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THE POLITICS OF HIGHER EDUCATION POLICY
IN MEXICO, 1970-1976

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Doctor of Philosophy
to the Department of Politics,
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SUMMARY

This thesis examines how far and in what manner political considerations determined the nature of higher education policy in Mexico during the Presidency of Luis Echeverría.

Between 1970 and 1976 the provision of places in higher education was doubled. This represented a significant expenditure on a type of education only pursued by a small minority while at the same time substantial action was still needed to achieve universal primary education. It might seem that such a pattern of investment would be explained by a developing country's need for highly skilled manpower. However, close examination shows that such a view is not plausible.

By 1970, in Mexico as in many advanced industrialised nations, those leaving higher education increasingly found themselves underemployed and sometimes unemployed. Investment in education was therefore not cost-effective. This makes unacceptable any explanation of continued expansion in terms of its economic productivity.

It is necessary to look elsewhere for explanations of the character of education policy between 1970 and 1976. Education policy is surveyed from the beginnings of state provision in order to assess what considerations have determined the shape of educational provision in the past. It is shown how the objectives and interests of politically influential groups have directed education policy in ways not wholly consistent with the demands of economic growth and cost-effectiveness. While in the 1920's and 1930's government attention focused to a considerable degree on the rural population and on technical education for the growing urban masses, subsequent political developments saw the weakening of worker and peasant groups and the emergence of new interests which have continued to influence educational provision until today.

With the development of an industrial capitalist economy not only did the industrial workforce grow but so too did the number of white collar employees whose work required previous education. This group formed a 'new middle class'. Government education policy began to focus on urban areas where such work was concentrated and on the secondary and higher education needed by office, managerial and professional workers. But this emphasis was not only occasioned by economic need but by the demands for education exerted by those who aspired to white collar positions. Competition for jobs encouraged students to pursue more qualifications. By the 1960's government investment in education was supporting a process of qualification escalation which was not matched by manpower requirements. An educational provision resulted which was both uneconomic and undemocratic.

During his electoral campaign Luis Echeverría promised to introduce a thoroughgoing reform of education, a Reforma Educativa, once in power. It is shown how the political realities of the period meant that it was unlikely that such action would be primarily directed at either improving the cost-effectiveness of the education system or at producing a more egalitarian participation in education. Rather, the government found it politically necessary to provide more higher education.

The 1960's had seen the appearance of growing discontent amongst middle class groups, occasioned by both a reduction in opportunities for economic improvement and disillusion with a political system which allowed little scope for independent action in the protection of group interests. Mexican governments needed to both improve their control of, and win the support of, middle class groups, as was most clearly shown by events surrounding the student movement of 1968. Education policy became a vital element in the achievement of such ends. An improved provision of higher education increased apparent opportunities for achieving social mobility while the control of student politics within universities removed a

potentially important catalyst of political opposition.

It is shown how educational planning in the 1970's took account of the political context into which policy would be implemented, rather than as in the 1960's concentrating almost exclusively on the economic role of education.

The last two chapters consider in some detail the education policy of the Echeverría government. Educational provision is examined at a national level demonstrating the relative priorities accorded to different types and levels of education. Policies designed to improve control of student activity are examined through analysis of changes effected in four universities, two provincial and two in the Federal District. It is shown that where university or local government administrations were unsympathetic to government policy, action was sometimes taken to remove them.

In conclusion it is suggested that economic concerns such as manpower requirements and cost-effectiveness, must continue to be of relevance to education policy in any country facing constraints on expenditure and aiming at economic growth but that education policy will not be adequately understood without reference to the political environment in which policy is implemented. Mexican education policy of 1970-76 is particularly influenced by the strengths and interests of that social group which is heavily dependent on educational qualifications, the white collar middle class.

GLOSSARY

ANUIES	Asociación de Universidades y Instituciones de Educación Superior
CCH	Colegio de Ciencias y Humanidades
CEE	Centro de Estudios Educativos
CGT	Confederación General de Trabajadores
CONACYT	Consejo Nacional de Ciencia y Tecnología
CNC	Confederación Nacional de Campesinos
CNOP	Confederación Nacional de Organizaciones Populares
CNTE	Consejo Nacional Técnico de la Educación
CROM	Confederación Regional de Obreros Mexicanos
CU	Ciudad Universitaria
DF	Distrito Federal
ENEP	Escuelas Nacionales de Estudios Profesionales
FSTSE	Federación de Sindicatos de Trabajadores al Servicio del Estado
ILO	International Labour Office
IMSS	Instituto Mexicano de Seguro Social
IPN	Instituto Nacional Politecnico
ISSSTE	Instituto de Seguro Social al Servicio de los Trabajadores del Estado
OECD	Organisation for Economic Co-operation and Development
PAN	Partido Acción Nacional
PCM	Partido Comunista Mexicano
PEA	Población Economicamente Activa
PLM	Partido Liberal Mexicano
PNR	Partido Nacional Revolucionario
PRI	Partido Revolucionario Institucional
PRM	Partido de la Revolución Mexicano
SEP	Secretaría de Educación Pública
SNTE	Sindicato Nacional de Trabajadores de Educación
UAM	Universidad Autónoma Metropolitana
UANL	Universidad Autónoma de Nuevo León
UAS	Universidad Autónoma de Sinaloa
UNAM	Universidad Nacional Autónoma de México
UNESCO	United Nations Educational, Scientific and Cultural Organisation

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METHODOLOGICAL NOTE

Certain difficulties in obtaining data should be noted, which are not peculiar to this thesis but are likely to be experienced by many studying Mexican politics. As is explained in Chapter 6, debates within the PRI or within the government do not occur in the open and it is therefore difficult for the observer to assess the precise nature of interests and debate within policy making bodies which lead to particular policy outcomes. Only very rarely will researchers be able to obtain such information, and if achieved this is likely to be through personal and informal channels rather than formal approaches such as interviews. So rather than making a study of the internal policy making process one must usually deduce government motivation by analysing pressures facing, and demands made of, government and resulting policy in the corresponding area.

In doing so this study draws on various but mainly written and statistical sources. Information on employment, and data which cross-references employment with education, has been obtained to a considerable degree from unpublished government documents, but also from statistics produced by independent research units. Information on the education system, if not always as extensive as might be desired, was more readily obtainable from published government documents as well as from independent bodies. Books and articles by Mexican authors, often little known outside Latin America, provide both detailed information on education and employment and also material on the political situation in the 1960's and 1970's. However, the latter was added to by a study of contemporary Mexican newspapers. Further material is drawn from general secondary sources, and to some degree from informal interviews and discussion.

INTRODUCTION

During the 1960's Mexico's higher education system expanded rapidly, as did the higher education systems of many 'developed' and 'developing' countries. But by the end of the decade there were indications in Mexico that a substantial number of students who had pursued courses in higher education were underemployed and less frequently unemployed. Students were encountering difficulty in finding employment which would make use of the training they had undergone or which had as a requirement of entry pursual of a course of higher education. This brought into question the efficiency of the higher education system. For if an economy is not making use of all the skilled manpower that is available to it, a proportion of investment in education and training is, in economic terms, being wasted.

The efficiency and productivity of education systems had been a major concern of academic literature on education in the 1960's. Social scientists had demonstrated the contribution that education could make to economic growth via the production of highly skilled manpower. They had developed techniques which allowed countries to determine the level and type of human resources necessary to their economic growth. Such work appeared to be of particular relevance to developing countries where growth was seen as urgent but where the potential of human resources had been little exploited. Higher education was seen to be of particular importance to development through its production of scientific and technological skills. A diversion of scarce resources from primary and secondary education to higher education might be justifiable if such a pattern of investment would promote development which would benefit a whole community.

However, evidence of growing underemployment of the highly educated necessitates a re-examination of the work of education economists. If efficiency of the education system was a prime concern of policy makers then planning techniques needed reassessing so that underemployment and wasted investment could be avoided. But it was possible that the economic efficiency of education was not as important as social scientists had believed it to be. The enthusiasm which had met the study of the economics of education, because of its promise of growth and development, may have caused other policy considerations to appear less important than they really were. Whereas it was possible that political priorities other than economic growth had directed educational provision away from a path consistent with economic efficiency.

It is argued here that the provision of education may be determined to a very significant degree by other than economic commitments. A particular provision of education may, for example, allow open access to all students in an attempt to provide equal opportunities for subsequent advancement. On the other hand the strength^{of} certain political pressures may promote a distribution of educational facilities which advantages particular social groups. It is important that policy aims such as these be given greater consideration in the analysis of educational provision. The importance of the productivity of education as a policy commitment must be reassessed, particularly in developing countries where it was perhaps given greater emphasis than elsewhere.

Such a reassessment of the determinants of educational provision is of particular relevance and interest in Mexico because of the importance accorded to opportunities for education since the revolution of 1910. Revolutionary objectives have embraced both a promotion of growth and development and equality of opportunity in education for all

citizens. Abandonment of, or a diversion from, the latter objective would only appear justifiable if a different educational provision would better promote a development to be shared by all.

But by 1970 the economic benefits of the existing pattern of educational provision in Mexico were in question. Large scale investment in higher education did not appear to be justifiable in terms of the benefits it was bringing to the economy. Nor did it seem that the expansion of higher education that had occurred during the 1960's could be seen as part of a policy of equal opportunity. For while the provision of primary education was approaching universality, the provision of middle education was uneven and inadequate and so it would not seem accurate to state that higher education was open to all. Thus the rhetoric of post-Revolutionary education policy did not seem to explain the pattern of educational investment that had in fact occurred.

A superficial glance forward at education policy in the sexenio of President Echeverría, from 1970-76, confirms the need for reassessment of Mexican education policy. For, despite the existence of underemployment among the highly educated, it seemed that demands for further expansion of the higher education sector were being met. This again indicated that the economic efficiency of the higher education system was not a major objective. So it would be interesting to find out what were the primary determinants of education policy in Mexico in this period, i.e. from 1970 to 1976. But how can one discover which pressures influence the formulation of education policy?

In some countries the type of education to be adopted is a matter of political debate. Where there is an effective competition between parties for political power, different parties may adhere to quite divergent views of what constitutes a desirable education policy and attempt to institute this once in power. The relative importance

accorded to, for example, the meeting of manpower requirements or the provision of equal opportunities may be clarified through such debate. Although it must be said that the most lively area of discussion in recent years in England and Wales, that of comprehensive education, has illustrated party views on individual ability rather than elucidating how governments weigh up their ideological commitments and demands of their supporters against possibly contradictory action which would produce skill needs at least cost. However, in Mexico party debate does not clarify the motivations of government action even to the, perhaps limited, extent that this occurs in the bi- or multi- party systems of advanced industrial nations in Western Europe. There is no effective party competition. The governing party, the Partido Revolucionario Institucional (PRI), is not forced to defend its policies in open debate with other parties who are challengers for power. The PRI is sure of maintaining power. And while government policy may be criticised and analysed within some newspapers and academic journals this generally occurs within circumscribed boundaries which must be adhered to if the existence of the particular channel of information is not to be threatened.

But circumstances arising in Mexico in 1970 made investigation into education policy both more urgent and to some extent easier to undertake. For, while campaigning as the candidate of the PRI for the Presidential elections of 1970, Luis Echeverría promised to introduce a large scale educational reform once in power. The decision to implement a Reforma Educativa immediately poses the question of what was seen as wrong with existing educational provision and what pressures motivated the formulation of new policies. Would the Reforma Educativa try to produce a more efficient education system, i.e. would the opportunity be taken to produce an education system better adapted to the manpower requirements of the economy? Or would study of educational

reform show that other considerations were equally or more important, and what would these be?

In respect of the difficulty of analysis, a public and wide ranging reassessment of policy, such as the Reforma Educativa promised to be, might permit insights into the pressures determining the formulation of education policy which the analysis of piecemeal and less public change would find it difficult to provide.

So this thesis looks at the education policies of the 1970-76 sexenio in an attempt to understand the major determinants of educational provision in Mexico. We will concentrate on looking at higher education for it is here that a conflict has been noted between particular and possibly limited needs of the labour market for educated labour and potentially contradictory demands for expansion of higher education. It will be important to assess the nature of political and social factors which may determine educational provision. But in examining the different pressures which influence the form that provision of education takes one does not only aim to understand how an education system came to be like it is. One also hopes to learn through the study of a specific political process something of the general nature of Mexican political life.

In other words, an understanding of those political pressures which influence policy making in the sphere of education is likely to be relevant to a wider understanding of Mexican politics. Whether one finds for example, a commitment to improving educational provision for the rural population or a more pragmatic policy of meeting the demands of groups whose support is most necessary to political stability. Each would suggest something of the nature of Mexican politics and one would then attempt to explain both the origin of ideological commitments, and the economic and political processes which have produced those social groups with specific strengths and interests which influence education policy.

In carrying out this investigation it will be necessary to see how far existing approaches to the study of education policy and work on Mexican politics and economic development can provide orientation for the study of higher education policy in Mexico. And as more is discovered of the pressures determining education policy in Mexico it should be possible to make some comments on the adequacy of literature on educational provision and to contribute to an understanding of Mexican politics.

The first step is to assess how far work on education in Mexico and other countries and especially studies attempting to draw more general conclusions, can provide useful perspectives for the study of contemporary Mexican education policy. Chapter One looks at sociological and economic studies and notes the dominance of a view which sees education, whether from a critical or uncritical perspective, as functional to the economic organisation of society. Chapter One continues by examining the accuracy of this view. An attempt is made to assess the extent to which higher education has been or is economically productive. This involves use of, and a discussion of the utility of, conventional economic techniques for the analysis of education, e.g. rate of returns analysis. Studies of the economics of education in both 'developed' and 'developing' countries are referred to while Chapter Two examines the Mexican case in greater detail. This involves the use of primary sources such as census statistics to assess the degree of underemployment or non-utilization of education in the Mexican labour market.

It is then necessary to assess what motivations, other than the efficient production of human resources, may have determined the provision of higher education. This is an area where existing literature is found to be scarce. Some economic studies have provided interesting insights into why increasing numbers of individuals may want to pursue

education up to university level even when the labour market does not demand such an increase. However, this type of analysis does not, for the most part, provide insights into why a government might respond to demands for such education rather than, for example, improving the provision of other forms of education. There are few political studies of educational provision. So it is necessary to try to derive useful perspectives on contemporary education policy from a detailed analysis of those pressures which have in the past affected the formulation of education policy in Mexico.

Chapter Three looks at education policy from the very beginning of state provision of primary education. It is important to do more than merely examine the post war period as many studies of education policy which emerged in the 1950's and 1960's concentrated, as noted, on the contribution that education could make to economic growth. By looking at an earlier period one is removed from this bias and it may be easier to identify important pressures on the education system. Many of the secondary sources which are used in this section are studies of education policy but sometimes, where sources are few, it is necessary to draw on more general texts. However, it is also important to look at studies whose subject area does not directly include education policy for by understanding more of Mexican politics and economics the precise considerations facing Mexican governments in their formulation of education policy may become clearer.

The changing nature of both Mexican society and education policy from the mid 19th century to the 1960's are examined in order to understand the emergence of new and different groups in the political arena and how their strengths and aims have had effect on the direction that education policy has taken. For different visions of society will involve different perceptions of the role of education and the form it should take.

One question that is asked is how far such developments promoted or allowed the existence of equal opportunities in education for all students, or whether instead political and economic pressures were more likely to promote an unequal distribution of opportunities, for example by social class or geographical region. An attempt to provide equal opportunities may explain why the education system has not been as economically efficient as it might have been. Chapter Three examines this question as far as is possible from a broad survey of education policy up to the 1960's and Chapter Four addresses specifically this question in relation to the 1960's. It is shown that government action could have promoted a more equal distribution of opportunities but that this does not seem to have been a major commitment of most governments since the 1940's.

Examination of education policy previous to 1970 suggests that neither a commitment to economic efficiency nor to equal opportunities can alone explain the nature of educational provision in Mexico. Rather it is necessary to look at demands resulting from manpower needs together with demands exerted by politically influential groups if one is to understand the most significant pressures affecting the formulation of education policy. Chapter Five attempts to find out how such factors might be relevant to recent educational provision. An important basis of investigation is Mexico's changing economic and social structure, a result of recent industrialisation. For a changing occupational structure is likely to place new demands on an educational system for appropriate forms of training, and to produce social groups who will pressure governments for an educational provision in their interests. So this chapter uses both primary and secondary sources to analyse Mexico's changing social structure and the existence of new social forces which might have influenced the nature of educational provision. Patterns of educational achievement between occupational

groupings are examined for these may illustrate the varying levels of education either necessary to or demanded by different social groups.

Mexico's economic development has demanded an increase in the educational achievements of the labour force but it also appears that certain social groups are likely to pressure for a provision of middle, but particularly higher education which may exceed that which accords with manpower needs. It is then necessary to assess whether such pressures were likely to be influential in the formulation of proposals for educational reform and why. Did political pressures exist which made it necessary or preferable to respond to demands for continued expansion of higher education rather than concentrating on the efficiency of the higher education sector? Chapter Six analyses the political context in which proposals for reform were formulated to discover considerations facing policy makers by 1970. This analysis of the political climate in Mexico in the late 1960's relies wholly on secondary sources. However, there are a substantial number of commentaries on Mexican politics in this period. The events at Tlatelolco in October 1968 appear to have promoted inquiry into what underlay such a crisis and caused some reassessments of Mexican politics. These are useful in establishing the political and economic tensions existing in Mexico in the late 1960's and early 1970's.

This examination of Mexican politics together with the analysis of the economic efficiency, quality and quantity of educational provision provides the information necessary to the interpretation of reform proposals and education policies of the Echeverría government of 1970-76.

Chapter Seven concentrates on looking at proposals for reform produced in 1971. This allows assessment of the relative importance accorded to different political and economic goals at the planning stage. Plans produced in the Echeverría sexenio are compared with those of earlier governments in order to assess whether and in what

manner planning processes had changed to take into account political considerations which had become important during the 1960's. As part of the analysis of education policy between 1970-76 Chapter Eight demonstrates how different goals were resolved in practice. It also suggests why certain proposals for reform were not implemented.

In assessing the effect of various political pressures on higher education policy one has to look further than higher education. Reforms at primary and middle levels will often form a necessary base for effective action in higher education. For example, without adequate provision of middle education an expansion of higher education could not be interpreted as opening up opportunities to all Mexicans but would rather benefit those who had managed to complete middle education. Therefore Chapter Eight looks at changes which occurred throughout Mexico at all levels of education as a result of the Reforma Educativa while concentrating on higher education, and attempts to understand the nature of political relations which such policies reflect.

Not all policy changes which occurred in higher education were a direct result of action on the part of the federal government. The government does hold considerable control over the quantity and quality of higher education through the size of financial allocations it chooses to make to universities. But owing to the autonomous status of many institutions of higher education the government strictly speaking has only the power to make recommendations for action and not the power to formulate or implement policy. Therefore, the recommendations made by the Asociación Nacional de Universidades y Instituciones de Educación Superior (ANUIES) are also examined noting how far these reflect government views.

Thus the first area of focus in the examination of education policy from 1970 to 1976 is on policies which aimed to modify the quantity or quality of the provision of higher education and the

political motivations behind such changes. But actions which affect the quantity and quality of higher education do not provide the only indication of those political pressures which determine the Mexican government's approach to the higher education sector. One can also learn something of the political pressures which affect higher education policy by looking at the government's attitude to and handling of student politics. The federal government may in commenting on or mediating in internal university disputes reveal something of the importance accorded to, and strength of, relevant interested groups, e.g. local governments, business groups, consumers of higher education (students and their families) etc. So Chapter Nine examines government action in respect of student politics at three universities at which there were major disputes between 1970 and 1976, the Universidad Nacional Autónoma de México, the Universidad Autónoma de Nuevo León and the Universidad Autónoma de Sinaloa. This analysis, which draws to a large degree on information in national and local newspapers, shows how universities can become arenas of debate and conflict over issues which reflect much wider conflicts in Mexican society.

Together Chapters Seven, Eight and Nine analyse the major determinants of higher education policy in Mexico between 1970 and 1976 and suggest how and why those studies which have concentrated on the economics of education should be reformulated. The basis of any examination of educational provision must be rooted in a historical analysis of the political structures and relations of the society concerned. Such a detailed analysis of education policy in Mexico should allow some concluding comments to be made on firstly, how the study of education policy may be most usefully approached, and secondly, on what the study of education policy can tell us about the nature of Mexican politics.

THE EXPANSION OF HIGHER EDUCATION
AND DEMAND FOR HIGHLY QUALIFIED MANPOWER

World wide the higher education sector has experienced rapid growth in the post war period. Such expansion is a feature common to countries of very different economic structures, where industrialisation may only be beginning or where it is advanced, and whose political systems display widely varying characteristics. Almost universally the rate of expansion of higher education has been higher than that of population growth. However, in many countries such expansion has not occurred without problems, e.g. in the capitalist democracies of Western Europe and North America. A paper from a recent O.E.C.D. conference on "Future Structures of Post Secondary Education" commented,

Massive private demand for education during the last twenty years or so has led to an expansion of post secondary education in many developed countries, such that policy makers today must think in terms of a mass higher education system. At the same time economic development, rapid technological progress and increased competition in international markets have brought major changes in employment structures.

In most O.E.C.D. countries these trends have led to a situation where many fear that a gap may develop between education and employment, or more precisely between occupational qualifications and expectations of graduates, and current employment opportunities and career prospects. For the first time young graduates are having difficulty in finding suitable employment. 1

It will be shown that similar patterns are emerging in some of the more advanced and industrialised capitalist countries of the 'developing world'.

In every country public expenditure has played a large part in financing higher education. Thus as an area of government policy, competing with other possible directions of expenditure, one may attempt to explain why higher education has been supported in preference to other

demands on public finance. This is not to preclude the view that financial support could or should in some cases be higher, whether from existing resources or as part of a larger government budget. Such judgements, however, are not immediately relevant here. The aim is to examine and explain reasons for existing levels of development of, and expenditure on, higher education for this may clarify both problems within higher education and the nature of the political and economic systems within which higher education is embraced.

Most existing analysis of education has fallen within the scope of traditionally defined social science disciplines of sociology and economics, yet neither discipline has been able to adequately explain the continued expansion of higher education in the 1960's and 1970's. Economics has included in its sphere of analysis, the contribution of education to growth, viewing education as an investment productive of human capital bringing social and individual benefits. Analysis of stocks of manpower in relation to growth rates and the calculation of rates of return became the basis of planning in education. Sociologists have examined the process of socialization which occurs in the school and looked at the occurrence of social mobility and the effect of education on social stratification. The discipline of politics has concerned itself to a minimal degree with education except in studies of the political activity of students. An article on recent research on education in Latin America shows that sociological and economic approaches are well represented while the political scientist rarely brings to bear the perspective of his or her discipline on the subject of education.² Supposedly interdisciplinary Marxist critiques of education have come little closer to explaining why higher education is expanded when many of its graduates are unable to use the knowledge and qualifications they have obtained. For such critiques have been constructed within frameworks set by existing analysis. To schematise some common arguments and responses:-

- 1) The individual may choose how much education to pursue and in which field of study, or
The individual chooses but his choice is limited. Education is geared to the needs of the economy.
- 2) Education both develops specific skills and promotes the fuller and wider development of individual personality and abilities, or
Education develops specific skills and promotes particular modes of interpretation, particular characteristics and abilities supportive of the system of production and compatible with the status quo.
- 3) Education like the family introduces the child or student to the values and norms of society, or
Education introduces the child or student to the values and norms of society but these serve the interests of a particular group, i.e. the dominant classes. Socialization presents particular interests as the general interest.
- 4) Equal provision of education allows equal opportunity and social mobility, or
Equal provision of education is not equivalent to equal opportunity. The opportunity to pursue, and succeed in, education is affected by financial resources if only through foregone earnings, and reinforcement in the home of abilities and attitudes promoted in the school. This varies between social groups and classes.

I think it is fair to say that most Marxist critiques only combine the above alternative positions presenting the following picture.

Education both provides particular skills and maintains social stratification. Differential achievement (linked to social class) channels individuals towards the performance of particular tasks within the division of labour and perpetuates inter-generational inequalities.

The picture is of an education functional to the needs of capital accumulation. Rather than adopting a dialectical perspective, many Marxist writers on education have only borrowed the functionalist approach they so much criticise and given it a radical face.³ Such a critique comes little nearer than conventional analyses to explaining the aims of

an education system which overeducates in relation to employment opportunities. Both positions presented only view the motivations of the providers of education i.e. governments, and see them as acting in a vacuum, whether towards the values of democracy or the needs of a capitalist economy. This ignores interaction between government and the rest of the population; it ignores the power of demands made by groups within a society which may not accord with actions functional to economic growth.

If a government is not continually to employ violent tactics it must act and present its activities in a way productive of consent. In societies whose social systems are perceived as based on equal opportunity and meritocratic organisation, educational provision must seem to accord with such principles, although this may produce an education system in which open access is allowed to all levels of education providing particular standards are reached or one in which there is no competition for a set number of places. The strength of demands made by certain social groups may also lead to a government giving disproportionate attention to particular forms or levels of education although this may be presented as part of a general policy of equal opportunity. For example, educational provision may allow open access to higher education but provision at lower levels may be such that those who have pursued private education are far more likely to reach the standards required for university entrance.

Thus the way in which quite generally adhered to ideals such as 'equal opportunity' will be interpreted and will provide the basis of policy depends on political debate and political organisation in the society concerned. Of course, even if a society achieved some approximation to an equal provision of education this would be unlikely to provide equal opportunity as students will enter the education system from quite different social backgrounds, the most advantaged being more likely to reap benefits from education provided.

For many equal opportunity has become associated with open access to education, and this has appeared as the basis of a democratic society. Open access was also justified because such a policy seemed to be producing the skilled manpower needed by developed and developing countries. However, more recently some economists have come to doubt the wisdom of such a policy.

It is our contention that an educational supply responsive to demand was not inappropriate in the 1950's and the early 1960's, when shortages of educated manpower were general, but to continue to adjust supply to demand throughout the 1970's and 1980's when opportunities for education already exceed requirements is clearly bad policy. 4

If one followed those mechanistic approaches which see education as directly responding to the needs of economic efficiency and growth one might expect substantial changes in education provision. But how could the political importance accorded to open access be so easily abandoned? For politics and ideology are not merely epiphenomenal. As Raymond Williams has said,

If ideology were merely some abstract imposed notion, if our social and political and cultural ideas and assumptions and habits were merely the result of specific manipulation, of an overt kind which might be simply ended or withdrawn, then the society would be very much easier to move and to change than in practice it has ever been or is." 5

Furthermore, a particular provision of education may be functional to particular groups in society in maintaining their position even if education does not function to produce trained and acquiescent manpower at least cost. Thus one has to ask in what way does the provision of education contribute to the legitimacy of the political system of any nation, and secondly which social forces or political pressures influence the precise nature of educational provision?

This is not to abandon the view that education provides the skill needs of the economy but it is to suggest that such a perspective must be

modified. However, first it is necessary to understand how studies of the economics of education achieved the dominance they did within research on education, and secondly to examine to what extent emphasis on the productivity of higher education was justified. Once it is established how far such an objective has determined the provision of higher education, other possible objectives can be examined.

The Productivity of Higher Education

The context in which theories of the economics of education were produced explains some of the assumptions involved in the economic models utilised. Such research occurred within the framework of the planning movement which aimed to modernise the 'Third World'. Benveniste, himself a planner, explains the sudden popularity of planned growth. He notes how when many Third World countries achieved independence in the 1950's and 1960's colonial policies were replaced by bilateral and international economic assistance. But, because aid acted as investment, competition existed between the various donor agencies, in Europe transformed colonial ministries and in the United States new aid agencies. Resulting overlap and duplication, apparently unnecessary aid, threatened public support for such policies. So,

The donors needed a rationale for aid, and national planning in each country provided it.

Thus it seems that the donor agencies were seen to be promoting a planned course of development, promoting progress in the developing countries.

Consequently in the late 1950's professionals in donor agencies, particularly in bilateral and international agencies, acquired a strong belief in planning. They called for rational centralised planning in developing countries even when such practises did not prevail at home. 6

Through experience of the Marshall Plan it was soon noted that inputs of physical capital alone did not produce desired development. The recipe for successful development was then found in the improvement of

human capital. As Dore says of the early 1960's,

The manpower planners were fanning out from the foundations and the aid-giving agencies. They were to devise the strategies whereby the new states could, in the shortest possible time, amass the human capital necessary to take-off into modernity.

7

The study of the economics of education mushroomed. Bowman⁸ noted in 1966 that in a bibliography prepared by Blaug on "The Economics of Education", of 420 items, 381, i.e. 91%, appeared within the decade 1955-64, and 283 of the 381 appeared in 1960 or later. Some studies posed, not a particular historical function for education but attempted to establish a relationship between education and growth, (through the production of skills) valid between countries and over time. With increasing talk of a superfluity of educated people in relation to job requirements it is necessary to establish the validity of such views and to see how far the methods of economics can allow an accurate evaluation of the role of education. The context of the development of the study of the contribution of education to growth, and of planning techniques, seems to have promoted the interpretation that education contributes to growth. While it is highly probable that education can be shown to contribute to economic growth one must beware of interpretations or economic and planning models which build such assumptions into their analysis.

It would appear that by 1970 there were doubts in the minds of international organisations, and individual economists concerning the value of continued investment in higher education. Table 1.1 shows the rapid growth of the higher education sector between 1960-1970. Growth was faster than that of overall population growth, and, as Table 1.2 demonstrates, faster than the growth of the 20-24 age group. While the group of 'developing nations' show slightly higher growth rates overall than the 'developed nations', there are individual exceptions and there is not a perfect

Table 1.1 Students in Higher Education, 1960-1970, by World Regions and Selected Countries

REGION	No. of Students 1960	No. of Students 1970	Students in h.e. 1960-1970 Average growth rate p.a.	COUNTRY	Students in h.e. 1950-1960 Average growth rate p.a.	Students in h.e. 1960-1970 Average growth rate p.a.	Population growth 1970-1974 Average growth rate p.a.
World	11,594,714	26,843,947	8.8				
Northern America	3,778,908	9,140,130	9.2	U.S.A.	-	9.0	0.9
Oceania	124,929	268,930	8.0				
Europe	4,690,874	7,380,138	7.3	France Federal Germany Spain U.S.S.R. U.K.	4.0 6.9 7.2 6.7 7.2	11.9 5.6 7.1 6.7 7.1	0.9 0.7 1.1 1.0 0.3
Africa	135,055	373,884	10.7				
Asia	2,295,797	5,943,943	10.0	India	9.4	12.0	2.1
Latin America	569,151	1,614,790	11.0	Argentina Brazil Chile Colombia Mexico	8.2 6.5 - 7.9 8.4	4.3 16.2 11.7 14.0 12.2	1.5 2.8 1.7 3.2 3.5

Source: Higher Education - International Trends 1960-1970, Office of Statistics, UNESCO, Paris, 1975.
UNITED NATIONS Statistical Yearbook, 1975, Table 18

The following countries are not included in UNESCO regional totals: AFRICA - Southern Africa and Rhodesia, ASIA - Peoples Republic of China, Democratic Peoples Republic of Korea, Democratic Republic of Vietnam.

negative correlation between, for example, G.N.P. per capita and growth rates in higher education. The absolute number of students in higher education doubled between 1960 and 1970 in every region except Europe, where population growth was lowest. Where statistics are available it appears that growth was generally more rapid in the decade 1960-70 than 1950-60. Growth was most rapid in 1960-65 except in Latin America where it was faster in the latter half of the decade, this region having the highest 1960-70 growth rate. The Mexican growth rate is above the continental average.⁹

It is important to determine to what extent such expansion has contributed to economic growth, whether excess or inadequate stocks of manpower (as a total or in particular spheres) exist in relation to the needs of the economy. But in establishing the contribution of education to growth one faces the above noted problem of assumptions built into economic models which make their conclusions somewhat questionable. For most existing methods of analysis originated in the context of development planning. The discussion of such methods is also relevant to the subsequent examination of Mexican education.

Rate of returns analysis relates the total cost of additional levels of education to future returns, i.e. the relevant difference in pre-tax earnings. Earnings are taken as a measure of the contribution to growth because payment is seen to reflect the marginal product of labour. This assumes that, a) the demand curve for labour is derived from an underlying production function, that employers are maximizing profits, and b) that the labour market functions competitively. Such conditions are never met absolutely. The validity of rate of returns analysis depends firstly on the extent to which increases in wages reflect additions to value. The price of highly educated labour is assumed to be set by private sector competition in most market or mixed economies. One of the most potent criticisms of relating earnings to the marginal product

of labour points to a situation where the private sector is a minority actor in the labour market for highly educated persons, where the public sector is the main employer. This is relevant to some developing countries. Blaug notes that in many African countries as much as 50-60% of all highly educated manpower is employed in the public sector.

In such cases the social rate of return on higher education reflects not the productivity of college graduates but simply the strength of control over their own earnings." 10

A more frequent criticism of rate of returns analysis is that education is only a sign or badge of social attributes, e.g. family connections or wealth, and it is these that are rewarded, such that social convention rather than productivity structures wages. It may in some cases be obvious that those with higher education qualifications belong to a particular social class, top income group or certain racial groups. This in itself is not a refutation of the value of their education to the economy. (It may reflect political power in obtaining education or high achievement in schools as a result of social and economic advantage which favoured success.) Social status can only be seen as a reason for higher earnings if individuals of high status are paid more than others with equal qualifications and abilities.

It could also be claimed that high status groups possess real abilities demanded in the labour market which are not produced by formal education. This points to another problem in rate of returns analysis, i.e. the evaluation of what portion of ability or skill rewarded is developed in formal education. Abilities may be inherited or a product of home background. Earnings can be positively correlated to, e.g. I.Q. scores, educational level of parents, parents' income or occupation, as well as to level of education. Intercorrelation exists between these variables which make isolation of the education effect difficult. It is possible to standardize different variables in a multiple regression analysis although this is less useful if a particular variable only makes itself felt through

another. However, studies which have attempted to measure the effect of education have seen it as the major if not only determinant of earnings.¹¹

It has been shown that an assessment of the contribution of education to economic growth by rate of returns analysis rests on two considerations:-

- a) the extent to which differential earnings reflect the marginal product of labour, and
- b) the extent to which, if wages reflect marginal productivity, education provides or develops the skills and abilities rewarded.

The effects of e.g. an increased supply of qualified personnel can only be measured by rate of return analysis in so far as prices i.e. wages reflect productivity.

Economists have also tried to identify the role of education in economic growth by international comparison. Positive correlations have been demonstrated between economic growth and development of education over time at national levels; this was extended to the comparison of national correlations. A pattern emerges of greater educational development with higher levels of G.N.P. per capita. However, such a correlation cannot be taken to demonstrate the causal effect of education, but the assumption of causality must be made if international comparison is to estimate the effect of education. Comparison is based on the view that there exists a unique pattern of manpower needs, along which a country moves according to the level of development. Thus to obtain similar levels of G.N.P. p.c. as has the U.S.A. a country must build similar stocks of manpower. This makes two very dubious assumptions,

- a) that all countries pass through similar stages of growth, to which are related particular occupational structures, and
- b) that the substitutability between labour possessing different levels or types of education is near zero.

The international comparison of stocks of manpower as a method of assessing education's contribution to growth implies that all existing stocks of educated manpower are necessary, and thus precludes any view of

imbalance in the labour market. Rate of return analysis does not make such an assumption. It shows the relation between supply and demand, the degree to which supply promotes growth, but on the assumption that the relation between supply and demand affects the price of labour.

A rise in demand (*ceteris paribus*) would cause a rise in wages as supply has become more scarce in relation to demand. Such adjustments, either up or down, would in a situation of maximization cause expansion or contraction of higher education enrolments such that rate of return to all levels of education remains equal. But, as indicated above, private decisions to invest in education are not necessarily based on similar calculations as appear in the evaluation of the social rate of return. Social rates of return are not equalized by the action of private demand. Knowledge of the difference between private and social rates can help to explain nature of particular labour markets.¹²

In a competitive wage market excess demand and supply will have price effects. In a monopolistic situation this does not necessarily occur, e.g. of public sector dominance. Overstaffing may exist, possibly to prevent unemployment, such that the rate of return would be overestimated. Unemployment is an inadequate indicator of the relation between supply and demand as highly educated labour may move between employment demanding its qualifications and employment demanding lesser skills, rather than between work and employment. The identification of underemployment is the only adequate test of the relation between supply and demand in all situations. But underemployment is very hard to measure. At one level, mainly applicable to rural labour underemployment can be measured in terms of hours worked. Here a different form of underemployment is referred to, i.e. the non-utilization of skills and abilities. Little data is available with which either skill needs for work can be matched against qualifications held, or by which overstaffing can be measured. Therefore, the estimation of underemployment is likely to be based on subjective evaluations which may be linked, particularly at a personal level, to

job expectations rather than to the utilisation of skills.

