (masters) and bachelors (journeymen), absorbed and sometimes critically assessed written accounts and observations handed down from past generations.[5] The largest activity became that of transmitting advanced bodies of ideas and skills in deliberate and wholesale fashion to learners, individuals defined as apprentices or students and socially segregated in a student role. Preparation for the professions became the central task, to the point where the university became a central place for legitimation of occupations as professions. In the nineteenth and twentieth centuries, leading systems of higher education added the commitment of discovering knowledge. The research imperative entered the university in many countries, turning the professor into a researcher as well as a scholar and teacher and providing science its principal institutional home.[6] Higher education also sometimes became directly involved in applying knowledge to the solution of current problems, whenever its agents responded to external requests for advice or participated as experts in external councils or carried out applied research called for by government or industry.[7] In discovering, conserving, refining, transmitting and applying advanced ideas and skills, the handling of knowledge materials has been a common thread in the many specific and diverse activities of academic workers.

This simultaneously intensive and extensive concentration on advanced knowledge distinguishes higher education from other social institutions:

economic, political, religious, recreational, and charitable institutions all use knowledge and are involved in aspects of producing and distributing it, but they do not so fully concentrate on knowledge tasks or attempt to encompass such a wide range of specialties within single organizations. No other major institution covers the alphabetical spectrum of fields of knowledge from archaeology to zoology, with business management , engineering, French literature, law, medicine, physics, psychology, and dozens of other fields included. A relatively simple national list of curricula, as in Italy, contains over forty such fields; a heavily specialized and finely differentiated structure, as in the United States, exhibits over twice that many fields of knowledge just within single universities, leaving aside the many subspecialties that appear within departments and professional schools that bring the list of tasks into the hundreds. And higher (or postsecondary) education differs in degree if not in kind from elementary and secondary education by focusing on more advanced, esoteric materials, and definitely differs in kind in many countries by including the research imperative and thereby serving as a principal location for science.

The complex task structure has to be embodied in the operating parts of universities and colleges. Whether the parts are departments or chairs, faculties or schools, they are committed to intensive work on bodies of thought and training, each of which represents an occupation unto itself within the academy and commonly within the more general labor force. The part, generally known as a "discipline," is a whole field of basic or applied knowledge. Disciplines are subcultures, with roots that run deep and stretch far out, not mere administrative categories which can readily be fused to fit a neat chart. This produces an uncommon centrality of the parts, compared to organizations in other domains, what we might call a functional basis for departmentalism. Each unit

can claim primacy in a front-line task: "Underlying the status of the department [in the English university] is its crucial characteristic of being authoritative in its own field of learning."[8] Relations among "production" units are strongly centrifugal: to each his own. We must expect, then, that academic coordination everywhere faces special problems, and is likely to take special forms that do not appear to a major extent in other institutions. Just at the institutional level alone, coordination involves loosely-coupled systems.[9] At broader system levels, it is likely to entail relations among parts so loosely connected as to be variously likened to the connective tissues of federations, conglomerates, and markets.

Focusing on the evolved sets of tasks of institutions and systems as the contents of coordination offers a special bonus in permitting us to bypass the tangled thickets of "goals." The operationally meaningful goals of academic systems are the tasks of the parts: e.g., to do the work of archaeology in the setting of a particular institution or sector of higher education, with the setting thereby defined by the crisscross of the discipline of archaeology with the type of institution; and similarly for the whole alphabet of disciplines as combined with institutional parts. If the disciplinary building blocks meaningfully interlock to form larger clusters, then operationally they effect larger "purposes" that are more interdisciplinary in nature, even composing liberal or general education. However, real purpose is always to be found in what people do in the disparate operational parts, whether in splendid isolation or in linked subsets. Thus we come to know about ends as we consult local and national configurations of tasks, rather than by turning to the historic pronouncements of Humboldt, Newman, Flexner, Hutchins, and others who were in the business of either prescribing reforms or of devising doctrines that would

throw a net of legitimacy over diverse activities. Old doctrines, even in the old days, were probably pretenses to unities that never existed. Now, after the expansions and adjustments of the last two decades, increasing diversity in academic work has stretched beyond repair the traditional statements of essence.

THE STRUCTURE OF EMBEDDED POWER

There are historically-derived national arrangements of tasks that vary in such crucial characteristics as to what specific fields are included, the breadth of coverage of fields, and the coupling of tasks (e.g., whether teaching and research are joined or separated). Most important for our purpose is the past role of state authorities in determining a super-structure of control, the levels above the institutional level that emerged or were devised to link parts together. Not invented yesterday, coordination has existed for as long as there have been institutions. For example, when Bologna, the first medieval university in Italy, was joined by a bevy of others throughout the Italian peninsula in the twelfth to fourteenth centuries, there was a competitive flow of faculty and students from one to another, since state authority was then radically decentralized to city and provincial levels, the local governments were interested in attracting the new academic guilds, and academic personnel, working out of disposable quarters, learned to move around in pursuit of self-interest, even on occasion in the name of self-preservation. That market-type interaction was clearly a form of linkage, apparently a dynamic and flexible one. This form was diminished and replaced by more deliberate frameworks in the fifteenth century as universities took up residence in permanent buildings and the professors went on public payrolls, freeing teachers from dependence on students while tying them closer to officials.[10]

Throughout Europe, an understructure of guild faculties, often autonomous

units within nominally-unified "universities," came under a systematic superstructure of state personnel as state power, especially in the last two centuries, expanded, consolidated its hold, and developed bureaucratic capacity. "The public interest" in high r education became the formal responsibility of ministerial officials. The institutionalized intent was then to exercise control through regulatory bureaucracy, even if the regulation was general and remote. Particular public bureaus became crucial elements: a national ministry, where the national state, as in France, took primary responsibility for education; a provincial ministry where, as in Germany, that responsibility became lodged at the provincial level. But always underneath that superstructure which lodged power in ministerial hands there was the understructure of guild-like faculty units which lodged local power in professorial hands, with the chaired professor a master of his own domain and part of a consortium of masters that through small collective bodies ruled the Faculty and the University. There developed a general European mode of top-bottom embedded power, which, compared to the American mode, has lacked a middle class of administrators (and lay supervisors) with powers independent in some part of professors and top state officials.[11] This combination of state bureaucracy and professorial guild became the modal form of formal coordination throughout the world, modeled by European countries and always significantly congenial to the way that new governments have viewed education as a public good, with one or more ministers as governmental custodians and professors as civil servants. Under the pressures of modernization and competitive national progress, let alone of ideology, few new governments have been prepared to trust the national welfare in higher education to fragmented and localized institutional control.

The great exceptions to this dominant mode have appeared in the leading Anglo-Saxon countries, following upon the relatively loose relation that

developed in England over a lo g period of time between Oxford and Cambridge and the central government, which modeled formal institutional autonomy to the world; and then even more so in the United States, under the special conditions of nation-building and federal governmental structure that have helped lead to a patchwork of hundreds of loosely-linked institutions. In both countries, public interests could be handled legitimately by private groups as well as state officials, by little detached groups of trustees superintending local institutions. Under the trustee umbrella, it was sometimes the case that guild-like clusters of dons captured enough power to constitute their own versions of self-rule, as in late nineteenth-century Oxford,[12] or for campus administrators to become more influential than the trustees, as in some American universities du ng the last century.[13] In any case, one essential feature of system has been the absence of an authoritative national or provincial ministry. If professors had to relate to public representatives or bureaucrats, they were local trustees, presidents and vice-chancellors, campus-rooted bursars and registrars. A different set of interests got vested, with the preponderance of the vesting taking place at the local level. The U.S. mode has been particularly striking in embedding so much power in the hands of trustees and institutional bureaucrats, at a middle level between state officials and professors, and interpenetrating locally the authority of faculties with the authority of trustees and administrators.

Thus the givens of coordination, the contents -- the what -- of new efforts in coordination, are made up of prevailing distributions of authority and power as well as received arrangements of tasks. The traditional authority relations themselves may be seen as an "in-place" system of coordination in each country, however weak or strong, effective or ineffectual, since they are means of tying people into a cooperating whole. And those relations need not always be heavily

hierarchical: they may be more a matter of mutual adjustment among individuals and groups at any one level of organization, and among levels, all of whom possess some bargaining power.[14] Certainly in higher education, where the distribution of authority has been so heavily influenced by the expertise of scholars as well as by their traditional guild forms, those who attempt new ways of coordination have a great deal with which to contend in the traditional complexes of authority that are rooted in ideology, structure, and vested interest.

NATIONAL PATTERNS OF COORDINATIVE ORGANIZATION

Now, what -- and who -- coordinates, linking together in one way or another the numerous universities, colleges, schools, and institutes that, in aggregate, are referred to as national systems? We first turn to general national arrangements and group them descriptively to show some similarities and differences. We then introduce a few concepts that permit us to array national systems on several quite different dimensions of coordination.