The concept of devaluation of educational qualifications sometimes indicates underemployment. If demand does not increase sufficiently to absorb increased supply a qualification held has been devalued, a) as an entrance qualification to a job, and b) in terms of potential rewards. But the use of the term devaluation to indicate loss of prestige because of the reduced scarcity of a qualification while job opportunities have expanded equivalently, is a cultural rather than economic evaluation and therefore has no relevance to the examination of the compatibility between education and occupation.

One of the few studies which has attempted to measure devaluation of qualifications over time in relation to type of employment obtained is that of Ivar Berg in Education and Jobs. The Great Training Robbery.¹³ By demonstrating an increase over time in necessary qualifications for particular occupations, Berg suggests that increases in qualifications have not been economically necessary or productive but have been determined by supply. The study examines the United States where in 1970 49 out of every 100 in the 20-24 age group were in higher education. Berg's starting point is the rejection of rate of returns analysis. He believes that market imperfections have more relevance for explaining the real world than the assumptions of wage theory. The method employed to measure the educational needs of the economy does not rest on market values.

The operational problem for the present research was to compare, through a series of gross estimates, the achieved education of the labour force with the educational requirements of the jobs held for the two census years 1950 and 1960.¹⁴

Job requirements are measured in the following way: the U.S. Employment Service estimated the general level of development (G.E.D.) required for different jobs in both 1956 and 1966. The G.E.D. scale covers reasoning, mathematical and language development. Berg worked with five versions of G.E.D. into years of education. G.E.D. levels were assigned to

occupational groupings used in the census and thus gross estimates of requirements made. The findings were as follows,

- a) job requirements in terms of G.E.D. increased between 1956 and 1966, and
- b) "in the conceptually most attractive versions there is a distinct drift of 'better' educated people into 'middle' level jobs and a reduction in the number of 'less' educated people who move up into middle level jobs in the decade covered by the data. The increase in educational requirements for middle level jobs may thus be taking place at some cost to a society that has historically prided itself on its mobility opportunities."¹⁵

It is noted that numerous methodological problems exist in this 'direct' approach to evaluating the benefits of education to the economy, as many as in rate of return analysis.¹⁶ Berg's method requires the assigning of skill needs to jobs and translating educational levels into skills held, both of which must be open to numerous alternatives. But the possibility is most definitely raised of the trend towards an increased supply of highly educated labour not being necessary to work performance. However, such detailed data is only available in the United States.

These are the primary and not wholly satisfactory methods available for identifying the productivity of higher education, and for establishing whether there is any economic necessity for continued expansion.

Table 1.1 showed the rate of growth of the higher education sector. This was faster than population growth. An increasing number, absolutely and as a percentage of the relevant age group, are pursuing higher education. Table 1.2 shows change in student numbers as a percentage of the 20-24 age group between 1960 and 1970. As was suggested by the growth rates participation nearly doubled in this period. Devaluation in terms of loss of prestige because of reduced scarcity may have occurred in all areas. However, great disparities in participation continue to exist between regions and countries. By 1970 higher education enrolments equalled e.g.

Table 1.2

Student population (higher education) as a percentage of the 20-24 age group, by region and selected countries, 1960 and 1970.

REGION	1960 %	1970 %	COUNTRY	1960 %	1970 %
World	6.3	11.7			
Northern America	30.6	48.0	U.S.A.	32.2	49.2
Oceania	15.1	18.6			
Europe	8.8	17.8	France	7.4	16.0
			Federal Germany	6.1	13.8
			Spain	3.9	8.5
			U.S.S.R.	11.0	25.0
			U.K.	8.9	13.9
Africa	0.8	1.4			
Asia	2.8	5.7	India	1.7	4.3
Latin America	3.2	6.7	Argentina	11.1	13.8
			Brazil	1.6	5.3
			Chile	4.1	9.3
			Colombia	1.8	4.3
			Mexico	2.6	5.8

Source: UNESCO Higher Education - International Trends, 1960-70, UNESCO, Paris, 1975, various tables.

The number of students is related to the population in the 20-24 age group, to give an 'enrolment ratio', as it is not possible to calculate exact enrolment rates.

49.2% of the 20-24 age group in the U.S.A., 16.0% in France, 9.3% in Chile, 5.8% in Mexico, 4.3% in India, and averaged 1.4% for African countries.

This might be taken to suggest that problems other than loss of prestige, such as unproductive investment evidenced in unemployment and underemployment, (e.g. as shown by Berg), would be limited to the more developed countries. The O.E.C.D. was quoted above as referring to the existence of un- and underemployment in its member countries, between which there are very different levels of participation. However, references can also be found to the unemployment of those with higher education in some developing countries, where participation is much lower. Blaug, Layard and Woodhall ask about India,

How is it that an economy that has grown at about 3.5% per annum for fifteen years has failed to absorb into employment one out of fifteen of its best educated people? After all, employed manpower with matriculate and graduate qualifications amounts to less than 4% of the entire labour force of India: 17
it is only the small apex of a vast pyramid.

Latin American countries face similar problems. The I.L.O. devised programme for Colombia, Towards Full Employment commented in 1970,

As far as we can judge, there is at present no general shortage of persons with middle or higher levels of education. Indeed, at university level there is some evidence that the recent rapid expansion may have exceeded 18
economic needs.

The level of participation in Colombia was 4.3% in 1970. Lack of suitable employment for the highly educated cannot be explained by reference to high levels of participation, by a move to mass higher education, for problems exist when participation is below 5% . Unemployment and underemployment affect countries of very different levels of economic and educational development.

In contrast to the U.S.A. where there was little graduate unemployment in the 1950's and 1960's, India had a male unemployment rate for those with completed secondary education or higher education of 6-7%, (equivalent to half a million individuals) in 1967. Whereas Berg looked for evidence of over education in underemployment, overproduction is clear in India.

Blaug, Layard and Woodhall try to explain this phenomenon by rate of returns analysis.

It is demonstrated firstly that the private rate of return to education is favourable as compared with alternative private rates of interest. Secondly, private rates of return exceed social because subsidies are never adequately recouped by income taxation of the highly educated. If open admission operates, it is assumed that expansion will continue until the private alternative rate is realised, rather than the social alternative rate. The social optimum requires that social rates of return exceed private rates of return and also that rates of return at different levels are equalized. This has not occurred, the social returns to primary education are greater than the returns to graduate education. The authors establish that in social terms, purely at the economic level, there is overinvestment in secondary compared with primary education, and university compared with secondary education. It is very apparent that private demand has structured the education system. What remains to be explained is why in the presence of unemployment there is not a fall in wages and a rise in demand at this new price, which might discourage some investment in higher education and reduce social cost. The authors suggest that wages have fallen, but that in India a significant number of graduates prefer to remain unemployed while seeking a job which meets their expectations rather than accepting lower pay or taking a more lowly position.

In addition factors other than excess supply have contributed to unemployment, or relevance to other developing countries.

Conventions in hiring practices, ignorance of skill substitution potential, the high cost of spreading information both among employers and students, the obsessive tendency to label skills solely in terms of paper qualifications as a response to imperfect knowledge, in short all the general factors that tend to inhibit market clearance for specialized skills in poor countries help to contribute to the creation of educated unemployment.

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Blaug, Layard and Woodhall entitle their model of educated unemployment a "dynamic surplus model" for it explains why overproduction is continually increasing, why more and more education is pursued. As supply increases at one educational level this has an adverse affect on earnings and the comparative rate of return to the next level tends to rise, thereby encouraging, for example, graduates to pursue post graduate education. As the authors say,

What we have here is a truly dynamic mechanism which is continually trying to shift the incidence of unemployment down the educational ladder while at the same time generating incentives to stay at school longer, leading to the appearance of unemployment at higher and higher levels. 20

The individual tries to improve his income by pursuing more education. But total increase in productivity may be less than the increased cost; the individual only takes account of the extra private cost. However, higher rewards encourage others to follow the same path, thus reducing benefits. Thus our first individual pursues more education to once more raise his value. Even if account is taken of the incidence of unemployment at graduate level, the average private rate of return may make university education appear worthwhile.

Certain criticisms have been made of Blaug, Layard and Woodhall's study, but these do not affect the useful concept of a "dynamic surplus mechanism". They do result from methodological problems in rate of returns analysis. The conclusion that the social returns to primary education are greater than those to higher education is questioned. Dore states that where returns to primary education have been calculated these are based on the earnings of those lucky earlier generations who could get modern sector jobs with their primary certificates.²¹ But as the primary certificate becomes devalued its monetary returns are reduced. Dore also sees little point in the examination of alternative rates of interest as individuals do not have sufficient

information to make such calculations and monetary returns are not seen as the only benefit of education. However, Dore does trace a process broadly similar to that presented by Blaug, Layard and Woodhall in explaining the striving for more qualifications.

Dore notes how education has been seen as a visa into employment in the modern sector in many developing countries. The emphasis on qualifications has tended to increase, the later the processes of development have occurred. This is due, among other factors, to the increasingly large technological gap that has to be closed, to the international consensus on the value of open access to education, and to a demonstration effect within countries which is increased by the spread of the mass media. In the process of rapid development education has increasingly acted as a qualifier for modern sector employment. More people enter this competition than there are suitable jobs. The individual finds that the qualification he has gained is not adequate for the job he desires.

The paradox of the situation is that the worse the educated unemployment situation gets and the more useless educational certificates become, the stronger grows the pressure for an expansion of educational facilities.

For if one cannot get one's desired job it is sensible to press on for more qualifications.

The mechanism of 'qualification escalation' ensures that once one is in the modern sector qualification range, the higher the educational qualification one gets, the better one's chances of getting some job. 22

A personal decision to pursue more education is entirely sensible yet this cannot be accepted as a rational provision of education. Firstly it is very costly, and secondly the educated unemployed and underemployed are a potential source of discontent and thus a political problem for any government. One cannot accept such over-education in relation to employment opportunities on the basis that all education is

beneficial, adding to the individual's personal satisfaction and possibly job performance. For education which is dominated by a race for qualifications is as Dore points out often mere qualification earning and not education. His personal solution to such a situation is to remove the selection or sifting process from education in order that the two are not confused. Dore believes that aptitude tests could successfully replace the testing of courses pursued in school. Education would not then have to be concerned with preparation for examinations but instead with providing useful information and awakening intellectual curiosity, the race for more education than the next person would become redundant.

While one may not endorse Dore's solution, his analysis of the expansion of the upper levels of education and the content of much education is most perceptive. Changes in the content of education would alter demand. Pressure for more secondary and higher education might be reduced if job qualifications were not provided. Finance could be directed towards improving what has in most nations been a slow progress in the provision of primary education. Participation might be improved particularly in rural areas by moving content away from qualification earning for urban, modern sector jobs.

Other analysts have endorsed a redirection of attention to primary education. This sometimes derives from possibly questionable rate of returns analysis. However, even if primary education is not currently more productive than higher education, avoiding unnecessary expenditure on higher education can still be defended on economic and on democratic or egalitarian grounds. It is felt by some that a more practical rural education might have economic pay-offs for developing countries through the production of more skills and greater productivity, and so contribute to the much desired expansion of the internal market.²³ It is democratically justifiable to press for a more equal and practical provision of education particularly when an elite oriented provision is

shown to have little economic justification. Berg concluded in relation to the U.S.A. that,

Americans could profitably and sensibly redirect their educational investments in order to improve primary and secondary state education. 24

The I.L.O. commented with reference to Colombia that,

We have little doubt that the main emphasis in the next phase of quantitative expansion should be in the rural areas and at primary level, which implies slowing considerably the recent rapid rate of university enrolments. 25

To summarise, it would seem that patterns of expenditure are not directly oriented to maximization of growth, neither do those examined tend to equalize participation.

Individuals are now required to obtain higher qualifications than were previously necessary for broadly similar jobs. However, this is not entirely a supply induced mechanism. The need for higher qualifications can be demand induced, owing to a) technological developments, and b) the possibility that standards reached at school and university are falling and more education compensates for this. Employers give this justification for upgrading requirements but it is difficult to tell how far it is true. Little credence can be given to the view that standards have fallen because of the lower ability of wider groups being enrolled. Rapid expansion may have put great pressure on the ability of governments to maintain adequate levels of expenditure. Table 1.3 shows expenditure on all levels of education as a percentage of G.N.P. for different regions. Expenditure increased in all regions between 1965 and 1973 but is lowest in Latin America. Comparative expenditures in dollars are unfortunately not a very useful guide to the quality of education for this measure cannot take account of the fact that exchange rate parities do not represent purchasing power values. It is shown that education expenditure has grown faster than

Table 1.3 Public Expenditure on Education as a Percentage of G.N.P. and growth rates of Public Expenditure and G.N.P.

REGION	Public Expenditure on Education as a % of G.N.P.			Average growth rate p.a. 1965-73	
	1965	1970	1973	Expenditure on Education	G.N.P.
World total	4.9	5.4	5.6	12.8	10.9
N. America	5.3	6.7	6.8	11.7	8.3
Oceania	3.6	4.5	5.2	19.6	14.4
Europe (excluding USSR)	4.5	4.8	5.1	13.7	12.0
Africa	3.5	4.2	4.2	13.7	10.9
Asia	3.7	3.6	3.9	16.6	15.7
Latin America	3.0	3.6	3.8	13.5	10.4

Source: UNESCO Statistical Yearbook, 1975, UNESCO, Paris 1976
Table 2.5 pp. 69-70

G.N.P. in all regions but in order to give consideration to quality it would be necessary to examine changes in expenditures per capita at constant prices. Such information is not readily available.

It has been suggested that both advanced and developing countries have not always required the increase in highly qualified manpower which has occurred. The driving factor behind pursuit of more education seems to have been a search for advantage in a competition for scarce jobs. Provision of education has in the cases examined supported a particular demand for more education, rather than egalitarian principles. In many developing countries higher education is expanded while attendance at primary level is not universal and/or secondary level participation is low, as is illustrated by the enrolment ratios in Table 1.4. Secondary education comes nearest to universality in the U.S.A. In France, Federal Germany, U.K. and Spain secondary enrolment is over 70%, but in the Latin American countries it is under 50%. Higher education enrolments in these European countries vary between 15% and 20%, while in the Latin American countries shown they vary between 7% and 20%. The ratio of higher education to secondary education enrolments is greater in Latin American countries than in European countries. The U.S.A. has a high ratio of higher to secondary level enrolments but here there is little room for numerical increase in secondary level participation.

Table 1.5 presents the percentage distribution of total enrolments by level of education for world regions. Comparisons between regions are affected by the number of years of each level, which may not be equal between regions, and also by the larger size of the younger age groups in comparison with the older in countries of rapid population growth, thus the statistics presented are only an approximate guideline. The table also demonstrates the varying participation at second and third levels, and the relation of the size of the third to the second level.

Table 1.4 Enrolment ratios for the first, second and third levels of education for selected countries for 1960, 1970 and 1972 or 1973.

Country	1st level (gross)	2nd level (gross)	3rd level (gross)
U.S.A.			
1960	118	64	32
1970	111	99	49
1973	104	91	52
France			
1960	144	46	7
1970	117	74	16
1973	111	86	17
Federal Germany			
1960	133	53	6
1970	129	66	13
1973	129	70	18
Spain			
1960	-	23	4
1970	123	57	9
1973	113	73	16
U.K.			
1960	94	67	9
1970	111	75	14
1973	112	76	15
U.S.S.R.	(age 7-14)	(age 15-17)	
1960	95	58	11
1970	104	66	25
1973	100	67	22

continued.....

Table 1.4 continued

Country	1st level (gross)	2nd level (gross)	3rd level (gross)
India			
1960	-	-	-
1970	65	-	4
1973	63	-	-
Argentina			
1960	98	32	11
1970	106	37	14
1973	107	50	21
Brazil			
1960	95	11	2
1970	83	27	5
1972	87	35	8
Chile			
1960	109	24	4
1970	107	39	9
1973	116	48	15
Colombia			
1960	83	12	3
1970	97	-	8
1973	100	37	-
Mexico			
1960	80	11	3
1970	104	22	6
1973	111	29	9

Source: UNESCO Statistical Yearbook, 1975, UNESCO, Paris, 1976,
Table 3.2 p.84.

"The gross enrolment ratio is the total enrolment of all ages divided by the population of the specific age groups which correspond to the age groups of primary and secondary schooling.....These ratios have been calculated taking into account the different national systems of education and the duration of schooling at the first and second levels. At the third level the figures for the population aged 20-24 have been used throughout." (p.84

Table 1.5 Percentage Distribution of Total Enrolment by Level
of Education, for 1960, 1970, 1973 by World Region

Region	1st Level	2nd Level	3rd Level	Total = 100
World				
1960	74.1	22.3	3.6	
1970	69.0	25.4	5.5	
1973	67.6	26.4	6.0	
Northern America				
1960	59.2	32.8	8.0	
1970	51.5	34.2	14.3	
1973	45.9	38.5	15.6	
Oceania				
1960	72.1	24.2	3.8	
1970	62.9	31.2	5.9	
1973	63.7	29.7	6.5	
Europe				
1960	68.7	27.8	3.4	
1970	60.2	34.0	5.9	
1973	56.5	36.7	6.7	
Africa				
1960	90.1	9.1	0.8	
1970	85.9	12.9	1.2	
1973	84.3	14.2	1.4	
-Asia				
1960	74.7	23.3	2.0	
1970	71.5	25.3	3.2	
1973	70.4	26.1	3.5	
Latin America				
1960	85.3	12.9	1.8	
1970	78.0	19.2	2.9	
1973	80.9	15.1	4.0	

Source: UNESCO Statistical Yearbook, 1975. UNESCO, Paris, 1976.
Table 2.2 pp. 60-61

Despite the disparities in secondary level participation the growth of the higher education sector was more rapid than that of primary and secondary in all world regions between 1960 and 1970 (see Table 1.6). In Africa there was little difference in the growth of second and third levels but this was not the case in Latin America where higher education grew at a more rapid rate than in any region between 1960 and 1973.

Higher education has been expanded while universal primary education has not been achieved, e.g. in India, and while participation in secondary education is low, e.g. in Latin America and in particular in Mexico. Low participation levels are, however, not just accounted for by lack of education facilities, but by non-attendance due to the apparent cost of remaining at school (in foregone earnings), and by the non-relevance of the education imparted. Nevertheless, these are areas which education policy can act to alter.

If there are surpluses of highly qualified manpower in relation to occupational requirements, and at the same time very unequal patterns of participation in education, it would seem that expansion of higher education cannot be defended by reference to promotion of efficiency and economic growth. Instead one must explain precisely what political pressures and economic imperatives have promoted the participation patterns described above.

In talking of possible surpluses and shortages in some technical fields of highly qualified manpower it is necessary to dispel one myth, i.e. that if the distribution of students between fields of study were changed in accordance with employment opportunities problems would not exist. Shortages are thus presented as being equal to surpluses, implying that the total number of students graduating at a given time is matched by the total number of job opportunities. But if students do pursue the 'wrong' course in terms of employment prospects this can

Table 1.6 Growth of First, Second and Third Levels of Education
for World Regions, by Indexed Numbers, (1960 = 100)

Region	1st Level	2nd Level	3rd Level	Total
World				
1960	100	100	100	100
1970	140	172	231	151
1973	149	193	272	163
N. America				
1960	100	100	100	100
1970	117	140	242	136
1973	118	163	272	139
Oceania				
1960	100	100	100	100
1970	120	177	215	137
1973	123	171	242	139
Europe				
1960	100	100	100	100
1970	108	151	212	123
1973	106	171	225	129
Africa				
1960	100	100	100	100
1970	174	259	156	183
1973	205	343	373	219
Asia				
1960	100	100	100	100
1970	154	175	260	161
1973	165	196	313	175
Latin America				
1960	100	100	100	100
1970	164	266	283	179
1973	201	249	466	212

Source: UNESCO Statistical Yearbook, 1975, UNESCO, Paris, 1976.
Table 2.4 p.66.

be explained in two ways,

- a) courses are followed for consumption value, without regard to employment problem,
- b) students in selecting a course do not have adequate information on which to base investment decisions.

Both these factors, consumption value and inadequate information could lead to total over or under-investment in higher education in relation to job opportunities. For excesses to equal shortages could only be the result of chance. The notion that surpluses are numerically equivalent to shortages serves to justify existing structures of higher education and levels of expenditure while placing the solution to employment problems in a purely technical sphere, i.e. in the necessity of more and better information and improved vocational guidance. If investment directs demand, better information might over time improve the number and distribution of graduates in relation to job opportunities. However, as has been shown, private and social decisions are not based on the same sets of information, therefore better information for the student does not end the necessity of the evaluation of the relation between social costs and benefits.

The distribution of students by field of study is not more than an essential part of educational decision making in relation to economic needs. Distributions will vary between countries, both because of different labour market demands and due to historically created perceptions of the worth and prestige of subjects of study, (sometimes reflected in financial reward) which although rooted in social and economic importance do not immediately react to present needs. National and regional cultural traditions will influence students' choice.

Distribution of students may also be affected by restricted entry into some or all subjects of study. The O.E.C.D. notes how numerus clausus is operated in the spheres of medicine, engineering, and natural

science in some countries because of high social cost, directing excess demand into the humanities and social sciences. It is also stated that humanities and social science graduates are more vulnerable to fluctuations in demand for graduates.²⁶ But the unemployed or underemployed arts or social science graduate is less costly than an unemployed or underemployed scientist. It might also be suggested that the former will have less specific career expectations than the holder of e.g. a medicine degree or engineering degree and so will be more easily absorbed into underemployment.²⁷

To summarise,

- a) distribution by field of study will be affected by, labour market demands, cultural evaluations of the worth of different subjects of study, and university or government restrictions on entry, and
- b) it cannot be assumed that surpluses of graduates in the labour market are even approximately equal to shortages of graduates from different disciplines.

It has been shown that private decisions to pursue more education result from viewing education as a consumption good, but also and more probably because more education advantages the individual in a search for scarce jobs. Whether or not exact calculations are made as to the rate of return of more education, most decisions taken concern education which is subsidised. The student is likely to receive free tuition or to pay minimal fees once a place is secured. As shown the social cost would not appear to be counterbalanced by benefits to the economy. Alternative reasons for supporting this social cost cannot immediately be provided at the general level of explanation to which economic theory aspires. Particular case studies must be analysed before this is possible. Education reform in Mexico will be examined as an illustration of the multiple pressures which provide the context of the formulation of education policy.

It has been suggested that education policies have been increasingly oriented to responding to private demand, although this does not necessarily imply an egalitarian response. If policies respond to demand it would appear that planning towards economic efficiency has in part been rejected. But before this interpretation is accepted one must demonstrate that techniques exist which allow the planning of education policy in accordance with any established economic priorities. If no such possibility exists, response to demand could, rather than being a result of political philosophy, political pressures and economic imperatives, be an acceptance that the aggregation of private decisions gives a more productive result than attempts at forward planning.

In considering first the contribution of education to growth and then the possibility of the existence of skills above labour market needs, two analytical approaches emerged: one is based on market mechanisms, in the relation between the price of inputs and outputs; the second is based on the evaluation of the quality and quantity of manpower stocks in comparison with need, defined by international comparison or skill requirements for existing jobs but with no regard to price, i.e. cost. The same dichotomy appears in the area of planning. The two dominant methods, (apart from complete response to social demand) are manpower forecasting and the use of rate of returns analysis. Linear programming models have been developed from the latter.²⁸

Rate of returns calculations, subject to the problems previously elaborated, cannot provide more than an ex post facto analysis of past expenditure patterns. Inequality between rates of return indicates the necessary direction of reallocation of expenditure but not the magnitude of change to equalize rates of return as no account of future growth is involved. Consideration is given to the rate of return

rather than to the size of outlay necessary to achieve the return, thus patterns of proposed action are not equated with budget feasibility. This does occur in linear programming which attempts to identify an efficient pattern of resource allocation. The maximand is growth of national income measured by additions to discounted life earning attributable to additional years of education, (as in rate of returns analysis). Constraints such as total expenditure, or population of school age act as boundaries. Other limitations may be endogenous to the model, e.g. number of teachers, number of buildings. Demand for the outputs of the education system is exogenous. The model measures the most efficient method of meeting these demands; possible alternatives take the form of linear equations.

Manpower forecasting is primarily oriented at identifying shortages. In the estimation of the size of future demand for specific skills current surpluses are not identified but built into the data of forecasts, (except (i) below). The main techniques of manpower forecasting are,

- i) survey of employers estimation of future needs,
- ii) international comparison
- iii) methods which estimate increases necessary to meet particular growth targets, national and sectoral.

The latter is the most common but many problems are involved. Sectoral composition of output must be estimated, changes in labour productivity should be estimated, and the required occupational composition of each sector must be determined and translated into educational attainment.

These planning methods imply quite different perceptions of the functioning of the labour market. Manpower forecasting does not use prices as a guide to the productivity of existing stocks of manpower; it does not see the working of market mechanisms as providing the best possible use of resources. Rate of return analysis and linear programming

view the labour market as functioning "perfectly", or approximating to this, while human capital production does not function perfectly. This means that the labour market pays labour, and substitutes between types of labour, according to marginal productivity. The best possible use is made of existing labour. However, manpower is not necessarily produced at the cheapest possible cost. Linear programming tests all possible combinations of manpower for greatest contribution to growth, assuming a reasonably high degree of elasticity of demand for, and substitutability between, different types of manpower by educational level. Bowles²⁹ defends assumptions of substitutability in two ways. He believes that education not only provides skills but is equally important in the production of attitudes and modes of behaviour compatible with subsequent employment, e.g. acceptance of routine, authority etc. Differential qualifications serve to stratify students and thereby fit them into the division of labour. This is an important aspect of education but does not itself disprove the necessity of also producing specialised skills. Bowles, however, also believes that economic growth does not depend on any particular technological needs. This view is based on the mistaken notion that developing countries, following imperatives of comparative advantage, specialise in producing labour intensive goods. Thus one may question the existence of almost total substitutability, while not ignoring the possibility of some substitution as have some manpower planners.

Blaug³⁰ suggests that the two major techniques presented here can be combined in use. Results may be compared and divergences explained by the assumptions of each theory, and from this body of knowledge a path of action can be decided. The level of abstraction of much economic analysis when involved in the construction of explanatory models necessitates the acceptance of certain assumptions. But if these are taken into consideration with the results of plans it would

seem that planning can produce results which the aggregation of private action cannot.

Economic analysis can suggest the most economically 'rational' policy, but for political reasons this may not be the desired outcome. The failure of some planning does not arise from faulty formulations in economic analysis although this may be a problem. An apparent dichotomy has arisen between planning for economic efficiency and a political response to social demand which excludes the consideration of economic imperatives. This arises from the way in which planners view their role and from the nature of the task politicians ask them to perform. The dominant ideology among planners sees their role, not in influencing the setting of goals, but in providing the technically best solution for given goals.³¹ But clear goals may not be set by politicians who are unwilling to acknowledge the existence of constraints produced by the power of social groups whose influence is not acceptable in the public arena. As will be shown to have occurred in Mexico, planners may strive towards goals, e.g. of economic efficiency, the practical implications of which will have little or no political viability. Plans fail for this reason and not only due to the techniques involved. But it would be possible to successfully plan towards an outcome which is not wholly based on economic efficiency if the political nature of both ends and means could be accepted.

It appears that higher education policies have not been directly oriented towards economic efficiency but also directed to meeting political demands. The former has been shown to be a possible path of action which has not been pursued. The discipline of politics must combine with that of economics in explaining the expansion of higher education. But before promoting politics in this way one must ask to what extent existing sociological analysis can be utilised in this enterprise.

As was noted in the discussion of substitutability, an important function of education is seen as being the production of attitudes and modes of behaviour compatible with subsequent employment, and not only the training of skilled manpower. This is an area, the value of which the economist has no means of measuring. Is it a function which necessitated the expansion of higher education?

Bowles talks of the role of education as the assignment of individuals to particular positions in the division of labour and the production of the authority relations in work.³² Stratification in education in terms of different paper qualifications is compatible with the stratification of jobs within the division of labour. Education also inculcates attitudes necessary to production, e.g. acceptance of routine and discipline. Althusser also notes the double function of education i.e. in the production of skills and of attitudes, and views education as the most important "ideological state apparatus", more important than the political in the production of consent.³³ For Althusser, education reproduces the conditions of production. This has two aspects, reproduction of the forces of production and reproduction of the relations of production. The former concerns the production of physical and human capital; here can be located the teaching of skills and development of human abilities necessary to current technological processes of production. But it is also important to examine the reproduction of the relations of production,

Reproduction of labour power requires not only a reproduction of its skills, but also, at the same time a reproduction of its submission to the rules of the established order, i.e. a reproduction of submission to the ruling ideology for the workers, and a reproduction of the ability to manipulate the ruling ideology correctly for the agents of exploitation and repression, so that they, too, will provide for the domination of the ruling class "in words". In other words the school teaches "know-how", but in forms which ensure subjection to the ruling ideology or the mastery of its "practice".

All the agents of production, exploitation and repression, not to speak of the "professionals of ideology" (Marx), must in one way or another be "steeped" in this ideology to perform their tasks "conscientiously". 34

But whether one accepts such an account of the inculcation of modes of behaviour or whether one prefers the more traditional perspective of Durkheim,

It is through the practice of school discipline that we inculcate the spirit of discipline in the child.....
It is by respecting the school rules that the child learns to respect rules in general. 35

it is difficult to see how the function of socialization demands an expansion of higher education.

In relation to the preparation of individuals for particular jobs it is true that higher education increasingly tends to sift and stratify students as the number of higher education institutions grows. In the United States the value of a degree varies according to whether it is from an 'Ivy League' college, a State university or a State college. Stratification has been furthered by the expansion of junior colleges offering shorter courses. But the increasing occurrence of stratification within higher education is an effect and not a cause of the expansion of higher education.

With regard to the production of attitudes compatible with future employment evidence is somewhat contradictory. Higher education would not for most part seem to encourage acceptance of routine and discipline. However, its tendency to produce a critical attitude towards society has probably been somewhat overestimated. Many radical movements flourished in the late 1960's in the developed and developing world. Bowles' comments on the radical consciousness of many students, on their concern to find an interesting job rather than high financial reward originate from examination of the late 1960's and early 1970's.³⁶
For various, not entirely explicable reasons, but including the effects

of economic recession and in some cases suppression of student movements, student radicalism has since declined. Institutions of higher education cannot alone encourage a critical attitude. The social and political climate within universities is fundamentally affected by the wider social and political context in which they exist. Methods of teaching may promote independent thought and self disciplined work, but the parameters within which critical activity occurs are continually changing. Nevertheless, if the critical function of higher education has been overestimated it would still seem difficult to maintain that the content and organisation of higher education have significantly promoted the production of consent. It does not seem that higher education has been expanded to extend the socialization function of education. Such an interpretation would in any circumstances be questionable, for it rests on a view of politicians and administrators consciously evaluating the socialization functions of education.

But although content of higher education may not secure a greater level of consent, increased availability of higher education may do so, although this also is not necessarily a conscious end of expansion. Government policies which expand the education system of their countries may represent a pursual of a generally accepted ideal such as open access, not questioned by government or most of the population because it is seen as an integral requirement of an acceptable social and political system. An 'unplanned' effect of the provision of education will be the reaffirmation of the legitimacy of the political system and the government concerned. However, it is also possible that education is provided with the conscious aim of gaining support or allaying discontent. This dual political aspect of education policy has not received sufficient attention.

Footnotes

1. O.E.C.D., Towards Mass Higher Education: Issues and Dilemmas
O.E.C.D., Paris, 1974, p.111.
2. Burnett, Jacquetta Hill, "Recent Social Science Research Appraisals of Latin American Education" in Latin American Research Review, Vol.3, 1613, March 1968, pp.11-23.
3. See for example, Bowles, S. and Gintis, H., Schooling in Capitalist America, Routledge and Kegan Paul, London, 1976, and Levitas, M., Marxist Perspectives on the Sociology of Education, Routledge and Kegan Paul, London, 1974.
4. Edwards, E.O. and Todaro, M.P., "Education and Employment in Developing Countries", in Education and Development Reconsidered. The Bellagio Conference Papers, Ford Foundation and Rockefeller Foundation, edit. F. Champion Ward, Praeger, New York, 1974. p.3.
5. Williams, R., "Base and Superstructure in Marxist Cultural Theory" in New Left Review, No. 82, December, 1973. p.8.
6. Benveniste, G., The Politics of Expertise, The Glendessary Press, Berkeley, and Croom Helm, London, 1972. p.41.
7. Dore, R., The Diploma Disease, Unwin Education Books, George, Allen and Unwin Ltd., London, 1976. p.1.
8. Bowman, M.J., "The Human Investment Revolution in Economic Thought", Sociology of Education, Vol. 39, 1966. p.111.
9. The statistics presented in this chapter are taken from United Nations, U.N.E.S.C.O., and O.E.C.D. data.
10. Blaug, M., An Introduction to the Economics of Education, Allen Lane, The Penguin Press, 1970. p.209.
11. For summaries of such studies see Blaug, op.cit., pp. 32-46, Bowles, S., Planning Educational Systems for Economic Growth, Harvard University Press, Cambridge, Mass., 1969. pp.25-28. Blaug and Bowles both give the percentage of 60% for that proportion of additional earnings, which correlating with more education, can be seen as a result of the effect of schooling.
12. Where excess demand continues, earnings are less than the marginal product of labour and so any calculation of the social rate of return is underestimated. Continued excess supply brings about more unemployment or underemployment accompanied by falling wages.
13. Berg, I., Education and Jobs. The Great Training Robbery, Penguin Books, 1970.
14. Berg's methodology is similar to that of earlier studies in the United States, by e.g. R.S. Eckaus, "Economic Criteria for Education and Training", Review of Economics and Statistics, May, 1964. pp. 81-90.

15. Berg, op.cit. p.72.
16. For a review of Berg's study see W. Norton Grub, Harvard Education Review, Vol. 41, November, 1971. pp. 580-582.
17. Blaug, M., Layard, P.R.G., Woodhall, M., The Causes of Graduate Unemployment in India, Allen Lane, The Penguin Press, 1969. p.2.
18. I.L.O. Towards Full Employment. A Programme for Colombia prepared by an Inter Agency Team, organized by the International Labour Office, I.L.O., Geneva, 1970. p. 227.
19. Blaug, Layard, Woodhall, op.cit. p.38.
20. Ibid. p.37.
21. Dore, op.cit. pp.91-92.
22. Ibid. p.4 and p.5.
23. See for example, El Problema ocupacional en México, Grupo de Estudio del Problema del Empleo, Mexico City, 1976, mimeo, p.205.
24. Berg, op.cit. p.186.
25. I.L.O., op.cit. p.227.
26. O.E.C.D., op.cit., Part 2, p.82.
27. In relation to career aspirations of Latin American University students see Liebman, Walker and Glazer, Latin American University Students, Harvard U.P., Cambridge, Mass., 1972. pp.49-58.
28. Some examples and evaluations of different planning techniques can be found in the following:-
 - For general summaries, Blaug, M. op.cit., and Bowles, S., Planning Education Systems for Economic Growth, op.cit.
 - Rate of Return Analysis - Becker, G.S., Human Capital. A Theoretical and Empirical Analysis, With Special Reference to Education, Princeton Univ. Press, 1964. Blaug, Layard and Woodhall, op.cit., Carnoy, M., "Rates of Return to Schooling in Latin America", Journal of Human Resources, Summer, 1967.
 - Manpower Forecasting - for the method, Parnes, H., Forecasting Educational Needs for Economic and Social Development, The Mediterranean Project, O.E.C.D., Paris, 1967. For an evaluation, Hollister, R., A Technical Evaluation of the First Stage of the Mediterranean Project, O.E.C.D., Paris, 1966.
 - A simplified version of manpower forecasting exists in the use of 'Tinbergen Regressions', see Tinbergen, J. and Bos, H.C., "A Planning Model for the Educational Requirements of Economic Development", in Econometric Models of Education, O.E.C.D., Paris, 1965. The authors suggest the use of constant incremental labour output ratios (ILOR), between highly educated manpower and national income, and suggest the relation is one of unity. The method is used by Rado, E. and Jolly, A., "The Demand for Manpower: An East African Study", Journal Of Development Studies, April, 1965.

The model is subjected to a severe critique by Blaug, op.cit.

Linear Programming - Bowles, S. op.cit., Bowles lays out the linear programming approach and compares its functioning and assumptions with other models.

29. Bowles, S., Planning Educational Systems for Economic Growth, Harvard Economic Studies, Vol. 133, Harvard University Press, Cambridge, Mass., 1969. p.40.
30. Blaug, op.cit., pp.214-224.
31. Benveniste, G., Bureaucracy and National Planning. A Sociological Case Study in Mexico, Stanford University, Ph.D. thesis, 1968. p. 14, p.54.
32. Bowles, S., "Unequal Education and the Reproduction of the Social Division of Labour", from M. Carnoy ed. Schooling in a Corporate Society: the Political Economy of Education in America, David McKay, 1972.
33. Althusser, L. "Ideology and Ideological State Apparatuses". Notes Towards an Investigation, in Lenin and Philosophy and Other Essays, New Left Books, 1971. Reprinted in Education: Structure and Society Edit. Cosins, B., Penguin Books in association with Open University Press, The Open University, 1977. pp.242-280.
34. Ibid., pp.245-6.
35. Durkheim, E. from Moral Education, published in French, 1925, a section reprinted in Education: Structure and Society, op.cit. pp. 200-1.
36. Bowles, S., "Contradictions de L'Enseignement Supérieur", Les Temps Modernes, No. 301-2, August-September, 1971, Paris, pp.198-240.

HIGHER EDUCATION AND EMPLOYMENT IN MEXICO

It has been shown that economic benefits from investment in education are by no means guaranteed. But while education has always been viewed as serving multiple purposes, there has been a tendency to view all education as economically justifiable. It was suggested that some unproductive investment can be located in education provided for limited sections of the community, i.e. higher education. A minority of the relevant age group, (except in the U.S.A.) pursues sometimes economically unproductive higher education while the majority may not finish secondary, and often not even primary, education. Restructuring the distribution of education would not of course necessarily create employment, but the possibility of an alternative exists, of a more equal provision of education which would not deplete human resource stocks below necessary levels.

If one is to understand why such an alternative is not pursued, one must examine the political context of policy making in education. But first it is necessary to consider the economic productivity of education in more depth. In the previous chapter some tentative conclusions were drawn on the basis of wide ranging material but without the detailed study of a particular case. This chapter will examine the economic productivity of the higher education sector in Mexico and the extent to which human resource needs are met and/or exceeded. This will allow the consideration in subsequent chapters of, firstly, other factors that have in the past influenced policy making, and secondly, whether reform measures of 1970-76 were oriented to changing the relationship between supply and demand for highly qualified labour or whether other motivations were predominant.

The difficulty of establishing the contribution of education to growth was discussed in Chapter One. A review of all available evidence in the Mexican case is given below. The following techniques have been introduced and are used in relation to Mexico:-

- 1) the measurement of unemployment. This was linked in Chapter One to rate of return analysis. Here it will be used as a crude indicator of unutilised resources.
- 2) the comparison of stocks of manpower with real needs by,
 - a) employers' estimations, and
 - b) comparison of educational attainment and job held.
- 3) the estimation of rates of return.

The evidence

Published census material does not provide information on unemployment cross referenced with educational level attained. However, some special tables, part of the 1970 census but unpublished, used by a government study group on employment provide such disaggregated data.¹ The tabulaciones especiales only give data for towns (localidades) with a population in 1970 of over 50,000; these numbered seventy.

Before referring specifically to the highly educated it should be noted that unemployment in these towns was higher than the national average. In 1970 total unemployment in Mexico averaged 3.74%, having risen from 1.62% in 1960. In the seventy towns with a population over 50,000 the average rate was 4.47%. These localities contain 42.05% of the economically active population (P.E.A. - población económicamente activa). This equals 5,447,809 of a total 12,955,057. These towns do, however, contain a much higher proportion of those with some higher education, 85.21%. In examining the largest seventy towns one can analyse the position of a very substantial proportion of the highly educated.

Table 2.1 Unemployment Rates in Towns with a Population of over 50,000 in 1970.

Overall Unemployment Rate	4.47
Unemployment amongst those with higher education	2.57
" " excluding Federal District	2.27
" " in the Federal District	2.79

Source: Tabulaciones Especiales: Cuadros procesados por la Presidencia, 1970 Population Census (unpublished). Table 22(a). Departamento General de Estadística, Sec. de Industria y Comercio, Mexico City.

Table 2.2 Proportion of the Population with Some Higher Education, 1970.

Proportion of Population with Some Higher Education				
All Mexico	In 70 towns with population over 50,000	All Mexico minus 70 largest towns	70 largest towns minus Federal District	Federal District
3.03	6.13	0.77	4.35	8.70

Source: Elaborated from Tabulaciones Especiales of 1970 Census (unpublished), Tables No. 6 and No. 22(b).

Nationally those with some higher education form 3.03% of the P.E.A. In the seventy towns represented in the special tables the comparable figure is 6.13%, although the Federal District, because of its size, has a great effect on this figure, as can be seen in Table 2.2. Average unemployment of those with some higher education was 2.27% in 1970. While the Federal District contains a large proportion of those with higher education, the overall unemployment rate is not greatly affected by excluding the D.F. as "professional unemployment"² is little higher here than outside the D.F. Unemployment rates vary between 0.79% (Irapuato) and 3.98% (Colima) with the exception of Zacatecas which has a rate of 13.17%.³

Such figures showing average unemployment of those with some higher education at 2.57%, might not appear to be a very real cause for concern, economically or socially. However, one is here examining the total workforce of all ages. If the position of those entering the workforce is examined the picture is very different. This is an important perspective in a country where the population is doubling every twenty years and where the total number in higher education in 1970 was equivalent to approximately 60% of the P.E.A. with some higher education.⁴ (This may involve some overlap as some students work.) With annual increments to the workforce forming such a significant proportion of the P.E.A., rates of absorption into employment of those leaving education provide an important indicator of trends in employment. Census data does not cross reference unemployment, education and age, and so cannot be used here. However, a model for the estimation of absorption rates has been constructed by a private research institute.⁵ The rate of absorption in the period 1960-70 for those with thirteen or more years of education has been estimated at 73%, 84% for men and 58% for women. All those not entering employment represent non-utilisation of resources.

At any time 16% of male students did not enter employment upon termination of their studies. The figure for female absorption into employment should not be taken as signifying that 42% do not wish to work. For, while this may be true of a certain percentage, it may be harder for those wishing to work to do so. Women tend to be more heavily concentrated in those courses associated with difficulty in finding employment, i.e. in arts, social sciences, and some professions, rather than in engineering and applied science. In 1972, of total enrolment in the Universidad Nacional Autónoma de México (U.N.A.M.), women represented, e.g. 67% of students in History, 63% in Psychology, and 45% in Sociology but only 1% in Mechanical Engineering, 10% in Chemical Engineering and 11% in Civil Engineering. There are, however, some vocationally oriented courses in which women predominate, e.g. Social Work and Pharmaceutical Biology.⁶ There may also be prejudice against employing women and some evidence exists of discrimination against female employees.⁷ But as the rates of absorption show, a large proportion of both men and women cannot find employment on leaving higher education.

In an attempt to gain a better picture of the employment situation facing graduates, interviews were conducted in some employment agencies (bolsas de trabajo) in the Federal District.⁸ The two biggest higher education institutions in the Federal District, and nationally, are U.N.A.M. and the Instituto Politécnico Nacional (I.P.N.) It was found that in the Politécnico a central service exists alongside employment services within each department, although the former was created to take over from the latter. Therefore, no overall impression could be gained. In U.N.A.M.⁹ it was stated that demand existed for students of short technical courses, for all forms of engineering (except civil engineering) and for students of business administration

and accountancy. Supply exceeded demand in medicine, law and social sciences, e.g. international relations and sociology. An interview with the head of the government service for professionals (Promoción Profesional) produced a similar picture. It was found easier to place technicians looking for employment than those at licenciatura level. The licenciatura is of first degree standard and usually requires five years study. Supply of graduates exceeded demand in nearly all of the most populated fields of study, i.e. medicine, dentistry, law, civil engineering, architecture, philosophy and letters, psychology, sociology and political science. The only notable demand was for students of business administration. It may be that the problem appears at its worst in this type of organisation. It was commented that it is a common occurrence in Mexico for graduates to find employment through personal connections and that the graduates using the government service probably did not have such connections, which are usually linked to a certain social status. In contrast to the experience of the government service, the administrator of the employment bureau of the Universidad Iberoamericana, a private institution, foresaw no problems for the students who were registered with this employment locating service.

The government employment service notes that those looking for work are increasingly found to be unemployed, rather than seeking alternative employment, owing to the reduction in generation of new employment.¹⁰ Problems in encountering employment do exist for many, if not the students of the most prestigious and expensive institutions.

Two important points are made by a report of the department Promoción Profesional. These are the lack of practical experience sought by employers and the inadequate quality of much professional study.

Demand for workers, already reduced by a low capacity for absorption of labour, is further affected by limitations in supply; levels of preparation and qualification for specific jobs are generally inadequate, thereby provoking a loss of much potential employment. 11

Lajous Vargas notes that graduates are inadequately qualified for the highest posts and that postgraduate courses should be strengthened.¹² Resiada, referring to the position of economists, says that the master's degree may be necessary to make up for deficiencies at licenciatura level.¹³ Problems do exist in maintaining the quality, or of reaching an adequate level of quality in undergraduate study. However, the increase in postgraduate study is also a response to a different phenomenon, the devaluation of the licenciatura as a qualification as more people reach this standard. Individuals may pursue further study to improve their position in a competitive labour market. For the licenciatura does not lead to the same type of employment as in the past. With increase in employment opportunities unequal to the increasing number of graduates,

Employers have a magnificent opportunity to lift the educational requirements which workers must fulfil to undertake occupations for which previously lower scholastic standards were established. 14

It has been shown that unemployment of those with some higher education exists. Census figures were not very high but examination of the position of those entering the labour market produced a different picture. It should also be noted that comments from the various employment agencies refer to students who have completed their university courses. Qualified graduates are unemployed in significant numbers. But it is necessary to go further and examine the type of employment performed by those with higher education. The last quotation noted a change in employment patterns.

It was shown in Chapter One that an excess of highly educated individuals in relation to employment demanding highly qualified personnel must result in unemployment, underemployment or overstaffing. But in nearly all cases it is very difficult to measure the degree of underemployment or overstaffing present in a labour market. Three types of underemployment (subempleo) have been noted in an academic journal and these definitions have been subsumed into official use.¹⁵

They are,

- 1) work for less hours than the individual would wish to work,
- 2) work which provides less than the minimum wage (salario minimo)
- 3) work which does not utilise the skills of the worker.

The first may be of universal applicability but is specifically relevant in the rural context. The second is also important in rural areas but may also be relevant particularly to service sector employment in the urban context. The third category, often referred to as educated underemployment, applies for example to individuals who have pursued higher education but do not need such qualifications for the performance of their job. This would be a common form, but not the only type of non-utilization of skills and abilities.

The first and second categories are measurable by objective and easily accessible data, i.e. on hours worked, the desire to find more work, and on salary, e.g. from census data. The third, however, if it is not to rest on subjective evaluation, requires the definition of qualifications necessary to specific jobs, a process which, as shown in Chapter One, has only been carried out in the U.S.A. While 1970 Mexican census data allows some estimation of "educated underemployment" such calculations have on the whole been eschewed by Mexican demographers. One exception is the above mentioned report of Promoción Profesional. Overstaffing cannot be measured without examination of particular work situations, by study of individual cases. Individual productivity

would be lower than potential. But if the individual is employed at a level compatible with his qualifications and full time, underemployment will not be evident, although his real situation is akin to that of the rural worker who could work more hours. Overstaffing most easily exists in organisations not subject to constraints of profitability, e.g. federal and state bureaucracies.

Evidence of underemployment will be looked for here by examining census material and existing surveys and studies. The Mexican government employment service, (Servicio Publico de Empleo) comments that,

A great number of professionals dedicate themselves to the performance of activities in posts lower than those corresponding to their preparation because of the lack of employment opportunities and the bad utilisation by private and public businesses of the resources they have; this is increasing the large group of underemployed, underemployment already being one of the most critical of the country's problems.

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However, it has been suggested that in some cases professionals are not displacing individuals qualified for sub-professional posts but that they are making up a lack of technical, or sub professional staff. Davis said in 1967 that "All upper level and some intermediate technical posts are now filled by professionals."¹⁷ He quoted a now rather out of date study by the Banco de México of 1956.¹⁸ They found from a sample survey, considering three categories, i.e.,

- A - graduates or professionals
- B - those with upper secondary level qualifications or some post secondary training, (sub-professionals),
- C - those with lower secondary level qualifications (practical technicians),

that there were

6 professionals to every sub professional (A:B = 6:1),

1 professional to every 1.3 practical technicians

(A:C = 1:1.3),

and the ratio of professionals to all other technical staff was A:B+C = 1:1.5.

Similar figures are given by a government study on employment which refers to a Consejo Nacional Técnico de la Educación (C.N.T.E.) study, based on 1960 data.¹⁹ It was stated in 1976 that "It can be considered that the situation has improved little since this date."²⁰

Indeed, the distribution of enrolments between various types of courses has not changed sufficiently to alter this pattern, which, as we have seen, has been recognised since 1956. A substantial number of the technical work force performing middle level functions has professional training which could have been replaced by shorter courses saving the cost of two or three years education. As Lajous Vargas commented in 1967,

It can be said that the universities have adapted themselves to the necessities of development: principally they have produced highly qualified technicians of intermediate level. But the cost of compensating for this lack (of technicians) has been a large educational effort and a useless investment, which in the country's position is an unjustifiable loss. 21

Or, as Davis said in 1967,

Mexican industry might go along well enough for a while with a middle level technical force made up of inferior professionals and superior workers. The question is whether the present system provides the cheapest and most efficient way to get the job done. 22

The underemployment of graduate scientists and engineers at technician level appears to cover a real gap. But the employment position of, for example, law, medicine, humanities and social science graduates is less clear. If supply is greater than demand in any of these areas it may be the case that the underemployment of such personnel in turn displaces other sufficiently qualified individuals. Neither the production of engineers or social scientists operates in the most economically rational way.

Census data does allow a more general and more contemporary comparison of the qualifications of the workforce and positions held.²³ But it does not necessarily demonstrate underemployment. This is because, as with data on unemployment, the categorisation of educational levels does not differentiate between commencement of and completion of cycles of education. Educational level attained is measured by the last cycle attended. The top category is undergraduate and postgraduate education, spanning from perhaps only one year of higher education to completed postgraduate study. If the course was not completed the individual cannot be considered competent to take up a professional or higher administrative post. Thus the data does not allow the estimation of underemployment, but does allow the estimation of the degree of productivity in higher education. By examining the numbers who have pursued some higher education but are in occupations compatible with lower levels of education one can identify whether there has been investment in unused training. Of course, two years higher education may make the individual a more efficient worker, but it may on the other hand make him or her more dissatisfied. It is difficult to obtain adequate data in this area. But from evidence available it has been, and will be seen, that it would be dangerous to assume that all increments in education are beneficial. This is stated in reference to the social returns to education in terms of contribution to growth and development. Other forms of social return, not directly related to the economy, do of course exist.

Table 2.3 shows the possible non-utilisation of higher studies. The proportion of those with some higher education not in the top two census occupational categories is shown.²⁴ As with census unemployment data the picture given is for all age groups. It is likely that, as for unemployment, lower age groups are most severely affected. Data on type of employment and educational attainment was compiled by economic

Table 2.3 Proportion of the Economically Active Population (PEA) with some Higher Education not in Census Occupational Categories 1 or 2, a) in Towns with a PEA over 50,000, b) in Selected Economic Sectors, in 1970.

2.3a	A Total PEA	B No. of 1 and 2 category occupations	B as a % of A	C No. with some higher education	No. of C in B	% of C not in B	% of C unemployed
All Mexico	12,955,057	1,053,037	8.13	392,101	270,534	31.21	-
Ciudad Juarez	103,998	10,238	9.84	2,168	1,473	32.06	1.85
Federal District	2,230,986	365,119	16.37	194,150	138,003	28.92	2.79
Guadalajara	361,165	46,217	12.80	19,573	13,438	31.44	2.57
León	98,161	7,842	7.99	2,059	1,418	31.13	2.87
Monterrey	258,772	35,806	13.84	16,106	12,105	24.98	1.92
NaucaIpán	110,719	18,449	16.66	11,789	9,373	20.49	2.47
Netzahualcoyotl	143,828	5,986	4.16	935	325	65.24	3.32
Puebla	119,016	17,114	14.38	7,538	5,311	29.54	2.53
Tlanepantla	95,779	11,170	11.66	5,663	3,851	32.00	2.53
Veracruz	64,604	8,393	12.99	3,049	2,068	32.17	2.13

Source: Tabulaciones Especiales of 1970 census (unpublished), Table 6

Table 2.3b.

Proportion of the PEA with some Higher Education not in Census Occupational Categories 1 or 2, by Selected Economic Sectors in 1970.

Economic Sector	A Total PEA	B No. of 1 and 2 category occupations	B as a % of A	C No. with some higher education	No. of C in B	% of C in B	% of C not in B	% of C unemployed
Agriculture, Cattle Forestry, Fishing and Hunting	5,103,519	42,816	0.84	17,508	3,010	17.19	82.81	-
Transformation Industries	2,169,074	184,293	8.50	79,392	54,383	64.72	35.28	-
Federal Government	305,281	49,283	16.14	32,601	20,775	63.73	36.27	-
State Government	50,640	8,473	16.73	4,870	3,131	64.29	35.71	-
Municipal Government	41,649	4,394	10.55	1,362	775	56.90	43.10	-

sector and for towns with a population of over 50,000. The aggregation of the former provides a national picture.

31.21% of those with some higher education are not employed in categories 1 and 2. In the ten biggest towns this figure varies between 20.49% and 32.17%, except for Netzahualcoyotl which registers 65.24%. As previously noted, the great majority of those with some higher education work in urban centres. 82.81% of those with higher education in agriculture and associated activities do not have category 1 and 2 jobs but this represents only 14,000 people, as professional and directive occupations form only 0.84% of all occupations in this sector. In manufacturing or processing industries 35.28% of those with some higher education are not in categories 1 or 2. Such occupations form 8.50% of the P.E.A. These proportions are similar to the overall national average. Federal and state governments have an above average proportion of category 1 and 2 jobs but a similar proportion of employees with some higher education are found outside these top categories.

The third occupational group, 'Administrative Personnel and those with Associated Occupations', is defined as including, for example, typists, messengers, cashiers and employees involved in accounting or using adding machines. Occasionally, such personnel may have employees working under their supervision, but they do not direct work. It would not seem that higher education is necessary to such work although certain skills are necessary. It should be possible to impart such skills at the upper secondary (medio-superior) level. However, if such education is not available or if employers prefer to employ the highly educated, individuals are encouraged to pursue higher education. The employer is not involved in the cost of more education and the individual may find that the private rate of return to more education is beneficial. Educational provision then benefits certain groups, rather

than providing a useful social return. This is one indicator that subsidised education continues for political rather than 'economic' reasons.

It can be pointed out that so-called educated unemployment and underemployment do not appear to most government administrators as a very serious problem. In interviews with the personnel of the Servicio Público de Empleo (Public Employment Service), it was noted that past and current administrators of the professional service were aware of the wasted resources, in skill and expenditure, and foresaw such problems growing. However, high level government personnel tended to view educated unemployment or underemployment numerically, as an insignificant proportion of total unemployment and underemployment.²⁵ The quantitative picture is as follows. It has been estimated that of the P.E.A. in 1970, of just under 13 million, between 37% and 45% were underemployed. This represents an equivalent unemployment of 3 million people, or 23% of the P.E.A. 60% of those underemployed were in the agricultural sector, 14.4% in services, 10% in processing industries, 6.4% in commerce and the rest insufficiently specified.²⁶ Underemployment is greatest outside towns, with the exception of the Federal District. But urban underemployment has become a much more serious problem in the last decade because of migration to the cities. Table 2.4 shows the growing underemployment in non-agricultural sectors.

As with unemployment of the highly educated total figures present an inadequate picture for it is the youngest groups who are most affected. Table 2.5 shows how unemployment rates for the under 25's are much worse than for older age groups.

It was estimated that if employment were to remain at the 1970 level, 6.8 million new jobs would be needed between 1970 and 1980, and a further 8.4 million between 1980 and 1990. Using 1960-69 trends it was projected that the P.E.A. would increase in 1970-76 by 3.9 million

Table 2.4 Estimations of Underemployment Coefficients in
Non-Agrarian Sectors.

Economic Sector	1950	1960	1970a	1970b
Extractive industries	0.21	0.25	-	0.33
Manufacturing industry	0.32	0.43	0.37	0.36
Construction industry	0.32	0.48	0.35	0.36
Electrical industry	0.16	0.19	-	-
Transport	0.14	0.26	-	0.23
Commerce	-	-	0.33	0.44
Services	-	-	0.41	0.48

Source:

Elaborated from R. Medellín and C. Muñoz Izquierdo, "Incremento de la población, capacitación y empleo en México, 1960-1970", Revista del Centro de Estudios Educativos, Vol. IV, No.3, 1974, p.123.

The statistics present underemployment calculated in terms of hours worked and pay, rather than use of skills. 1970 (a) is based on amount of employment during the year and 1970 (b) on the proportion of the PEA earning less than the minimum wage.

Table 2.5 Average Unemployment Rate by Age Group and Sex, for the
Period January to June 1975, for the Federal District,
Monterrey, and Guadalajara.

City	% Unemployed Total	Age 12-19	Age 20-24	Age 25-34	Age 35-44	Age 45-54	Age 55 +
Federal District	7.35	19.1	9.95	4.45	2.65	2.9	2.8
men	6.1	19.4	9.65	2.85	1.75	2.35	3.25
women	9.55	18.6	10.4	7.5	4.65	4.95	1.7
Monterrey (metropolitan area)	7.35	21.35	9.1	2.35	2.75	1.2	2.9
men	6.0	18.95	11.1	1.8	2.2	1.5	2.2
women	11.2	24.8	5.6	4.2	7.15	-	9.1
Guadalajara (metropolitan area)	5.1	9.35	6.55	3.8	2.75	3.5	2.55
men	4.75	8.45	5.9	3.55	3.05	2.75	3.5
women	5.85	10.5	7.3	4.3	1.8	2.8	-

Source: Encuesta Nacional de Hogares, Vol. III, Tables 7, 11 and 12.
Dirección General de Estadística, Sec. de Industria y Comercio,
Mexico City, 1976.

while only 2.1 million would find productive work.²⁷ Such a trend seems to be corroborated by available data. Unemployment figures for the Federal District show unemployment at 7.35% between January and June 1975,²⁸ as compared with the 1970 census figure of 4.89%. Thus the trend of increasing unemployment between 1960 and 1970 continued.

Unemployment has been increasing since 1960; it appears that the most severely affected are the young. However, average schooling of the P.E.A. increased between 1960 and 1970, as shown in Table 2.6. It would seem difficult to show that higher educational levels are either necessary to, or a cause of economic growth if large sections of young people are unemployed or underemployed. Rates of absorption of school leavers into employment do increase with more schooling but do not rise above 73% (see Table 2.7).

It is, of course, possible that the labour market requires individuals with particular qualifications that are not available. In the previous examination of the labour market for professionals there were found to be problems due to lack of experience and the poor quality of some students. At the sub-professional level technicians jobs were shown to be filled by professionals or skilled workmen, (practical technicians) because of a lack of trained technicians. Nevertheless, while improvements in educational content might produce better employees possibly at less cost, it seems unlikely that a different education would of itself lead to the absorption into employment of all school leavers. But, in order to better understand the relationship between employment and education it is necessary to look at Mexican development strategy, to find how employment is affected and what educational demands are made. With a subsequent analysis of the structure of higher education it may then be possible to discover to what extent unemployment and underemployment of the highly educated is a result of i) quantitative problems, in that supply exceeds demand, or ii) qualitative problems, in that supply

Table 2.6 Changes in Percentage Composition of the PEA by Years of Schooling, 1960-1970, and Growth Rates of Different Categories.

Years of Schooling of PEA	1960	1970	Years of Schooling of PEA	Growth Rate
0	36.00	27.14	0	4.9
1 - 3	31.86	30.32		
4 - 5	11.39	11.53	1 - 5	5.1
6	12.72	12.79		
7 - 8	1.61	2.99		
9	2.34	2.56	6 - 9	6.3
10 - 12	2.19	4.17	10 - 12	9.5
13 years +	1.89	3.20	13 y. +	10.0
Total	100.00	100.00		
Total PEA	7,609,000	12,954,000		

Source: C. Muñoz Izquierdo, "Expansión escolar, mercado de trabajo y distribución del ingreso en México", Revista del Centro de Estudios Educativos, Vol. IV, No.1, Mexico City, p. 12 and p.18.

Table 2.7 Absorption of School Leavers into Employment, 1960-1970

Years of Schooling	Total Rate of Absorption	Men	Women
1 - 5	36	57	14
6 - 9	43	55	29
10 - 12	72	68	78
13 years +	73	84	58
Total	55	77	27

Source: C. Muñoz Izquierdo, "Expansión escolar, mercado de trabajo y distribución del ingreso en México", Revista del Centro de Estudios Educativos, Vol. IV, No.1, 1974, Mexico City, p.13

does not match demand in content and quality. This will provide the necessary background to interpretation and analysis of education policy in the period 1970-76.

Economic Strategy and Employment Opportunities

Post-revolutionary Mexican governments have never produced integral development plans. A certain development strategy can be shown to have existed but this has not involved the declaration of particular goals in, for example, G.N.P. growth rates, levels of industrial expansion, or the specification of paths of action. Development plans, had they existed, might have led to the consideration, within if not without government, of the implications of development strategy for employment. Instead the consequences of the economic strategy for employment would seem to have been ignored or deemed unimportant, perhaps not an unusual occurrence in developing countries.²⁹

Unemployment and underemployment not only represent the non-utilisation of available resources, but effects on personal income levels have constrained demand in the internal market. The expansion of the internal market has now been recognised as necessary if the economy is not to stagnate. Nor, moreover, is increasing unemployment and underemployment conducive to the maintenance of support for the government. The 1970 census showed that unemployment had more than doubled in the intercensal period, from 1.62% to 3.74%.

Economic policy has been totally oriented to the growth of the national product rather than to the redistribution of income or full employment. The development strategy adopted has had demonstrably adverse effects on income distribution as well as employment, but for three decades annual growth rates of over 6% have been achieved. Government policy has played a large role in encouraging industrial

development, both through economic policy and in the political sphere. Potential investors have been presented with a situation of low risk. The government has carried out important infrastructural works, energy prices have been kept low, the price of capital has been relatively low, the importation of machinery and equipment has been facilitated, as have been credits for the manufacturing sector, and domestic industry has been protected. There is also free convertability of currency. Furthermore, real increases in wages have been small, labour conflicts were few up to 1970; in general, there has existed social and political stability.

But such policies, particularly the low price of capital and protection of domestic industry, have not only encouraged industrial growth but have influenced the structural development of industry with noticeably adverse effects from the mid 1960's onwards. The low relative price of capital has favoured capital intensive production techniques. In addition, the low cost of machinery allows profitability to be achieved with below maximum utilisation. And if plants are only used for one turn, employment requirements must be less than for any alternative less capital intensive method. Also, while productivity per worker is obviously higher in the bigger capital intensive firms productivity of all factors is low for these firms depend on protection and a favourable fiscal policy. The nature of the existing system of granting permission for the importation of capital goods has encouraged businesses to import above short term needs. This affects the capital product ratio and therefore contributes to balance of payments problems.

However, the path pursued, for all its social and economic problems, was one which allowed effective participation in a competitive world market. Profitability and growth have of necessity been primary considerations. Employment levels and income distribution may warrant attention due to their effect on the internal market, but are only likely

to move to the top of the agenda when either satisfactory growth and productivity are being achieved, or when political pressures on government demands their consideration.

The use of capital intensive techniques may in part be a result of the fact that little research and development has been carried out in Mexico. But whether such a factor has any causal significance is debatable. One of the few countries in which some form of intermediate technology has been utilised is China where profit making and competitive motivations were not dominant.

Because economic policy has discriminated in favour of the use of capital, and protection has continued, i) industry is increasingly capital intensive, ii) only partial use is made of installed capacity, and iii) the beneficiaries are large firms which tend to have significant foreign holdings or belong to international groups. Given such an industrial structure, increased economic growth alone will not significantly improve employment possibilities. It has been estimated that if the rate of growth of the national product was 8% in the years following 1970 (involving such favourable conditions as export growth of 15% p.a., agricultural sector growth of 5% p.a., and investment at 24% of the national product), unemployment and underemployment would still tend to get worse.³⁰

Critics of the import substitution strategy have emerged from both ends of the political spectrum. The "left" see a new dependence characterised by the

domination of the most dynamic sectors of industry by foreign capital, a shift in the composition of imports towards intermediate products and capital goods, and an increased importance of financial payments in the form of dividends, royalties, and interest payments to M.N.C.s and debt servicing.

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"Right wing" critics feel that underdeveloped countries have neglected their comparative advantage. Protection has promoted inefficiency and

high cost production. A more "liberal" trade policy would introduce competition and greater efficiency, and it is believed, greater use of an abundant resource, labour. There is little international evidence of the current feasibility of the latter policy.

While this study aims to build up to an examination of policies of the period 1970-76, by stepping ahead a moment and examining the slightly changed economic strategy of 1970-76 it is possible to illustrate the dilemma in which the country lies if one aim is to increase employment opportunities and not just to increase growth. From about 1970 the Mexican government has promoted manufactured exports, in the belief that this would create more employment than import substitution, improve income distribution and therefore promote growth and wider based development.

Transnational enterprises produced between $1/3$ and $2/5$ of Mexican industrial output in 1970. This was unevenly distributed between industrial sectors. Exports grew most rapidly in sectors where foreign participation was high, and,

Not only are exports by foreign firms concentrated in the sectors in which multinational corporations have shown most interest in Mexico, but they are considerably more concentrated in these sectors than is total investment. 32

Foreign firms are concentrated in engineering industries which tend to be capital intensive rather than, for example, raw material processing and other labour intensive industries. Because of a lower employment coefficient, creation of employment by foreign firms, as a percentage of total employment creation, was less than their percentage share in manufactured exports in 1965-72.

To summarise, in the words of a government study group on employment,

Mexico is now facing grave problems of poverty, unemployment and underemployment of human resources, as a result, among other reasons, of the paradoxical result of the achievements of the last forty years in industrialisation, public health and education. 33

Import substitution in a framework of protection and a low relative price of capital could not create sufficient employment to absorb increases in the labour force. Capital intensive industry with strong foreign participation became the fastest growing area, both in production for the domestic and export markets. Promotion of exports cannot reduce the problem of unemployment and underemployment to any great degree. These are structural problems which will not be cured by economic growth alone.

Returns to Investment in Education

Unemployment and underemployment have increased at the same time as average educational attainment of the population has increased. As indicated, it has been common to view education as an investment, as the improvement of human capital for the productive process. But how plausible is such an attitude when a large proportion of young people ending education and entering the labour force are faced by unemployment and underemployment? As all levels of education are affected (although some more than others), it would not seem that the distribution of resources between different levels of education can be entirely explained by the expected economic return to investment. One method of evaluating the investment value of different levels of education explored in Chapter One, was the estimation of the social rate of return, although it was shown that methodological problems exist in the measurement of monetary returns. One of the few studies of this type that refers to education in developing or underdeveloped countries was carried out in Mexico by Carnoy. However, this work dates back to 1963.³⁴ It has been seen that unemployment has since risen and it will be shown how education enrolments have also increased since this date. Thus Carnoy's results may be out of date but are at

least interesting for the comparison between returns to different levels of education in this earlier period of both lower enrolments and lower unemployment. Carnoy's findings are shown in Table 2.8.

Carnoy's data refer to years of schooling rather than participation at certain levels, e.g. primary or secondary, although in his text he equates six years education with termination of primary level and sixteen years with termination of a university first degree. This may be slightly inaccurate given that many school and university students are required to repeat years. However, Carnoy's interpretation will be adhered to. Nine years education is taken as equivalent to termination of lower secondary level and eleven years to completion of upper secondary school. Carnoy also provides adjusted figures in which the effects of environmental factors are accounted for.

Rates of return have been ranked for each group of results (unadjusted and adjusted). It can be seen that the highest rates of return apply to categories which include termination of primary school and completion of university education. However, the completion of both secondary levels (9-11 years education) ranked fifth in all cases. The poorest investment in "A" (unadjusted) and "B" (partly adjusted) is education up to one or two years of university level; in "C" (further adjusted) it is incomplete primary education.

Carnoy's findings indicate that the best investment would be to encourage individuals to complete primary and higher education. However, such indicators only apply to the "next" individual and not to large shifts in distribution. Uncompleted cycles of education provided the worst return to education, and in the case of higher education this involves the provision of expensive education to a narrow social group.

It has to be noted that more secondary education for those who have commenced this cycle but who do not intend to complete higher education does not appear to be a good social investment. More recent data do not

Table 2.8 The Social Rate of Return to Years of Schooling

Years of Schooling	'A'		'B'		'C'	
		Rank		Rank		Rank
2 - 4	17.3	4	12.8	4	4.6	6
5 - 6	37.5	1	34.5	1	26.8	2
7 - 8	23.4	3	20.6	3	17.1	3
9 - 11	14.2	5	12.3	5	13.2	5
12 - 13	12.4	6	11.4	6	16.7	4
14 - 16	29.5	2	31.5	2	27.9	1

A - Unadjusted

B - Father's occupation constant

C - Father's occupation, industry, city of occupation
and attendance constant.

Source: Carnoy, M., Journal of Human Resources, Vol. III, No.3, 1967,
'Rates of Return to Schooling in Latin America'.

show rates of return to education (i.e. relation of cost to benefit), but indicate that in the period 1960-1970 average monthly income of those with education up to secondary level grew more slowly than the average monthly income of any other educational group (see Table 2.9). But it was shown in Chapter One that Mexico has a low percentage of the total school and student population in secondary level education, and that only a small proportion of students reach secondary level in comparison, not only with European countries, but also with Latin American nations. It has also been indicated that a lack of secondary level technicians exists. This scarcity has not been reflected in the wages received by those with secondary education. One, or a combination of several explanations, of this seemingly contradictory evidence is possible:-

- 1) that the type of qualifications held or education pursued are not those required,
- 2) that individuals with some higher education displace those who have pursued secondary education in the labour market, depressing the returns to both levels and lowering the wages of the latter,
- 3) that payment, or the price of labour, does not reflect value; graduates or those with some higher education may be better rewarded for cultural (e.g. prestige evaluation) or political reasons.

Evidence already examined tends to support the second reason, and to some extent the first. The fact that returns to secondary and incomplete higher education are the lowest of the six levels is compatible with, the absence of technicians noted by the Banco de México, and, employment patterns noted by subsequent commentators, e.g. Lajous Vargas and Davis. Carnoy's figures suggest that action would have to be taken by the government if it wished educational investment to be directed towards greatest possible productivity. A prime area for action would seem to be limitation of 'dropping out' or failing during the course of higher education. Entry would have to be made more difficult, or the

completion of courses more easy.

The overall situation in Mexico may be described in the same way as Blaug et al. looked at India,³⁵ that is in the operation of a "dynamic surplus mechanism". There exist in total more potential employees, or a larger P.E.A. than employment, or work opportunities. In order to find a job, individuals try to put themselves in an advantageous position by pursuing more education than the next person, as the employer will probably regard more education as a guide to ability. The employer is not directly concerned with whether the job could be performed by someone trained at less cost as the state appears to have paid for education. Thus the social cost may not be beneficial, as the increased productivity of the individual with incomplete higher education is not necessarily equal to the cost of additional education. The individual with secondary education may then be displaced into occupations for which payment, contingent on the degree of scarcity of labour and contribution to productivity, will not provide a beneficial return on the social cost of education.

The "dynamic surplus mechanism" operates because the individual sees it as beneficial to pursue more education, and government provision of education allows some to do so. It is even debatable as to whether or not the individual considers the total cost-benefit calculus, counting for example foregone earnings. Disregarding cost, it can be shown that the more education pursued, the more the individual earns, as is demonstrated in Table 2.9.

However, in Carnoy's data when foregone earnings are taken into account and incomplete cycles of education are separated from complete, incomplete higher education shows a poor return. According to Carnoy's data for private returns, pursual of post-primary education is only beneficial if higher education is completed. Such conclusions are subject to the criticisms presented in Chapter One. Calculations of the

Table 2.9 Growth of Incomes, 1960-1970, by Level of Education Achieved

Level of education of P.E.A.	Average growth rate of income p.a. 1960-70	Average Income in Pesos	
		1960	1970
Illiterates	6.6	421	801
Primary - complete or incomplete	6.7	581	1,112
Middle (medio basico)	5.2	1,128	1,827
Middle (medio superior)	5.4	1,508	2,443
Higher education	9.6	1,838	4,558
Approximate Average	7.6	615	1,254

Source: C. Muñoz Izquierdo, "Expansión escolar, mercado de trabajo y distribución del ingreso en México", Revista del Centro de Estudios Educativos, Vol.IV, No.1, 1974, Mexico City, p.20.

returns to primary education are based on the earnings of earlier generations who could get modern sector jobs with primary certificates. Calculations do not look at one group with different qualifications entering the workforce in a given year, for which results would be truly comparable.

In addition to bringing increased earnings, more education does reduce the likelihood of unemployment. These may be the most important factors in influencing the individual's decision as whether or not to pursue more education. But as was shown above, the absorption into employment of those with some higher education is estimated to reach only 73%. This represents a significant loss of human resources and social investment. While the individual may benefit from pursuing more education it is unlikely that the cost of higher levels of educational attainment is met by associated improvements in productivity.