FORMAL PATTERNS

We can identify four general patterns of coordinative organization that appear frequently among national systems of higher education in the twentieth century. These patterns vary on the two characteristics of monopoly of formal control and monopoly of organizational form:

(1) National control, over a single sector of institutions

(2) National control, over several institutional sectors

(3) National and regional control, with several sectors

(4) Private as well as public control, with several sectors

National Control: Single Sector

This pattern expresses a double monopoly, one of authority and one of institutional type. There is only one system, the national one under a national ministry, and the system contains essentially only one form, the state university, with 85 percent or more of enrollment in that one type of institution. The most extreme case of this form in Western Europe in the 1960s was Italy, with its nationalized system of public universities, plus only a few "free" institutions that had to attach them to the national system, and with 98 percent of all students in higher education located within places called university.[15] Teacher training in Italy falls within the university form, as does preparation for public administration and the professions. Engineering and technological training are also located in the university, or partly in a few polytechnics that are treated as university units by the national system. Among the twelve countries of the ICED study, Sweden traditionally fell in this pattern, with a national system composed largely of a handful of university-type institutions that in the mid-1960s still absorbed 90 percent of the students.[16] Spain and Portugal appear also to be systems mainly of this type.

This pattern of double monopoly of control and form is capable of offering great resistance to change, as in Italy. But how much and how rapidly that resistance gives way to change depends also on other features of the government of which higher education is a sub-system: e.g., whether there is strong executive power, a competent and aggressive bureaucracy, a corporatist relation of external groups to government. In Sweden, high access by economic groups to governmental policy, together with centralized power in a small planning state, has produced extensive and rapid change in the last two decades. In general, this pattern increasingly appears too limiting and systems move toward the next type, with its plurality of sectors.

National Control: Two or More Sectors

In this pattern, formal control is unitary in the sense of hegemony of one level of government but the system is differentiated into two or more types of institutions. Around the world, this seems the most common pattern, the dominant arrangement in Communist societies, Western democracies, and Third World nations alike. Typically, the main sector is a set of universities, with one or more "non-university" sectors organized around vocational instruction, or teacher training, or both, but occasionally around an esoteric function prized by the government. All sectors are financed primarily by the national government, sometimes through a single ministry but often through several ministerial avenues. France is a striking case of this pattern, with its historic differentiation of universities and grandes écoles, specialized schools that have been more elite in nature than the universities. The university sector, containing the largest share of students, falls under the Office of the Secretary of State for Universities. Some institutions in the grandes écoles sector also answer to that ministry but have "a special status"; others in this elite grouping answer to other ministries, e.g., the école polytechnique to the Ministry of Defense. And then there are additional small sectors of Institutes of Technology (IUTs) and other enterprises devoted to technical education and teacher training. The ICED French study notes, in general, that "the institutions of postsecondary education form a disparate group....responsible to different ministries."[17]

We can immediately grasp a qualitative difference in linkage from that of the single-sector national system: there are major parts that have different roots in history, clientele, and governmental structure. The parts become at least semi-autonomous claimants, often with semi-autonomous governmental sponsors to articulate and press their claims. Therefore, the parts are more

difficult to relate to one another and to change deliberately in a balanced way. In all the crisis, governmental intervention, and planned reform experienced in French higher education in the ten eventful years that began in 1968, the grandes écoles have sat to one side, largely untouched. This sector's grand protection has many sources, not the least that top governmental posts are filled with its graduates. Privileged access to the corridors of power is a solid underpinning for privileged autonomy. Hence, in a system often portrayed as a case of unitary centralized control, the presence of several sectors has meant uneven control, even a dispersion of control within government. And we should expect some similar dispersal even in those countries where the several prevailing sectors come under a single ministry, since then the sectors become anchored in different major sub-bureaus within a mammoth ministry, with the bureaus pushing and protecting the academic interests for which they are responsible.

Among the twelve countries of the ICED study, Thailand, Poland, and Iran also fall within this pattern of nationalized pluralism. To take up only Thailand: nearly all institutions are there governmental. Only about five percent of the students are in nominally "private" institutions, which are mainly in business training, and even these colleges are "under the supervision" of a national government department.[18] The governmental institutions divide into two major types, universities with about 55 percent of the enrollment and more specialized colleges with approximately 35 percent, and a third minor type consisting of a melange of other specializaed institutions. And, as in France, different types of institutions come under different central bureaus: the universities under an Office of University Affairs; the colleges under the Ministry of Education; and other specialized colleges under other ministries, e.g., seven nursing colleges under the Ministry of Public Health. The

Thailand Report (ICED) details bureau control of the colleges down to the point of saying that "there are six governmental departments/organizations that have colleges," namely such bureaus of the Ministry of Education as the Department of Teacher Training, the Department of Vocational Education, and the Department of Fine Arts.[19] This twentieth-century nationalized system is an excellent example of one actually spawned by different governmental ministries, including many of the universities that are now grouped under the one Office of University Affairs. With such roots, it remains the case that "powers are still dispersed to many regulating agencies" within the central government.[20] Further, that instead of three sub-systems of formal coordination corresponding to the three sub-systems named above, there were instead "as many sub-systems of coordination as number of parental departments...coordination is made in terms of intra-subsystems rather than inter-subsystems."[21] Thus, even under a powerful central regime, fragmented bureaus may cause formal coordination to be a highly fragmented affair. The shape of sectors can be as important as the shape of government.

National and Regional Control: Two or More Sectors

In this pattern, the control of postsecondary education is divided between national and lower levels of governments and among the lower parts. It is theoretically possible under this control structure for only one type of institution to exist, but in reality it seems nearly always to co-exist with multiple sectors. The decentralization of public authority in a more "federal" government apparently generates variation. Countries also have generally evolved into this pattern from a background that combined private sponsorship and public control located primarily at the sub-government level. The influence of the national government generally came late, after World War II and as recent as the period of expansion after 1960. At the same time, private

sectors gradually vanished or became reduced to less than 15 percent of student enrollment.

Australia is an excellent example. There are two clear levels of governmental control, state and national, over three distinguishable sectors of universities, colleges of advanced education, and colleges of technical and further education.[22] Constitutionally, as in the United States, public authority is located at the level of the state, six in number. But the national government has had the power to make financial grants ("Section 96 grants") and has expanded its power from this base, since it requires political discussion and administrative guidance on what grants to make, commissions to advise it, and some ways of checking the propriety of expenditures. Then, too, the national government's role has expanded as scholars and institutions have voluntarily turned to it in their search for funds. As a result, both levels of government have become involved in all three primary sectors.

Among the twelve countries of the ICED study, Canada, West Germany, Great Britain, and Mexico, with considerable variation, also fall within the broad limits of this general pattern. Canada exhibits the strongest degree of control lodged at the provincial level, with a tendency at the present time for such control to become even stronger as part of the current trend toward political provincialization.[23] Here national influence is minimal, and the system tends toward pure provincial control over multiple types of universities and colleges, including short-cycle units similar to U.S. community colleges. Control in Germany has also been deeply institutionalized at the level of the eleven Länder governments(leaving aside the Fascist period), but national bodies and component of national government have become more influential in the years since 1960, to the point where central administrative machinery now plays a key role in determining who is admitted to universities and fields of studies

and where law courts are now active in specifying systemwide regulations.[24] West Germany remains a federal system, but one in which formal interests in standardization, as well as informal and quasi-formal linkages, are considerably stronger across the nation than in the Canadian case.

Great Britain, as usual, virtually eludes classification. It has not been a nationalized system in the style of its Continental counterparts, nor a truly federal system known for separate state or provincial government, nor can we comfortably embrace it any longer with the systems in our fourth pattern that are characterized by private sponsorship as well as public control. But there are distinctive regions aside from England--Scotland, Northern Ireland, and Wales--that operate in higher education as public authorities, with the Scottish subsystem long rooted in its own distinctive set of characteristics, and Local Educational Authorities traditionally have had a strong role.[25] Thus, as between levels of government, control has been pluralistic. And sectors have been multiple: universities of several types, from Oxford and Cambridge as a class unto themselves, the University of London as a class in itself, the nineteenth-century-spawn civic universities, and the set of new universities of the last two decades; a host of technical and technological enterprises, sor- bracketed under university status while others constitute a polytechnic sector, the nonuniversity set of institutions that most aggresively challenges the privileges of the universities; teacher training colleges and a diffuse set of institutions of "further education." The British system manages to have a nomenclature almost as confusing as that found in the United States, which is perhaps a good indicator of lack of control by national departments traditionally, since bureaus introduce uniform terms while dispersed authorities manage to create terminological difficulties.

Mexico is also a case of this public-federal pattern: about 90 percent

of enrollment is in public institutions and these institutions are variously under "state" and national sponsorship and control.[26] Among the five countries of the ICED study which fall within this third pattern, one might suppose that Mexico would rank highest in degree of national influence, and related low degree of institutional autonomy, since Mexico is widely classified by political scientists as an authoritarian state while the other countries stand as democracies. But, as Daniel Levy has shown, the relation between the higher education institutions and the central government is more that of a reconciliation system than an authoritarian system.[27] There is power and advantage on both sides, negotiation and bargaining are common, and financing is more determined by student numbers than governmental choice. Segments of the system are strongly and autonomously represented by bureaus within the central ministry of education, to the point where the ministry becomes "a loose coalition of fiefdoms," a good case of "structural feudalism."[28]

The wide range of characteristics among the five national systems included here within a third pattern indicates anew that our patterns do not have neat cutting points and watertight boundaries but rather are broad zones along several dimensions. For example, with only a slight shift in definition, Mexico would fall in our fourth category, since it has about ten percent of its students in truly private institutions, ones that receive virtually all their funds from non-governmental sources and are free to charter their academic and administrative courses. Similarly for Great Britain: the major entrenched endowments of the dozens of colleges that compose Oxford and Cambridge indeed make these institutions at least quasi-private in nature. Differences among our patterns are often differences in degree not in kind. And the diversity of institutions found in many countries in our third and fourth patterns means that summary estimates of a national structure are often poor

accounts of different sectors.

Private and Public Control: Multiple Sectors

Fourthly, there are national arrangements of higher education in which formal control is in the hands of private parties as well as public authorities, to the point where 15 to 20 percent or more of the students are in institutions that receive most of their financing from non-governmental sources and have boards of control selected through non-governmental channels. This is the most heterogeneous pattern of control, one that co-exists generally with a multiplicity of institutional types. Japan is a strong case with some 75 to 80 percent of enrollment located in private institutions. The country has numerous major sectors and sub-sectors: a small set of imperial universities supported by the national government; a larger number of additional public institutions, supported by city and provincial as well as national government; a large number of private universities and colleges, varying widely in quality; and over 500 junior colleges, mainly private ones.[29] As in the United States, each private institution is under a board of trustees of its own. The imperial universities set the pace: and, within this small group of elite institutions, the Universities of Tokyo and Kyoto are widely recognized as a distinctive sub-class whose status and privileges as a narrow pinnacle of a major national system are virtually unmatched anywhere in the world, including the grandes ecoles in France and the Oxford-Cambridge combination in England. Here admission and placement are tight: certain faculties virtually monopolize placement to certain bureaus and firms. But in other parts of the national system, admission is lax and placement problematic; the great heterogeneity of sectors entails great differences in selectivity and job possibilities. The Japanese system is deep into mass higher education, virtually on a par with the United States with a rate of participation double that of most European countries. The

evolution into mass participation came about primarily by expansion of relatively unselective private colleges, around less expansion of selective public institutions.

The United States is the second great case of the fourth pattern, with its 3,000 institutions dividing into about 1,500 private colleges and universities and a similar number of public ones, the latter all falling within the fifty sub-systems of the states.[30] Thus public control as well as private control is fragmented: traditionally, the national government had little role, much less than in Japan, and the influence of national bureaus has developed quite late in an uneven fashion. The many sectors are well-known: most states now have something like a tripartite differentiation of state universities, state colleges, and community colleges, the latter in many states supported considerably by local funds and under the control of local educational authorities; and then there are private universities, varying from the well-known "research universities" to less-known "service universities" that have little endowment and have learned to survive on tuition and fee income (much like the majority of Japanese private universities and colleges); and, of course, the over 700 private colleges, the type of institution which arose first, during the colonial period and the first half of the nineteenth century, and which runs the whole gamut of selectivity and quality and, similarly, the full range of secular and religious differences in American life.

* * * *

These four patterns provide elementary groupings within which we can place many countries. They do not exhaust the possibilities, and, as indicated, the definition of their boundaries is meant to be loose and tentative rather than tight and permanent. They mainly indicate the broad range of national coordinative patterns prevailing at present, or in the near past, as products of historical origin and evolution. We now turn to several concepts that refer

to different modes of coordinating relationship, ideas that will permit us simultaneously to compare national systems of higher education and to make such comparisons a part of the study of social systems generally.

STATE AUTHORITY, MARKET, AND OLIGARCHY

We can simplify and yet give greater flexibility to the patterns mentioned earlier if we establish a dimension that extends from tight to loose linkage in the parts of national systems. This dimension is adapted from the theoretical literature in interorganizational analysis that has focused on the problem of how organizations interact in making decisions. Following Roland Warren,[31] the tight end of the continuum is a unitary context in which all units are parts of an inclusive formal structure and have common goals. Moving down the continuum we may speak of a federative context in which the units primarily have disparate goals but possess some formal linkage for purposes they share. Still further along the line as a looser arrangement is essentially a coalitional setting in which disparate goals are so paramount that there is only informal or quasi-formal collaboration among the parts. And at the loose end of the continuum there is a "social-choice" context in which there are no inclusive goals and decisions are made independently by autonomous organizations. The concept of social choice, as opposed to central decision, was developed by Edward Banfield:

> A social choice ...is the accidental by-product of the actions of two or more actors--'interested parties,' they will be called--who have no common intention and who make their selections competitively or without regard to each other. In a social choice process, each actor seeks to attain his own ends; the aggregate of all actions--the situation produced by all actions together--constitutes an outcome for the group, but it is an outcome which no one has planned as a 'solution' to a 'problem.' It is a 'resultant' rather than a 'solution.' [Emphasis in the original].[32]

Resultants, as well as planned solutions, coordinate. Rooted in the interested groups, they may result in new viable structures that become permanent

solutions. For example: the rise and spread of the graduate school in the United States as a solution to the problem of underpinning research and advanced training was never a centrally planned solution nor apparently even a tacit agreement among a small group of leaders. It was more a social choice, a resultant rooted in the competitive interaction and voluntary imitation of autonomous institutions.

Reformulating only slightly, to apply more effectively to national sets of universities and colleges, we can think of the two ends of the continuum as state administration and market in their classic forms. The first national pattern we set forth earlier was one of unitary and unified state administration; the second was unitary in general control but broken into sectors of activity and interest; the third was a looser arrangement of divided governmental authority and multiple sectoral interests, shading down, as in Canada, into confederations; and the fourth pattern contained extensive social-choice or market-type interaction. Hence the continuum, moving from left to right, is one of decreasing state system inclusiveness and of increasing market-type interaction, with inbetween combinations that can be referred to by such terms as federation, confederation, and coalition.

We can illustrate how national systems of higher education qua systems might locate on this dimension, without regard to spacing and hopefully without stirring tedious argument, by placing six nations:

Sweden France England Canada Japan United States

Unitary and unified State Administration — Market Linkage

Not to put too fine a point on it: Sweden has the most inclusive and tightest system of state coordination; France is somewhat similar but with some disparity

introduced by multiple bureaus and sectors and more looseness due to much larger size; England has moved along the continuum from right to left rapidly since 1965, from coalitional linkages with strong elements of market, to tighter federative connection, and then to important elements of inclusive state structure, but is still in the middle range; Canada remains heavily confederative and even coalitional, with the authority of the provinces straining mightily against national linkage; Japan has extensive market characteristics in the interaction of its 1,000 institutions, but with some movement in the 1970s toward greater state coordination as increased governmental funding of private institutions brings governmental guidelines for all; and the United States, qua national system, remains the most heavily endowed with characteristics of autonomous choice and exchange in the labor markets, consumer markets, and enterprise markets of higher education.[33]

Movement along this state authority-market continuum is possible in either direction. There is little doubt that the years since World War II, especially, the 1960s and 1970s, have seen a general shift from loose arrangements to tighter and more inclusive formal systems. Even the United States, the market system par excellence, has not been immune to this shift as the costs and complexities brought by expansion have strengthened the perceived need to bring order out of disorder, first at the level of the fifty states, where the formal machinery of coordination has changed qualitatively in the last two decades, and secondly at the national level.[34] But systems already hitting their heads against the pole of unitary system often see reform as movement away from it, for example, current discussion and action in Sweden, France, and Italy concerning regionalization and other forms of deconcentration of administration authority and even decentralization of political authority. And a country that has provinces moving away from national unity, such as Canada, may remain an exception to the

rule that modern countries currently are straining to heighten state coordination at the expense of other forms of coordination.

We now introduce a third possibility that will take us another step closer to reality. A national system may be coordinated primarily neither by political-bureaucratic dictate not by market-type interaction. For example, Italy has a nationalized system that severely dampens market relations within it; at the same time, its coalitional government has been relatively weak and its state bureaucracy relatively mediocre, especially in the Ministry of Education. It turns out that state authority has functioned largely as a mock bureaucracy, a facade of public control, behind which senior professors have had primary power.[35] The great power vested locally in chairholding professors in European systems has been used in Italy to build professorial control in bodies responsible nationally for finance, personnel, curriculum, and research. On some issues, the control by chair professors at the national level has had the unity of a relatively small oligarchy, as superbarons came together in a central council or maintained informal contact. On other issues, particularly in those specialized along disciplinary lines, such as the allocation of research monies, the small-group control has been more plural or polyarchical in nature. In either case, the point is that there have been "authorities" in charge, not market mechanisms, but the authorities are professors rather than bureaucrats. For simplicity, we refer to such coordinative organization as academic oligarchy. It may also be denoted as guild authority, since it combines personal authority with collegial authority in a way historically associated with guilds and guild federations and has its academic roots in the guild structures of the original European universities.

Some coordination by academic oligarchy exists in all national systems of higher education. It is prominent in chair-based organization, since so much

concentration of power locally in individuals, amounting to small monopolies in thousands of parts, establishes conditions that propell some of these persons to national power, by means that vary from sheer inflation of status to steady participation in central councils. The extensive powers of clusters of senior professors, even in the face of a strong and competent bureaucracy, has been a notable feature of traditional French academic life.[36] German professors have had powerful collective voices at national as well as at provincial and local levels, in such bodies as the Science Council (Wissenschaftsrat), the West German Rectors Conference, the University Association, and the disciplinary committees of the German Research Association.[37] The division of academic tasks along lines of disciplines is a primary source of oligarchical linkage: the discipline is the first avenue along which academics become national notables either on the basis of recognized research contribution, chair incumbency, or administrative role in associations and bodies that span the nation.