This chapter has demonstrated that the increasing levels of participation in higher education have, for the most part, been a result of individual attempts to gain more qualifications in a competition for scarce jobs. Government provision has to quite a significant extent supported the demand for more higher education while participation at primary and particularly secondary levels do not reach universality. Such a provision cannot be explained by reference to the contribution of the highly educated to productivity as many have been shown to be unemployed and underemployed. Many others have pursued but not completed higher education and so do not gain top level employment, making little use of the country's investment in their education.

Unemployment levels of the total working population and of the highly educated did not appear very severe. However, employment seemed a much greater problem when the unemployment of younger groups, and the

extent of underemployment were examined. The young are worst affected by both unemployment and underemployment. The necessity of increasingly higher qualifications for the same and similar jobs seems to be almost entirely a supply induced mechanism. Recent research on the criteria used by employers in selecting employees suggests that employers will tend to choose the most highly educated applicants. The authors note,

The Mexican employers gave most frequently the reply that, if more qualified people were available at little extra cost, it would be foolish not to utilise them. 36

However, one should note that there was little consensus on the precise benefits of more education. For many a higher level of education was obviously indicative of social class. In assessing the advantages of employing the most highly educated workers, both employers and supervisors pointed more to social background and social skills than to productivity or cognitive skills.

Such qualification escalation occurs because of the inadequate generation of employment in the economy as a whole. The result of this process is that much education received is probably not necessary to job performance. To any economist who views economic growth as the maximand of investment in education, patterns of expenditure increasingly appear irrational. That such patterns of expenditure continue suggests that the rationality of many economists is not that of the Mexican government. One must, therefore, identify what different perspectives on educational provision have directed policy making in Mexico.

1. Unpublished material of the 1970 Mexican population census, Tabulaciones Especiales. Cuadros Procesados por la Presidencia, No. 22i.
2. The census category refers to all those who have some higher education. For reasons of convenience this will be referred to as "professional unemployment" although the individuals concerned may not have finished their courses and therefore will not be qualified.
3. This figure seems surprisingly high. 83 out of 630 are given as unemployed.
4. That section of the P.E.A. with some higher education numbered 392,101 in 1970 according to census data. The number in higher education at this period was approximately 250,000. The education ministry figure for 1970-71 is 271,275, (Informe de Labores, 1970-76. S.E.P., Mexico D.F., 1976, p.26) while the Centro de Estudios Educativos gives a figure of 225,842 for 1970 (Revista del Centro de Estudios Educativos, Vol. 4, No.3, 1974, p.172).
5. This model was constructed by personnel of the Centro de Estudios Educativos, an independent educational research institution. The model is described in the Centre's journal, Revista del Centro de Estudios Educativos, Vol.I, No.4, 1971. The data given are taken from an article by Medellin, R. and Muñoz Izquierdo, C., "Expansión escolar, mercado de trabajo y distribución del ingreso en México", Revista del C.E.E., Vol.IV, No.1, 1974. p.13.
6. U.N.A.M. 1924-72 Dirección General de Administración, Departamento de Estadística, U.N.A.M., 1975.
7. Resiada, J.A., a study on the employment of economists in the Federal District in Factor Económico, 9th July, 1976, Mexico D.F.
8. Interviews were conducted in February and March, 1977.
9. U.N.A.M. maintains a register and statistical analysis of supply and demand but access to this information was refused.
10. Report of the Departamento de Promoción Profesional, Técnica y Especializada, Part 2 - Análisis de los Recursos Humanos de la Oferta y Demanda de Profesionistas y Tecnicos sobre datos existentes del Departamento de Promoción Profesional, Técnica y Especializada, Secretaría del Trabajo y Provisión Social, Servicio Publico de Empleo, December, 1976, Mexico D.F. This is an internal, unpublished document.
11. Ibid. p.28.
12. Lajous Vargas, A., Aspectos de la educación superior y el empleo de profesionales en México, 1959-67, El Colegio de México, Mexico D.F. 1969. Ch. 3.
13. Resiada, op.cit.
14. Ibid.

15. Bialotovsky, C.J. de, in Economía y Demografía, El Colegio de México, Mexico D.F.
16. Report of the Departamento de Promoción Profesional, op.cit. Ch.4.
17. Davis, R.G., Scientific, Engineering and Technical Education in Mexico, Education and World Affairs, New York, 1967, Occasional Report, No.3, p.18.
18. El Empleo de personal técnico en la industria de transformación, Banco de México, Departamento de Investigaciones Industriales, Mexico D.F., 1959.
19. Educación en el trabajo y para el trabajo, Vol.3, Consejo Nacional Técnico de la Educación, Mexico D.F., 1963, referred to in El Problema ocupacional en México, magnitud y recomendaciones, Grupo de Estudio de Empleo, Secretaría de Trabajo, internal document, Mexico D.F., 1976.
20. El Problema ocupacional... op.cit. p.521.
21. Lajous Vargas, op.cit. Ch.3.
22. Davis, op.cit.
23. Tabulaciones Especiales, op.cit. Tables 6 and 22ii.
24. There are seven occupational categories plus "insufficiently specified". The first two are, "Profesionales y Tecnicos Afines" and "Funcionarios Publicos Superiores y de Categoría Directiva, Gerentes, Personal Directivo, Administradores y Propetarios de la Iniciativa Privada".
25. Interviews conducted in February, 1977.
26. Grupo de Estudio de Empleo, op.cit., p.5, p.20, p.27.
27. Ibid. p.41, p.72.
28. Encuesta de Hogares, Dirección General de Estadística, Sec. de Industria y Comercio, Vol.3, Datos Preliminares de Ocupación y Vivienda, Mexico D.F., 1976, Table 7, p.6.
29. Mahbub al Haq, "Employment in the Seventies: A New Perspective" in Education and Development Reconsidered, The Bellagio Conference Papers, edit. F. Champion Ward, Praeger, New York, 1974. p.76.
30. Grupo de Estudio del Empleo, op.cit. p.60.
31. Jenkins, R., "Foreign Firms, Manufacture Exports and Development Strategy: The Case of Mexico", mimeo, University of East Anglia, 1977.
32. Ibid. p.31.
33. Grupo de Estudio del Empleo, op.cit., p.1, presentation note.
34. Carnoy, M., "Rates of Return to Schooling in Latin America", The Journal of Human Resources, Vol.3, No.3, 1967.

35. Blaug, Layard and Woodhall, The Causes of Graduate Unemployment in India, Allen Lane, The Penguin Press, 1969. See Chapter One.
36. This is an Institute of Development Studies, University of Sussex research project on education and employment, carried out in Mexico and Sri Lanka. Details here are taken from an Abstract of Report on Research Scheme RG2971.

A POLITICAL PERSPECTIVE ON MEXICAN EDUCATION POLICY

Social scientists established a relationship between education and growth in the 1950's and 1960's which appeared to both explain and justify educational expansion. Such work did influence policy making in 3rd world countries through both informal (influence of the studies themselves) and formal mechanisms (institutionalized links with western research through e.g. UNESCO).¹ Education was presented as an essential part of the development package. Education would contribute to the promotion of growth, which would in turn lead to the elimination of social problems and to political stability. One and the same programme would promote equal opportunity and economic growth.² But it has been shown in earlier chapters that an ahistorical assumption of the contribution of education to growth is unfounded. One cannot assume that all increments to levels of education improve the productivity of the economy.

It has also been shown that Mexican governments have not directed their expenditure in line with the most favourable cost-benefit calculations. This has become clear with increasing evidence of under employment and some unemployment of the highly educated, together with the inadequate level of general, and especially technical, secondary education. It is suggested that considerations other than economic efficiency have always been important in the formulation of education policy. As shown earlier, economists have now become critical of the benefits of further expansion of higher education. But governments, while never having completely pursued the implications of economic analysis, refer to the contribution of education to growth in the presentation of their education policies. The Mexican government has presented education as a major factor in promoting development and

therefore greater equality, and as a direct manifestation of equal opportunity. The previous chapter demonstrated that education policy cannot be seen as wholly oriented to cost effectiveness and economic growth. This chapter will suggest that political pressures have in the past been equally important in determining the nature of educational provision by the late 1960's, suggesting that educational provision has not met its commitment to equal opportunity. We will then discuss what political pressures may have influenced policy making in the contemporary period.

An examination of policy making in the late 19th century and early 20th century will demonstrate how pressures for education have emerged in the political arena, and might be expected to continue to emerge. This will include the examination of the political aims represented, the response of dominant groups, and the adaptation and modification of alternative positions into the mainstream of thought and into policy making. It is important to analyse the role that education policy has played in legitimizing governments of the post Revolutionary political system.

Policy making in the late 19th and 20th centuries.

In looking at this long period, it is possible to show the changing political context of policy making, pre and post Revolution and within the Revolutionary period. It becomes apparent that contemporary education policy cannot be analysed with any imposed notion of the Mexican Revolution.

The mid 19th century saw a virtually continuous struggle between Liberal and Conservative groups. This conflict extended into the sphere of public education. For Liberals, one of the main issues in the attempt to reduce the power of Conservative groups was the power of the Catholic church. The church's own landholdings, and its defence

of landholding power and its social ramifications, aligned the church with Conservatives. Thus not only did Liberals act to end landholding by the church, but they also aimed to remove the church as far as possible from positions where it could justify a hierarchical and static social structure. The constitution of 1857 established "la libertad de enseñanza", effectively the secular nature of state education, while the reform laws of 1859 were somewhat more explicit, affirming the autonomy of the state in the face of any church or sect. The new organic law of "Instrucción Pública" passed in 1867 after the fall of Maximilian, stated that religious teaching in government schools was to be ended. Thus the main area of debate in the mid 19th century was over the content of education.

However, the ideological base of the Liberal challenge to inherited Conservative power emphasised the rights of the citizenry as a whole. Thus the Plan de la Constitución Política de la Nación of 1823 had declared that "teaching is the origin of all individual and social good",³ and foresaw the creation of state institutions to promote and regulate education. The Constitution of 1824 had confirmed the juridical capacity of the state to establish educational institutions, although administrative machinery was not set up until 1823. The notion of state education was not rejected by Conservatives in the federalist-centralist struggles of 1834-54. The Liberal laws of 1867 and 1868 went further in declaring the obligatory and free nature of primary education for the poor. But such statements were based on abstract ideals, and in a climate favourable to laissez faire, to private rather than government initiatives, free from obvious political or economic pressures for education, little was done to extend primary education.⁴ There was a greater practical concern with secondary and higher education. Juárez set up an educational commission under Barreda; he like many Liberals of his time was a believer in the positivist theories of Comte, which emphasised the

importance and benefits of order, and the progress of humanity within this framework. The doctrine supported change and development directed from above against a stable social background. The knowledge seen as necessary to this directing group was essentially scientific, but a science built up in an incremental rather than a critical manner. The "Escuela Nacional Preparatoria" (National Preparatory School) was set up as the base of and stepping stone to higher education in the National University; the organisation of teaching followed Comte's classification of the fundamental sciences. Education produced an elite whose conception of knowledge, while rejecting aristocratic culture, justified the existing order.

Juárez himself favoured extending primary education in order to elevate the moral standards of the indigenous family and thereby contribute to national advancement. Here we see the beginnings of a link between education and economic advance as one factor influencing policy making. Poverty was seen as a moral problem, a problem to be eliminated by encouraging the peasant to work harder and to be more efficient, to break away from his traditional conceptions of the world. The benefits of such action were probably too distant for Juárez' ideas to have gained much support. Such interest among indifference was also characteristic of the situation of Justo Sierra, eager to incorporate and elevate the Indian against the indifference of Díaz and his supporters. This was the position in official government circles during the Porfiriato.

But the political opposition which built up to Díaz's government made access to education a sphere of debate, in contrast to the 19th century when content of education was an area of debate between elite groups. Those who had previously taken up the ideal of public education had done so from the viewpoint of combatting aristocratic privilege and promoting national advantage by the incorporation of the

unproductive and uncultured Indian. This was superseded by an increasing popular demand for education although the pre-Revolutionary public education system did not play any positive role in radicalizing the lower classes, as participation was minimal. Vaughan says, "The Revolution occurred despite the school, not because of it."⁵ But the making of the Revolution embraced a strong concern with education. Various elements of the in some ways disparate movement which overthrew Diaz, and then struggled to form a new government, made demands for an effective educational provision by the government rather than education as an abstract right. Visions of the desirable form of education varied between liberal, anarcho syndicalist and socialist groups.

The Partido Liberal Mexicano published its programme in 1906. The party, formed from Liberal groups over the country, covered a wide spectrum of opinion from the anti-reeleccionista and anti-clerical to the anarchist and socialist. Major activists, of anarchist leanings, such as Flores Magon, did not always openly declare their views, but they were open about their desire, and the need to win the support of labour and the peasantry. The programme of 1906 was designed to have broad based appeal and thus did not go as far as some ultimately desired. The P.L.M. called for extended and secular primary education. Their concern was with the real provision of education rather than with abstract rights, as can be seen in articles 12 and 13.

12. Compulsory education to the age of fourteen; the government shall be responsible for providing protection in whatever form possible to poor children who, because of their poverty, might lose out on the benefits of an education.

13. Good salaries for elementary schoolteachers.

6

Criticism of existing education was not limited to its inadequate provision. Among some groups of the organised working class there did exist a conception of an alternative content to education. They favoured the ideas of the Spanish anarchist Ferrer Guardia. Mena set

up a school based on Ferrer Guardia's ideas in Yucatán. This escuela moderna (modern school) or escuela racionalista (rationalist school) was declared the official school of the Casa de Obrero Mundial in 1912, and was later endorsed by the Confederación Regional de Obreros Mexicanos (C.R.O.M.), the Confederación General de Trabajadores (C.G.T.) and the Partido Comunista Mexicano (P.C.M.) in the 1920's. Ferrer Guardia rejected both the ethic of individual competition, (the basis of Social Darwinism or the survival of the fittest) and pedagogy which emphasised obedience to an imposed order, in favour of cooperation and the building up rather than the imposition of social harmony. Mena was also influenced by the North American educationalist Dewey, who promoted "learning by doing", although Dewey's orientation was to increased efficiency; he had no fundamental criticism to make of American society.

Thus the content of education in the escuela racionalista was quite different from that of existing state or private education. Children learnt without set texts but instead read newspapers and produced their own. They produced food and other goods from locally available materials. Learning and reproduction of the means of subsistence were integrated activities, performed by cooperating children. The school was idealist in that it attempted to make real an alternative conception of society within the confines of existing society. But it also indicated that there were radical alternatives to Justo Sierra's idea of the elevation of the Indian and his incorporation into acceptable and civilised society from a dehumanized and traditional society. Such alternatives were to influence future policy making. But, before the revolution, commitment to such alternatives was limited to small groups among organised labour, itself a small sector of the population.

The provision of education was also a concern of the peasantry. Villa and his supporters demanded the possibility of participation in education. Here there was no concern with content; all education was perceived as of value whether for the possibilities of social advancement or the pure pleasure of reading. Vaughan has said that men such as Villa had a naive faith in education, being unaware of the structural constraints that inhibit social mobility.⁷ However, one has to remember that such groups within the peasantry hoped for radical change, for land reform as well as education, although no view of the nature of future society was articulated. As John Reed said,⁸

Villa's great passion was schools. He believed that land for the people and schools would settle every question or civilization. Schools were an obsession with him. Often I have heard him say: 'When I passed such and such a street this morning I saw a lot of kids. Let's put a school there.'

The Revolutionary period demonstrates how different social philosophies and political aims involved different attitudes towards education, and as will be shown, how different approaches to education may influence policy making but are adapted and modified in the process.

In comparison with the alternatives posed by the Partido Liberal Mexicano (P.L.M.) and the union endorsed escuela racionalista, the constitution of 1917 stayed within a 19th century liberal framework, but the changed political context provided the rights described with a new meaning and importance. The establishment of a new government had occurred against a background of popular mobilization; popular pressures could not be completely ignored. The constitution of 1917 stated in Article Three that,⁹

Teaching is to be free from any ideological direction but that which will be given in official educational establishments will be lay (non-religious), as will be the elementary and upper primary education provided in private establishments. No religious body, nor minister of any sect may establish or direct schools for primary education. Private primary schools may only be established when submitted to official inspection. In official establishments primary education will be provided without cost.

The secular nature of education is confirmed, and the intervention of the church in primary education forbidden. The state will now ensure that schools meet such requirements. However, there is no real commitment to action as put forward by the P.L.M. Programme. Primary education will be free, but the state's action to aid participation is not recommended. Article Three still rests on the conception of individual rights, which are abstract in a context of social and economic inequality. But alternative aims and conceptions of education did not disappear with the writing of the constitution; conflicting pressures remained. Carranza, for example, attempted to deradicalise Article Three, reducing its anti-clerical content. This was unsuccessful. Carranza as President, in keeping with the classical liberal preference for federal power, local autonomy and antipathy towards centralism, abolished the Ministry of Public Instruction. He had no leanings towards a positive, centrally directed education policy. The initiation of a more active education policy began in Obregon's Presidency, meeting a climate more favourable to positive action than had existed in the Porfiriato. The Revolutionary upheaval had indicated a rejection of the results of the laissez-faire policies of the Porfiriato. The provision of education was an area in which demands of participants in the revolution could be met. It would appear that the precise nature of action was quite heavily influenced by one individual, Jose Vasconcelos. Obregon was receptive to Vasconcelos' suggestion of re-establishing national direction with the founding of of Secretaria de Educacion Publica in 1921. Vasconcelos' ministry harnessed a great deal of energy, but was this new start real or symbolic?

Vasconcelos' ideas are in many respects similar to those of Justo Sierra but in his prescriptions for action he included some of the ideas

of, for example, the escuela racionalista. The more radical ideas of the pre-Revolutionary period were now incorporated into the public education system. While at certain levels conflicts remained, there was an integration of some alternative approaches to education, which although united in their opposition to the Porfiriato, were potentially divisive thereafter.

The education ministry adopted the ideas of learning by doing, and of activity linked to production used by the escuela racionalista. Such methods promoted efficiency, but for Vasconcelos as for Dewey, this was necessarily efficiency of the national economy, for productivity rather than cooperation. National development was one of Vasconcelos' aims, although it involved him in a, not wholly welcome, espousal of foreign development patterns. His positivist views on scientific advance indicated the existence of only one pattern of progress, thus that of the fastest growing country of the period, the U.S.A. But determined to maintain some cultural identity for Mexico, Vasconcelos criticised an all pervasive influence of learning by doing, and other aspects of what he viewed as an extremely materialist North American culture. Vasconcelos wrote,¹⁰

On the pretext of trying to awaken the curiosity of the pupil in relation to the world around him, the Dewey system consumes the class' attention in detail..... With the appearance of freedom, then what in reality is obtained is the product of millions of human specimens competent to take advantage of certain aspects of the outside world, but blind to the disinterested.....From this fate, free and responsible initiative is transformed into apparently fragmentary solutions such that they all result in the aggrandizement of the Moluch of industry. Or rather liberty in the service of slavery;.....Caliban victorious both in Wall Street and in Moscow.

Vasconcelos' policies demonstrate certain contradictions of the post Revolutionary period, contradictions to a large extent resolved by the 1940's. There is the contradiction mentioned above, of the attempt to promote a specifically Mexican pattern of development

responsive to national political requirements while adhering to a positivist conception of progress and development. In the 1930's the Cárdenas government attempted to build the strength and autonomy of the Mexican economy vis a vis foreign influence, but subsequent governments moved towards a greater integration with North American capital. Secondly, the experimental form of rural education was effectively a compromise between radical change involving extensive land reform, and maintenance of existing patterns of production, a compromise which could not last. Perhaps the existence of an only embryonic bureaucracy allowed the experimentation that occurred. Initially volunteer teachers were recruited by misioneros, but between 1922 and 1925 various states set up rural Normal schools. Cultural Missions, started in 1923, travelled the country preparing teachers and providing courses in hygiene, agriculture and artisan skills, etc. The "Centrales Agrícolas" provided advanced courses in farming techniques, it being intended that the students should spread such knowledge among their villages. Most of these projects lacked resources and were insufficiently planned but the main problem was that education alone could do little. As Raby says,¹¹

A conventional liberal education was of little use to the campesino, and a socially oriented education would definitely have met the powerful opposition of dominant groups in rural society - as long as the power of landholders and caciques was not destroyed by a radical agrarian reform.

Rural education alone could only be a palliative, but one which could incite action. Some teachers in rural schools became involved in peasants' struggles to obtain land reform. As became evident, any experimental rural education which explored the possibilities of radical change was a threat to the rural power structure.

Education was viewed by the government as promoting national development; as in the 19th century for Juárez and Justo Sierra, it

was seen as necessary to incorporate the rural population, to lift men from their traditional life style in order that Mexico might move forward. Such aims took on a moral aspect, of the salvation of the Indian. As Cosío Villegas says,¹²

At that time there was an evangelical atmosphere for teaching one's neighbour to read and to write; then did each Mexican feel in his breast and in his heart that the act of educating was as urgent and as Christian as giving drink to the thirsty and food to the hungry.

Such action coincided with popular desire for education. The desire for national development in this period involved provision of education not just to the urban middle class but particularly to the rural population. Under Vasconcelos primary and technical education were favoured against extension of higher education. More extensive rather than more intensive education was seen as necessary. Thus in the 1920's government policy, oriented to meeting significant popular pressures and towards economic growth, produced programmes of a relatively egalitarian and democratic nature. In later periods economic, political (in terms of strong pressures on government), and democratic imperatives did not show the same tendency to coincide on similar recommendations for action.

In the 1920's those groups desiring education found response. However, the reaction was not uniform. While, to some extent, Vasconcelos' policy incorporated conflicting educational ideologies, the undeveloped bureaucratic structure could not control those teachers and peasants who reacted against education divorced from land reform. Dissent developed subsequent to Vasconcelos' occupation of the education ministry. In Calles' Presidency the pace of change slowed; expenditure on education dropped. Emphasis turned once more towards education for the middle and upper classes.¹³ But pressures for a more radical education policy remained. Governments had to take account of these

different demands, and still existent pressures for greater freedom for religious education.

The Emergence of Conflict over Education Policy

Carranza had been against total prohibition of religious schools and neither Obregón or Calles had acted to enforce this aspect of Article Three of the constitution. In 1926 the Catholic church began a campaign for the legalization of religious schools. The government now responded by attempting to enforce Article Three. The conflict continued from the period of Puig Casauranc's occupation of the Secretaría de Educación Pública to that of Narciso Bassols. Groups outside government came to pressure for a strongly anti-religious policy. Radical elements who had, as shown, exerted some influence in 1917 and the 1920's now began to pose their own alternatives in the light of right wing organisation. As the conflict continued into the 1930's the radical climate was further engendered by the increasing activity of labour groups in reaction to the effects of the 1929 depression.

Pressures which emerged called for a socialist education policy but these demonstrated little unity in the use of the term "socialist". Widely varying conceptions of socialist education existed. The idea of socialist education did not gain support in a vacuum but against a background of right wing and church opposition. Thus support for socialist education was very much a unifying concept for opposition to the right. Some called for anti-religious education, others maintained the notion of rationalist education. The word socialist was often used to signify little more than non or anti religious education. But other groups did envisage accompanying social change. Among intellectual groups where redistribution of the means of production was

proposed, emphasis was on the rural property structure, on the introduction of more ejidos (a form of communal landholding). Emphasis on the necessity of a Mexican solution rather than wholesale acceptance of the Russian Revolution did not bring much clarification on the nature of socialism proposed. The weakness of organised labour and the distance of many intellectuals from such groups probably resulted both in a lack of coherence in relation to desirable economic change, and authoritarian and paternalistic attitudes towards organised labour and the rural masses.

Narciso Bassols was one of the first socialists to attain high public office when appointed Secretary of the Education Ministry in 1931 by President Abelardo Rodríguez. Bassols introduced new regulations relating to private education and suggested that schools should teach socialist aims. The opposition which such an orientation aroused came to be directed at one issue - the introduction of sex education, and led to Bassols' resignation in May 1934. But the debate over socialist education continued. The Junta de Inspectores y Directores de la Educación Federal declared their support for,¹⁴

Education of the campesino that will tend to transform systems of production and the distribution of wealth with an openly collectivist end.

The Partido Nacional Revolucionario (PNR), formed in attempt to unite popular groups as a support against the church and its sympathisers produced a proposal for the reform of Article Three.¹⁵

Education imparted will be socialist, in its orientation and tendency, fighting in order that prejudice and religious dogma disappear, and a true human solidarity is created on the basis of a progressive socialization of the means of production.

Both groups quoted suggest radical economic change as a concomitant of socialist education. The Chamber of Deputies did not as a body

adopt such a radical perspective but favoured changes to Article Three towards the introduction of socialist education. President Abelardo Rodríguez took no further action but the idea of socialist education was taken up by his successor, President Cárdenas in 1934. The growing influence of radical groups and the espousal of socialist education by Cárdenas led to a new law being passed but the lack of unity, coherence and consensus on possible meanings of socialist education meant that the demands of such tendencies were met with a rather vague amendment. This calls for socialist education but does not envisage accompanying social and economic change.¹⁶

Education provided by the state will be socialist and besides excluding any religious doctrine, will combat fanaticism and prejudices, so that the school will organise its teaching and activities in a manner that permits the growth of a rational concept of the universe and of social life in young people.

The new Article Three can be seen as a response to radical pressure from teachers and inspectors, and from the state governments of Ucatan, Tabasco and Veracruz. It did not, however, signify a radical ascendancy; opposition to socialist education was fierce.

The interpretation of socialist education reflected Cárdenas' plans for Mexican development and his analysis of what would be the politically important groups in such development. It is evident that Cárdenas saw the potential for an increasingly industrialised Mexico but on the basis of greater state activity within a capitalist framework rather than a radical reform of the distribution of the means of production. Such industrialisation would necessarily add to the potential strength of the working class support for the government. The transformation of the PNR into the Partido de la Revolución Mexicano (PRM), organised on a sectoral basis involved an attempt to institutionalise working class and peasant support and to control union activity. Closer links

of such groups to the state reflected their increased strength and importance. The introduction of socialist education in part reflected this strength, but its content aimed to build up support for government policy. The ideological direction of the S.E.P. changed from an emphasis on nationalism under Vasconcelos, to regard for the role and conditions of the working classes. Numerous texts, e.g. the writings of Marx, Engels and Lenin, were published by the education ministry.

A new concern with vocational and technical education served both the new needs of a growing industrial sector and appeared to promote the educational and general interests of the working class. Cárdenas maintained that education should,¹⁷

Identify those pupils with proletarian aspirations;
strengthen ties of solidarity and create for Mexico,
in this way, the possibility of a revolutionary
integration in a strong economic and cultural unity.

The Instituto de Educación para Trabajadores was to create institutions of secondary and higher education, libraries and museums. The Instituto Politécnico Nacional (IPN) was created in 1937 to meet the need for individuals qualified in technological areas. But it would appear that such chances did not give greatest benefit to the working classes. Not surprisingly, it was the growing urban middle classes rather than the children of workers who took up places in the technical schools. In 1938, only 25% of students were children of workers, peasants or artisans, according to the Department of Technical Education.¹⁸

The presentation of policy as benefiting the proletariat should not be seen as a deliberate misrepresentation; there were socialists in the SEP who wanted to implement policies favourable to labour groups. But action in the sphere of education alone could not prevent more favourably placed social groups from reaping the benefits of any new opportunities.

In addition to introducing a relatively limited conception of socialist education, Cárdenas also sought to prevent any further conflict. Many of his policies did involve significant change but, because of the delicate balance of political forces, radical steps were usually accompanied by moves to appease the right. Cárdenas' first education minister, García Tellez, was replaced by Vazquez Vela, in part because of the former's too open adherence to Marxist views. Religious opposition to socialist education had not disappeared. In reaction to Catholic opposition Cárdenas at first imposed further sanctions on religious activity, but as Catholic opposition continued, it was Cárdenas who stepped down, maintaining that socialist education was not anti-religious. Some compromises were necessary to try to prevent any political opposition focusing on more innovatory measures such as the expropriation of the oil companies. Other concessions included the abandonment of the Cultural Missions, opposed in some quarters for their propagation of government and socialist ideology. This milder approach is demonstrated in the Organic Education Law of 1939, which while emphasising economic transformation, omitted specific reference to socialist education. The law talked of the end of the latifundias, of national economic independence, of the formation of harmoniously developed men, and significantly of an education which would,¹⁹

Forge a more humane and just co-existence in which economic organisation is structured to function in favour of general interests so that the system of the exploitation of man will disappear.

Cárdenas' emphasis on national unity as an ideological support for his economic programme was extended and modified by subsequent governments in the 1940's. While Cárdenas aimed to bring the benefits of economic transformation to the lower classes within a multi-class

alliance, subsequent governments concentrated on economic growth and national unity, but largely without specific orientation to the conditions of the lower classes. In a wartime climate, concentration on defence, national unity and democracy appeared acceptable to most groups, but this involved an effective break with policies of the previous sexenio. Some groups still adhered to the need for a socialist education policy and opposed the new, more conservative orientation of the SEP. The opposition of the teachers' unions and the left in Congress forced the resignation of education minister Vejar Vazquez in September 1943. However, the independent force of such opposition groups was reduced by a government initiative of 1943. This curbed the influence of left wing attitudes to education. Politicians Torres Bodet and Alemán, left wing historian Chávez Orozco and labour leader Lombardo Toledano were involved in the promotion of a new teachers' union, the Sindicato Nacional de Trabajadores de Educación (SNTE), founded in December 1943. SNTE leaders suppressed and controlled any dissidence within the union. Multerer says that,²⁰ "After 1946 administrations treated the teachers groups with patronizing contempt." Teachers became subject to further pressures to conform in the 1940's as all aspects of the career became increasingly regulated by the SEP's growing bureaucratic structure.

The new education minister, Torres Bodet, instituted a review commission to reform and produce new textbooks and programmes. Rather than emphasising the contribution to society of a particular group, i.e. the working class, in a so-called socialist education policy, the new ideological orientation was towards national unity, and not towards any specific group within the nation. The increasing power of the ministry and government in relation to previously influential social groups is evident. The idea of socialist education, if incoherent,

was the result of real intellectual debate; the idea of national unity was here imposed from above with teacher reaction stifled. In 1946 the government introduced a new Article Three removing any reference to socialist education with manageable opposition. A strong group in the SNTE were against change but the power of the union leadership now held sway.

In this examination of education policy from the end of the 19th century to the early 1940's it has been shown how different groups formulated their political aspirations in terms of demands for education, and how governments sought to win acceptance and legitimize their existence through action in education. Thus while we have seen governments promoting particular forms of education for economic or national development, they have also responded to political pressures, particularly up to 1940 in the provision of education for the lower classes.

However, a government in responding to desire for change, for perhaps social mobility or raised living standards, by the provision of education, takes measures which satisfy political pressures to some extent without substantially disturbing the status quo. Education alone is rarely able to effect a redistribution of political or economic power, as was seen with reference to rural, and technical education.

In the pre-Revolutionary period, at the end of the 19th century, opposition to the hierarchical and static social structure was manifested in demands for a changed educational system. Opposition to the power of the church was shown in the repeated demand for the prohibition of religious teaching and direction of schools by the clergy. The practical proposals of the PLM for more elementary education expressed a desire to break down a society where success appeared to be based on social status. Such pressures were absorbed in a modified form in possible interpretations of the constitution of 1917. After the Revolution,

Vasconcelos demonstrated an orientation to education similar to some 19th century politicians with his concern for the elevation of the Indian. Their aim was national development and thus implicitly economic development and modernization. Some radical pressures, proposing an alternative content were incorporated in a modified and functional form into government policy. The strong anti-religious current built up as the Catholic church began to organise opposition. The socialist education policy was, to a large degree, a response to left wing pressure, although the strength of dissenting right wing groups was great enough to prevent its effectiveness.

It has been shown that education policy cannot be interpreted by reference to links between economic growth and education alone. Demands for more extensive provision of education, and different conceptions of necessary content, were influential in the policy making process.

In the Cárdenas period there is again a concern with the role of education in promoting, or as a necessary contributor to, economic development. Emphasis was directed away from education of the Indian and rural productivity, towards the need to produce technical skills. But the attempt to maintain political support necessitated seemingly contradictory policies, appeasing first the left and then the right. Thus the "political" and "economic" link was not coincidental. Government policy aimed to increase the institutionalisation of, and incorporate any opposition from workers with any disruptive power. As this policy continued and succeeded in its aims subsequent governments became more secure in their control of the lower classes and education policy was redirected to meet other political and economic imperatives.

In this examination of education policy, of government priorities and popular pressures, higher education has not been discussed. Higher

education only achieved a priority commensurate with that of today in the 1940's, in a significantly different political context from that of before 1940. Pre 1940 governments did not view the expansion of university education as of economic benefit, nor do there appear to have been strong popular pressures for extension of participation; demands were directed more to education at primary and secondary levels. University education was very much an elite dominated area and was a source of opposition to post revolutionary government.

At the time of the Revolution there existed the National University in Mexico City and some professional schools in the states of e.g. Coahuila, Sinaloa and Nuevo León. A decade after the revolution only one new institution of higher education had been established. By 1930, 21 out of 31 states had no university: where universities had been formed this had usually occurred through the expansion of existing professional schools.²¹

De la Huerta had placed the National University in charge of education in the Federal District, and as supervisor of education in the rest of the country.^{21a} Under Obregón these roles passed to the newly created SEP. From this point onwards the university was criticised for its conservative nature. By 1929 conflict had grown to the extent that Portes Gil tried to weaken opposition by restriction of the university's autonomy. This only produced further chaos within the university which led Abelardo Rodríguez to try the opposite tack in 1933. The university was given greater independence, its autonomy restored but it lost its "National" character. Feeling in the camara was strongly against the university; it appeared to represent the characteristics of the pre-Revolutionary elite rather than the democratic and practical image of post Revolutionary education.

The government of the Republic adheres to the line of the educational position which is undoubtedly that of the greatest consequence and significance for the bulk of our inhabitants; technical education, useful education which teaches manual skills and the use of the forces of nature to create products capable of raising the standard of living of the great mass of workers.

He favoured expansion but in areas of useful skills and with an orientation to public service; Bassols complained of overproduction in the liberal professions.

The generally conservative nature of the university was further manifested in its opposition to the introduction of sex education and in its opposition to the new Article Three in 1934. The university in the 1920's and the 1930's was not regarded as having a primary role to play in national development nor did the value of higher education to the individual cause pressures for expansion. The National University did not grow between the 1920's and mid 1930's. It had 7,776 students in professional schools in 1925 (as opposed to the preparatory stage of middle education), 6,503 in 1930 and 6,138 in 1935.²³

The Cárdenas government took a new interest in higher education with its desire to build up technical education and extend it to a higher level. The IPN appeared as having an integral role in the social and economic transformation of Mexican society, and as an alternative to the conservative UNAM. An attempt was made to enforce a socialist orientation by the effective reduction of the federal government's financial allocation to UNAM. There were also attempts to place greater government control on professional registration and practice. As in other areas a tactical retreat was later made. The 1939 education law limited government jurisdiction to pre-professional levels. Significant changes in policy came after 1940. Camacho's government of 1940-46 continued to support IPN but the offensive against

UNAM was dropped. The subsidy to UNAM increased from 3.6 million pesos in 1940 to 6.2 million pesos in 1946. The education law of 1946 excluded UNAM from its provisions. Multerer notes that in the 1940's,²⁴

Campus politics were somewhat compartmentalized from national politics as overlapping political, social and cultural elites learned to co-operate with each other and avoid public competition.

In the 1920's and early 1930's government education policy involved little positive attention towards access to, or content of, higher education. Neither political pressures or requirements of the economy indicated a need for expansion or improvement of higher education. However, UNAM was identified as a source of opposition to post Revolutionary governments and this led to attempts to reduce its influence.

Then during the 1930's the potential for, and needs of an increasingly industrialised economy were recognised. It was seen as important to increase the level of skilled manpower, especially in technological fields. Partly for political reasons Cárdenas chose to locate this expansion outside the conservative stronghold of UNAM, although it became necessary to make some concessions towards UNAM to placate right wing opposition. From an examination of higher education policy up to 1940, it is evident that political considerations were as important as manpower requirements in determining the changing nature of the provision of higher education.

The decade of 1940 saw significant changes in direction of education policy as a whole. Regard to industrial development and its necessary conditions in terms of infrastructure, skill needs etc., had begun in the second half of the 1930's. This emphasis was maintained, but in a war and post-war climate more favourable to conservative orientations. Education expenditure was directed towards areas of potential industrial development while the distinctive nature of rural education was eroded.

The urban primary school curriculum became general; emphasis on practical activity and the use of the annexo²⁵ diminished in rural schools. The free text books produced for distribution by the SEP were based entirely on the experience of the urban child. Rural development was largely ignored once industrial potential began to be realised, and consequently rural education was no longer a major concern. Parallel to this there disappeared for the most part the moral or evangelising directive of action, the desire to elevate the Indian into a more civilised lifestyle. Myers states, with reference to rural areas and areas of less economic potential,²⁶

Those of the elite who most insistently demanded renewed efforts for their improvement usually represented a residual minority from the era of reform.