National systems that are not formally organized as such are likely to depend heavily on the many ways that academic oligarchy can link together persons, groups, and institutions. The classic case is Great Britain, where the University Grants Committee, manned largely by prominent academics, has long modeled to the world an effective way of taking the government's money without taking orders from the government's officials. When institutions are funded mainly by government, academics will normal y first seek the privileged autonomy of a direct and unfettered lump-sum grant from the national treasury to the individual institution, especially in the older institutions that have become fixed items in the state budget. But once interinstitutional coordination in some formal sense becomes probable, as it has virtually everywhere, a common second preference is to have a buffer body, an intermediate group that

"understands the institutions," and is "sympathetic to their needs," and will represent them to government. And academics have a persuasive case, on grounds of expertise and representation, that such bodies should be staffed with academic persons of stature, influential within and outside their disciplines and institutions, and with persons of known administrative skill drawn from the field.

The intermediate body is not the only means of such high academic influence, but it is a key one that is seized upon in one system after another, for different sectors and at different levels of government. In Australia, for example, where such British traditions as the UGC have been borrowed and adapted to a more extended federal setting, intermediate bodies have developed at both national and state levels and for all three major institutional sectors: at the national level, there has been in the last several years the Australian Universities Commission for the university sector, the Commission on Advanced Education for that sector, and the Further Education Commission for that sector with all three Commissions now to be reconstituted as statutory Councils for their respective areas under the new umbrella Tertiary Education Commission established in 1977; somewhat parallel bodies, especially for the second and third sectors, have been spawned at the state levels, amounting to six subsets.[38] And, especially at the state level, the sectors and their respective commissions have a background in which historically they were generated by, or have related to, different government departments. The situation two decades ago was that: "In each state except New South Wales, a single university related directly to its state government, while teachers colleges, institutes of technology, technical colleges, agricultural colleges and similar institutions generally came under the direct control of a particular state government department.[39] The specific commissions emerged as buffers between specific

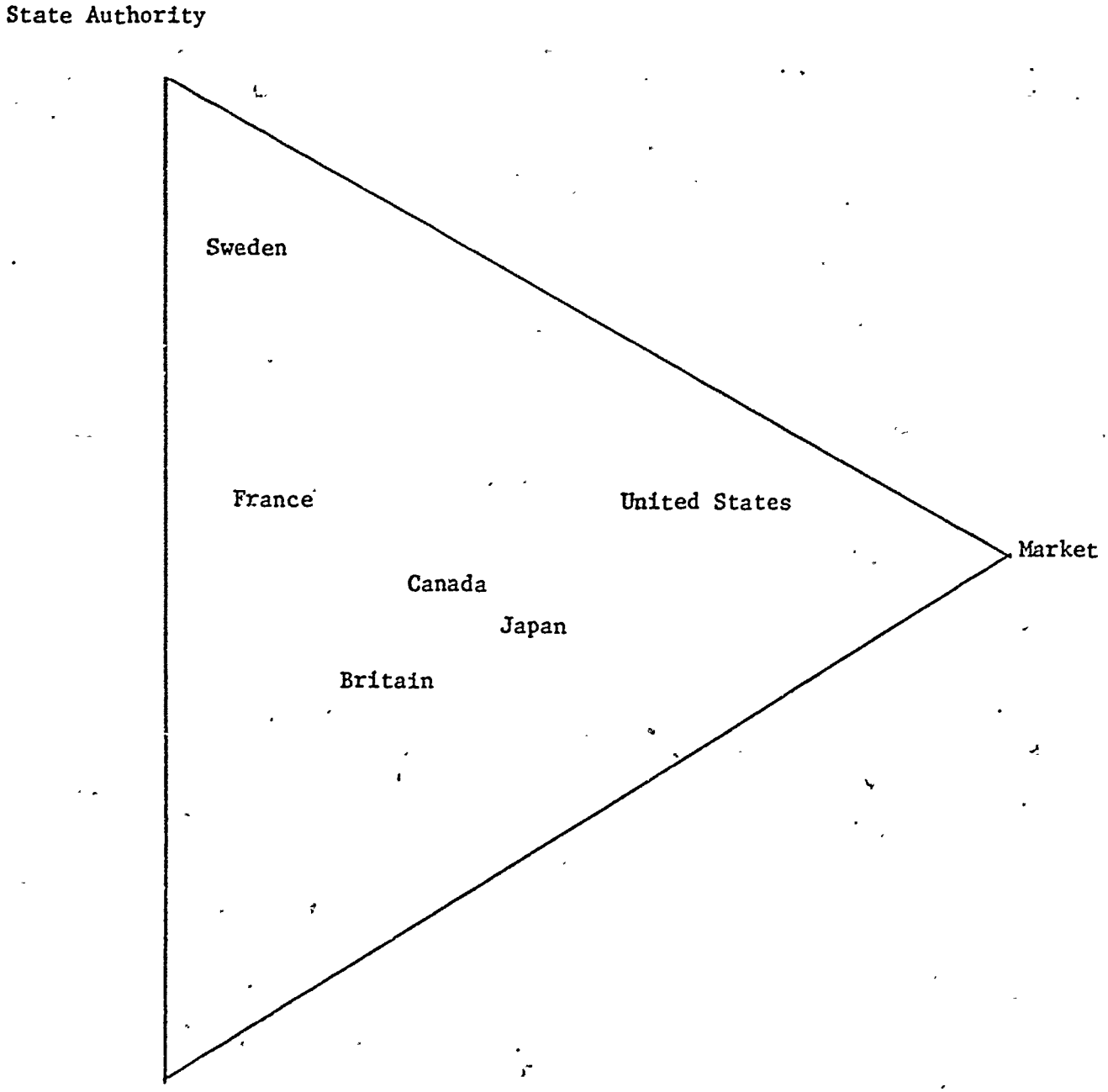
sets of institutions and related government departments, with the latest reforms establishing broader commissions and attempting to regroup departmental sponsorship. For a nation of less than 15 million people and only six states, Australia is not short of intermediary bodies!

We may think of such bodies as a form of structured pluralism in coordination. The buffer form of oligarchial influence is found in all four national patterns identified earlier but it is likely to develop extensively in those systems historically rooted in federative, coalitional or market environments of institutional development. There the vacuum of an official top is filled, at least in some minimal part, by the professionals getting their heads together. Systems rooted in ministerial control exhibit fewer buffers. In these nationalized systems, there are two main possibilities. One is that central civil servants will keep power in their own hands to a degree commensurate with the systemwide responsibilities that they carry. Delegation of administrative authority is then a matter of line officers placed in the field, for example, in the traditional French style of prefectural supervision. The other possibility is that power will pass into the hands of academic notables as they penetrate and surround the ministry with forms congenial to their rule.

With academic oligarchy omnipresent or lurking in the wings, in forms attractive and unattractive, our continuum from state authority to market can be reshaped as a triangular space of state, market, and oligarchical forms of coordination. Each corner of the triangle is then the extreme of one form and a minimum of the other two, and locations within the triangle represent combinations of the three elements in different degrees of each. Mainly as illustration, we may try placing within this triangle the six countries that we previously arrayed on the continuum, as a way of weighing the influence of

academics (see the diagram). Sweden remains relatively close to the pole of state coordination, since that country has developed strong capacity during the last two decades for state officials, and allied interest groups, to override the traditionally strong power and p ivileges of professors. It is now a Western European country in which academic barons feel particularly pushed around by the state and outside groups. France moves somewhat more toward oligarchy, since, despite a strong and competent ministry, the continuing situation has something of the character of a standoff between the formally superior powers of the central officials and the capacities of university personnel to ward off, reshape, and attenuate state-imposed rules and policies.

Britain locates the most closely of the six countries to rule by academic oligarchy, due to the extensive role of intermediate bodies (the University Grants Committee, the Council for National Academic Awards (CNAA), the Regional Advisory Councils) on which academic notables have a dominant or significant role. Even after the significant increase in state power that has occurred since the mid-1960s, deliberative coordination in Britain remains a blend of the bureaucratic and the professional. In their British study, Becher, Embling, and Kogan have noted that the "central government has the determinate role in the overall shaping of the system:"[40] this is not left to the market nor to academic judgment. Yet, given the traditional respect for institutional autonomy and individual academic freedom, the government is "coy" about stating national objectives, and the intermediate bodies, although increasingly to be seen as parts of the machinery of government, retain "academic judgments" and are heavily involved in "resource decisions."[41] The indeterminacy of objectives and the freedom of these bodies means that "co-ordinative planning" by the state is generally weak. Compared to the strength and style of a European Ministry, national coordination comes out as implicit, covert, and indeter-


State Authority
Sweden
France
United States
Market
Canada
Japan
Britain
Academic Oligarchy

minate.[42] The realities of governance in British higher education remain shaded, but there is no doubt that significant academics retain significant influence in the determination as well as the implementation of national coordination.

Canada is located close to Britain in this three-dimension conceptual space, with a somewhat weaker tradition of oligarchical influence. And if we drop for the moment from the national to the provincial level of government--Canada's strongest level of state supervision--then we find state officials exercising considerable bureaucratic influence upon sub-systems, particularly in Quebec and Alberta.[43] Japan, given its complexity, is difficult to place in a summary fashion; on the one hand, national coordination is formally left largely to ministerial officials and not to bodies analogous to the British University Grants Commission; on the other, the Chair system, mixed with certain Japanese characteristics of small-group loyalty and cohesiveness, has given senior professors a strong power base.[44] The towering status of the Universities of Tokyo and Kyoto has also given academics at those institutions national influence as well as privileged autonomy. The United States, inordinately complex, exhibits relatively little coordination at state as well as national levels by senior academics. Lacking the power base of European and Japanese counterparts, American academics are poorly represented in the many levels of influence now found in the superstructure of control that stretches from the level of multicampus administration to state-level boards, commissions, and departments and to national-level departments, bureaus, and institutional associations. American professors might control their departments, and their multidepartment faculties, colleges, and professional schools, and even occasionally have an important coordinating role in the campus at large, for example, in the case of the powerful Academic Senate at the University of California, Berkeley. But they are not found in significant number and strength at the higher levels,

outside of research councils. Indeed, it is noteworthy that even voluntary commissions established to address national issues in higher education are manned by administrative representatives of important sectors and institutions rather than by prestigious professors.

In our triangular diagram of types of coordination, most of the action in most national systems is now located to the left of the midpoint: the open battle is between state officials and professors. The market is either not perceived as a form of coordination or as one that gives undependable and undesired results. On the part of responsible academics as well as state officials, political or administrative, there is the assumption that there should be an authority, someone in charge. And the state officials are not automatic winners in this battle, easy victors in an unequal context. They do move toward dominance in a host of ways, for example, through ministerial control over the location and expansion of facilities, segmental budgeting, the administrative staffing of coordinating bodies, legislative program evaluation. But academics have imposing counter-bases, rooted functionally in the need for experts to participate in the making of competent judgments. That need constantly expands and proliferates, apace the growing complexity of the disciplines and academic tasks generally. Hence the need for peer review by experts within subareas, and for "advice" by councils of experts, grows rather than diminishes and at national as well as local levels. Nations need national academics; and academics, like other professionals, learn how to penetrate and control bureaus of government as well as to convince government to construct such congenial forms as grants commissions and governmental foundations.

CONTEMPORARY PROCESSES OF INCREASED COORDINATION

We began by looking at the nature of academic tasks and the structure of embedded power as the stage for national coordinative organization. We then tentatively grouped some countries in four broad patterns, based on degree of monopoly in formal control and institutional form. And then we groped analytically for underlying dimensions of variation by specifying three basic elements of state authority, academic oligarchy, and market. Building and expanding upon these rudimentary elements, our final effort attempts to be a little more precise in establishing categories for cross-national comparison.

Recent research, including the twelve national reports of the ICED study, reveals or suggests a number of processes of coordination that have been operative in the last quarter century. Some of these processes are closely interlinked and convergent, the one encouraging the other. But some contradict others and pull in such disparate directions as the three poles of the state-market-oligarchy triangle. Contradictions in the means of coordination should be expected. As emphasized throughout this essay, we improve our understanding of coordination in national systems of higher education as we give up simple definitions that encompass only coordinating boards and ministries of education and adapt perspectives that point to fundamentally different ways in which the actions of groups and organizations are linked and concerted. Toward comprehending that complexity, we here set forth fourteen processes of coordination, grouped under the four headings of bureaucracy, politics, profession, and market. Bureaucracy and politics are largely, but not entirely, constituent parts of state authority, and have increased considerably in strength in many countries in recent years. In our previous discussion of state authority, we did not distinguish between bureaucrats and those groups that possess or

have access to state power but are above or apart from the civil service. We here separate the more bureaucratic and the more "political" as two elements. The processes of profession and market may be seen as counter-forces to state authority. They operate significantly in a number of national systems, and while they appear to have been weakened in the last decade, they may be stronger than currently recognized since they are less obtrusive than the state-related command structures and thereby not so readily noted. Some of these processes may also increase in strength in the near future as counter-vailing powers to the forces they oppose.

PATHWAYS OF BUREAUCRATIC COORDINATION

The general phenomenon of bureaucracy is well known, referring in general to coordination by means of formal administrative hierarchy. But it may be usefully broken into a number of elements, of which the five set forth here have been observed frequently in higher education in recent decades.

Bureaucratic Route I: Layering. There is an increase in levels of formal coordination, governmental or quasi-governmental. Decentralized systems add new higher levels; centralized systems introduce more intermediate levels. This route is widely noted in the country studies: for example, the United States and Australia have been adding higher levels of coordination in essentially new or vertically-extended administrative superstructures, while Sweden is newly introducing regional councils. This pathway may be denoted as "layering," a phenomenon noted in public administration as a lasting structural effect of reforms. Reforms necessitate reorganization, and "reorganization often results in layering--the piling of administrative echelon upon administrative echelon in an unremitting quest for coordination, symmetry, logic, and comprehensive order."[46]

Layering makes administrative pyramids taller. It is often loaded with

unanticipated and undesired effects: the additional layers distort communication between the top and the bottom, thereby rendering administration less rather than more consistent and dependable; reforms enacted today help establish massive command structures that rigidly resist reforms tomorrow; and efforts to consolidate and streamline by means of additional comprehensive top layers make a small number of posts at the top highly attractive but a large number of now "lower" posts less attractive than they were, thereby, in all probability, inducing a loss of talent and initiative at middle and lower levels. The highest positions on public campuses in the United States are probably becoming less attractive as three or four layers are laid down over them in the form of multi-campus administration, state governing board, state government surveillance, and a web of national government regulations.

Bureaucratic Route II: Jurisdictional Expansion. There is an increase in the jurisdictional scope of administrative agencies, singly and in combination. Existing ministries of education are given or seize expanded responsibilities; additional departments are established; quasi-governmental commissions become more comprehensive, replacing specialized commissions or placed over them. Such expansion in the scope of central bodies is widespread, noted in one country after another as efforts are made to pull together formerly separated domains and to cope with the creeping disorder of a bewildering variety of tasks. Public accountability is a basic force behind such expansion.

The wider jurisdictional responsibility has the effects of making administrative pyramids wider and more firmly structured. In Japan, the jurisdiction of the Ministry of Education steadily expands in relation to the huge private sector of universities and colleges, making that sector quasi-public to a greater degree. In the United States, a host of national departments

have developed an administrative reach into and over hundreds of universities and colleges as they attempt to supervise proper expenditure from various accounts. In Australia, the new 1977 super-commission has been established to encompass the domains of three more specialized commissions.

Much reform has the combined structural effects of layering administrative echelons and expanding administrative jurisdictions.

Bureaucratic Route III: Personnel Enlargement. There is an increase in the number of central administrators who attend to matters of higher education. Layering and jurisdictional expansion generally result in such enlargement. But the enlargement can come about in a host of ways, for example, through expansion of personnel who attend to old duties within the existing structure of an old bureau. This phenomenon is noted everywhere, readily observed through the counting of administrative staff. Thus, in small Sweden, the central staff who attended to higher education in the mid-1940s amounted to a few people within the Ministry of Education and only three civil servants in the Office of the Chancellor of the University. As late as 1960 there were only 17 in the Chancellor's Office. But by the mid-1970s, these staffs had grown to over 25 in the Ministry and 170 in the Chancellor's Office. Great personnel growth in the Chancellor's Office was stimulated not only by the general expansion of the system (tenfold in students between the mid-1940s and the mid-1970s), but also by a deliberate change in the character of the Chancellor's Office from "a representative of the universities," elected by the rectors, to "a regular state agency," appointed by the Cabinet, and operating "wholly in line with the pattern of Swedish state agencies in general."[47] In Britain, the administrative staff of the University Grants Committee grew from about six in the early 1950s to over 140 in 1975. Many of these permanent staff members of the UGC are civil servants holding appointment in the parent

Department of Education and Science.

Bureaucratic Route IV: Administrative Specialization. There is an increase in expertise in administrative work. A shift from amateurs to experts occurs in line positions, from top staff to institutional administrators, with the amateurs replaced by persons who make a career in administration, become expert in specific administrative areas, hold long terms in office, and are appointed rather than elected. The composition of coordinating bodies also shifts toward greater dependence on full-time permanent staff and less on the part-time, temporary generalists, as in the case of the British UGC. As administrative work becomes more specialized, administrative credentials and experience become more essential for entry into formal positions of coordination. A separate administrative class develops, and, as its members mainly interact with each other within large staffs removed from professors and students, that class develops a separate culture. Hence the dilemma: can the center of attention in academic work be held by professors and students if the hierarchical power center is distant from them and held by administrators with little or no background in teaching and research? These tendencies have been observed in research in the United States on administrative staffs at the institutional level.[49] The tendencies are bound to be even stronger in effective layers of coordination above the institutional level, since staffs in the superstructure need skills applicable across larger and more complex systems and are more removed from faculty and students. The day of the "non-academic" academic administrator is here.

Bureaucratic Route V: Rule Expansion. There is an increase in the number and complexity of formal rules designed to effect consistency in the action of people within the system. The growth of rules is an universal aspect of what is commonly meant by bureaucracy: no expanding or changing system of

higher education apparently escapes it. The rules may be of various types: for example, some attempt to guide or "preform" decisions of those at lower levels, as in the case of budget categories, while others are meant to check the compliance of personnel with policies or decisions already made at higher levels, as in the case of auditing and inspecting practices.