Such changes in government policy were possible because of a stronger educational bureaucracy which stifled independent action, and because of increasing control over the lower classes. New directions were pursued both in response to different needs of a changing path of economic development, and in response to new political pressures, to increased demands for education from urban, middle and upper class groups.

New needs of the economy and changing political pressures led, not only to the changes in primary education described above, but to changes in the structure of middle level education, and a general expansion of higher education. Between 1940 and 1960 middle education developed more as a stepping stone to further education than as a provider of techniques for skilled manual and non-manual labour. In the 1930's technical schools had been set up as a result of a specific interaction between government and a growing urban, organised, working class. As stated, the Cárdenas government perceived a need for technical education, and for maintaining working class support. Experiments in technical education were in part motivated by workers' demands. Post

1940 governments did not see a need for such a specialised provision within middle education. Table 3.1 demonstrates the increasing proportion of secundaria and preparatoria schools as opposed to other, e.g. technical, forms of middle education, between 1930 and 1960.

Table 3.1 Distribution of Middle Level Education Students by Type of School, 1930-1960.

Place	T y p e o f S c h o o l					
	1930		1940		1960	
	Secundaria & Preparatoria	All Other	Sec. & Prep.	All Other	Sec. & Prep.	All Other
All Mexico	30.2	69.8	42.2	57.8	59.0	41.0
Federal District	27.1	72.9	48.3	51.7	56.1	43.9
Nuevo Leon	33.4	66.6	36.0	64.0	63.7	36.3

Source: Myers, C.N. Education and National Development in Mexico Princeton U.P., New Jersey, 1965, p.96

The structure of education became more pyramidal post 1940. (Participation has always taken a pyramidal form.) Primary and middle education became increasingly uniform, and the latter more general in content. For those who pursued more than primary education, subsequent education increasingly took on the characteristics of steps towards higher education. One cannot explain such a change in dominant patterns as a result of government initiative alone. In such a period of rapid growth, employment in professional and administrative positions necessarily

expands. Higher education rather than acting as a means of confirmation of elite status is seen as an entree into new opportunities in high level employment. Thus demands for general secondary education, leading to higher education, and for higher education are likely to increase.

The most forceful popular pressures for education had changed, from those social groups who desired previously denied primary and technical education, to groups in a position to take advantage of the increasing value of professional education. The support of peasant and labour groups had been increasingly institutionalized, such that little opposition arose to the increasingly urban, professionally oriented education policy. However, some opposition did arise in relation to other issues. Working class resistance to government co-optation of unions, and consequent difficulty in challenging a development pattern which relegated social improvements to a very secondary position, emerged in the railroad strikes of 1958-9. The possibility of alternative patterns of development was demonstrated by the Cuban revolution. But working class action was met by government repression. Independent unions did not develop; control was reimposed. However, the government made some attempt to win over popular support, for it is important that political control does not rest wholly on repression. Barkin makes the following link,²⁷

After the wave of violence and unrest which culminated in the railroad strike of 1958-1959, and in conjunction with the growing popularity of the Cuban Revolution, a new 'Eleven Year Plan' was adopted for rapid increases in education expenditures and enrolment.

The Eleven Year Plan was introduced by López Mateos in 1959. It aimed to bring participation in primary education to as near 100% as possible. Again one can see provision of education legitimising a government's existence. The Eleven Year Plan was important as a

public relations exercise; references to the plan and achievements were frequent in its early years but later are virtually non-existent, it having lost news value. This is not to deny that significant improvements were made in the provision of primary schooling but existing patterns of inequality were not eradicated.

The context of policy making is not constant in the post-Revolutionary period. Popular pressures influencing government changed between the period before 1940 and that period after, as they had done, in a different direction, between the 19th and early 20th centuries. In the 19th century content of education seemed to be the main area of debate; in the pre-Revolution period and in the 1920's and 1930's access to education and the content of education were points of conflict. From 1940 the main pressure is for access to professional education with little apparent concern for content at any level.

One may attempt to examine the importance attributed to education, and particularly to different levels of education by examining participation rates. However, it is first important to note that substantial population growth has occurred since 1940, making improvements in percentage participation rates harder to achieve. Nationally population growth was relatively low between 1920 and 1940 (1.72% p.a. in the 1930's) but from 1940 onwards growth occurred at a rate in excess of 3% p.a.²⁸ One effect of this was that the size of the primary school population increased by 34.7% between 1952 and 1960. Thus achievement of a 44.4% increase in the total numbers enrolled gave only a small improvement in participation.

Nevertheless, previous increases in enrolments (i.e. in absolute numbers), were more favourable for 1930-40, at 62.6%. The rate of expansion declined post 1940 with an expansion of 56.0% over a 12 year period (1940-52).²⁹

But it is also necessary to examine growth rates of different regions. Although nationally the rate of expansion of the creation of primary school places declined after 1940, primary education in the Federal District experienced enormous growth. The participation rate rose from 61% to 75% of the relevant age group between 1940 and 1952. This occurred, not only against a background of a growing population, but also of internal migration to the Federal District. This improvement in participation rates reflected an absolute increase of a quarter of a million in primary school attendance, an increase of 90% between 1940 and 1952.³⁰ As will be shown in more detail in the next chapter, the counterpart of this growth was a much slower improvement in rural areas, explaining the overall declining rate of expansion after 1940.

Participation in middle education continued to grow in the 1940's and 1950's but showed an extreme inequality in provision. The Federal District maintained its advantage, while in the second most industrialised area provision grew; participation in these two areas far outstripped the national average. Middle education belonged primarily to the big urban centres.

It has been shown that higher education was not a growth area in the 1920's and early 1930's. In the late 1930's expansion began, although not completely on traditional lines; the Instituto Politécnico Nacional was an innovation of the Cárdenas period. It is difficult to portray the exact nature of development of the higher education sector as statistical data are hard to obtain, many universities not having kept records of enrolments. The 1940 and 1960 censuses give numbers of students disaggregated by course at professional level. These figures demonstrate a total increase from 22,000 to 80,000.³¹ UNAM has kept records, and enrolments are shown in Table 3.2. The number of students almost quadrupled between 1940 and 1960 and continued to expand rapidly after the 1960's.

Table 3.2 Enrolment in Higher Education Courses at UNAM, 1934-1970

	1934	1940	1946	1952	1958	1964	1970
Total	6,083	10,670	15,432	19,392	30,750	46,932	67,113
Men	5,021	8,535	12,521	16,163	25,784	37,627	51,827
Women	1,062	2,135	2,911	3,229	4,966	9,305	15,286

Source: UNAM - 1924-1972, Dirección General de Administración, Departamento de Estadística, UNAM, 1975.

Thus participation rates and enrolment figures demonstrate the changing nature of educational priorities. Primary education was seen as important in rural and urban areas up to the end of the 1930's, from which time expansion was far more concentrated in urban areas. This change coincided with a growth in university enrolments after a period of relative stability. Explanations of such changes in policy have been given above.

It is also possible to analyse the relative priority attributed to education over time by examining the expenditure of different governments.³² As might be expected, expenditure, as a percentage of the government budget, became significant under Obregón, after the foundation of the SEP. Outlay fell, and then rose slowly under Calles, continuing to grow slowly until the Cárdenas sexenio. Expenditure then reached between 12% and 13% of the government budget, (and projected expenditure was particularly high at 18.1%).

As noted above, a primary concern of post-war governments was the support of industrialisation. The late 1940's and first half of the

1950's was a period of low social expenditure. Education expenditure fell in the war period under Camacho, but fell even lower during Alemán's Presidency and remained low in the sexenio of Ruiz Cortines. Alemán's government concentrated on economic investment, while the education ministry under Gual Vidal, was concerned with expenditure which would promote economic development. The sexenio of 1952-58 saw no important new projects in education. But this general orientation of post war governments, involving low social expenditure, had political consequences. For the social unrest of the late 1950's forced some reappraisal of policy and López Mateos' slogan became that of balanced revolution.

This chapter has examined the formulation of education policy in Mexico from the late 19th century to the 1950's. This period is prior to the influence of professional analysts, i.e. social scientists and, primarily, economists, on policy making. Furthermore, the new perspective of the late 1950's and early 1960's has not, for the most part, permeated the interpretation of policies of the earlier period. Analysis of this earlier period has demonstrated the political context of policy making: the formulation of education policy has always been an area of political conflict.

As noted, in the late 19th century debate over education was primarily concerned with the content of education and took place among elite groups. The growth of a revolutionary movement contained various elements which made access to education a point of debate, and a necessary area of action of any post Revolutionary government. However, the content of education remained a disputed area, but now in a different political context. By the 1940's governments had controlled previously

influential social and political groups to a large extent, and the debate over content of education seems to fade. New pressures for secondary and higher education from middle class and bourgeois groups enter into the political arena. Thus demands for access to education remain important but again in a changed political and economic context. While governments appear to be much stronger vis a vis the mass of the population from the late 1930's onwards, this does not imply either an absence of political debate or conflict, or that governments do not any longer need to legitimate their existence through actions of a democratic and social reforming nature.

This analysis would indicate the utility of examining education as an area of political action in subsequent periods, in the 1960's and 1970's, rather than seeing policy as determined by the 'scientific' analysis of economists. The distance (examined in Chapter Two) between the results of education policy by 1970 and potential cost effectiveness, also suggested the need to look outside economic analysis in an understanding of education policy.

1. International institutions promoted educational planning, educational provision being seen as an integral and necessary element of economic and social development. Early influence was through the Organization of American States, which sponsored a Seminar on Educational Planning in Washington in 1958, and an Inter American Training Course on Overall Educational Planning in Colombia in 1959. By 1963 UNESCO and ECLA had made arrangements for the training of educational planners in Santiago. This coincided with the new interest of the United States in social and economic reform and planned development in Latin America. Following the Punta del Este meeting of 1961 concerning the promotion of the Alliance for Progress, a major conference was held in 1962 to discuss education and economic development in Latin America. This involved UNESCO, ECLA, the U.N. Bureau of Social Affairs and OAS.

See Benveniste, G., A Sociological Study of Educational Planning in Mexico, Ph.D. thesis, Stanford University, 1968. pp. 109-11.

2. Such ideas were also vital to the stance of some social democratic parties in the 1950's. See, for example, the importance placed on education by British Labour Party theoretician C.A.R. Crosland in his Future of Socialism, Cape, London, 1956.
3. The sixth section of the Plan de la Constitución de la Nación, of 13th March, 1823, refers to education. See Trayectoria de la legislación sobre educación pública en México, S.E.P., Mexico City, 1974, p.8.
4. Juárez' government was an exception: some five and a half thousand primary schools were set up between 1867 and 1874. See Vazquez de Knauth, Josefina, Nacionalismo y educación en México, Centro de Estudios Historicos, Nueva Serie 9, El Colegio de Mexico, 1970, Mexico City. pp. 51-2.
5. Vaughan, M.K., Schools for Social Control: Mexican Educational Policy and Progress, 1880-1928, University of Wisconsin Ph.D. thesis, 1973, see Ch.2, p.48.
6. Programme of the Liberal Party, of July 1906, reproduced in Cockroft, James D., Intellectual Precursors of the Mexican Revolution, 1900-1913, University of Texas Press, Austin and London, 1968, p.240.
7. Vaughan, op.cit.pp.94-5.
8. Reed, John, Insurgent Mexico, Seven Seas Publishers, Berlin, 1974.
9. S.E.P. Trayectoria de la legislación... op.cit. p.12.
10. Vasconcelos, "Examen de Algunas Doctrinas Pedagógicas Contemporáneas. El Peligro de Dewey". from Obras Completas, Libreros Mexicanos Unidos, Vol.2, pp.506-515, Mexico D.F. reproduced in Monroy Huitrón, G. Política Educativa de la Revolución (1910-1940), Sep-Setentas No.203, S.E.P., Mexico D.F., 1975, pp.73-74.

11. Raby, David, Educación y revolución social en México, Sep Setentas No. 141, S.E.P. Mexico D.F., 1974. p.33.
12. Cosío Villegas, Daniel, "La Crisis de México" Cuadernos Americanos, Vol. 6, No.31, March-April, Mexico D.F., 1947. pp.46-7.
13. Vazquez de Knauth, Josefina, op.cit., p.142. Only two public secondary schools had existed in the D.F. A decree was passed to allow the foundation of more schools.
14. Ibid. p.157.
15. Monroy Huitrón op.cit., p.116. The declaration was issued in December, 1933 and is recorded in the Diario de los Debates of the Camera de Diputados.
16. The new text was approved by Congress on 13th December, 1934. See S.E.P., Trayectoria de la legislación... op.cit. p.13.
17. Vazquez de Knauth, op.cit. p.157.
18. Multerer, R., The Socialist Education Movement and its Impact on Mexican Education, 1930-48, Ph.D. thesis, State University of New York at Buffalo, 1974. p.202.
19. Vazquez de Knauth, op.cit. p.160.
20. Multerer, op.cit. p.185.
21. Myers, Charles Nash, Education and National Development in Mexico, Industrial Relations Section, Princeton University, 1965, Princeton New Jersey. p.100.
- 21a. S.E.P. Trayectoria... op.cit. p.12.
22. Vazquez de Knauth, op.cit. p.150.
23. U.N.A.M., U.N.A.M. 1924-1972, Dirección General de Administración Departamento de Estadística, 1975, Mexico D.F. p.xxxix and xi.
24. Multerer, op.cit. p.316.
25. The annexo was an annexe to, or part of, the school in which pupils engaged in practical activity, such as cultivation of a plot of land or artisan activities.
26. Myers, op.cit. p.45.
27. Barkin, David, "Education and Class Structure: The Dynamics of Social Control in Mexico", Politics and Society, Vol.5, No.2, 1975. pp.185-199. p.187.
28. Myers, op.cit. gives figures for 1940-50 as 3.1%, and 1950-60 as 3.4%, taken from Cincuenta años de Revolución, Vol.2 La Vida Social, Fondo de Cultura Económica, 19, Mexico D.F. Muñoz Izquierdo in "Evaluación del desarrollo educativo en México (1958-70) y factores que lo han determinado", Revista del CEE, Vol.3 No.3, 1973, gives the rate for 1960-70 as 3.43%, (p.13).

29. Note that the time periods are not of equal length and so prevent accurate comparison.
30. Myers, op.cit. pp.86-7.
31. Census de Población-Resumen General, for 1940 and 1960, Secretaría de Industria y Comercio, Mexico D.F.
32. Wilkie, James W., The Mexican Revolution. Federal Expenditure and Social Change since 1910. University of California Press, 1970, Berkeley and Los Angeles, pp.158-161.

CHAPTER FOUR

THE NATURE OF EDUCATIONAL PROVISION BY THE 1960's:

QUANTITY AND QUALITY

Previous chapters have suggested a method of looking at education policy which moves away from both the approach of theories of economics of education, and also from mechanistic Marxist interpretations, towards seeing the formulation of education policy as a resolution of conflicting political pressures. Thus while education policy must respond to the demands of the form of economic organisation existing in any society and so to the demands of dominant groups, it will also tend, in a formally democratic society, to play an important part in the production of consent, that is in the legitimation of societal organisation, including the existing form of government. The formulation of education policy, like any other area of state activity, is a complex process. It is clear that the state does not only act to secure a skilled and compliant workforce at least possible cost.

Popular demands are adapted within a framework compatible with the constraints set by the form of economic organisation. The degree to which popular pressures are met or adapted to will depend on the strength of those pressures with the response varying from complete inattention to decisions which are contrary to the immediate interests of the dominant classes. Examination of such a process can tell us what education is provided and why.

But it is also necessary to understand the result of educational provision, i.e. the nature of participation in the education system and the consequent distribution of the benefits, or effects, of education. While a government may find it desirable to make a commitment to, for example, universal primary education, the effects of such a policy will

be determined to a large degree by the nature of the society into which the policy is inserted. An ostensibly egalitarian policy is unlikely to have egalitarian effects in an unequal society.

Following these points, this chapter aims to discover to what extent the nature of educational provision in Mexico in the 1960's, and the problems presented by such a provision, were a result of a commitment to policies which could be justified on democratic, if not on purely economic grounds. This involves three stages, i) analysis of the nature of educational provision, its quantity and quality, ii) examination of the extent to which different groups benefit from such an educational provision, iii) enquiry into whether the government could more effectively meet a commitment to equal opportunity.

In analysing problems in educational provision as regards quantity and quality, this chapter together with Chapter Two, on the cost-efficiency of the higher education system, provides an account of the nature of educational provision and the problem areas facing the Education Reform programme of 1970-76. We will concentrate on looking at the nature of provision of higher education. However, in order to better understand provision at this level it will be useful to examine the wider system of which higher education forms a part.

The Structure of Higher Education

In the colonial period all universities, whether set up by the Crown or by Catholic orders, were dominated by the clergy. Theology was the most important discipline, others being law, medicine and arts. The universities prepared students for subsequent occupations, in the church, as doctors, as lawyers and some in government administration. Such education was confined to a small group of upper class families. Some students were involved in pressuring for independence but the

social upheaval that occurred during the struggle for independence did not change the class character of university participation. One consequence for the universities was that, along with action to reduce the power of the Church, theology lost its importance, its place being taken by law.

The 19th century university was influenced in some aspects by the Napoleonic model. A structure of separate schools within the university covering discrete areas of knowledge became the accepted pattern. In keeping with European movements there was new interest in science and economics, but emphasis remained on professional preparation rather than on natural science. Positivism was an important influence, as was mentioned earlier in relation to the Escuela Nacional Preparatoria. As entry was limited by social and economic barriers, university education acted much more as a confirmation of status rather than as a channel of social mobility. Teaching was carried out by individuals professionally active outside the university. The position of university professor was seen as primarily honorific rather than remunerative; university teaching was not usually pursued as a career.

Many characteristics of the 19th century university remain today. The liberal professions have continued to dominate university study although not to the extent of the 19th and early 20th century. It is interesting that the Spanish language reflects this emphasis on professional learning in its use of the word carrera for university course. The separate organisation of the various professional schools has remained. This results in poor communications and a duplication of facilities. Different faculties might all have an introductory course in the same subject; this can involve duplication of teaching staff, laboratory facilities and library materials. Such a structure maintains the power of the director of the school or faculty. Within the school or faculty the catedrático (professor) normally has the power

to appoint; other staff become his personal assistants. Such a structure has been challenged by students, notably in Cordoba in 1918 and related reform movements, but usually with limited and short term success. The predominance of part time teaching has prevailed. This seems to have occurred in order to save money; there is inadequate finance to pay full time staff sufficiently advantageous rates to draw them from other employment. In the late 1960's Mexico's UNAM had one of the lowest percentages of full time staff at 3%. The rest are hired predominantly on an hourly basis. The University of Buenos Aires has 10% full time staff, Venezuela, Panama and Peru have approximately 25%, while Chilean and Colombian universities show the highest proportion at 37%.¹ One consequence is that a formal career structure rarely exists, thus discouraging those who might prefer to work in a university full time.

Myers, writing on Mexico, gives one interpretation of the reasons for such a structure,

Institutions that received the bulk of investment were large, non-resident universities and technical institutions in large cities, staffed by part-time faculties. The advantage of this type of institution for a nation with limited resources was obvious. Two of the usual constraints on university expansion, shortage of dormitory space and scarcity of qualified teachers are avoided. Money for student residence and maintenance of full time faculty can be spent instead to increase the numbers of classrooms and enlarge the size of the part time faculty. 2

However, Myers does not consider whether the benefits of a better quality, smaller higher education sector might be greater than the combined advantages and disadvantages of expansion. As a conventional manpower planner he views all existing high level human resources as necessary. But Liebman et al note that,

Governments found it easier to accede to the demand for more student positions in the universities than for more staff positions. 3

It is suggested similarly, that in many countries it has been politically necessary to surrender considerations of quality to demands for access. But the consequences of part-time teaching are various. The lecturer is probably only present at the university for his teaching hours, thus there is little staff student contact or possibility of discussion outside teaching hours. Part time teaching combined with a job is rarely compatible with research work (science lecturers are more often full time than lecturers of other disciplines). The amount of both time and money devoted to research is low. Ribeiro says,

The Latin American university is condemned to operate always at the third level, forming professionals, without coming to function at the fourth level, corresponding to postgraduate education, the preparation of its own teaching staff and research.

Some deficiencies are a result of inadequate financial resources, e.g. the predominance of part time staff and the consequent poor quality of teaching and low level of research, and inadequate libraries. Other shortcomings are structural in origin. The often jealously guarded independence of different schools and faculties leads to a lack of communication in terms of study and research and to duplication of facilities. Attempts to impose a more "rational" organisation from above, by, for example, the government, will usually be met by opposition from students guarding the principle of autonomy.

The political, teaching and administrative autonomy of the university was one of the demands of the Cordoba reform movement of 1918. In the face of government interventions which had closed the university, or sent in troops when the university was identified with any opposition, students maintained the separation of the university and the state. The reform movement spread throughout Latin America. Students were most successful in gaining acceptance of autonomy and co-gobierno, (co-government), in the more developed countries, e.g.

Argentina, Uruguay and Chile, where the growing middle classes had given their support to reformist governments. Students were more directly involved in political opposition in e.g. Peru, Venezuela, and Cuba, where dictatorial governments existed in the 1920's and early 1930's. As such forms of government became more widespread more student movements became involved in the defence of the measures of autonomy they had gained.

However, Mexico is an exception to this general pattern of support for reform and opposition to right wing governments, because of the distinct nature of the government and the then apparently anachronistic form of the university. In the 1920's and early 1930's UNAM was very much an upper class institution, this at a time when governments aimed to introduce social and economic reforms, their power resting on popular support. As Rodríguez Lapuente says,

The struggle for university autonomy in Mexico deserves separate consideration, because although it apparently followed the path of the Cordoba reform, in the political and social context in which it arose, it acquired a dramatically opposed meaning,.....in Mexico autonomy was brandished against a regime risen out of the Revolution, which had initiated a nationalist and popular policy, while the University strove to maintain a liberal ideology which reflected the interests of the₅ social classes affected by the revolutionary reforms.

Conflict between university and government in Mexico became less extreme only as the government lessened its radical actions and rhetoric, and as the university grew and became less of an elite institution, a pattern we saw emerging in the 1940's. We will now examine how higher education had developed in Mexico by the 1960's.

It is difficult to gather accurate data on higher education in Mexico. The absence of any central agency performing such a function until the Asociación Nacional de Universidades y Instituciones de Educación Superior, (ANUIES), was founded in the late 1950's, may be seen in part as a result of the autonomous status of most universities and the absence of federal control. Thus in examining expansion of the higher education sector, data for institutions other than UNAM has only been compiled from 1959 onwards.

In 1910 the only university in Mexico was what is now UNAM. By 1940, seven universities existed, by 1950 twelve, and by 1967 there were thirty five, at which time there were in all 103 institutions of higher education in Mexico.⁶ The rate of founding of universities after 1945 exceeds the average for Latin America, while the rate of numerical growth of the student body is comparable to that of Latin America as a whole. In Table 4.1 the expansion of enrolments between sexenios is shown, from the period of stable size in the 1920's and early 1930's up to 1970. Each sexenio from 1934 onwards has shown an increase of nearly 50% or more, apart from Alemán's government in 1946-52. The latter has been noted as a period of low social expenditure.

Data available for the states of Mexico, excluding the Federal District, show a total enrolment of 19,905 for 1958-59, 69,781 for 1967 and 116,785 for 1970-71.⁷ The provincial universities expanded rapidly in this period, at a faster rate than overall expansion. One of the first facts that can be noted is that while expansion has been rapid in the provinces and in UNAM, a vast inequality exists between provision of higher education in the Federal District and in the regions. The provincial universities still had under 50% of total enrolment in 1967 and 1970-71.

Table 4.1 Enrolment in Courses of Higher Education at UNAM, 1934-1970,
showing Absolute and Percentage Increases between Sexenios.

	1934	1940	1946	1952	1958	1964	1970
Women	1,062	2,135	2,911	3,229	4,966	9,305	15,286
Men	5,021	8,535	12,521	16,163	25,784	37,627	51,827
Total	6,083	10,670	15,432	19,392	30,750	46,932	67,113
Absolute Increase	4,587	4,762	3,960	11,358	16,182	20,181	
% Increase	75	45	26	59	53	43	

Source: UNAM - 1924-1972, Departamento General de Administración,
Departamento de Estadística, UNAM, Mexico City, 1975.

Apart from the unequal distribution of provision of higher education, a further problem exists in that expansion has occurred without sufficient consideration for the quality of education; emphasis has been on quantitative rather than qualitative change, such that problems, some noted above as typical of Latin American universities, have remained.

Richard King's comments are worth quoting,

It has become increasingly clear that a mechanistic brand of quantitative planning that focuses on the outer parameters of educational systems and institutions and takes their internal arrangements for granted fails to come to grips with the hardest challenges now facing education. Indeed, this sort of planning, unrelieved by major qualitative considerations, can sometimes do

more harm than good by a false illusion of progress and by concealing imperative needs for educational change.....Behind the statistical facade one finds abundant evidence that these enormously expanded educational systems have now ended in the throes of a profound and worsening crisis - a crisis of painful maladjustment between unchanging educational institutions and their rapidly changing environment. 8

However, the nature of quantitative expansion will first be examined in greater detail, looking at the location of the distribution of higher education facilities. Table 4.2 shows percentage participation for the 20-24 age group in 1964 and 1970. In 1964, the provincial average was 1.6%, while in the Federal District it was 12.8%. In 1970, these figures had increased to 3.1% and 18.0% respectively. The range of regional averages was 0.8%-4.3% in 1964, and 1.6% - 6.9% in 1970. When the regional figure is above average this is often due to high participation in only one or two states within the region, e.g. Nuevo León in the North, and Jalisco and Nayarit in the West. Puebla also considerably lifts the average for Centre South. Thus while we can say that the South, and South-east have the lowest participation, followed by the Centre South, Centre and the North-west, with highest participation in the North and East, it is necessary to look further at individual states.

Expansion between 1964 and 1970 was most rapid in the West at 135%, while averaging 100% in all other regions except the North. Thus the East with second highest participation grew faster than other regions with lower participation. The North and the Federal District retained levels of participation well above those of other regions. The urban population is in all cases better attended to than the rural, the average participation rate for urban provincial areas being 3.4% for 1964 and 5.8% for 1970, while for urban and rural areas together, the figures are 1.6% and 3.1% respectively.

Table 4.2 Percentage Participation of 20-24 Age Group in Higher Education, 1964 and 1970, by State, Region and for Students from Urban Areas.

LOCATION	1964		1970	
	Total	Urban	Total	Urban
<u>North West</u>	1.1	1.9	2.3	3.5
Baja California Norte	0.6	0.7	1.8	2.0
Baja California Sur	-	-	-	-
Chihuahua	1.5	2.6	3.1	4.5
Sinaloa	1.0	2.3	1.9	3.9
Sonora	1.2	1.9	2.3	3.4
<u>North</u>	4.3	6.0	6.9	9.0
Coahuila	1.7	2.4	4.9	6.5
Nuevo León	8.9	11.4	11.3	13.7
Tamaulipas	1.1	1.8	2.7	4.0
<u>Centre</u>	1.1	3.0	2.2	5.6
Aguascalientes	-	-	0.3	0.4
Durango	0.8	2.1	1.4	3.8
Querétaro	1.5	4.9	3.0	8.6
San Luis Potosí	1.6	4.3	5.6	9.2
Zacatecas	0.8	2.9	1.1	3.4
<u>West</u>	2.0	3.8	4.7	8.1
Colima	0.9	1.4	1.2	1.9
Guanajuato	1.1	2.2	2.1	3.9
Jalisco	3.2	5.2	7.4	11.1
Michoacán	1.2	2.8	2.6	5.3
Nayarit	1.9	4.1	7.6	14.2

Cont'd....

Table 4.2 continued

LOCATION	1964		1970	
	Total	Urban	Total	Urban
<u>Centre South</u>	1.3	3.1	2.2	4.6
Guerrero	0.2	0.6	1.5	4.4
Hidalgo	0.8	3.3	1.2	4.0
México	0.6	2.2	0.6	1.1
Morelos	1.3	2.4	9.2	14.7
Puebla	2.7	5.6	4.3	8.0
Tlaxcala	-	-	0.8	1.4
<u>South</u>	0.8	2.3	1.6	4.2
Chiapas	0.1	0.5	0.2	0.9
Oaxaca	0.2	0.7	0.2	2.2
Tabasco	0.6	2.2	1.5	4.4
Veracruz	1.4	3.3	2.6	5.7
<u>South-east</u>	1.3	2.2	1.7	2.7
Campeche	0.4	0.6	0.6	0.9
Quintana Roo	-	-	-	-
Yucatán	1.7	2.6	2.3	3.3
Federal District	12.8	13.2	18.0	18.6
Provinces	1.6	3.4	3.1	5.8
All Mexico	3.3	6.0	5.6	9.3

Source: Isidoro del Camino and Jorge Muñoz Batista, "La Enseñanza profesional, el gasto educativo, el desperdicio económico y la pirámide escolar en México en 1971", Revista del CEE Vol. 3, No.4, pp.119-20.

It should be noted that the figures referred to take potential demand as the 20-24 age group and calculate participation as a percentage of this group. However, a substantial number of students will fall outside this group. The figures are more useful for comparative purposes than as a completely reliable guide to participation levels. It will also be seen that real demand is less than potential demand when the rest of the educational pyramid is examined.

Methods of financing higher education tend to exacerbate the inequalities that exist. Financing is heavily dependent on the federal government, although the position of state universities is distinct from that of institutions in the Federal District. In the late 1960's the typical state university received 40% of its budget from state funds, less than 50% from federal funds and the balance from the institutions' own income. Table 4.3 shows how the total income of state universities is far below that of universities in the Federal District, while the two groups cater for an equal number of students. 84% of the federal subsidy went to institutions in the Federal District. State subsidies did not bring expenditure to Federal District level. It is particularly difficult for the economically less developed and poorer states to lift very low participation levels and to raise per capita spending as they are dependent on their own resources. There is no set procedure for apportionment of finance to state universities. One survey presents the following response as typical,

We do not have established any automatic percentage increase, but are at the expense of what the Federal and State powers want to provide.

Rectors also noted that finance had not kept up with increased enrolments and that increases in federal subsidies had been slow in the 1960's. Some effort has been made to increase alternative sources by the setting up of private foundations to raise funds.

Table 4.3 Subsidies to Public Universities in Mexico, 1967,
in millions of pesos.

Universities	F U N D S			
	Total	Federal	State	Own Funds
Total	1,146	855	138	153
Institutions in Federal District	757	717	-	40
State Universities	389	138	138	113

Source: La Educación Superior en Mexico, 1967, Anuies, Mexico City, 1969.

The number of students in state and federal institutions was approximately equal in the late 1960's. Therefore the above table also gives an approximate picture of the difference in expenditure per student between federal and state institutions.

Finance available for higher education is therefore quite heavily related to the state's wealth. As Rangel Guerra, secretary of ANUIES has pointed out,¹⁰ constitutional provision exists for the government to reorganise finance on a more equitable basis. Article 73 of the Constitution states that,

Congress has the power
XXV - To establish, organise and maintain in all the Republic, primary, secondary and professional rural schools;and to legislate in all that refers to such institutions;.....likewise to dictate laws directed at suitably distributing, between the Federation, the States and the Municipalities, the function of educating and the economic contributions corresponding to that public service, attempting to unify and co-ordinate education throughout the Republic. 11

Legislation utilising this power of government has never been proposed. Governments in the 1960's saw no reason to increase their financial commitments to universities. An ANUIES conference of February 1970 commented on the lack of funds, and decline since 1965.¹² Rangel Guerra noted a few days later that the subsidy to federal institutions in 1969 was 1,000 m pesos, while only 100 m pesos was given to regional institutions, a greater disparity than is presented in Table 4.3 for 1967.¹³ Later in the month the education minister, Yáñez, announced that there were no plans for more federal government help to the provincial universities at the present time. Rather,

The State universities must promote, in co-ordinated action with their state governments, the foundations which constitute their principal source of economic income. 14

Equity was most obviously not, at this point, a federal government aim for either political or economic reasons.

Many students leave the provinces to attend universities in the Federal District, (although the proportion has not been quantified). The older established universities have maintained a higher prestige. The continued attribution of higher status to education in the Federal District does rest in many cases on real educational considerations of quality and courses available. It cannot be denied, however, that differences are often exaggerated and that impressions built up over a long time do not accurately reflect the real situation. But with a smaller financial allocation per capita in the provinces, considerations of quality are still likely to draw students to the Federal District. One consequence is that many such students do not return to the provinces, where there may be a lack of professional skills, unlike in the Federal District. When Domínguez Vargas of UNAM suggested the creation of more regional universities, Rangel Guerra of ANUIES responded by emphasising the importance of first improving existing universities.¹⁵

Education for Development?

Financial considerations have limited the number of courses that can be offered in some universities and have meant that expansion has often been in the least costly disciplines.¹⁶ Thus expansion has not been linked to considerations of economic development, increasing places where job opportunities are perceived or where a lack of skilled labour exists, but rather has been oriented to meeting demand for higher education at least cost.

The pattern of participation between different courses and the limited number of courses available in some institutions has been a source of criticism. However, as shown in Table 4.4, there is an extent to which the distribution of students between subject areas appears more development oriented than in Latin America as a whole, i.e. a greater proportion of students are in subject areas producing skills closely linked to development needs, e.g. engineering and architecture, and economics and business studies, rather than in philosophy and the humanities. However, without further disaggregation of these categories, it is impossible to tell if this pattern is beneficial. It was shown in Chapter Two that an excess of students had begun to appear in architecture and civil engineering, important categories within the engineering group. In UNAM the engineering and architecture category showed an enrolment of 14,573 in 1972 in professional level courses; of these 4,355 were in architecture and 3,233 in civil engineering. Thus only 50% of students are in areas of engineering still in demand although the position of economics students was less secure. Mexico shows a lower proportion of students in law and social science than Latin America as a whole, but this is still not the optimum level in relation to job opportunities. Many sources showed an excess of students in these areas. It may be that administrative

Table 4.4 Distribution of Higher Education Students by Subject Area for Mexico and Latin America.

	Mexico	Latin America
Total	100	100
Medical and Dental Sciences	17	17
Natural Sciences	5	3
Engineering and Architecture	27	16
Agronomy and Vet. Medicine	2	4
Business Administration and Economics	30	17
Law and Social Sciences	12	20
Philosophy, Humanities and others.	7	23

Source: Richard King, with Rangel Guerra, Kline and McGinn; The Provincial Universities of Mexico, Praeger, New York, 1971. p.9.

posts taken by law and social science students in some countries are in Mexico increasingly taken by business administration graduates. Mexico has been influenced by North American patterns in the professionalizing of commercial skills. The faculty of business administration in UNAM was set up in 1958 with 334 students and in 1972 had a total enrolment of 7,043 students.¹⁷

Tables 4.5 and 4.6 give some idea of the development of distribution of students between courses. Patterns by subject area for 1959 to 1970 were quite stable apart from the economics category which became relatively more important between 1959 and 1964. The traditionally popular courses from the 19th century onwards, of law and medicine, have declined in percentage participation but the increase in absolute numbers has been too big in relation to job opportunities. Interesting developments post war are the growth of engineering, architecture and business administration courses. This coincides with the period of rapid industrialisation, increased state intervention and economic growth, which created job opportunities and encouraged study in growth related fields.

However, it would be misleading to represent the pattern of study as development oriented if development is considered to have a meaning other than that of growth, i.e. if development is seen as an integral process of change encompassing all sectors and involving some redistribution of resources among the community. Governments have not attempted to direct skills to poorer areas. For this reason one must qualify the idea of overproduction of professionally qualified persons. As has been shown, excess supply now exists in many areas in relation to jobs available, that is, in relation to effective but not potential demand. For while there may appear to be an excess of, for example, doctors in some urban areas and especially the Federal District, many rural communities remain without medical services. Calculations by manpower planners of future demand and of possible excess supply, tend not to distinguish between real and potential demand. This point is made in Malostozky and Barkin's critique of Myer's calculation of the future demand for doctors in Mexico.¹⁸ They criticise the view that supply and demand can be treated purely as factors emerging in the market.

Table 4.5 Distribution of Higher Education Students by Subject Area
in Mexico, 1959-1971.

	1959	1964	1970-1
Science and Technology	39.12	36.27	38.17
Natural and exact	1.51	2.22	3.25
Engineering	35.46	31.22	31.52
Agronomy	2.15	2.83	3.4
Others	60.88	63.73	61.83
Medicine and Dentistry (Health sciences)	20.04	16.02	21.19
Economics, Administration, Social Sciences	32.96	37.95	37.68
Humanities	7.88	9.76	2.96*

Source: Urquidi, V. and Lajous Vargas, A. Educación Superior, Ciencia y tecnología en el Desarrollo de México, El Colegio de México, Mexico City, 1967. p.42 for 1959 and 1964. For 1970-71 figures, Boletín Informativo, No.7, S.E.P., Mexico City, January, 1977.