This route of bureaucratic coordination is relatively easy to measure in gross terms, cross-nationally and over time, since it can be observed in the indices, pages, and volumes of administrative codes and commission regulations. For example, national laws and regulations that pertain to higher education in Italy required in the mid-1960s a twenty-page index of eight hundred items to guide readers through a thousand pages of specifications.[50] But then rule enforcement becomes an additional matter, beyond rule enactment, and when enforcement is weak, as in Italy, the administrative structure becomes a mock bureaucracy, a paper tiger.

Layering stretches the administrative superstructure vertically; jurisdictional expansion thickens it horizontally; personnel enlargement fills it with more people; administrative specialization, with more experts; and rule expansion insures that the larger, better-manned structure will have a commensurate massive body of regulations. These processes, separately and together, tend to increase the coordinating influence of bureaucrats. As a result, administrative officials in central committees, commissions, and councils, as well as in ministries and offices of education, become more active and dominant in the formation as well as the implementation of policy. However, the influence of the bureaucratic tendency is affected by numerous features not mentioned here that vary from one nation and context to the next, especially in the administrative organization and culture of the national executive branch. In some cases, often in less developed countries, state

bureaucracy is relatively "laid back," passive and benign; in others, often in the most developed societies, it is assertive, multiplying regulations in excess of legislation and accumulating autonomous authority. Higher education systems move from benign to assertive bureaucracy as they are goaded to modernize, become efficient, and plan.

PATHWAYS OF POLITICAL COORDINATION

If the bureaucratic avenues of coordination have gained the most in recent decades, political means have not been far behind. The political pathways cause a system to behave like a set of contending interest groups, with interest expressed informally and through associations as well as through the established channels of representation in the major branches of government. The political tendency is widespread in organizations, as parts become divergent interests, but its strength varies considerably from one setting to another. Since less is currently known about the more political ways of connecting groups and concerting actions in higher education, compared to the bureaucratic means detailed above, we here use broad categories to point to pathways that loom large. They center, in turn, on regular political officials, external interest groups, and internal interest groups.

Political Route I: Increased Regime and Party Involvement. There is an increase in the influence of elected officials and the ones appointed to top offices by political parties and regimes. Such officials assume more responsible, assertive, and intrusive postures. More issues in higher education are divided along the lines of party politics, legislative coalitions, and power exchanges among central executives. Experts and staffs on higher education policy develop within the party, the legislature , and the minister's own office.

In these senses of regime and party involvement, higher education in apparently every country in Western Europe is more "politicized" in the

mid-1970s at the national level than it was two decades earlier. Sweden seems a leading case. In Great Britain, rising costs and popular interest has caused "the political class" to become more involved, right down to assertive party doctrines of what we will do for, or to, higher education when we come to power. In Eastern Europe, Communist rule is devoted to great strengthening of this form of coordination, as in Poland, through the dual and interpenetrating dominance of the single political party and the one-party regime.[51]

Political Route II: Increased Corporatism. There is an increase in the systematic, open inclusion of certain external interest groups in governmental decision-making in the realm of higher education, with a related, if often covert, exclusion of other groups. The outside groups are formally organized as associations, unions, councils, and the like, and the government legitimates the organizations as representatives of certain bona fide interests. It comes to be understood that certain vocational organizations have the right of representation in national decision-making.[52] As Samuel Beer has noted: "The welfare state and especially the managed economy of recent decades simply could not operate without the advice and cooperation of the great organized producers groups of business, labor and agriculture." Beer identified a "new group politics" in Great Britain as a "system of quasi-corporatism bringing government and producers' groups into intimate and continuous relationship" in framing, applying, and legitimating state policies.[53]

This relationship has not yet developed strongly in the British system of higher education, since robust Departmental bureaucrats and academic oligarchs have stood in the way, but one can anticipate gradual increase in its strength. The phenomenon has been particularly striking in Sweden where the government has worked long and hard to have a quite inclusive democratic corporatism. There, in the last decade, the three major trade union federations

have come to be strongly represented in the membership of planning and decision-making bodies in higher education at national, regional, and enterprise levels. "Several hundreds of representatives of interest organizations participate in formal decision-making bodies in higher education, from the board of management of the National Board of Universities and Colleges down to councils of admission in local institutions...Simply put, the big interests of capital and labour have stepped in."[54]

As a matter of degree, corporatism shades off into various ways of relating interest groups to governmental decision-making that are less explicit and less systematic in the interpenetration of government and group. In a number of societies, for example, the United States, there is quasi-corporatism and covert corporatism in the systematic access of organized lobbies to legislative and executive circles. Our second pathway of "politicization" is, then, the sharpened cutting edge of interest-group representation. Such representation is increasingly organized within the outside group itself and in its penetration of government. We shall see more of the organized form of penetration and interrelation in the coming decades in the coordination of higher education.

Political Route III: Increased Participation. There is an increase in representation and involvement within the ranks of higher education itself. This "participation" or "democratization" phenomenon has been particularly strong during the 1970s in Western Europe, with institutions in West Germany and Denmark most notably affected by new participation rights and privileges for junior faculty, students, and nonacademic personnel. In one form, the participation is corporatist in that it is based on organizations that claim to represent various strata and factions. In another, it is direct representation from unorganized strata.

"Politicization" by means of increased involvement of internal interest groups is not a form that directly enhances state authority. It tends, like the processes listed later, to operate as a counterforce to control by political and administrative officials of the state. But, like the forces of state influence, it is a process that encroaches on the power of senior professors: the common enemy has been the academic barons. The state-linked bureaucratic and political processes attempt to move power into nonacademic hands in central circles, while the formerly weak internal groups of junior faculty and students attempt to move it into their own hands, generally at lower levels of organization.

PATHWAYS OF PROFESSIONAL COORDINATION

Universities and colleges are central sites of expertise in modern society, and systems of higher education, old and new, are full of professional as well as bureaucratic and political forms that link participants and set the agendas of decision-making. We point here in a general way to three broad routes of professional influence in coordination.

Professional Route I: Expansion of Subject Expertise. There is increased need to base thousands of judgments at operating levels on the ever more esoteric knowledge of professors. Authority is pulled downward in the structure of national system and toward professional rather than bureaucratic or political bases. We noted earlier, in a quotation from research on British universities, the stubborn centrality of the parts, the primacy that each department is able to claim as the authoritative unit for a given discipline or professional field. The great strength of this understructure, in comparison to the superstructure of national systems, is a remarkable phenomenon, one apparently linked to the nature of academic tasks discussed at the outset of this essay.

If the superstructure of state control should be able to impose its will

on the understructure of faculties, departments, chairs and institutes anywhere among Western democratic nations, it should be in Sweden, where, as mentioned, state political authority is strong, corporatist groups are active, the bureaucracy is competent, and planning capacity is relatively developed--all in a small homogeneous society. Yet an insightful 1977 research report from Sweden notes an ongoing "antithesis of central importance" between the real governance mechanisms in universities and colleges and the mythology of central governance. Against the rules and formal organization of central control there is the reality that:

> the internal life of universities and colleges is to a great extent guided by interests and needs attached to their organization into disciplines and subject departments and to the status of research and graduate studies. Various bodies above [the] departmental level tend to respect each other's efforts towards resource maximization, to preserve the balance between power centres and to safeguard the status quo. Central governance is often out of step with real local governing mechanisms, in which case it becomes unrealistic and inefficient. [Emphasis added.][55]

The understructure is not simply passive, forced to give way to the superior powers of the bureaucratic and political tendencies that strengthen state authority. Rather, central state coordination becomes "unrealistic" as it becomes out of step with the organic professionalized understructure.

Subject expertise is central to operations in social systems that are simultaneously knowledge-intensive and knowledge-extensive. This expertise has an expansive dynamic of its own, rooted in the actions and interactions of the scholarly segments. Realistic coordination is shaped by this expansion, accommodating to home rule by professionals. There is de facto coordination at the bottom, as accord is collegially accumulated, and much influence is exercised by the bottom over middle and top levels of formal organization.

Professional Route II: Expansion of central collegial bodies. There is an increase in central bodies manned by professors and/or institutional

representatives and an increase in their coordinative powers. This phenomenon is most noticeably in the support of research: the distribution of scientific funds in virtually every country is heavily influenced by peer review among academic notables sitting on central science councils and commissions. But the expansion of central collegial coordination is not limited to science. It has become especially potent among institutional representatives who have banded together voluntarily in reaction to growing bureaucratic and political forces. National conferences of rectors are now more active than before in the German-speaking countries of Austria, Switzerland, and the Federal Republic of Germany. The national Committee of Vice-Chancellors and Principals in Great Britain has become a powerful organ to which the academic heads of all the universities belong. The CVCP becomes an additional central academic body to which the institutions can turn, beyond the University Grants Committee, to have a collective voice in centrally-determined matters. It, too, seeks to coordinate on "matters of common interest" through its own system of working parties, its own staff, its own deliberations, and its representation of the universities' definition of "the case" to the UGC and the Department of Education and Science.[56] And so it is in many other countries, especially in those where campus headships have been weak traditionally and have emerged as important posts only in recent years.