* This lower figure may be due to different classification, e.g. the placing of Educational Studies in Social Sciences.

Table 4.6 Enrolment at UNAM in Licenciatura Level Courses, 1940 to 1970, by Faculty, or School or by Selected Subjects.

Year	TOTAL ENROLMENT	Faculty or school: Subject:	MEDICINE (-) % of total	DENTISTRY (-) % of total	LAW (1) % of total	ARCHITECTURE (-) % of total	ENGINEERING (4) Civil % of Eng. total Elec- % of trical total
1940	10,670		3,353 31.42	319 2.99	1,838 17.23	163 1.53	555 5.20 36 0.34
1950	17,271		5,128 29.69	398 2.30	2,456 14.22	837 4.85	1,704 9.87 283 1.64
1960	39,191		8,057 20.56	923 2.36	6,145 15.68	3,278 8.36	2,272 5.80 823 2.10
1970	67,113		11,774 17.54	2,207 3.29	7,045 10.50	3,707 5.52	2,831 4.22 4,361 6.50

Courses shown are those with the largest enrolment in each faculty. The number of courses given in a faculty or school other than those shown follows the faculty names.

Table 4.6 continued

Year	TOTAL ENROLMENT	Faculty or School:	COMMERCE AND ADMINISTRATION (-)		CHEMISTRY (2)		PHILOSOPHY & LETTERS (12)							
			Subject:	Public Account.	% of Total	% of Business Admin.	Chem. Eng.	% of total	Pharm.	% of total	Psych.	% of total	Hist.	% of total
1940	10,670		1,114	10.72	-	-	315	2.95	334	3.13	6	0.06	87	0.82
1950	17,271		2,070	11.99	-	-	537	3.11	306	1.77	196	1.13	127	0.74
1960	39,191		3,805	9.71	631	1.61	1,366	3.49	513	1.31	623	1.59	217	0.55
1970	67,113		5,785	8.62	4,245	6.33	2,831	4.22	898	1.34	1,705	2.54	724	1.08

Table 4.6 continued

Year	TOTAL ENROLMENT	Faculty or School:		SCIENCES (3)		SOCIAL SCIENCES (3)			
		Subject	Biology	% of total	Actuarial Studies	% of total	Diplomacy and Int. Relations	% of total	% of total
1940	10,670		39	0.37	4	0.04	-	-	-
1950	17,721		-	-	-	-	-	-	-
1960	39,191		380	0.97	106	0.27	205	0.68	102
1970	67,113		882	1.31	823	1.23	627	0.93	482

Source: Calculated from UNAM - 1924-72, Dirección General de Administración, Depto. de Estadística, UNAM, Mexico City, 1975.

Their study suggests that the population can be divided into three groups in relation to demand for medical services: i) demand exercised by the top strata, (approximately 20%) depending on income, ii) another, approximately 20% of the population is covered, often through a worker's union membership, by institutions such as IMSS (social security), ISSSTE (for state workers) and schemes run by PEMEX and other employees. But the third group, owing to type of work and level of income are not included in the above groups. A need for medical services exists which is only met by limited government activity and private voluntary organisations. But projections of need rather than demand could not be based on Myer's method in which market indicators measure effective demand, i.e. demand at current cost. As the study notes of Myer's calculations,

In order to carry out the analysis it is necessary to assume that these relationships represent two sets of equilibrium points between government and private demand, and total supply.

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Reflection of demand by market mechanisms does not portray an adequate picture of potential demand, or in other words, of need. Although it is not only high pay which draws doctors to the capital it would seem that the government could take action which would increase the supply of professionals in rural areas, in addition to the existing obligation of one year's social service.

The productive employment of other professional groups, such as agronomists, in the service of rural communities also depends on the creation of employment by the government. Little demand appears in the market. Table 4.4 demonstrated the very low percentage in Mexico (and in Latin America) following courses in agronomy. However, the 1970 census shows that of 17,508 people with some higher education in the agricultural sector, only 3,010 (17.19%) are in category 1 and 2 (professional and higher administrative) occupations, yet such occupations

form only 0.84% of employment in this sector.²⁰ While some land reform has occurred abolishing semi feudal structures, small proprietors and ejidos usually have insufficient financial resources and access to credit to use the services of, or take up the recommendations of, a professional. There may also be some resistance to the introduction of new and unknown methods. Modernisation is inevitably heavily dependent on government initiative. The public sector must be the main source of employment for agronomists and other associated occupations, as a UNAM study on the career of agricultural engineering shows.²¹ Sources of employment noted include, in the secondary sector, state and private industry producing, for example, fertilizers and machinery, and refining primary products such as sugar. In the tertiary sector such professionals could be employed in banking and administration. However, no private sector employment is noted for direct involvement in many of the professional's potential functions in the primary sector, such as administering a farm, ejido or cooperative.

It can be seen that pursual of some development oriented professions and the subsequent obtaining of a job (e.g. in agronomy, rural medicine and even in engineering, law and business administration) in poorer areas, and the consequent avoidance of some excess supply, is heavily dependent on government action. Some reasons for the limited nature of government activity in areas affecting the rural sector will be given in the next chapter.

Quantitative problems, such as the number of students that can be catered for in higher education, and their distribution between subject areas, represent only one area of concern for policy makers. As noted with reference to Latin American universities, major problems of a qualitative nature exist which put into doubt the value of investment in further expansion rather than improvement of higher education.

A major problem lies in the form and level of staffing of Latin American universities. Only 3% of UNAM's staff were employed on a full time basis in the late 1960's.²² In the survey of provincial universities the average given is 16%, but showing considerably variation between subject and university. Of the hourly professors 78% held other employment, as do 40% of the non-hourly full time professors. The most common forms of outside activity are teaching at university level, professional practice and administration within the professional field. The authors note that in their sample of 327 professors,

Of the 164 non-hourly professors 55 list specific commitments totalling 40 hours or more per week, (apart from reading, research and class preparation), and 71 of the hourly professors have schedules that are equally crowded. 52 non-hourly professors and 23 hourly professors list specific commitments totalling 30-39 hours per week. 23

The absence of an accepted promotion structure does not encourage professors to concentrate their activities around the university. There is also no incentive from this or other directions to engage in research, although research does not appear to be so infrequent an activity, or one so completely removed from teaching as Ribeiro would suggest.

A further problem in Mexican universities (common to Latin America), which originates with the students, is low retention rates, although this is probably contributed to by the nature of teaching. Another reason for high desertion after one or two years may be the absence of effective selection processes at the end of preparatoria level. Entry into university is virtually assured for those finishing "prepa", at least into the local university or the university of which the prepa is part. State universities, UNAM and IPN all have their own preparatorias (or in the case of IPN, vocacionales), from which entry into their

respective universities was automatic before 1970. (The existence of automatic entry of provincial students into UNAM was rescinded in 1964 when competitive examinations were introduced to reduce entry.) Instead selection tends to occur at the time of entrance to preparatoria through lack of places, and in the university due to failure of courses and economic inability to pursue studies. Failure of a year can be attributed to intellectual inability but also to insufficient study because of the necessity to do paid work, and because of poor teaching. Most teaching takes the form of lecturing, usually to large groups, from the professors' notes which may be available for students to buy. There can be little catering to individual need for explanation and little possibility of discussion.

Economic restrictions have been mentioned, for while fees to state and federal institutions have been very low, approximately 200 pesos (equivalent to about £4) in the 1960's, little help is available to cover living expenses and this must be found by the student or his or her family. Many universities operate by having two sets of lectures, one in the morning and one in the afternoon/evening which not only allows more students to be catered for but allows the student to attend one session and then be free to work the rest of the day. Many families cannot afford to support a full time student for five years although participation in higher education is concentrated among upper income level families. UNAM statistics show that for 1965, 40.2% of students held paid employment, of these 40% in government, 11% in industry and 10% in commerce. 80% of students working worked five or more hours per day and 37% seven to eight hours.²⁴ Table 4.7 gives an indication of the levels of retention in higher education by showing the concentration of students in the first years of higher education.

Table 4.7 Percentage Distribution of Students Between Years of Higher Education, for 1959, 1965 and 1971.

	1959	1965	1971
1	34.3	35.4	31.1
2	24.1	24.3	23.0
3	18.0	16.8	18.4
4	13.6	13.1	15.4
5	8.2	8.7	10.8
6	1.8	1.7	1.3
Total	100.0	100.0	100.0

The majority of licenciatura courses last 5 years, but some can be longer.

Source: Isidoro del Camino and Jorge Munoz Batista, "La Enseñanza profesional, el gasto educativo, el desperdicio económico y la pirámide escolar en México en 1971", Revista del C.E.E., Vol.3, No.4, Mexico City, 1973, pp.127-8.

The high levels of desertion and repetition impose a high cost on the education system which may be said, in the light of evidence in Chapter Two, to show below potential economic return. Subsidised tuition shows a low rate of return, partly because the absence of further subsidies to support living costs causes some students to be unable to pursue their studies for five years. As courses are structured around progression to the licenciatura, a student who "drops out" has little to show for his study, in qualifications or useful knowledge. For courses which are intended to last two or three years, i.e. for technicians, were scarce and not integrated into licenciatura courses before 1970. This is a serious problem when only 25% of enrolled students graduate.²⁵ Latapí gives the figure of 29.67% for UNAM and IPN students due to finish their studies in 1963.²⁶

In 1960 and 1970 respectively, only 1.3% and 2.6% of GNP were spent on the whole of the education system. In higher education this contributed to low quality teaching and an inadequate provision of necessary university facilities, particularly in provincial institutions. It also led to great imbalance in the production of highly skilled manpower between different regions of Mexico.

We may now ask to what extent the service that exists provides a 'democratic' opportunity. Are low quality and underemployment counterbalanced by a movement towards an egalitarian massification of higher education?

Participation in higher education approximated 3.3% of the 20-24 age group in 1960, and 5.6% of this age group in 1970.²⁸ First one may note the extreme geographical inequality in levels of participation. It was demonstrated above, and in Table 4.2, that participation varies between states and between urban and rural areas. This has not only

been a result of unequal development but has exacerbated it, and in addition has meant unequal individual opportunity. Participation would also appear to be very unequal between social classes.

Little data is available on the social background of university students. Lajous Vargas and Urquidi's enquiry showed that 43% of students at UNAM declared family incomes higher than those of 91% of the Mexican population and 75% of the population of Mexico City.²⁹ This means that just under half the students came from families within the top 25% by income in the D.F., and just over half fell below this level. The average income of a university student's family was 3.2 times greater than the national average. Latapi states that 66% of students are in the top 5% income group and 91% in the top 15.4% of the population by income. These data clearly show unrepresentative selectivity.³⁰

However, UNAM data, as reported by the Centro de Estudios Educativos (CEE), are not compatible with these two sources. UNAM data for 1964 estimated that 86% of students had incomes above the national average, and 48% above the average for the Federal District.³¹ The CEE interprets these figures as showing a predominance of above income students in higher education, although the figures do not demonstrate this in relation to incomes in the Federal District. A similar mistake is made in interpreting the comparison of income between preparatory and professional level students. It is stated that in these two groups, 13% and 35% of families respectively, receive incomes higher than the average in the Federal District. This implies lower than average incomes for the majority, a fact which would be surprising as it is also stated that only 12.76% of students are children of working class families and only a further 2.55% of campesino families. The incompatible income statistics may result from misinterpretation by the CEE, or possibly from underestimation of income by students. An interesting

point which does emerge is the increasing selectivity by income between preparatory and professional level students. Average income level increases and the proportion of students from worker and peasant families decreases.

Statistics on the class background of UNAM and IPN students given in the newspaper El Día in 1971 present a similar picture to that given by Lajous Vargas and Urquidi's and Latapí's statistics. The average income of a family in the Federal District is given as 1,707 pesos per month. The average income of the family of a student commencing studies at UNAM is given as 3,854 pesos per month, while the average family income of a student finishing a course is 5,140 pesos per month.³² This illustrates a previous point, that it is the less well off students who tend to drop out of courses. The statistics from El Día also maintain that 92% of UNAM's students are middle class and 8% working class, while in IPN, 84% of students are classified as middle class and 16% as working class. The basis for these categorizations is not given.

Within the university social status appears to affect choice of course. Low status students choose careers more directly applicable to a subsequent career, that is courses which give professional expertise such as economics, law and engineering. High status students more frequently choose medicine, philosophy and science.³³

Participation in higher education is, therefore, heavily confined to a small group whose families have above average incomes, largely outside the working and rural peasant classes. This could not be described as an unusual situation in Latin America. Although higher education may be open to all, patterns of participation do not reflect this democratic right. It will be necessary to examine the passage of students through earlier cycles of education to understand the extremely narrow class background of students in higher education. The

social class background of students in higher education in Mexico is not dissimilar to that of other Latin American nations, but certain tendencies within Mexican education should be noted. If nations are ranked according to participation rates in primary, middle and higher education, it is found that Mexico ranks higher in the provision of higher education than it does in the provision of either primary or middle education. Thus in comparison with other nations, Mexico gives disproportionate attention to higher education. The relation between those finishing and entering primary school puts Mexico in ninth place among Latin American countries. But relating those finishing secondary school to those who began primary education places Mexico in fifteenth position. This is very low when one considers that Mexico would easily be placed within the top five nations according to economic growth. From such a position of backwardness, Mexico rises to seventh position in the relation between finishing higher education and commencing primary education.³⁴ This implies that while attention to secondary education is low, an above average proportion of secondary school students carry on to higher education.

The Character of Participation in Primary and Middle Education

By tracing age cohorts through the education system one sees the very pyramidal form of participation of which participation in higher education forms the apex. Table 4.8 shows the process of access to higher education, relating entry to higher education to numbers commencing and finishing primary education for three age cohorts. By tracing the cohort of 1959 more detail can be given. Of those who started primary education in 1959, 22.6% finished 6th grade; 11.6% started secondary (first cycle) education and 8.5% finished; 4.3% began preparatory level and 3.9% completed this level. 3.5% started a professional level course in 1970.³⁵

Table 4.8

Students Entering Higher Education as a Proportion of
 the Relevant Cohort which a) started primary education
 b) finished primary education

a)

	1st grade primary		1st grade higher ed.	%
1958	1,823,765	1969	59,531	3.3
1959	1,990,166	1970	69,722	3.5
1960	2,158,725	1971	77,218	3.6

b)

	Finishing Primary		1st grade higher ed.	%
1963	366,049	1969	59,531	16.3
1964	436,351	1970	69,722	16.0
1965	489,404	1971	77,218	15.8

Source: Isidoro del Camino and Jorge Muñoz Batista, "La Enseñanza profesional, el gasto educativo, el desperdicio económico y la pirámide escolar en México en 1971", Revista del CEE Vol.13, No.4, Mexico City, 1973. p.122.

Of those who started primary education in 1959, 22.6% finished 6th grade. However, this does not indicate the level of participation of the relevant age group in primary education as a whole. The Eleven Year Plan instituted by President López Mateos aimed to provide primary school places for all those able to attend. While relative participation increased, the absolute number of non-participants increased. Satisfaction of demand (over all grades) improved from 30.9% to 40.7%. But not enough places were being provided to cope with the increase in population per annum. Population growth remained at about 3% p.a. from 1958-70. This signified a 54.6% increase in the potential demand for all stages of education, i.e. in the 3-24 age group.³⁶ Greater advances were made in meeting increased demand in the sexenio of López Mateos, 1958-64, than in that of Díaz Ordaz, 1964-70. Table 4.9 shows increases in capacity and satisfaction of demand and average participation levels between 1958-64.

Table 4.9 Increase in Places Provided, and Improvements in Participation in Primary, Middle and Higher Education, 1958-63.

	Participation Level %		Increase in Satisfaction	Percentage Increase in Capacity
	1958	1963		
Primary	59.3	69.7	10.4	43.0
Middle	10.6	17.5	6.9	101.8
Higher	2.0	2.9	0.9	71.9

Source: Latapí, P., "El Rendimiento del Sistema Escolar" in Excelsior, 26-29 January 1965, Mexico City.

One problem which the age cohort statistics demonstrated was the problem of desertion within educational levels, of the number of students who begin but do not complete educational cycles. Table 4.10 shows the distribution of students between grades of different cycles of education. It should be remembered that the potential attendance at lower grades of each cycle is greater due to the continued effects of population growth. Improvement of retention rates was an aim of the Eleven Year Plan but the goals set were not achieved. In 1958 those completing primary education numbered 16% of those who had started this cycle six years earlier. The aim was achievement of 38% by 1970; 30.6% was achieved and was quite a significant overall improvement.³⁷ But many places created were, for lack of teachers and schools, only being offered for the first few grades. In addition, for those who finished primary education, the possibilities of entering secondary school improved little from 1958-70.

Retention rates in preparatory, technical and higher education do not change significantly between 1959 and 1971 according to the distribution of students between grades as shown in Table 4.10. The statistics for preparatory level are affected by the different lengths of this cycle in different areas of the country. Technical education showed little variation between 1958 and 1964 although some improvement may be hidden by the creation of courses which added to the number in first grade in 1971. The data on higher education corroborates comments made above. Small improvements in rates of retention have occurred since 1959.

The amount of money spent on education did increase in both the 1958-64 and 1964-70 sexenios. Latapí, using SEP figures shows that the proportion of PNB spent on education rose from 1.5% in 1958, to 2.7% in 1964, while Muñoz Izquierdo gives the figure of 3.1% for 1970.³⁸ UNESCO figures show a move from 1.3% of PNB in 1961 to 2.6% in 1969.³⁹

Table 4.10

Percentage Distribution of Students between Grades of
Different Cycles of Education, 1959, 1964 and 1971.

		1959	1965	1971
PRIMARY	1	40.3	33.3	29.1
	2	20.9	21.3	19.9
	3	15.0	16.2	16.8
	4	10.3	12.1	13.6
	5	7.5	9.5	11.3
	6	6.0	7.6	9.3
SECONDARY	1	47.9	42.7	40.8
	2	31.7	31.7	32.6
	3	20.4	25.6	26.6
TECHNICAL	1	58.2	55.9	59.0
	2	24.7	27.8	25.6
	3	13.2	13.6	13.2
	4	3.9	2.7	2.2
PREPARATORY	1	58.2	56.9	52.0
	2	41.8	43.1	42.2
	3	-	-	5.8
NORMAL	1	54.3	34.1	31.0
	2	26.1	31.7	34.7
	3	19.6	34.2	34.3
HIGHER	1	34.3	35.4	31.1
	2	24.1	24.3	23.0
	3	18.0	16.8	18.4
	4	13.6	13.1	15.4
	5	8.2	8.7	10.8
	6	1.8	1.7	1.3

Source: Isidoro del Camino and Jorge Muñoz Batista, "La enseñanza profesional, el gasto educativo, el desperdicio económico y la pirámide escolar en México en 1971", Revista del CEE, Vol.3, No.4, Mexico City, 1973, p.127.

However, the teacher-pupil ratio became worse between 1964 and 1970, changing from 1 : 45.5 to 1 : 52.6, the ratio being worse in rural than in urban areas.⁴⁰ In addition, while rural schools have 35.7% of primary school teachers, they only have 24.5% of the qualified teachers at this level.⁴¹

It has been shown that participation in education steadily declines from first grade onwards. Attempts to improve levels of participation between 1958 and 1970 met with some success but left significant room for further improvement. To this picture of pyramidal participation, with the majority of students terminating education mid-cycle, we may add significant rural-urban differences in participation and retention, in part a cause of the patterns noted at higher levels. Table 4.11 shows improving retention rates at primary level for urban and rural areas. But it should be noted that not only are retention rates much better in urban areas but that improvement between the two periods shown is greater in urban areas. 2nd grade participation in rural areas is lower than 5th grade in urban areas in 1959-64 and lower than 6th grade urban areas in 1965-70.

Inequalities in participation do not only occur between urban and rural areas but, as with higher education, distinct patterns of inequality appear between states and between regions. Mir has examined the association between educational levels and levels of economic development between states, by use of multivariate regression analysis.⁴² It is pointed out that any correlation shown cannot be assumed to demonstrate causal relationships in any direction, (although the term explain is used). Seven indicators of educational level are in turn related to six independent variables representing economic development. The variation in attendance at school of the population between 6 and 14 years, the tasa de escolaridad, (the schooling rate) is found to be explained to an extent of 37% by the standard of living, as measured by

Table 4.11 Retention of Students in Urban and Rural Primary Schools,
by Grade as a Percentage of 1st Grade Attendance.

Cohort	Zone	G r a d e						Completing Primary School 6
		1	2	3	4	5	6	
1959-64	Urban	100	68	63	57	51	46	41
	Rural	100	49	29	15	9	7	6
	Total	100	58	45	34	28	25	22
1965-70	Urban	100	79	79	74	66	58	54
	Rural	100	56	38	22	15	12	10
	Total	100	67	57	46	39	33	32

Source: S.E.P. La Educación Pública en México, 1964-1970,
Mexico City, 1970.

the consumption of particular foods (e.g. meat, eggs) and by the level of the average industrial worker's wage in the state. Other variables only explain a further 9%. Urbanization does not appear as an important factor. But the degree of urbanization is a major factor in explaining differences in levels of expenditure. Mir suggests that in addition to any government preference for finance to urban areas there exists pressure for the provision of schooling from groups who expect their children to take up the increasing number of white collar occupations.

However, retention rates show association with different independent variables if one distinguishes between rural and urban areas. In urban areas close association is shown with standard of living and levels of expenditure, introduced as an independent variable. In rural areas the most significant independent variable appears to be the proportion of the state's population employed in agriculture, i.e. retention improves in rural areas as the size of the rural population in relation to the state's total population becomes smaller. Expenditure also appeared as an important variable. These inequalities do not follow a simple pattern. As retention rates in rural areas are related to the proportion of the state's population employed in agriculture, this implies significant differences in retention rates for different rural areas, depending on whether the state is primarily rural or urban, and whether or not urban development has begun to affect rural life-styles in, e.g., standard of living and patterns of agricultural production. Mir says,

At primary level the urban-rural gap can quickly be closed in the advanced states, in the predominantly rural states on the other hand, we can expect that the 43 discrepancies will continue sharpening.

This analysis demonstrates that participation is closely related to levels of development and standards of living. While inequalities in provision of education, including unequal expenditure, have contributed

to and worsened inequalities in educational levels, such inequalities cannot be overcome by increased expenditure alone. Mir states that for retention levels to improve, in addition to extending opportunities (e.g. more schools to sixth grade and more qualified teachers), families would have to reach higher standards of living before more education was economically possible or seemed important. Here we touch on a vital problem in the consideration of the distribution of resources between educational levels. To some extent it is true that the direction of more resources to rural education would have less than desired effect on participation as major contributory factors to low participation are economic. As Mir concludes,

It is evident that any attempt to reduce the educational gap (rural - urban) is condemned to fail if it does not constitute an aspect of a larger programme designed to promote economic development in the backward areas.

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However, retention areas are also affected by non-availability of schools, or more often the absence of later primary grades, and by the not wholly satisfactory form and quality of rural education. As noted, rural education tended to lose its specific character from the 1940's onwards. Orientation to the rural environment, in terms of content and of the school calendar, might improve participation.

Low participation must be explained both by socio-economic factors and by inadequate provision of educational facilities. Corroboration of these findings is given by a survey carried out for the Eleven Year Plan. In 1959 there were 7,867,869 children of between 6 and 14 years of age. Of these, 3,057,596 were not attending school. The sample survey estimated that of this age group, 1.4 millions were prevented from going to school for socio-economic reasons. Thus the non-attendance of a further 1.6 millions could possibly have been reduced by increased investment in education.⁴⁵ We have seen that the Eleven Year Plan did improve percentage participation although absolute numbers not

attending school increased. At the end of the time period of the plan, 75% of rural primary schools had four grades or less. Thus it can be said that the utility of further attempts to improve participation by improved provision of education should not be discounted in the light of socio-economic realities, but nor should 100% participation rates be expected unless educational provision is part of integral development planning.

Because of the higher desertion rates in rural schools the cost of one pupil completing primary school is far higher in rural than urban areas (because of the higher proportion of children commencing primary school to primary school graduates). Latapí, commenting on the period 1958-64, gives evidence of this: the graduate of an urban school cost 2,687.79 pesos, while the graduate of the rural school cost 10,171.03 pesos.⁴⁶ An improvement could only be made by achieving better retention rates.

Economic loss from desertion is greatest at primary level (as measured by cost per pupil multiplied by number not completing the educational cycle). However, in comparing levels one finds that because cost per pupil is lower at primary stage, the percentage of total loss which occurs at this level is much less than the percentage dropping out at this level. Conversely, while 1.49% of all students drop out during higher education, this represents 17.5% of the total economic loss. Table 4.12 shows economic loss by level and the percentage dropping out at each level for 1964 and 1970. It would appear that, disregarding political pressures for access to particular forms of education, the most necessary policy is improvement of retention within cycles, both where learning is basic, i.e. primary, and where the total cycle imparts a particular body of knowledge, e.g. technical

Table 4.12 Proportion of Students Leaving or Failing Cycles of Education in 1964 and 1970, and Percentage Distribution between Cycles of the Total Consequent Economic Loss.

Stage of Education	1964		1970	
	% Students	% Economic Loss	% Students	% Economic Loss
Pre-primary	1.54	1.1	1.74	1.7
Primary	83.90	48.4	81.92	46.1
Secondary (lower middle)	7.52	18.2	9.77	19.7
Normal	0.36	2.5	0.23	1.4
Preparatoria (upper middle)	2.46	9.9	2.47	10.0
Technical (upper middle)	2.60	5.1	2.38	3.6
Higher	1.64	14.8	1.49	17.5
Total	100.00	100.00	100.00	100.00

Source: Calculated from Tables III 12 and IV 1, "Estadística", Revista del CEE, Vol.3, No.4, Mexico City, 1973.

Economic loss equals cost per pupil at 1960 prices multiplied by numbers failing and leaving. The cost per pupil varies at each level.

and higher education. If necessary this might be financed by tighter controls on access to some higher levels.

Cost per pupil statistics can add to the picture already given of changing educational priorities over time. Despite lack of facilities at lower levels, the possibility of improved quality of facilities, and the economic inability of most students to complete even the lower cycles of education (primary and secondary), expenditure per student at constant prices increased most at the level of higher education between 1958 and 1970 (excluding nursery education), as is shown in Table 4.13. Obviously expenditure per pupil is necessarily more at higher levels, but the relationship between primary and higher education changed from 1 : 14.0 to 1 : 17.9 between 1958 and 1970. Cost per pupil increased more at primary than at secondary level. Technical education (upper middle) showed a big increase from 1958 to 1964, but then fell back. The low level of expenditure shown here for technical education may contribute to high drop-out levels. At preparatory stage, cost per pupil fell slightly, while expenditure on higher education per pupil was 77.86% more than in 1958. However, it has been stated earlier that expenditure has not been great enough to remove very important problems arising from the low quality of education, nor to support less well off students with grants.

This section on participation in education has shown a highly pyramidal form of satisfaction of potential demand. It has been noted that, given the existing economic conditions and cultural environment of a great part of the rural population, much of this potential demand will not become effective demand until more resources are devoted not only to education but also to economic development. However, some of the unsatisfied demand, e.g. for later grades of primary school and

Table 4.13 Cost per Pupil at Constant Prices (1960), for 1958,
1964 and 1970 and Proportionate Changes with 1958 as
base 100.

	1958		1964		1970	
	Cost	%	Cost	%	Cost	%
Pre-primary	302.9	100	505.2	167	739.3	244
Primary	338.1	100	418.1	124	438.1	130
Secondary (lower middle)	1,418.7	100	1,753.2	124	1,573.9	111
Normal	4,022.7	100	4,910.6	121	4,837.0	119
Preparatory (Upper middle)	3,168.9	100	2,912.7	92	3,136.9	99
Technical (Upper middle)	921.7	100	1,445.7	157	1,180.9	128
Higher	4,732.6	100	6,533.8	138	8,180.9	173

Source: Calculated from Table III 12, "Estadística", Revista del CEE
 Vol.3, No.4, Mexico City, 1973.

for secondary school places is likely to respond to increased and better facilities. In 1970 the majority of rural primary schools provided four grades or less, and there were still insufficient places in secondary school for all those graduating from primary school. Despite such inadequacies, expenditure per student increased most in higher education between 1958 and 1970.

Thus there existed a very unequal base from which students might proceed to higher education. Students most likely to continue their studies to the upper middle level of education and to higher education were those of an urban background, and belonging to families with above average incomes.

Patterns of participation in the levels preceding higher education help to explain the nature of participation in higher education. Rural and lower income groups are severely disadvantaged by the stage of middle education. The provision of higher education exacerbates inequalities through its concentration in the more developed states, particularly in the largest provincial towns and in the Federal District, and through the absence of any loan or grant scheme for students. The nature of educational provision in the 1960's could not be said to have provided equal opportunity.

In examining the nature of expansion of higher education, it emerged that there existed quite severe inadequacies in the quality of higher education, - low quality which was not counterbalanced by an egalitarian provision of education. It does not appear that response to the needs of development or of economic growth has been the major consideration directing provision of higher education. Expansion has been greatest in the least costly disciplines rather than in established areas of economic priority. This supports findings in Chapter Two concerning the unemployment and underemployment of university students. The account of the low quality of education presented here also supports

comments presented in Chapter Two on the inadequate training of many graduates. Qualitative improvements would appear to have had a low priority.

This chapter has demonstrated that the provision of higher education and school education in Mexico does not demonstrate a strong commitment to democratic forms of provision. Thus neither democratic or economic goals can satisfactorily explain the nature of educational provision.

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EDUCATIONAL PROVISION AND THE GROWTH OF

WHITE COLLAR EMPLOYMENT

The preceding chapters have taken two major directions. Firstly it was shown that patterns of investment in education do not appear to represent economically rational decisions. It can often be shown that alternative investment decisions would provide a bigger economic pay-off. Such a simple statement might come as no surprise to the politician or policy implementer who could cite other goals, most frequently of equality, or equality of opportunity. However, examination of the education system in the 1950's and 1960's suggested firstly that equal participation has never even remotely been approached and secondly but perhaps more importantly that facilities have not existed which would allow equality of opportunity. A commitment to universal primary education is enshrined in the Constitution of 1917, but this had not been attained by 1970. Similarly, participation in middle education is low at 30%, not only due to social and economic constraints on attendance, but also to inadequate provision.

While contributions to development through the building up of skills may be an integral consideration in any formulation of education policy, such motivations do not totally explain the nature of investment patterns, any more than does the pursuit of equal opportunity. These two policy directives cannot, either alone or in combination, provide an explanation of patterns of participation portrayed in preceding chapters.

Chapter Three showed that education policy earlier in the 20th century can only be understood through a knowledge of Mexican history and politics. For political structures, relations and pressures form

the context of policy making. Policy is likely to represent a resolution of conflicting pressures, one of which may be for economic efficiency, and will produce a particular distribution of opportunities which may be defended by the rather vague ideal of 'equal opportunity'. This chapter will attempt to explain the political and economic pressures which gave rise to the form of participation demonstrated in the previous chapter. This will also indicate those pressures likely to influence the Reforma Educativa of 1970 to 1976.

From approximately 1940 to 1970, Mexican governments have implemented education policies which have benefited the urban more than the rural population, and higher socio-economic groups rather than lower. In particular, students in the upper secondary and higher stages of education come predominantly from economically favoured families, usually of an urban background. Participation at these levels neither approaches mass education nor is confined to a narrow elite group. UNESCO statistics for 1970 showed 22% of the relevant age group in secondary education and 5.8% of the relevant age group in higher education.

It would then be very easy to say that education above primary level is largely confined to the middle classes. This alone tells us little. Who or what are the middle sectors, classes or class? Why should they desire post-primary education and why should the government consider it desirable or necessary to provide such education? Can reference to social grouping and position in the social structure help to explain the nature of educational provision and recent reforms, rather than merely describing certain attributes, e.g. income, of the students' social background? This chapter will aim to show that the nature of educational provision can be better understood by use of the concept middle class. Chapter 6 then demonstrates the importance of examining middle class interests and attitudes in the late 1960's as part of the immediate context of education reform.

The Nature of the Middle Class

In bourgeois society the middle classes can most usefully be seen as intermediate groups between bourgeoisie and proletariat. This would include those individuals not directly involved in the predominant form of accumulation, i.e. the relationship between productive wage labour and capital, excluding those who are unemployed. One group which falls into this category is the self-employed, either rural or urban, e.g. the businessman, professional or farmer. One might also include with urban self employed businessmen those who employ a few individuals. Their interests may be more akin to those of the self-employed due to their relatively small deployment of capital in relation to other large scale entrepreneurs. Such a group of self-employed or small capitalists is frequently referred to as the traditional middle class for its existence is closely related to the earlier stages of capitalist production in which there are numerous small scale producers, but it is threatened by increasing competition with the development of capitalist production.

But there also develops what has sometimes been called a new middle class. The need for the services of those trained in the liberal professions grows as capitalist production expands. And as business enterprises expand in size, they are liable to require the full time services of lawyers, accountants etc. and thus there is a tendency for previously liberal professions to enter into a relation of wage labour. This group is no longer outside the relationship of wage labour and capital but holds a particular position within it. Work performed is of a highly specialised nature - although so are many other forms of wage labour. The significant difference is that such work depends on mental skills, skills that are increasingly most usefully learnt not on the job but in a separate educational institution which gives qualifications enabling the individual to practise his or her chosen profession.

But the development of capitalist production also demands the expansion of other occupational positions, mental labour of a more

generalised nature. As industrialisation proceeds and the scale of production expands, the demand for manual labour increases, due to mechanisation at a slower pace than the rate of expansion. However, as production becomes more complex there is a growing need for specialisation within other areas, e.g. managerial and administrative tasks, maintenance of records and book-keeping etc. This development was recognised by Karl Marx in Capital. He identified a middle group which emerges with the expansion of capitalism. Part of this group is made up of unproductive workers whose labour is, however, necessary to the process of production. The number of such workers necessarily grows as the scale of production grows.

Labour consisting merely of intermediate operations connected partly with calculating values, partly with realising them, and partly with reconverting the realised money into means of production is a labour whose magnitude therefore depends on the quantity of produced values that have to be realised, and does not act as the cause, like directly productive labour, but rather as an effect of the respective magnitudes and masses of these values. 1

Such a development necessarily increases the demand for mental labour.² And such positions have, in common with professional specialisation, the need for formal education to produce necessary skills. This is not to say, as has been demonstrated above and will be discussed below, that all education pursued is necessary to the job performed. However, the mental worker or white collar worker has depended on qualifications for progress in this occupational field. He or she is set apart from the manual labourer by the greater scarcity of his or her skills, their greater cost of reproduction and therefore higher wages, and further by separate geographical position within the workplace. Poulantzas states that the worker using mental skills, who may for example be involved in banking, accounting or office work, is

Encased in a whole series of rituals, know-how and cultural elements that distinguish it (work) from that of the working class i.e. from productive labour within the material labour process

3

It is suggested that the conditions of work of white collar workers

are distinct from those of manual labourers and that this, together with an associated different educational and cultural background, gives rise to distinct interests and class perceptions which are more akin to those of employed professional groups. Thus it may be useful to examine the actions and interests of such a group in the political arena and the action of government in respect of this "white collar" middle class. The so-called "traditional" and "new" middle class differ in a fundamental way. The former group, some of whom are involved in small scale capitalist production, tends to diminish in importance as capitalist production expands, while the latter group grows as the scale of production expands and is not involved in the deployment of capital. In order to more accurately reflect this situation it is suggested that the term petty bourgeoisie be used to refer to the "old" group, reserving the term middle class for the new group of employees within capitalist societies.

Capitalist development has of course occurred in very different circumstances in Latin America. For example, the development of industrial production has not necessarily involved the overthrow of non-capitalist relations of production on the land. However, there have developed as in advanced industrial societies, intermediate groups between the bourgeoisie and the urban proletariat performing the functions noted above. This group is usefully seen as a middle class.

However, much writing on Latin America has used this term in a different sense, either to refer to entrepreneurial groups who do not appear to form a hegemonic bourgeoisie,⁴ or, more frequently, to refer in a descriptive manner to groups of middling income, wealth, social status etc. The latter is true of the work of John J Johnson, who attached great importance to the supposedly "progressive" middle sectors of Latin America, and of many who have sought to analyse the specific nature of the Mexican class structure.⁵

Whetton in his section on Mexico in the Pan American Union's Materiales para estudiar la clase media en America Latina⁶ (published in 1950) gives no clear reason why the groups he examines should be regarded as a specific

social group. Rather than identifying common interests or actions, similarity is seen in type of lifestyle which probably relates to certain levels of income or wealth. The latter is also the basis of classification in Mendieta y Nunez' work on the middle class.⁷ And while Gonzalez Cosio criticises non-Marxist sociology, including the work of Mendieta y Nunez, his definition of the middle class is of little more analytical value, identifying as he does the middle class as a zone of social mobility.⁸ Like other writers mentioned here Gonzalez Cosio does not clearly identify the emergence of a white collar salariat, or in other terms, a group of non-manual employees. His work, although claimed to be Marxist, gives little hint of the usefulness of Marx's writing in this area.