Faculty Route III: Expansion of faculty interest organization. There is an increase in the strength of comprehensive faculty bodies, such as unions and associations. This phenomenon has also been stimulated as a counterforce to the processes of bureaucratization and the growing influence of external political forces. Old local collegial bodies have been replaced or supplemented by new forms linked to national organizations of professors, for example, academic senates by local chapters of national unions. Faculties in institu-

tional sectors historically characterized by weak faculty influence have particularly seized upon modern union organization as a way of increasing professional power. The professorial unions bargain with high levels of administration and political authority for an extended academic labor force, and thereby, as in the industrial domain, become tools of coordination, particularly in determining the conditions of employment and work.

PATHWAYS OF MARKET COORDINATION

It has been left primarily to political economists to grasp and explain the ways in which market interaction coordinates the behavior of individuals, groups, and organizations. It is not necessary to slip off into the mystery of an invisible hand that leads individuals to promote larger ends. All social controls have elements of the automatic, unintended, and unconscious; and, in market life, people "are deliberate and conscious; but their acts accomplish feats of coordination of which they are not necessarily conscious and which they do not intend."[57] As example, one coordinating function of a market system is constant occupational reassignment, with consumer preferences and occupational preferences reconciled in a reshuffling of labor from one field to another, one specialty to another. Even in the most state-dominated systems of higher education, processes of market coordination will be at work. "Exchange," a basic form of interaction that stands in contrast to authoritative command, needs to be seen not merely as a method for reshuffling the possession of things but also as a method of controlling behavior and of organizing cooperation among people. And, in higher education, as elsewhere.

Market Route I: Increased Consumer Sovereignty. There is an increase in the capacity of would-be students to afford the costs of higher education and to choose among institutions to attend. This phenomenon occurs whenever public funds for higher education are distributed to individual students

rather than to institutions and choice among institutions is widened. Nearly all regimes use a consumer market in higher education to some degree by awarding scholarships and other forms of financial aid, as well as by lowering student charges. Allocation to consumers is particularly attractive in a country such as the United States in which the thinking of planners and public officials is heavily influenced by economic market theories: let the government influence higher education indirectly by letting aggregate consumer reactions decide the fate of programs, institutions, and sectors. But everywhere apparently students have some capacity to vote with their feet, moving from unattractive to attractive parts, thereby promoting one part at the expense of another.

Market Route II: Creeping Institutional Markets. There is a creeping decentralization of operating authority to the enterprise or institutional level. Students of centralized political regimes have noted that such regimes are likely to be subjected to a creeping decentralization because of the increasing scale (size and complexity) of the sectors they attempt to manage, for example, the industrial sector of the economy of the USSR.[58] The center cannot hold to the integrated control it can exercise over a smaller, simpler system; authority slips off to the enterprise level, restrengthening market forces in the sense of interaction among at least semiautonomous enterprises.

If observable in industrial sectors, this phenomenon surely bulks large in higher education systems, due to the unusual inherent complexity of their knowledge tasks. No group at the center has the tools for tight integrative control; no central group can know enough to coordinate effectively so many disparate tasks and issues that are subject to so much local variation. Again it is instructive to return to the case of Sweden. This small advanced nation, the best planning state among Western democracies and with a population of only

eight million (one sixth the size of France, one twenty-fifth the size of the United States), is currently attempting to decentralize through grants of official authority to regional boards and local entities, in order to better handle local variations in study programs.[59] What is done in Sweden by official proclamation is often done in larger, less-planned societies by unofficial and unclear drift. And systems which have evolved into central formal coordination out of traditionally decentralized arrangements probably possess lower thresholds at which the increasing scale of inclusive organization will trigger the reaction of coordination through the interaction of enterprises. Just as systems may creep up on institutions, institutions may creep away from the extensive controls of centralized systems, leaving coordination to looser linkages and even to market interaction.

Market Route III: Extension of Power Markets. There is an increase in the market of power relations within the broad confines of state authority. We noted earlier, as the second pathway of bureaucratization, the tendency for specialized coordinating agencies to be consolidated into units of broader administrative scope. But there is an opposite tendency that runs strong within all modern governments: bureaus balkanize around specific domains and clienteles and resist mightily all efforts to pull them together. Vertical lines of coordination tend to form naturally, as central officers and counterpart officials at lower levels develop common commitment to a line of specialized work, but horizontal lines tend to be weak, and require special attention,because they attempt to encompass disparate interests.[60]

Bureau balkanization has been widespread in education. Mexico exhibits a relatively extreme case of the phenomenon, especially fascinating since a regime labeled "authoritarian" by political scientists ought to have the will and the political and administrative muscle to pull things together. But

lateral cooperation between departments within the huge Mexican Ministry of Education rarely takes place: "All departments work totally independently one from the other and take no interest in what others are doing... The Ministry is an archaic structure which can be described as a series of independent empires, each inviolable, with long traditions and rights that no minister is going to be able to alter."[61] Such "archaic" structures were also noted in the ICED studies of Thailand and Iran. And modernized structures hardly rid themselves of bureaucratic independence, protectionism, and struggle. Indeed, the larger the complex of governmental tasks and the greater the degree of professional specialization in those tasks, the greater the force of bureau balkanization. And the more socialized the state, the more does the interest-group struggle of modern societies appear within the governmental structure as a struggle of divisions, bureaus, departments, and ministries against one another. Given the special complexities of interest and task in higher education, its absorption into governmental frameworks is bound to produce virtually everywhere great struggle among a number of involved governmental agencies and quasi-governmental councils.

Thus, we come to see that higher education is subject not only to markets in the normal economic sense but also to power markets in the sense of units struggling against one another within the broad frameworks of state authority. And this, too, is a form of coordination. In a classic essay written thirty years ago, Norton E. Long pointed to "competition between governmental power centers" as an, perhaps the, most effective instrument of coordination in complex government. He noted:

> The position of administrative organizations is not unlike the position of particular firms. Just as the decisions of the firms could be coordinated by the imposition of a planned economy so could those of the component parts of the government. But just as it is possible to operate a formally unplanned economy by

> the loose coordination of the market, in the same fashion it is possible to operate a government by the loose coordination of the play of political forces through its institutions.[62]

Recent work in political economy, seeking to understand the interpenetration of state authority and economic markets, has also pointed to various forms of interaction within the bounds of state authority. Authority is operationally divided among a plurality of officials and offices; interdependence among these authorities often requires mutual adjustment among them--witness the hundreds of interagency coordinating committees in the British and U.S. governments; and that adjustment, as earlier pointed out, carries much of the load of coordination. Mutual control among officials becomes even more intricate than officials' control over the population. A pattern of reciprocal obligation among officials develops. In sum: "large-scale politico-economic organization is possible either through unilateral coordination in hierarchy-bureaucracy or through mutual adjustment among authorities who practice an extended use of their authority in order to control each other."[63]

Such reasoning is especially applicable for administrative pyramids that have no apex, but instead at the top have a variety of boards, bureaus, commissions, and committees; for structures stuffed with diverse experts possessing arcane knowledge and authority rooted in their expertise; for frameworks increasingly committed to encompassing all of the increasing body of specialized knowledge, skill, and lore of modern society. In short, for systems of higher education. Thus, it is no wonder that we come to know so little about how the actions of persons and organizations in higher education are concerted when we look only to the formal plan and the formal hierarchy. Much of the coordination is going on in other ways, including through the struggle, exchange, and adjustment of officials at the higher levels. The

latter phenomena expand in the modern period. For want of a better name, and to dramatize their importance, we refer to their expanding role as the extension of power markets.

CONCLUSIONS

Coordination of higher education within national sets is achieved by means as varied as those of state authority, market interaction, and rule by academic oligarchy. All national systems have involved all three of these major ways of concerting the actions of individuals, groups, institutions, and sectors, and all three types will be needed in the future. The special function of state authority is to articulate a variety of public interests, including equity, as these are defined by prevailing groups within and outside of government. The special function of the market is to enhance and protect freedom of choice, for personnel, clientele, and institutions, and thereby indirectly promote system flexibility and adaptability.[64] The function of academic oligarchy is to protect professional self-rule, to lodge the control of academic work, including its standards, in the hands of those permanently involved and most intimately acquainted with it.

What we need to further the understanding and the sophisticated development of academic coordination is not fanatical pursuit of one form of coordination or the other because of its obvious advantages, nor a deliberate juxtaposing of forms that indicates one to the exclusion of the others. Given the special task structure of higher education, it is not possible to coordinate by the market alone, nor can either state or professional hegemony in itself do what must be done. Needed instead are reconciliation models of state-market-oligarchical relations. For such models to develop conceptually and normatively, we need to recognize that all three types of relations are

present, necessary, and legitimate. State authority and professional control each now have reasonably wide acceptance as general principles, even by persons possessed by one and worried about the evils of the other. It is the contribution of market relations to coordination that is currently least well understood and accepted.

Hence in this essay we have taken special pains to point not only to a host of contradictory processes of political, bureaucratic, and professional coordination, but also to stress processes of market coordination which are less apparent and have received little attention. And along all the possible pathways of coordination, what appears empirically in any one country are patterns that vary in strength, tightness, and appropriateness, contributing over-all to coordination that is weak or strong, loose or tight, effective or ineffectual. It is not to be assumed that the market necessarily does a powerful job of coordination; but then neither is it to be assumed that centralized state control has unproven advantages in effective coordination. It is better to think in terms of routes and pathways of coordination and of the respective contributions of multiple elements. It should be the many faces of effective coordination that interest us. Rationality in the coordination of higher education, of all domains of modern activity, comes in many guises.

FOOTNOTES

* I wish to thank the members of the Yale Higher Education Research Group for discussion and criticism of the ideas presented in this paper.

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5. Hastings Rashdall, The Universities of Europe in the Middle Ages (Oxford: Oxford University Press, 1936), Vols. I-III; Charles Homer Haskins, The Rise of Universities (Ithaca, N.Y.: Cornell University Press, 1957); Joseph Ben-David, "Universities," International Encyclopedia of the Social Sciences (New York: Macmillan Company and The Free Press, 1968), Vol. 16, pp. 191-199; Marjorie Reeves, "The European University From Medieval Times," Higher Education: Demand & Response, edited by W. R. Niblett (San Francisco: Jossey-Bass, 1970), pp. 61-84; John W. Baldwin and Richard A. Goldthwaite, Universities in Politics: Case Studies From the Late Middle Ages and Early Modern Period (Baltimore: Johns Hopkins Press, 1972).

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7. Clark Kerr, The Uses of the University (Cambridge, Mass.: Harvard University Press, 1963).

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9. James. G. March and Johan P. Olsen, Ambiguity and Choice in Organizations (Bergen, Norway: Universitetsforlaget, 1976).

10. Hastings Rashdall, op. cit., Vol. I, p. 218, Vol. II, pp. 61-62; Alan B. Cobban, "Medieval Student Power " Past and Present, No. 53, 1971, pp. 38-40, 44-45, 61-64.

11. Burton R. Clark and Ted I. K. Youn, Academic Power in the United States: Comparative, Historical, and Structural Perspectives, ERIC/Higher Education Research Report No. 3 (Washington, D.C.: The American Association for Higher Education, 1976), pp. 3-15.

12. Arthur Jason Engel, From Clergyman to Don: The Rise of the Academic Profession in Nineteenth Century Oxford, unpublished Ph.D. dissertation, Princeton University, 1975.

13. Laurence R. Veysey, The Emergence of the American University (Chicago: The University of Chicago Press, 1965).

14. Lindblom has noted that mutual adjustment "carries much of the load of coordination in any government," since authority is divided among a plurality of officials, the officials have reciprocal obligations, and their interdependence requires that they adjust to one another, which, among other things, means that they exchange favors of authority. Lindblom, op. cit., pp. 17-32.

15. Burton R. Clark, Academic Power in Italy: Bureaucracy and Oligarchy in a National University System (Chicago: The University of Chicago Press, 1977), pp. 8-34.

16. Sweden, ICED Study, p. 35.

17. France, ICED Study, pp. 1.

18. Thailand, ICED Study, pp. 10-23.

19. Ibid., p. 30.

20. Ibid., p. 254.

21. Ibid., pp. 25[illegible]-55.

22. Tertiary Education in Australia, ICED Study; Barbara B. Burn and Peter Karmel, Federal/State Responsibilities for Postsecondary Education: Australia and the United States (New York: International Council for Educational Development, 1977); Grant Harmon, "Issues in the Co-ordination of Post-Secondary Education," paper prepared for the Enquiry into Post-Secondary Education in South Australia, August 1977.

23. Canada, ICED Study.

24. The Federal Republic of Germany, ICED Study; John H. Van de Graaff, "Germany," Academic Power: Patterns of Authority in Seven National Systems of Higher Education, by John H. Van de Graaff and others (New York: Praeger Publishers, 1978).

25. Tony Becher, Jack Embling, and Maurice Kogan, Purposes, Policies and Prospects in British Higher Education: A Contribution to the ICED Study

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26. Mexico, ICED Study.

27. Daniel Levy, University Autonomy Versus Government Control: The Mexican Case, unpublished Ph.D. dissertation, University of North Carolina, 1977, pp. 246-47.

28. Ibid., pp. 208-9.

29. Japan, ICED Study, pp. 29-35; Donald F. Wheeler, "Japan," in Van de Graaff and others, op. cit.

30. United States, ICED Study (section written by John Shea).

31. Roland L. Warren, "The Interorganizational Field as a Focus for Investigation," Administrative Science Quarterly, Vol. 12, 1967, pp. 396-419.

32. Edward C. Banfield, Political Influence (New York: The Free Press of Glencoe, 1961), pp. 326-27.

33. Labor markets are those where people offer their capabilities and energies for money: hence faculty and administrative employment constitute such markets. Consumer markets are where people exchange money for desired goods and services: hence student payments to institutions constitute one or more consumer markets. Enterprise markets are where enterprises deal with each other: hence interactions among colleges and universities, and between them and outside agencies and firms, constitute, in some part, enterprise markets. Planned systems attempt mainly to control this third type of market, to have controlled rather than freely competitive relations among the enterprises. The enterprises are the key, for as Lindblom points out, they sit astride the whole market structure. Lindblom, op. cit., pp. 37-38.

34. United States, ICED Study; Burton R. Clark, "United States," in Van de Graaff and others, op. cit.

35. Burton R. Clark, Adacemic Power in Italy, op. cit.; Burton R. Clark, "Italy," in Van de Graaff and others. op. cit.

36. Robert Gilpin, France in the Age of the Scientific State (Princeton: Princeton University Press, 1968), especially pp. 112-123; Terry Nichols Clark, Prophets and Patrons: The French University and the Emergence of the Social Sciences (Cambridge, Mass.: Harvard University Press, 1973); John H. Van de Graaff and Dorotea Furth, "France," in Van de Graaff and others, op. cit.

37. John H. Van de Graaff, "Germany," in Van de Graaff and others, op. cit.

38. Tertiary Education in Australia, op. cit.; Burn and Karmel, op. cit.; Harmon, op. cit.

39. Harmon, op. cit., p. 3.

40. Becher, Embling and Kogan, op. cit., p. 16.

41. Ibid., pp. 119-20.

42. Ibid., p. 116.

43. Canada, ICED Study (sections on Quebec and Alberta); OECD, Reviews of National Policies for Education: Canada (Paris: OECD, 1976), p. 82. The OECD Report noted tendencies toward unchecked bureaucracy and overstaffing at the level of provincial authority, especially in Quebec and Alberta.

44. Donald F. Wheeler, "Japan," in Van de Graaff and others, op. cit.

45. My thinking on these two categories has been stimulated by Olof Ruin's excellent discussion of the four processes of bureaucratization, corporativization, politicization, and centralization in Swedish higher education. I have freely revised and regrouped his categories for my purpose of cross-national comparison. Olof Ruin, "External Control and Internal Participation: Trends in the Politics and Policies of Swedish Higher Education," Report No. 1, Group for the Study of Higher Education and Research Policy (Stockholm: Department of Political Science, University of Stockholm, May 1977), especially pp. 67-74.

46. Herbert Kaufman, The Limits of Organizational Change (University, Alabama: The University of Alabama Press, 1971), pp. 76-77.

47. Sweden, ICED Study, pp. 26-29.

48. John Vaisey, "Higher Education Planning," in Higher Education and the Current Crises, edited by Barbara B. Burn (New York: International Council for Educational Development, 1975), pp. 191-198.

49. Terry F. Lunsford, "Authority and Ideology in the Administered University," in The State of the University: Authority and Change, edited by Carlos E. Kruytbosch and Sheldon L. Messinger (Beverly Hill, California: Sage Publications, 1970), pp. 87-107.

50. Burton R. Clark, op. cit., p. 35.

51. Cf. Poland, ICED Study (section on "Management of the System of Higher Education").

52. Philippe C. Schmitter, "Still the Century of Corporatism?," The Review of Politics, Vol. 36, No. 1, January 1974, pp. 85-131; Leo Panitch, "The Development of Corporatism in Liberal Democracies," Comparative Political Studies, Vol. 10, April 1977, pp. 61-90.

53. Quoted in Panitch, op. cit.

54. Sweden, ICED Study, p. 92; see also Olof Ruin, op. cit., pp. 69-71.

55. "Planning for Change in Higher Education," (summary report of a project led by Bertil Ostergren), R&D for Higher Education, 1977: 12 (Stockholm: The National Swedish Board of Universities and Colleges).

56. Great Britain, ICED Study, p. 30, 59.

57. Lindblom, op. cit., p. 39.

58. Joseph S. Berliner, The Innovation Decision in Soviet Industry (Cambridge, Mass.: The MIT Press, 1976), pp. 17-18.

59. Olof Ruin, op. cit.; Sweden, ICED Study

60. On the balkanization of bureaus and their constituencies (and their legislative counterparts) in modern government, see Henry W. Ehrmann, "Interest Groups and the Bureaucracy in Western Democracies," in State and Society, edited by Reinhard Bendix (Boston: Little, Brown and Company, 1968), pp. 257-76; Harold Seidman, Politics, Position & Power: The Dynamics of Federal Organization (New York: Oxford University Press, 1970).

61. Guy Benveniste, Bureaucracy and National Planning A Sociological Case Study in Mexico (New York: Praeger Publishers, 1970), pp. 44-62; see also Levy, op. cit.

62. Norton E. Long, "Power and Administration," Public Administration Review, Vol. 9, (1949), pp. 257-264. (Quotation from p. 262.)

63. Lindblom, op. cit., pp. 29-32.

64. A basic tenet of government and system organization increasingly is the importance of system flexibility in accommodating diversity--and diversity is the name of the whole enterprise in higher education. Hence the impelling need to always minimize the straitjackets that can be imposed by formal systems.

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