One must make clear, however, that the growth of a middle class is not dependent only on the level of advancement of production but also on developments in the activity of the state. According to the type of political system within which production is organised a government may act i) to support or promote industrial development, and ii) to provide goods such as education and medical services. Both areas of action increase the number of government employees in white collar occupations and have been responsible in Mexico for a substantial growth in white collar employment.

Changing Occupational Structure

At the time of the Revolution 80% of the population depended on agricultural labour for its livelihood.⁹ Between 1880 and 1900 rapid development had occurred in mining and petroleum, and railroads were built for the extraction of mineral and primary products. Foreign investment predominated in such activities, and did not lead to much associated manufacturing activity. Thus production was primarily agricultural or extractive, and the vast majority of the population worked on the land. Those outside such relations of production were

involved in commerce, (particularly exporting) and in the liberal professions and government administration, but a predominantly agrarian economy with concentrated land ownership and little government intervention required only small numbers of the latter groups.

The structure and continuity of production was broken by the Revolutionary period of, broadly, 1910 to 1920. After this period a national state had to be reconstructed. This involved meeting the demands of groups involved in the Revolution, e.g. for education and for land reform. The nature of land reform in this early period concentrated on the formation of ejidos (communal farms). Redistribution occurred in the 1920's but more was achieved by the Cárdenas government such that by 1940 49% of cultivated land was in ejidos.¹⁰ What were the effects of these changes on the rural class structure?

Few ejidos are collectively organised, rather an individual tends to work on a parcel of land within the ejido. However, it would be difficult to see such workers as a rural middle class. They are in a sense independent farmers, but the assets of most are such that production often does not rise far above subsistence level. Whetton notes that the average recipient received only 4.6 hectares of cropland of which only a small part of the total was irrigated land.¹⁴ Thus the land reform did not create a group of medium scale farmers employing and accumulating small amounts of capital but increased the number of farmers working at low levels of productivity. This group therefore has little political independence as it relies on the government for assistance in the form of credit, irrigation schemes, etc.

Land reform which occurred after 1940 has concentrated to a greater extent on distributing plots to individual owners, but again these have generally been small. The exception is land which benefited from government irrigation projects, which began in the Cárdenas period. However, much irrigated land, particularly in the north, has been sold

or granted in large holdings on which commercial farming has developed, maintaining quite rigid distinction between large scale capitalist farming and small scale low productivity farming.¹² Between 1950 and 1960 the number of ejiditarios and small plot owners fell with a consequent concentration in land ownership. Rangel Contla shows the growth and then decline of what he defines as the rural petty bourgeoisie in the statistics presented in Table 5.1

Table 5.1 The Mexican Petty Bourgeoisie as a Proportion of Total Population, 1895-1960.

Year	Agrarian	+ Ejiditarios	Non Agrarian	TOTAL
1895	7.0	-	17.0	24.0
1900	12.6	-	18.1	30.7
1910	8.4	-	20.4	28.8
1921	13.1*	-	15.3	28.4
1930	-	-	-	-
1940	12.3	20.1	12.4	44.8
1950	24.1	16.7	8.1	48.9
1960	13.9	10.6	9.9	34.4

Source: Jose Calixto Rangel Contla, "La Polarización de la estructura de clases en México", Revista Mexicana de Sociología, January-April, No.2, 1970. p.403.

* Includes some of first ejiditarios.

Thus land distribution has changed significantly since the Revolution creating a larger group of "independent" farmers (although some decline has occurred since 1950). However, because holdings are generally small and unproductive, this group does not have the independence and degree of political power that one might expect of a group outside the interdependent capital-wage labour relation, and with a property base of its own. As noted, it is dependent on the government for the introduction of improvements. This factor has allowed the development of a situation in which the main organ of expression of small landowners, the Confederación Nacional de Campesinos (CNC) is effectively government controlled.¹³

There does not exist in Mexico a substantial agrarian based petty bourgeoisie that might make effective demands for representation, or for particular goods and services of which education would be an example.

Post Revolutionary development has perhaps had a more radical effect on urban occupational and class structures. Pre-Revolution, there had existed only limited manufacturing activity. Significant non-agrarian activity was confined to mining and petroleum, and infra-structural development was oriented to the export of primary products. The Revolution interrupted these activities and by the mid 1920's Mexico had only managed to return to production levels of the end of the Diaz period. Mining was then hit by reduced demand due to the effects of the Depression. However, it is in this period that manufacturing began to develop. This was in part a recovery from past disruption, but also a response to the disruption of trade caused by the Depression. In some sectors import substitution was promoted. But the decisive factor in the further promotion of development was government action. The Bank of Mexico had been founded in 1925 as a central bank. Banking reforms of 1930-1 reinforced the position of the Bank and allowed fiscal

policy to be used to promote development.¹⁴ Other agencies were created to facilitate government investment and the provision of credit, e.g. the National Bank of Agricultural Credit in 1926, and the National Urban Mortgage and Public Works Bank in 1933. One of the most important innovations was the foundation of Nacional Financiera in 1934 which has acted to promote industrialisation through its investment policies.

Policies of the Cárdenas government of 1934-40 attempted to give some impetus to specifically national development. Public investment went into areas which would promote further growth and industrialisation, e.g. in irrigation, to road transport. The nationalization of the petroleum companies allowed the future direction of the industry to be oriented to national needs. In this period (1934-1940), public investment was financed solely from domestic sources. There was far greater national control of the economy with domestic rather than foreign capital becoming the major source of investment, and with public investment forming almost half of domestic investment. (Subsequently foreign investment has increased and government finance has depended on foreign loans incurring a sizeable external debt.) As Glade says, "Government policies functioned to create industrial investment opportunities and to increase the availability of liquid capital for acting on them."¹⁵

Policies of the 1930's laid the foundations for the rapid growth which occurred from the 1940's and through the 1950's, and which brought about substantial developments in employment and occupational structure. In the 1950's and 1960's governments continued to take action which would stimulate private investment in order to strengthen commercial agriculture and to consolidate and expand Mexico's industrial base. The process was based on, among other factors, protection of domestic industry, favourable fiscal policies, small increase in real wages, low interest credit, and infrastructural activity on the part of the

government. As a government study group comments,

In sum, in creating a propitious atmosphere so that private businesses will find industrial investment less risky and more attractive and obtain a high rate of profit. 16

Government economic policy was very successful in promoting industrialisation and sustained economic growth for at least two decades. This had important effects for the workforce in its sectoral distribution and in type of work performed. The growing need for white collar workers also demanded the provision of education by the government to train such workers. The gaining of educational qualifications allowed entry into white collar work. Later, in the 1960's, when employment opportunities became relatively scarce, education was increasingly sought after as a passport to employment. But before looking at the causes and consequences of this phenomenon, it is necessary to establish the growth of the middle class.

Changes in Sectoral Distribution of Employment and the Development of Large Scale Units of Production.

Increasing employment opportunities in urban areas with industrial development have produced sizeable rural to urban migration. The proportion of the population living in urban areas increased from 20% in 1943 to 43% in 1970 (considering 15,000 as an urban population), while the number of cities with over 100,000 inhabitants had reached 35 by 1970.¹⁷ This reflects a change in the sectoral distribution of employment and production. The primary sector has lost some of its former importance as an employer with the growth of both the secondary and tertiary sectors as is shown in Table 5.2.

Table 5.2 Sectoral Distribution of Employment 1940-1970.

	1940	1950	1960	1970
Agriculture	65	58	54	39.5
Industry	13	16	18	22.5
Services	21	26	28	38

Source: For 1940, 1950 and 1960, Roger Hansen, The Politics of Mexican Development, John Hopkins Press, London, 1971.
 For 1970, James Cockroft in "Mexico", in Chilcote and Edelstein eds, Latin America: The Struggle with Dependency and Beyond, Schenkman, Cambridge, Mass, 1974, p.287.

The secondary sector has shown fast growth during the periods of 1910-70 and 1940-70. The sector is sufficiently diverse that it makes very varying demands in terms of skill requirements. It is obviously the larger units of production which require workers with non-manual skills, i.e. managerial, professional and office employees. Approximately half the industrial labour force (which makes up 80% of the secondary sector) is employed in such larger units. 42% are employed in establishments with over 50 employees, 9% have between 16 and 50 employees and 49% have 15 and under.

The tertiary sector has become an important source of employment and contributor to the gross domestic product, as shown in Tables 5.2 and 5.3. The growth of industrial and urban areas demands the associated development of for example, banking, professional services, large scale commercial activity and the expansion of government (federal and local) administrative and welfare activities, all areas of white

collar work. The growth of this modern sector has, however, been accompanied by an expansion of small scale or "traditional" activity in non-institutionalized positions (so-called marginal occupations), in services and commerce (e.g. maids, street vendors). The growing wealth of the cities attracts rural to urban migration, and while there has been insufficient growth of the "modern" sector to absorb this new workforce, small scale independent activity can produce an income greater than that available in rural areas.

Table 5.3 Sectoral Contributions to the Gross Domestic Product, 1940-1970.

Sector	1940	1950	1962	*1970
Agriculture	23.2	20.8	17.2	
Industry	31.0	31.0	33.9	
Services	45.8	48.2	48.9	
TOTAL	100	100	100	

Source: For 1940, 1950 and 1962, Roger Hansen, The Politics of Mexican Development, John Hopkins Press, London, 1971. p.43.

For 1970, El Problema ocupacional en México, Grupo de Estudio de Empleo, mimeo.

* The 1970 figures are for primary, secondary and tertiary sectors. Therefore the primary sector will include mining, elsewhere included under industry.

The growth of the tertiary sector is very closely associated with levels of industrialisation and urbanisation, the tertiary sector being most important as an employer in the Federal District and the northern towns.¹⁹ However, as shown there are great variations between the types of employment created. Approximately half those employed in the service sector work in establishments with over 50 employees. In the service sector 39.5% of the group earn over 1,000 pesos per month and 60.5% less than 1,000 pesos per month. The former group can perhaps be loosely equated with the group of professionals, scientific staff, directors, administrators and office workers who make up 41% of the service sector. Their numbers have quadrupled between 1950 and 1970, increasing from 37.6% to 41.0% of the service sector in this period.²⁰

The growth of both the secondary and tertiary sectors has involved the creation of large and small scale organisations. It is in some senses justifiable to label these respectively modern and traditional, for the use of recent and more efficient techniques in production and administration is only likely to be feasible in larger scale operations, where there is a sizeable capital input allowing mechanization, and a relatively developed division of labour. It is in such organisations that one tends to find a more developed division between mental and manual labour. Table 5.4 presents the economically active population in Mexico in terms of its distribution between modern, traditional and marginal²¹ occupations by sector.

34.6% of the PEA work within the modern sector. The greater part of this group is found within the tertiary sector (53.1% tertiary, 36.2% secondary, 10.7% primary).²² As was noted earlier, it is the secondary and tertiary sectors which have grown rapidly since 1940. If we then look at educational achievement by sector it can be seen that where participation in the modern sector is greater, general levels of attainment in education are also higher (see Table 5.5).

Table 5.4. Modern, Traditional and Marginal Employment by Sector, 1969

Activity	S E C T O R S										Insufficiently Specified
	Total	%	Modern	%	Traditional	%	Marginal	%			
TOTAL	12,955,057	100	4,486,535	34.63	3,866,123	29.84	3,854,874	29.76			747,525/577
PRIMARY %	5,325,409	100	478,700	8.99	1,882,898	35.36	2,963,811	55.65			
SECONDARY %	2,987,776	100	1,623,898	54.35	1,363,878	45.65					
TERTIARY %	3,894,347	100	2,383,937	61.22	619,347	15.90	891,063	22.88			
Insuff. Specified	747,525										

Source: El Problema ocupacional en México, Grupo de Estudio del Problema del Empleo, mimeo, p.51.

Table 5.5. Level of Education of Different Sectors of the Workforce, 1970

	No education	Some Primary	Secondary and above	Training
TOTAL	27.1	59.4	13.0	0.5
Industry & Services	16.4	63.8	19.0	0.8
Commerce	15.4	66.4	15.4	
Services	15.3	55.4	28.1	
Transport	10.9	72.8	15.8	

Sources: For Total and Industry & Services, "Tabulaciones Especiales" of 1970 census, Depto. General de Estadísticas, Sec. de Industria y Comercio, Tertiary sector figures from El Problema ocupacional en México, Grupo de Estudio del Empleo, mimeo, pp. 161, 165, 172.

Such a correlation cannot prove causality. However, it has been suggested that larger, 'modern' organizations are more likely to need workers with i) general education and literacy, and sometimes ii) specialised skills also achieved in formal education. As has been explained before, this does not mean that all education pursued is necessary to work performed. As educational qualifications become an entry requirement, individuals may attempt to better their own chance of getting a job by gaining more qualifications, more than were originally required for the performance of the job.

Changes in Type of Work - The Growth of 'White Collar' Employment

An alternative method of identifying changes in the occupational structure is by examining type of work rather than sectoral distribution. Census statistics allow a broad classification of types of work, and show changing patterns of distribution, and growth areas between 1950 and 1970. As Table 5.6 shows, there have been significant increases in the proportion of professional and scientific staff, of business managers and high level officials, of office workers, a substantial absolute increase but smaller relative increase in the number of producers of goods and services, and a fall in the proportion employed in agriculture.

This form of classification confirms the expectation that a certain proportion of secondary and tertiary sector growth, in the 'modern' sector is composed of growth in non manual salaried employment. Census statistics (1950, 1960 and 1970) show a steady proportionate growth in all white collar groups, (except sales workers which is a wider category where numbers declined between 1960 and 1970). The proportion of professional and scientific staff rises from 2.50% in

Table 5.6 Distribution of Workforce (PEA) by Type of Work, 1950-1975.

	(1) Professional & Technical	(2) Directors, Managers, (Business & Govt.)	(3) Office Workers	(4) Sales Workers	(5) Factory Workers & Artisans	(6) Personal Services	(7) Agricul.	(8) Insuff. Specified	Not Accounted for.
1950	2.50	0.78	4.65	7.82	78.88		58.70	3.83	2.54
1956	4.2	0.8	9.2	13.9	25.3	9.4	36.1	1.1	
1960	3.61	0.84	6.12	9.03	19.87		53.54	3.00	4.00
1970	5.66	2.47	7.54	7.47	21.37	12.05	38.23	5.22	
1975	6.2	2.6	8.1	8.1	22.5	13.2	39.3	-	

Sources: For census years of 1950, 1960 and 1970

1950 & 1960 - J. Morelos, "Fuerza de Trabajo", in L. Solis ed. La Economía Mexicana, Vol. II, El Trimestre Económico, Fondo de Cultura Económica, Mexico, 1975. p.415.

1970 - Tabulaciones Especiales, for 1970 census, Dirección General de Estadísticas, Mexico City.

For 1956 - I.M. Navarrete, "Income Distribution in Mexico", in Mexico's Recent Economic Growth, Institute of Latin American Studies, Austin, Texas, 1967. p.155.

For 1975 - J. Wilkie, Statistical Abstract on Latin America, Vol. 18., UCLA Latin American Center, 1977. p.192.

1950 to 5.66% in 1970, and the proportion of office workers from 4.65% to 7.54%. The proportion of business managers and high level officials also shows a substantial increase, from 0.78% in 1950 to 2.47% in 1970. Navarrete gives rather different figures, elaborated from a sample survey of 1956, which compared with census figures for 1950 and 1960, shows a reduced proportion of the population in agricultural work and a greater proportion in professional, scientific managerial, office and sales work. This survey is useful, however, as it also examined type of work by region. As might be expected, if level of industrialisation is taken into account, the northern regions showed a higher proportion employed in categories 1-4 than the southern states.²³

(For categories see Table 5.6.) Thus a pattern emerges of an increasing proportion of white collar work, i) as industrial development proceeds over time, and ii) between regions by level of industrial development.

As has been noted, industrial development in Mexico has been actively promoted by the state. This has involved the development of an adequate infrastructure, (transport, communications, banking etc.) investment in industry, and the promotion of certain rights and benefits for employees (union rights, social security, medical services). Such interests have increased the scope of activity of federal and state government and have led to the creation of certain specialised agencies. This has also meant that the different levels of government have become increasingly important as employers. Table 5.7 shows the number of the workforce employed in government. In 1969, 75% of government employees were employed at federal level, 17.5% in state government, 10.3% in municipal government (and 2.2% insufficiently specified).²⁴ The figures given denote a slightly declining proportion of the population employed in government between 1950 and 1970.²⁵ But as a proportion of the PEA the number employed in government has not varied greatly between 1930 and 1970 averaging around 3%.²⁶ However, the

Table 5.7 Number of Workforce Employed by Government (Federal, State and Municipal).

	No. Employed in Govt.		No. Employed in Govt.
1900	25,188	1940	191,588
1910	22,415	1950	263,261
1920	63,074	1960	334,934
1930	147,301	1969	406,607

Source: M.S. Grindle, Bureaucrats, Politicians and Peasants in Mexico, University of California Press, Berkeley, 1977. Appendix B. p.188.

Table 5.8 Distribution of Government Employees Between Different Types of Work.

	Absolute Number	%	Cumulative %
Professional & Technical	35,630	8.76	
Officials & Directors	27,414	6.74	
Administrative	148,554	36.54	52.04
Sales	1,605	0.39	
Services	127,366	31.32	
Agriculture	9,051	2.23	
Non-Agric. workers	41,744	10.27	
Insufficiently specified	15,243	3.75	47.96
TOTAL	406,607	100.00	100.00

Source: Tabulaciones Especiales for 1970 census, Dirección General de Estadísticas, Mexico City.

absolute increase in employment is important and would make the federal government one of the biggest single employers.

A very substantial proportion of government jobs are non manual or 'white collar' occupations as shown in Table 5.8. Expanded government activity increases the demand for qualified labour to a greater extent than expansion in other areas. The development of government activity is an important area to consider in the examination of changing occupational structure but unfortunately the census category government does not include all public sector activity, that is all publicly financed employment. It would appear that decentralized agencies and state industries are not included in the figures given.²⁷ The number of these has increased greatly since 1930, from under 50 to over 400 in the 1970's. The expansion of education is another important area of white collar work. However, in this study the aim is first to examine to what extent the expansion of education is an effect of a changing occupational structure and the growth of a middle class, rather than as a causal factor in creating employment.

So far changes in the occupational structure have been traced in two main ways, i.e. by examining sectoral distribution (including traditional/modern divisions), and by examining distribution of the PEA between types of work. It was shown that agrarian reform had not acted to create a substantial rural middle class as most land distributed has been in the form of small plots and some much larger holdings. Sectoral data showed the relative decline of agriculture as an employer, with both secondary and tertiary sectors increasing in importance, from the 1930's and 1940's. These changes were caused by a rapid path of industrial development promoted by government activity. Both in industry and the service sector growth has occurred in what have been called modern, traditional and marginal occupations. It is within the modern sector that one expects to find a demand for white collar work, that is, non-manual work requiring previous education.

The examination of types of work showed a steady increase in the relative importance of white collar jobs during the period of rapid industrial development. The government was shown to be an important factor in the promotion of development and as an employer of non-manual labour.

One additional factor in the changing occupational structure which should be noted is the decline in the urban petty bourgeoisie. The urban petty bourgeoisie has previously been distinguished from the new white collar group. However, the decline of the former group, probably due to increased competition from larger scale entrepreneurs, may serve to swell the ranks of the white collar group or its aspirants if the sons and daughters of entrepreneurs now seek employment rather than continuing as entrepreneurs and employers themselves. Rangal Contla shows the non-agrarian petty bourgeoisie as having declined from 20.4% of the PEA in 1910 to 9.9% in 1960.²⁸

Broad changes in occupational structure have been identified, in particular the emergence of a new middle class, whose basis consists of white collar workers. Some brief suggestions have been made as to what this might mean for the demand for, and supply of, education. The nature of increasing white collar employment is extremely diverse, ranging from general and routine office jobs, to positions demanding a high degree of specialised knowledge. Thus the supply of education must meet these diverse needs, through upper secondary and higher education of both a general and a specialised nature.

In Chapter Four it was shown that provision of education favoured urban areas. It is only in the towns that there has been any approximation to open access or equal opportunity. This chapter has demonstrated the increasing demands made by the economy for white collar

work, occasioned by the expansion of the secondary and tertiary sectors. Skill needs were met by allowing an almost "free" flow of individuals into the higher stages of education, and without the intervention of manpower planning. But true equality of opportunity to enter the higher stages of education was hampered by geographical inequalities in the provision of education (even between urban areas), and by the need of individuals, in the general absence of grant or loan schemes, to finance their time spent in study. Such breaks on participation in education meant that in 1960 only 12% of the relevant age group attended the lower middle level of education. However, such a level of participation was for the most part sufficient to meet market demands for skilled labour. It does not appear that there were effective pressures for, or a desire on the part of governments to introduce, an educational provision which would increase benefits to rural and lower income urban groups.

In the 1940's, 1950's and early 1960's, the supply of education appeared to meet both the demands of the changing economic structure and of the sections of the population who wished and were able to pursue advanced education. In this context human capital theories could flourish. Education was producing skills which were realised as human capital because sufficient new employment opportunities were created to absorb the highly educated. Demands for education from particular social groups did not interfere with the formulation of the view that education contributes to growth, as "social demand" for education did not direct provision away from its productive functions. It is only in the subsequent period of slower economic growth, and a probable relative decline in job creation, that it is possible to see the effects of "social demand" on the provision of education. As was shown in Chapter Two, the continued provision of education in a period of slower economic growth had by 1970 become dysfunctional in

purely monetary terms. Maintaining existing access to education allowed a "dynamic surplus mechanism" to operate, whereby individuals sought more qualifications to more effectively compete for jobs. The government did not cut back its educational provision to accord with the changing economic situation but rather maintained the existing method of meeting market needs, in the form of an almost open access to education in urban areas. However, the government of Díaz Ordaz could not meet the total increase in demand for places in preparatorias and universities. This increase was probably caused both by the growth in Mexico's population and by a general desire for more qualifications. Paradoxically a scarcity of employment opportunities may only increase the demand for education.

Thus the education reform of 1970-76 could (among other actions) limit the growth of the higher education sector and direct finance to improvements in the quality of higher education or to other levels of education. Or reform could respond to pressures for more education at upper levels. The next chapter sets the political context of education reform by examining the relationship between the government and the middle class in the late 1960's.

1. Marx, Karl, Capital Vol. 3, Laurence and Wishart, London, 1959, pp.299-300.
2. The rate of demand for mental labour may not equal rates of expansion of the economy as mechanisation is increasingly being introduced into this area as well.
3. Poulantzas, Nicos, Classes in Contemporary Capitalism. New Left Books, London, 1975. p.258.
4. See for example, Nun, Jose, "The Middle Class Military Coup" in Veliz, C., ed. The Politics of Conformity in Latin America, Oxford University Press, London, 1967, and Petras, James, Politics and Social Structure in Latin America, Monthly Review Press, New York, 1970.
5. Johnson, John J., Political Change in Latin America - The Emergence of the Middle Sectors, Stanford University Press, Stanford, Calif., 1958. Victor Alba's writing is somewhat similar in its emphasis on attitudes and views of the middle class.
6. This is a six volume study which examines the middle class in Argentina, Uruguay (Vol.1), Mexico, Cuba (Vol.2), Bolivia, Brazil, Chile, Paraguay (Vol.3), Panama, El Salvador, Honduras, Nicaragua (Vol.4), Costa Rica, Haiti, Venezuela (Vol.5), Colombia, Ecuador and the Dominican Republic (Vol.6), and is edited and compiled by Crevenna, Theo R., for the Dept. of Cultural Affairs, Pan American Union, Washington D.C. One or more writers was asked to make a study of each country. An outline procedure is given but methodology and theoretical suppositions vary greatly between essays.

Nathan Whettan's contribution on Mexico is reprinted in Las Clases Sociales en Mexico: ensayos. Editorial Nuestro Tiempo, Mexico City, 1968. pp.69-90, and is followed by a commentary by Angel Palerm Vich.
7. Mendieta y Nunez, Lucio, "La clase media en Mexico", Revista Mexicana de Sociologica, 18 No. 2, 1955.
8. Gonzalez Cosio, Arturo, Clases y estratos sociales en Mexico: Cuatro ensayos de sociologica politica, UNAM, Mexico City, 1972, p.31.

9. Cockroft, James, "Mexico", Ch.7 of Chilcote, R.H. and Edelstein J.C., Latin America: The Struggle with Dependency and Beyond, John Wiley and Sons, New York, 1974. p.248.
10. Hansen, R., The Politics of Mexican Development, John Hopkins U.P., Baltimore, 1971. pp.31-32.
11. Whetton, N., "El Surgimiento de una Clase Media" in Las Clases sociales en Mexico: ensayos, Editorial Nuestro Tiempo, Mexico City, 1968. p.80.
12. Cockroft op.cit. Using material from the 1960 census, Cockroft states that 10% of farms absorb 94.4% of capital destined for machinery and equipment. 2% of farms receive 70.1% of the value of agrarian sales. Of 6 million rural workers, 1.5 m, mostly ejiditarios, work on their own parcels of land, 1.5 m privately hold between 0.1 - 5.0 hectares and 3 m are landless labourers or unemployed.
13. Hansen, op.cit. pp.116-118.
14. The gold standard was abandoned and this facilitated the use of paper money. See, Navarrete R.A., "The Financing of Economic Development", in Mexico's Recent Economic Growth, Latin American Monographs, Institute of Latin American Studies, Texas, 1967. pp. 105-130.
15. Glade, William P., "Revolution and Economic Development" in The Political Economy of Mexico, Two Studies by Glade, W.P. and Anderson, C.W., University of Wisconsin Press, 1963, p.85.
16. El Problema ocupacional en Mexico, Grupo de Estudio del Problema del Empleo, an unpublished government report, Mexico, 1976. p.14.
17. Ibid. p.311.
18. Ibid. pp. 106-7 and 113.
19. Ibid. p.149.
20. Ibid. pp. 166-7.
21. 'Marginal' is used to indicate the absence of any formal employment, of any institutionalized work arrangement, rather than any notion of separateness from the rest of the economy. 'Marginal' is used here following the statistical source used although the term 'informal sector' may be preferable.
22. Elaborated from El Problema Ocupacional op.cit. p.51.
23. Navarrete, I.M., "Income Distribution in Mexico, in Mexico's Recent Economic Growth op.cit., p.155, Table 9.
24. Figures are taken from "Tabulaciones Especiales", unpublished tables of the 1970 census.

25. The variation is between 1.0% and 0.85%. These figures are estimated from Grindle, M.S. Bureaucrats, Politicians and Peasants in Mexico, University of California Press, 1977, and from census data.
26. The estimated figures, from Grindle op.cit. p.189, are 2.9% in 1930, 2.9% in 1940, 3.25% in 1950, 3.00% in 1960 and 3.25% in 1969.
27. The Mexican federal bureaucracy is composed of 18 regular ministries and departments of state, 123 decentralized agencies, 292 public enterprises, 187 official commissions and 110 development trusts, Grindle op.cit. p.3., (published 1977).
28. See figures presented in Table 5.1, p. 182 from Rangel Contla, "La Polarizacion de la estructura de clases en Mexico", Revista Mexicana de Sociologia, 23 No.2, 1970, p.403.

THE POLITICAL CONTEXT OF THE 1970-76 EDUCATION REFORM

It has been shown that the nature of economic development after 1940 expanded the demand for particular skills with consequent changes in Mexico's occupational structure. The development of industry and commerce increases the demand for non agricultural manual labour, but also for mental labour. To meet such skill needs it was necessary to expand the upper levels of the educational system. The expansion of higher and upper middle education was an infrastructural input necessary, like transport and banking facilities, for industrial growth. But education was also necessary to the individual citizen in his or her personal attainment of a non-manual job. The individual, (if he or she is not to pursue private education) is dependent on the government's educational provision in the search for his or her desired job and social mobility. There was pressure on the government to provide education, not only for the needs of industry but also from likely participants.

In the 1950's and early 1960's the expansion of both job opportunities and education allowed considerable occupational mobility. In this period industrial growth in Mexico was rapid. The annual increase in manufacturing output had averaged 7.1% in the period 1939-1956 and rose to an average of 8.5% p.a. for 1957-66. Growth tailed off, however, to 6.4% p.a. for 1966-70. There was a similar pattern in the agricultural sector. Despite population growth, per capita output in agriculture increased by an average of 2.2% over the period 1955-60, but declined to 1.5% p.a. in the period 1960-67, and then to -1.0% for 1967-74.

Over the period 1940-1966 agriculture grew at about 5% p.a. and industry at about 7% p.a. giving a G.D.P. growth rate of around 6% p.a.¹ This, as has been shown, was accompanied by a growth in white collar occupations and the education structure was extended to provide necessary skills. It would seem reasonable to expect that the subsequent decline in growth rates from the mid 60's onwards was accompanied by a slowing down in the rate of creation of new job opportunities. But education still remained as the main path to preferred occupation and social advancement. The reduced rate of expansion of job opportunities only made the gaining of more qualifications more important, for everyone desires to increase their marketability as competition increases. It is also probable that the steady high birth rate of the late 1940's and early 1950's, and past evidence of the benefits of education, were drawing more people into a search for what in relative terms were increasingly scarce jobs.

There would appear to be concrete reasons for dissatisfaction among individuals not achieving their desired occupations. Education had been shown to be a path of advancement but was now seeming far less effective. In addition there were not always sufficient places in preparatorias² and universities for those seeking to gain qualifications. While individuals want more education to compete for jobs, in aggregate terms the economy does not necessarily need a greater supply of skilled labour. A government may therefore be reluctant to provide desired educational facilities. There is also an extent to which, as higher education expands, it is no longer an 'elite' sector and therefore cannot fit all participants into 'elite' jobs. Thus for students to expect elite jobs, after following a course of education no longer confined to a narrow elite, is to hold unreasonable expectations. This may be a contributory factor to discontent but it should not lead us to attribute all discontent to a lack of realism in aspirations.

For opportunities may also be constrained by the effects of policies pursued by a particular government. However, some have seen aspirations to unachievable goals as a problem particular to and arising from a general situation of underdevelopment, rather from more specific historical situations. Cervantes Hernandez identifies problems for Mexicans which derive from "institutional inconsistency", between different structures of society, presumably between educational and employment opportunities. The first hypothesis of his study is that,

Serious disturbances between available means and ends sought, directly or indirectly produced by the rise of consumption expectations in the situation of underdevelopment in Mexico, determine a high level of occupational aspirations regardless of class. 3

No evidence is given to show that the "disturbance" is directly or indirectly produced by the "rise of consumption expectations in the situation of underdevelopment in Mexico". Although this forms part of Cervantes Hernandez' hypothesis it is not tested by the questions posed, making consequent conclusions invalid unless sociological or development theory is taken to have proved this causal relationship.

In a somewhat similar manner Gabriel Careaga identifies an alienation of the middle class, attributing this to the general nature of the middle class rather than to any specific historical or political circumstances.⁴ He states that the middle class aspires to a bourgeois life style through newly possible patterns of consumption (where all modern consumption goods are readily available). Occupation becomes a means to achieve an income which will purchase more but never sufficient consumer goods. Careaga provides a biting account of the vacuity of a multitude of middle class lifestyles and the feelings which they produce. Unfortunately the method is descriptive and rarely analytical although the concepts of class and ideology are surveyed before proceeding. In addition, it is never quite clear as to which elements of Careaga's thesis apply solely to the Mexican middle class and their

discontent, and which are common to the middleclasses of either Latin America, all underdeveloped countries, or to the world. It is therefore difficult to trace what is Careaga's view of the exact interrelation between Mexican society and politics and the Mexican middle class. He pays insufficient attention to the political system in explaining feelings of "alienation" and dissatisfaction. The precise effect of the Mexican context is also largely omitted from Cervantes Hernandez' study since Mexico is examined only as an example of a developing country, all characteristics being derived from underdevelopment and not from Mexico's historical situation.

It is suggested that, firstly, differences between expectations and outcomes must be explained in relation to the nature of economic development and changes over time in the availability of jobs. Any dissatisfaction arising from a lack of opportunities is likely to have, at least in part, a historically specific cause. This is in contrast to a generalised notion of institutional inconsistency between different structures of society in underdeveloped countries. When accounting for student radicalism of the 1960's Careaga does point to the importance of, not only the international, but also the national context, to increased difficulty in finding jobs, and to disappointment in the monopoly of the PRI and the absence of effective political debate, in what is apparently a closed political system.⁵ No such historically specific reasons are given for the alienation or discontent experienced by the middle classes as a whole. However, it would seem useful to examine the notion of a 'closed society' for it may help us to understand what Cervantes Hernandez describes as "anomie" and what Careaga describes as "alienation" and "apathy", but what is here felt to be a discontent, the origins of which lie in part in the political and economic situation of Mexico in the 1960's. Alienation and anomie

are general sociological categories constructed to explain the effects of broad historical movement (of e.g. the development of capitalist production and industrialisation) and not specific historical developments.

By examining the destiny of those who pursue higher education (Chapter 2), the expansion of higher education, and the declining rate of growth of the Mexican economy, it has become apparent that job opportunities for higher education students are declining. The pursuit of higher education no longer appears to lead inevitably into avenues of social mobility, economic advancement and political influence. This of course is true to varying degrees of higher education in many developed and developing countries, as was shown in Chapter 1. But this experience takes on a special relevance in a country such as Mexico when combined with an increasingly "closed" political system.

In general non propertied groups may expect to make their views heard and their interests considered via two mechanisms. Firstly, they may, through the gaining of qualifications and the demonstration of ability, gain influential positions where political and economic agendas are set. Secondly, through the workings of a democratic polity they may express their views on issues put before them, and through parties and pressure groups attempt to bring issues into the area of political debate. In the first case the functionings of a meritocracy supposedly bring reward for ability, raising some sections of the non-propertied population to positions of high economic reward and political influence. In reality, success in education is related to environmental factors, to social advantage and is not due only, if at all, to innate ability. However, it is the existence of competition within an already unequal society which allows some groups to raise themselves above the mass of the people.⁶ As demonstrated, this

process was perhaps becoming less secure in the late 1960's (while by no means disappearing) thus affecting not only students in search of a job but those already employed.

Furthermore, the second mechanism, i.e. the political system, seemed increasingly closed to public influence. The executive is dominant in the process of government in Mexico. The legislature is widely seen as operating only as a rubber stamp to decisions taken elsewhere rather than as a forum of debate and decision making.⁷ Members of the legislature are elected as representatives of political parties but the parties play little or no role as interest aggregators. The PRI mobilises support for government policy and acts as an organ of political recruitment but recruitment operates in a top-down fashion with electoral candidates chosen at the top rather than by local party members. The Partido Acción Nacional (PAN) by the 1960's had largely abandoned its role as an intellectual critic of the government and the PRI, and was attempting to gain greater electoral success as a gatherer of a wide range of protest votes. Thus it was not effectively representing any particular set of interests or beliefs. Not only was the social and economic position of the new professional and white collar groups and their children declining, but political channels through which a remedy might be sought seemed ineffective. Thus it would seem possible to suggest that if these groups express discontent, and if the government wishes to win back support, it may take action in the spheres of political reform and the provision of greater apparent opportunities for advancement, for example, in the provision of more or different education.

It will now be shown in greater detail how educational reform can be seen in part as a response to an apparent decline in support for the government from urban, professional and white collar groups. In this chapter we will first examine reasons for and manifestations of

discontent. The nature of the incorporation and participation of the above mentioned groups in the Mexican political system will be examined. It will then be possible to discuss why the government might deem it important to secure "middle class" support, and how this could be and was attempted.

It will be shown how educational reform fits into a generalised attempt on the part of the government to win greater support and control opposition. This is not to say that the precise details of education reform did not also respond to other quite different imperatives, e.g. the production of particular skills and the improvement of teaching methods.

It has been shown in some detail how employment opportunities for those with higher education appeared to be shrinking in the late 1960's. This can be related to some degree to the quality and nature of education pursued. There was a need for state provision of better and sometimes further (postgraduate) education. Also many students were, then as now, forced to abandon their studies owing to lack of financial support, so jeopardising their future careers. This produced, in some quarters, demands for government loan or grant schemes. The greatest problem, however, was that the expansion of "prepa" and higher education with their promise to an individual of a career and training for a profession, had not been accompanied by an equivalent expansion in employment opportunities. This also affected those in white collar jobs as a slow expansion at the bottom meant less promotion opportunities.⁸ The political context in which professional and white collar groups and their student sons and daughters found themselves gave no cause for optimism about their ability to improve the situation.

In trying to comprehend this political context one finds today a greater number of penetrating analyses of Mexican politics than existed ten years ago.⁹ Rather than congratulating Mexico on its economic

growth and political stability and locating the technical requirements of the former and the formal structure of the latter, political analysts have increasingly looked to the social and economic realities underlying what are to many nations, two very elusive goals. The new radicalism was derived from or encouraged by a changing intellectual climate in the United States, but was not unaffected by the events of Tlatelolco in 1968 which finally broke through Mexico's image of stability.

Unfortunately some of the new analyses, while presenting interesting material, still hinged rather too heavily on the location of a Mexican character in the explanation of political events. In the first edition of his book, 'Mexican Democracy: A Critical View', Kenneth Johnson stated that the primacy of individual values in Latin America was a barrier to a thoroughgoing national development.¹⁰ He also maintained that Mexicans follow men rather than ideas or movements and that it is only the institutionalization of the competition between men that has provided the stability that has existed. Such psychologistic explanations are not accepted here: national characteristics can arise from common historical experience but must be shown to do so. Octavio Paz treads this tightrope of national character, although claiming to be involved in a historical rather than psychological enterprise. However, his consideration of,

The existence in each civilization of certain complexes and mental structures that are generally unconscious and that stubbornly resist the erosions of history and its changes,

is here felt to be less useful than his short description of the evolution of the Mexican political system. He, more accurately and eloquently than other North American or Mexican writers, describes the role of the PRI, and is therefore quoted at length,

The party has not produced a single idea, nor a single program, in its forty years of existence! - It is not a political organization in the proper sense of the term; its recruiting methods are not democratic, and it develops neither programs nor strategies for realising them. It is a bureaucratic organism that performs politico-administrative functions. Its principal mission is political domination, not by physical force but by the control and manipulation of the people through the bureaucracies that direct the labour unions and the associations of the peasants and the middle class. In this task it has the support of the government and benevolent neutrality or outright partisanship of almost all the information media: political monopoly entails control not only of popular organizations but of popular opinion. 11

If the interests of the mass of the population are to be influential without recourse to demonstrations, violence or other extra-legal means it requires the party leadership or government to take the initiative in either assessing political interests, or allowing the free expression of opinion at grass roots level with consequent upward flow of influence. However, most local party candidates are named or approved by the central party structure. Those entering political activity with the PRI usually owe their involvement to patronage and possibly to cooptation. Ideological factions exist within the PRI but are not openly evident, nor are such internal differences democratically debated. Thus on joining the party, a young person will not just look to a group or to an individual politician of a similar political persuasion, but rather to a group which is most likely to be successful and a channel for political advancement. Advancement will be won by loyalty and hard work rather than by the promotion of any particular political cause. These tendencies exist in other political systems but it is important to note the extent to which the absence of a democratic party structure prevents the independent raising of issues and allows the working of a patronage system.¹² The political groups or cliques that exist have links to interests outside the political system and in this sense political competition is not purely personalist. But such interests are not clearly articulated. The

aspiring individual must, if he or she is not going to attempt to challenge the entire structure of the PRI, attach him or herself to a camarilla.¹³

The nature of entry of some individuals into "official" politics, i.e. into the PRI and government, illustrates the problem of opposition politics. Where political movements or trade unions manage to organise and gain support outside the octopus arms of the PRI, the PRI or the government draws on a practised and apparently simple strategy. Independent movements are always likely to flounder when faced with, for example, the ability of the PRI to distribute material goods to gain support, the possibility of fraud at election, government control of registration of parties and unions, and the government's role in union-management arbitration. Thus the government may arbitrate in favour of most of the demands of a trade union if the trade union will affiliate or cooperate with the PRI in future. This type of negotiation usually occurs with the union leader who may be persuaded by both organisational and personal advantages. The individual and the organisation are both coopted. Favours are given in return for support. Similarly, individual leaders who demonstrate political ability may be coopted into the PRI to prevent any subsequent disruption and to absorb talented political aspirants. It is often stated that student politics, especially outside the official party, is a particularly fertile recruiting ground for the PRI.

When organizations and individuals resist cooptation the government is likely to repress activity. Individuals may be imprisoned, may disappear or even die in dubious circumstances while members of organisations are subjected to harassment and violence. Anderson and Cockroft first identified this continuum of cooptation and repression in a 1966 article, in which they illustrated this tendency with a history of a dissenting peasant group from Baja California.¹⁴ Other

writers have subsequently utilised this perspective showing in some detail the nature of negotiations and the point at which attempts at cooptation are exchanged for repression.¹⁵

Such patterns of political activity have become reasonably evident to the more politically aware sections of the population. This, as will be shown, has encouraged both dissatisfaction and a tendency to apathy in the face of an apparently monolithic system. That such tensions were recognised at the beginning of the 1960's is shown by the 1964 campaign pledge to democratize Mexican politics and the introduction shortly before this of a restricted form of proportional representation which allowed opposition parties to gain a few seats. But it appeared that most top members of the PRI were more interested in a symbolic democracy if this would waylay discontent. Carlos Madrazo, President of the PRI under Díaz Ordaz, pressed the PRI to effect its campaign pledge by introducing a type of local primary for the choice of candidates for municipal elections rather than the imposition of candidates by local party bosses, but his proposals met with large scale opposition and were abandoned. This and other attempts by Madrazo to make the PRI more democratic and more responsive had little success.¹⁶

The PRI faces the problem of allowing a level of free expression and organization in order to maintain sufficient support for the political system, while not jeopardising its own hegemony. Certain electoral struggles of the mid and late 1960's reflect this problem, showing the difficulties faced both by the PRI and by opposition groups.

Any political party faces the problems noted above, that is of registration, of competing against a party which can offer the benefits of a spoils system and which usually has or can mobilise media support, and in the last stage, the possibility of fraud at the election. There is only one party, the PAN, that continually confronts these problems

(except that of registration) in genuine competition with the PRI.¹⁷

The PAN's victories or even near victories have, as might be expected, been infrequent. But by looking at the PAN and some of its electoral struggles it is possible to evaluate to what extent the PAN provides an alternative vehicle of political expression and action, and to what extent its existence quells dissatisfaction or increases opposition to the PRI.

The role of the PAN as an opposition party has changed somewhat since its founding in the Cárdenas era. In its original form the PAN was pledged to mobilize opinion against extensions of state power and what were perceived as the socialist and anti-religious measures of the Cárdenas government. To some extent this platform is now redundant. While the Mexican Constitution still embraces clauses disallowing religious education or political parties identified by religion, the fervour associated with the religious debate has completely subsided and successive governments have ignored the church's contravention of certain limitations on its activity. Furthermore, post-Cárdenas governments have directed the economic activity of the state towards the promotion of private industry, rather than an extension of state control via nationalization which the PAN originally opposed. Thus the PAN has lost much of its original ideological thrust, its position now relating more to the PRI's tactics than strategy. It aims to attract support by pointing out violations of the constitution, the dominance of the government bureaucracy, the existence of widespread corruption and electoral fraud.¹⁸ The direction of its activities has changed accordingly. Initially the PAN attempted to remain above the politicking of the PRI, offering an intellectual or ideological critique of PRI policy in a public debate which might influence government decisions.¹⁹ But since the 1950's, when ideological

differences became less clear, greater emphasis has been placed on electoral competition in the hope of gathering a wide range of protest votes.²⁰ However, electoral victories have been few. In order to break through the barriers noted above it appears that some special circumstance must exist to catalyse discontent into a level sufficient to challenge the PRI. In Sonora in 1967, for example, an unpopular candidate was imposed by the PRI hierarchy, and in Yucatán in 1967, increased taxes sparked off charges of corruption against the PRI. In these circumstances the PAN's challenge was too strong to be shrugged off and PANista mayors took office in the states' capital cities. Indeed, as Bezdek says,

At the same time, probable opposition victories at the gubernatorial level occurred in these states, although the regime did not recognise these victories....The regime's suppression of these movements has prevented them from continuing.²¹

Thus two factors become apparent, firstly that the government will not allow opposition victories above a mayoral level, but secondly that opposition victories do not occur with great frequency even at the lowest levels. The PAN has not, and would not seem able to present a viable alternative to the mass of electors except when they are sufficiently incensed by a particular issue. The government has ultimately used fraud and repression to prevent important victories. It has been suggested by Von Sauer that the PAN had more influence in the period when ideological differences were more evident and before it took on an electoral role.²² Examination of the experience of the PAN does little to alter the picture already presented of a political system closed to the independent raising of issues and mobilization of support. The PRI is shown to prefer a symbolic but secure democracy to genuine electoral competition although the dice are heavily loaded towards the PRI before voting occurs. It would seem that the government would rather offer seats in accordance with its provisions for proportional representation than allow the PAN to build up a power base

in however small a region.

Although the PAN finds it difficult to win elections voting for the party is not insignificant. Indeed, the level of opposition voting gives both the Mexican government and the political scientist some indication of the level of PRI support and/or control. In the 1970 elections the PAN won 28.7% of valid votes in the 35 most important towns. Opposition strength is almost completely urban and is greatest in the Federal District. Segovia has said that the PRI, "has a comfortable margin everywhere except Mexico City".²³ Ames has shown a negative correlation between levels of development (urbanization) and PRI voting, inferring greater support in rural areas.²⁴ Other analysts have replied that the real issue may be the PRI's greater ability to control and "buy" support in rural areas.²⁵ Which ever is true, the PRI is likely to see itself as needing either to actively win more support in urban areas or to increase its control of urban politics. Examination of overall levels of voting confirms this view. As is obvious from the above description of the PAN, many voters were unlikely to support the PAN because their vote would be ineffective, either when the victory is not admitted, when the PAN local government is granted inadequate funds, or when the possibility of subsequent victory is nil. In such a situation, disaffection with the political regime is also likely to be expressed by abstention, although this can carry legal penalties.

Abstention does not follow a very clearly defined pattern which would produce strong correlations with level of development or level of opposition support. There is a certain correlation with level of development but the degree of abstention varies more closely with regional distinctions. In 1967 the participation rate in elections for deputies was 60% or less in 11 states, over 60% and under 70% in 18 states (including the D.F.), and over 70% in 7 states. The

areas of low voting fell in the north of the country, including all the border states plus Sinaloa, Durango and Nayarit and also Colima and Morelos. On the whole these are areas of higher development. The areas of highest participation were near the isthmus of Mexico and also Querétaro, Hidalgo and Tlaxcala. Electoral participation in 1970 showed three broadly similar divisions. One area of high development not showing a low participation rate is the Federal District but here the major concern is a high level of PAN support. Voting reached over 70% in only 7 states in 1967 and 6 states in 1970, generally the less developed. While a participation rate of under 70% does not necessarily denote opposition to the government or the political system it might be taken to suggest that a significant proportion of the population feel that the formal mechanisms of participatory democracy are ineffective or unimportant.²⁶

This was the nature of the situation faced by the Echeverria government. Since then political reforms and the registration of new parties have not decreased the level of abstention. In the 1979 elections for Congress, the officially admitted figure for abstention reached 40%, and was probably 50%, exceeding the 1976 abstention rate of 40%. The PRI gained about 68% of the vote in 1979 so winning 296 of the 300 seats contested by direct election.²⁷

These comments on Mexico's political system have aimed to show how it was and is almost impossible for groups to raise issues of interest to them through the channels of the formal political system. The PRI is closed to the open debate of political issues while the PAN is prevented from building up any power base. However, in those areas where PRI control is weakest there is still a significant showing for the PAN even though this is usually fruitless, and together with considerable abstention this may demonstrate a sizeable measure of disaffection with the PRI.

In the 1960's urban white collar groups were not only presented with an apparent decline in social and economic opportunities, but also with a political system that seemed closed to the furthering of their interests. The government wished to maintain support or control among such groups but was unwilling to open up channels of political expression to this end, for fear of weakening its existing position.

It would also appear that Mexican governments were unwilling to tolerate independent unionisation among professional or white collar groups. Such a conclusion might be drawn from the government's treatment of the doctors' strike in 1965 although it is admittedly unsatisfactory to draw general conclusions from a single event. However, when the doctors' strike is viewed in the context of existing government-union relations, and of governments' orientation to white collar unionisation from the founding of the Confederación Nacional de Organizaciones Populares (CNOP) onwards, one might support the view that independent unionisation will not be tolerated, at least among government employees, and will have a very difficult path elsewhere. What is perhaps a more untenable position is to view the doctors' strike as an example of an increasing trend to unionisation among professional and white collar groups.

The doctors' dispute arose over the pay and conditions in several Mexico City hospitals of house doctors who were not salaried staff but on scholarships.²⁸ This occurred because such positions were generally taken up directly after graduation as a part of job experience. At the end of 1964, the organisation representing the doctors, AMMRI,²⁹ demanded not only increased pay but a contract of work to secure the doctors' positions. The dispute was to continue through to August 1965. A pay award was given but when AMMRI tried to discuss contracts it was found another union had been formed to preempt their bargaining position. The doctors had not formed an officially recognised union for a variety of reasons including the wide spectrum of views involved,

apathy, government opposition, opposition of the pharmaceutical companies, and some reluctance to be identified in any sense with the working class. This had not prevented negotiation by an association representing doctors, but by Mexican law on closed shop agreements, once a union is recognised it takes on full bargaining responsibilities. Thus the government was able to set up a 'sindicato blanco' or a company union, affiliated to the Federación de Sindicatos de Trabajadores al Servicio del Estado (FSTSE), a major component of the CNOP, in an attempt to exclude independent action. Conflict ensued over recognition while a strike occurred demanding full implementation of the pay agreement which was being delayed by lengthy negotiations. The government threatened to dismiss the doctors if the strike was not ended and the President refused to see AMMRI members until the strike was ended. At this stage the doctors gave in and returned to work. When pay awards still failed to be implemented another strike was called, strong support coming from the Veinte de Noviembre hospital. Not all doctors sympathised or agreed on tactics and the hospital became a platform of debate.

At this point the government changed its tactics. The granaderos (Federal District riot police) were ordered in to evict the doctors and bring in new staff. According to the government this action was requested by the FSTSE. About a week later, in his 1st September address, Díaz Ordaz maintained that all possible had been done (although pay awards were still not implemented) and threatened legal action. This was a further sign of failure if any was necessary and the striking doctors returned to work.

The government of Díaz Ordaz attempted to stifle the doctors' independent organization by substituting a government sponsored union for an existing association. When this was unsuccessful the government responded with violence and threats of harmful legal action. This

episode only serves to confirm the picture already painted of Mexican politics. Although, with this potentially articulate and publically respected profession, the government did not give grounds for large scale protest; there were no large scale imprisonments as in the railroad dispute and no loss of life.

Three years later, however, the government was faced with an independent organization which challenged previous patterns of cooptation, repression and 'crisis management'. The students structured their movement to avoid cooptation of leaders and insisted on public debate rather than private negotiation. Tragically the ultimate outcome was the harshest repression seen in post Revolutionary Mexico. The student movement is important in terms of the demands generated, of the signs of support it elicited from wider sections of society, and for the way in which the government's handling of the situation demonstrated to many the undemocratic and often violent fate of "non-revolutionary" demands. The events of 1968 and their intrusion on the public consciousness meant that some action had to be taken to rebuild control and support. In the past attempts to gain support had of course often involved symbolic rather than real change.

It appears that the government was unaware and unprepared for the strength of student unrest that became manifest in 1968. Student government relations, however, had hardly been calm in the preceding decade or more. Troops had been used to break strikes in the Politecnico in 1956 and in various provincial universities in the 1960's. As Stevens says,

These events indicate that during the 1950's and all through the 1960's, students' grievances against the law enforcers, especially the army paratroopers and police grenadiers, had been mounting, and that the tension was not confined to the Federal District area.³⁰

None of these events had involved issues of national politics but centred on local and university affairs. However, opposition to central government built up in this instance because of the manner in

which the government responded to student demands. Also, students faced the same problems as anyone else in trying to achieve political power and influence. For all those who managed to rise with a particular clique within the PRI, others would remain in out groups, largely powerless, until the student movement of 1968 offered a channel of action. Some who had been involved in PRI politics had been angered by the ousting of the reforming Carlos Madrazo from the Presidency of the PRI. Other students resented the repressive tactics of government and the undemocratic and currently conservative nature of the government. And for many their demands were for a better and more accessible higher education system.³¹

The government did not expect joint action from university and polytechnic students. The two groups were separated by tradition, geography and status within the higher education system. UNAM had been resited since 1952 on the southern perimeter of Mexico City, while the Polytechnic Institute was relocated in the 1960's at Zacatenco, to the north of Mexico City. Stevens suggests that these moves were made partly to "help quarantine the effects of student activism".³² The Polytechnic had a lower status, concentrating to a greater extent than the university on technological courses and less on the liberal professions, and did not exist as a political training and recruiting ground in the same way as did UNAM. In addition UNAM students by virtue of the autonomous status of their institution appeared free from open government interference, a privilege not shared by Poli students.

Police action in July 1968 succeeded in reaffirming many students' discontent and in forging a unity between university and polytechnic students.³³ Two demonstrations had occurred on July 26th, one to protest at police violence in dealing with a student fight of 23rd July and the other in celebration of the 14th anniversary of Fidel Castro's

attack on the Moncada barracks. After the separate demonstrations, some groups dispersed towards the Zocalo but they encountered Mexico City riot police and conflict ensued. Some of those involved, and other schoolchildren in the area fled to a local school pursued by the riot police. More violent incidents occurred on the 30th July. Students of the Polytechnic and of the University met together on 27th August supporting a strike by students and announcing a programme of demands for its resolution. These were later formed into the six demands of the Consejo Nacional de Huelga, formed in early August. Some demands referred specifically to contemporary incidents, indemnization for families of the wounded and killed, dismissal of three police chiefs, and clarification of those responsible for the violence.

Other demands reflected a more general concern with government strategy in dealing with opposition. Students demanded the freeing of all political prisoners, the abolition of the granaderos (the riot police), and the repeal of Article 145 of the Federal Penal Code which allowed easy arrest and detention for political activity on the vague charge of "disturbing the public order or affecting the sovereignty of the Mexican state". They demanded an end to the more notorious methods of quelling opposition.

The organization and methods of the Consejo Nacional de Huelga reflected an attempt by the students to avoid the pitfalls of previous negotiations between independent organizations and the government. The Council comprised 250 representatives from 128 different institutions, and operated on democratic principles with no hierarchic structure.³⁴ The Council's directorate had a rotating membership. This avoidance of a permanent leadership did not only produce greater internal democracy but also prevented the government from defeating the students by beheading the student movement either by cooptation or repression. Students also realized that their cause would not be accurately reported by the

media and so themselves took on the responsibility of informing the public. The decentralised base of the movement, the comites de lucha in each institution, distributed leaflets and organised, among other activities, local demonstrations. The Strike Council refused to meet members of the government in private, demanding a public dialogue. This aimed to avoid secret threats or persuasion and, in the expectation of refusal, to highlight the absence of democratic debate. The large scale demonstrations which occurred in August evinced a high level of support for the students' demands. Three demonstrations in the first half of August had support from 80,000, 100,000 and 150,000 people respectively. The largest demonstration on 27th August is estimated to have attracted some 300,000 people.³⁵ The government attempted to stage a counter demonstration giving its employees the day off in order to participate but this was a failure. The CNOP (the popular sector of the party) and in particular the FSTSE (the government employees' union) did not come to the government's rescue. Johnson says,

There is impressive testimony to indicate that this was where the PRI showed serious evidence of frailty: many of its popular sector personnel, released from government jobs to support the status quo counter demonstration, actually cast their lot with the National Strike Committee.³⁶

The students' stand against the government, representing as it did opposition to a repressive and unresponsive government, elicited support from groups whose own position seemed threatened by the closed nature of Mexican society. It was an important indicator for the government that techniques of control were wanting in relation to the popular sector. The leadership of constituent unions did not seem able to dissuade members from sympathising with students. Some of the issues raised were perhaps too close to the mass of the urban, white collar and professional groups for the FSTSE, or the CNOP to be able to openly concur with the official position as represented by a statement from the CTM.

The discontent of some disoriented students has been exploited by subversive agents of the left and the right in order to sew discontent and create an atmosphere of chaos in our country.

37

One should not exaggerate the level of active support for the students during 1968. However, it is likely that the tacit support which existed during the period of conflict was only strengthened by the government's final stroke in destroying its opposition.

The government wanted a quick solution to these disturbances for if the dispute continued it was feared that the students might resort to disruption of the Olympic Games, due to be held in Mexico City in October of 1968, in order to strengthen their position. However, the government would not accept the students' demand for public dialogue, only offering a private audience. This allowed no advance and troops moved into UNAM and Poli campuses in September, leaving UNAM at the end of the month but remaining at the Polytechnic. An unknown number of students were killed during this period, this adding to those killed in the July disturbances, but still no solution was forthcoming. The government was unable to negotiate with student leaders and seemed incapable of fully turning public opinion against the students. Cooptation was never possible, and repression of this large and vibrant movement was perhaps inevitably on a correspondingly large scale. On the evening of the 2nd October 1968, students held a meeting at the Tlatelolco housing complex in Mexico City and were surrounded by members of the police and the army. Shots were fired and in the violence that ensued it has been estimated that between 50 and 200 people were killed, and 1,500 to 2,000 arrested.³⁸

Student political activity has never been subject to the control exercised over workers through their membership of unions and of the PRI. Their cooperation did not appear necessary to the production of goods and services. The government did not have to counter withdrawals of labour and demands for pay rises. But consequent on

this was the fact that governments could not buy student support with economic concessions. The events of 1968 proved that students could disrupt the daily life of the Federal District, if not the economy in immediate terms, but also and importantly that student protest might act as a catalyst in relation to the latent discontent of wider social groups. It was necessary to act in two areas. Firstly, student political activity had to be controlled and some attempt made to reduce activity by winning some support from students. Secondly, it was necessary to increase control of, and allay discontent among, those groups who had shown sympathy with and support for the student movement.

In the year after October 1968 there was probably little that could have been done to dispel the government's repressive image. It was left to the PRI's candidate for the Presidency, Luis Echeverría to promise a more radical and democratic approach for the new sexenio. Echeverría, despite facing the odium resulting from his actions as Secretaría de Gobernación under Díaz Ordaz, hoped to create support, not by a rejection of the immediate past, but by emphasising a return to the radical orientation of Lazaro Cárdenas, and a departure from the policies of the last thirty years that had produced social and economic inequality. Echeverría conducted a vigorous election campaign, although as PRI candidate he was assured of victory. By touring the country and meeting as many people as possible, Echeverría obviously hoped to create an image of government responsiveness to popular feeling. Nevertheless, more concrete changes were required once Echeverría was in power.

Support for the student movement and evident distaste for the manner of its suppression both confirmed the existence, and must have added to, discontent among urban, white collar and professional groups. Student protest at the repressive tactics of the government reflected

the views of much wider sections of society. Thus it might be expected that the government would employ broadly similar strategy to win back the support of both student youth and other groups. It was previously suggested that reforms to the political structure and to education might evidence a willingness to open and democratize a closed society. In the political arena it was necessary to open up debate, increase government responsiveness and avoid open repression against opposition. Owing to the importance of education to white collar groups improvements in the quality and availability of education would appear to increase job opportunities, and perhaps show a commitment on the part of the government to more meritocratic patterns of organization. To students, reforms in education would bring immediate benefit, whereas for those in employment the benefit of reform would be for their children or would have a symbolic value. Education reform did become one of the most publicised policies of the Echeverría government. It fitted into a broader policy of an apertura democrática, a democratic opening. This was to involve the encouragement of a climate of criticism and discussion of the nation's problems, and certain reforms to the formal political structure, concentrating on electoral procedure.

However, attempts to win support or at least allay discontent did not alone constitute the new government's strategy for dealing with recently demonstrated opposition. It was hoped to better control, and make ineffective, potential opposition activity. New tactics were adopted in dealing with student politics. It is difficult to identify any concrete steps taken to bring urban, white collar groups under more effective control, but there was, in the early 1970's, a substantial level of discussion in government and PRI circles on the political role and activity of the middle class. It was suggested that the PRI make greater attempts to organize and involve middle class groups. Some occupational groups were organised within the popular sector of the

party, the Confederación Nacional de Organizaciones Populares (CNOP).

But this sector has not involved a very substantial proportion of white collar workers, and due to its heterogeneous composition cannot really present itself as a guardian of middle class interests.

A popular sector of the party was initiated with Cárdenas' foundation of the Partido Revolucionario Mexicano (PRM) in 1937, and it later became the CNOP of the PRI in 1946.³⁹ The sector was formed from above, rather than incorporating existing unions. A primary aim was to organise state workers while keeping them separate from the growing industrial working class which was organised in the labour sector, for such an alliance would have been dangerously powerful. The organisation of state employees, the FSTSE which includes within it separate occupational unions, has remained the strongest component of the CNOP. The FSTSE acts to protect the interests of its members in e.g. pay, social security, etc. Because support of government employees is vital to the smooth running of the bureaucracy the union has a strong bargaining position. However, as the union has to operate in a one party system some level of cooperation with the government is necessary and its genuine independence reduced. The government would seem reasonably secure in the support of the FSTSE. Its hierarchy is unlikely to fundamentally challenge the government, not only because this is the source from which all goods must ultimately be obtained, but also because the leaders of the FSTSE are themselves likely to desire advancement in Mexican politics.

The support of other white collar groups is less certain but they are generally not unionised. Attempts were made to organise one union for professionals at the beginning of the López Mateos sexenio but this was unsuccessful. Professional groups are affiliated to the CNOP but operate as separate occupational groupings and not as a single union. This is due to the fact that such associations do not act to

promote 'trade union' interests but rather as channels of political recruitment and influence. In such a situation cooperation floundered against self interest. The government has little bargaining power with the mass of professionals, but instead the support of that section desirous of a political career.

Other organisations of white collar workers scarcely exist. Private sector workers in non manual jobs are not incorporated within the party structure. Nor generally do they have any independent organisations. Non manual workers would, however, seem to be a good source of support for the PAN. This is the main group whose support the Mexican government has not acted to secure. For the CNOP is not predominantly a white collar grouping. Even the FSTSE is not itself wholly white collar. 30% of its membership are in professional and technical occupations, 50% in clerical jobs, and 20% have manual occupations.⁴⁰ A substantial section of the CNOP membership is composed of merchants, small businessmen and the self employed, a petty bourgeoisie which gains protection for its fragile position in return for political support. The CNOP also includes that group of rural workers not included within the CNC, small landowners. These groups belong to what is sometimes called the traditional middle class, and together with state employees and professionals give the CNOP its image of a middle class sector. Other social groups are, however, included such as shanty town dwellers and street vendors. In effect the CNOP has tended to become a catch all organisation for those who did not properly fit into, or whom it was thought desirable to keep outside, the CNC or CTM. Examination of the CNOP has shown that it was not particularly suited to gaining the support of, or controlling opposition from, urban white collar groups. Its composition, heterogeneous while excluding most white collar employees, was unfavourable. Its organisation, providing either material benefits or a political career in return for support, presented no more of a democratic mode of organisation

than the PRI, for which support was so evidently lacking. The nature of the structure and organisation of the CNOP does in fact reflect that of the PRI very closely.

During the Echeverría sexenio there was considerable discussion on the need to involve and win the support of the Mexican middle class. It would appear that this was a reflection on both the events of 1968 and the lack of an organisation which was truly effective in maintaining middle class support for, or absence of opposition to, the political regime.

It should be noted that it was party members and intellectuals linked to the PRI who use the term middle class. It has previously been suggested how the term middle class might usefully be employed in relation to the Mexican social structure. However, a social class cannot exist as a result of the social scientist's categorization alone but must be shown to have a coherent existence in practice. Up to this point then, analysis has been in terms of occupational rather than class grouping as it is necessary to demonstrate the existence of a class before the term is used. Political activity presented so far does not present a very clear middle class interest or activity. Attempts at independent unionisation have been isolated, support for the student movement not clearly articulated and election results (due to inadequate information) cannot be analysed very accurately in terms of social background. No specifically class organisation has been founded or opposition expressed. But united action or expression of interest indicating the existence of common interests and attitudes is perhaps unlikely in the context of Mexican politics. Nevertheless, it is significant that the government has identified a need to work with the middle class to gain its support.

That the government talks in terms of a middle class will itself further influence political dialogue and practice. But PRI intellectuals do not identify the middle class as a radical critic of the Mexican political system for this would be an immediate indictment of Mexican politics. Rather a discontent is noted which has to be stemmed because the middle class has conservative and even fascist tendencies. Analysis of government and PRI pronouncements is difficult for they not only reflect the government's perception of the problem at hand but the way in which a problem is to be presented to the public via the media. Several articles on the Mexican middle class appeared in the PRI's journal of political debate, Linea, during 1973 and 1974. This prefaced a CNOP conference in 1975 on the middle class which was quite widely reported in the newspapers.

One of the more interesting statements in Linea is from Jesús Reyes Heróles, then president of the National Executive Committee of the PRI. Much of the analysis in his article "Nuestras Tareas" is unremarkable, talking of the necessity to increase strength against counter revolutionary forces.⁴¹ He speaks of a need for a 'popular front' which should incorporate the middle classes. Reyes Heróles notes that a substantial sector of the middle class is weak and feels threatened by proletarianization, but that due to lack of organisation such groups are either passively apolitical or only make sporadic emotional incursions into the political arena. Such a pattern of activity does indeed threaten the security of the PRI. Reyes Heróles maintains that this is a seed bed for fascism. What is perhaps more telling is the 'solution' the PRI proposes. First it is necessary to preempt any reactionary, i.e. non-PRIista attempts to organise currently unorganised workers,

To establish contacts with non-organised workers and to block the attempts that regressive currents and groups of political adventurers are making to control them and take advantage of them.

For the party to be effective (and one presumes to involve those presently unorganised) greater levels of democracy and criticism are necessary,

It is necessary that decisions are imposed from below upwards. To serve in a political party or to direct it should be exclusively a difference relating to functions, without pre-eminence of some over others.

Also,

To comrades who have some differences with party decisions we exhort you to exercise, without restraint, the widest criticism and so contribute to correcting errors.

Echeverría Ruiz and Pontones Chico present rather more crude analyses of the middle class and do not formulate any concrete solutions to deal with discontent.⁴² Echeverria Ruiz believes that the middle class has a fascist tendency arising from a fear of becoming insignificant between the bourgeoisie and the proletariat. The middle classes should, however, because they are exploited within a capitalist system, be included within the multi-class alliance of the PRI. Pontones Chico maintains that the richer section of the middle class wants more political participation while the poorer sectors want greater wealth and employment opportunities.

The CNOP conference of May 1975, the 'Primer Encuentro Nacional sobre Clases Medias' involved academics and PRI officials. Recommendations followed similar lines to those that had appeared in Linea. López Camara, author of a book on the challenge of the middle classes, emphasised the need to encourage increased political participation of the middle classes, maintaining that half of the urban middle class vote went to the PAN in 1973.⁴³

It is evident from the level of discourse that occurred on the subject of the middle class that the government saw a need to improve its control of this section of the population. But despite the discussions that occurred no moves were taken to extend the organisation of white collar groups through the CNOP or any other section of the party

machinery. It might then appear that, despite identification of a problem, mechanisms of control were not substantially altered in the period 1970-76. This would be to ignore aspects of the electoral reforms of the early 1970's and innovatory methods of dealing with student politics.

There was some delay in implementing political reforms, caused by internal divisions in the PRI. Conservative pressure on Echeverría meant that some reforms, suggested in the period 1970-76 by Echeverría and Reyes Heróles, were not implemented until 1979. Electoral reforms introduced between 1970 and 1973 both aimed at winning support and improving control. They were intended to both provide a greater measure of democracy, and to institutionalize opposition so making it easier to deal with. As a result of the passing of the 1973 Federal Electoral Law opposition parties were to be involved in the running and checking of elections, as a precaution against fraud. In order to present their views they were to be allowed the use of radio and television. Attempts to institutionalize opposition were made by emphasising the role of opposition parties, and by encouraging the participation of young people. Reform to the Constitution gave representation in the Chamber of Deputies to opposition parties on a smaller percentage of the total vote than previously, 1.5% rather than 2.5%, and raised the maximum number of deputies of such minority parties gained in this fashion to 25. Changes in the minimum age for voting and for candidacy were introduced in the last years of the Díaz Ordaz government while Echeverría was PRI candidate, allowing more people to participate in the coming elections. The minimum voting age became 18 years. It had previously been 21 years for single persons and 18 years for married persons. The age of eligibility for candidacy for deputy or senator were respectively reduced from 25 and 35 years old to 21 and 30 years old.⁴⁴

Changes in electoral law both aimed to win support and increase the government's control over opposition. The other major area of action was in education where one sees a similar pattern of policies directed at winning more support for the government but also at controlling opposition. Both political and educational reform contributed to what Echeverría announced as an apertura democrática, that is a political climate in which participation, debate and dialogue would be encouraged.

It is interesting to note, however, that Echeverría acted to win the support of those who could have been among the government's more articulate and influential critics. Octavio Paz commented in his 1969 book Posdata (The Other Mexico) on how writers, academics and artists could sow the seeds of rebelliousness among other social groups.⁴⁵ After 1970 one finds Paz, along with, for example, Carlos Fuentes and Fernando Benítez declaring his support for the government of Luis Echeverría. The support of such intellectuals gave credence to Echeverría's reforming image. Such support was possible because, as an article in Punto Crítico comments, in the 1960's these writers,

were confronting the excesses of the system which brought them rapid prestige as progressive intellectuals.⁴⁶

Having not confronted the underlying political and economic structures of such excesses, it was possible in 1970 to support what appeared to be a more liberal government. Fuentes' support for the government, voiced in the PRI's journal Linea, expresses the view that the current political option is between democracy and fascism, and that in order to support the former and fight the latter one must support rather than criticise the government.⁴⁷ The presentation of the threat of fascism is aimed at preventing the emergence of a significant critique of Mexican politics. But the spectre of fascism is raised in a somewhat different manner from in the government's analysis of the middle classes. There, rather than examining in any depth the cause

of perceived middle class frustration and discontent, emphasis was placed on preventing the "psychology of frustration" being channelled into fascist activity. The framework of argument adopted by Fuentes and others served to divert any thorough critique of the government. Also demonstrating the support of intellectuals was aimed at winning wider support, at home and abroad.

Another potentially influential source of criticism was from university academics. Some such criticism was probably stifled as a result of Echeverría's policy of recruiting a substantial number of young academics into government employment, thus not only occasioning a certain loyalty from these intellectuals, but also giving a somewhat radical flavour to his administration.

Such mechanisms, i.e. obtaining the support of intellectuals and academics served the purposes of both controlling opposition and building support among wider groups who may be influenced to some degree by positions taken up by recognised intellectuals. Changes in electoral law also aimed both to win support, by improving the democratic image of the political system, and to control opposition by institutionalizing it. The declaration of an apertura democrática aimed to win support, while proposals for improving the political organisation of the middle class were directed primarily at improving control.

This chapter has demonstrated how the Mexican political system has been closed to the independent raising of issues. It has appeared to be almost impossible for groups to further their interests through the political system. The experience of the doctors, but more particularly of the students showed that discontent among the middle classes was quite widespread but also that the government could not effectively deal with such opposition. Some mechanisms employed by Echeverría's government to build support and improve control have been examined, but an important aspect of such a policy was action within the sphere of education.

Some policies were directed at winning support, e.g. through an improved provision of education and encouragement of criticism and debate among students, (part of the apertura democrática). Other policies aimed to improve control, through structural changes in educational provision which would weaken students' ability to organise, and through indirect intervention in student politics. The next chapters will explore the interaction within educational reform of an attempt to respond to political imperatives noted in this chapter, and an attempt to provide a more effective and efficient response to the manpower needs of the economy.

1. Fitzgerald, E.V.K., "The State and Capital Accumulation in Mexico", Journal of Latin American Studies, Vol.X, No.2, 1978, p.264.
2. Preparatorias are the predominant form of upper middle level education. They were, until 1970, usually attached to a university and provided a general pre-university education. Vocacionales provided technical education.
3. Cervantes Hernandez, José, Social Class and Educational-Occupational Aspirations: An Explanatory Study in Two Regions of Mexico. Ph.D. thesis, The Catholic University of America, 1970. p.4.
4. Careaga, Gabriel, Mitos y Fantasías de la Clase Media en México, Cuadernos de Joaquín Mortiz, Mexico, 1970. Chapter 8, "Ocio y Enajenación".
5. Ibid., p.142.
6. For a selection of contributions in this area see Karabel J., and Halsey, A.H., eds. Power and Ideology in Education, Section II Education and Social Selection, pp.167-305, Oxford U.P., New York, 1977.
7. Stevens, Evelyn P., Protest and Response in Mexico, M.I.T. Press, Cambridge, Mass., 1974. p.78.
8. Schers notes that pay increases are often achieved by the creation of new jobs. As new personnel move into existing posts, existing personnel are promoted to better paid jobs, thus avoiding the negotiation of incremental pay scales. See Schers, David, The Popular Sector of the Mexican PRI, Ph.D. thesis, The University of New Mexico, 1972. p.136.
9. See for example, Hellman, Judith Adler, Mexico in Crisis, Heinemann, London, 1978, Johnson, Kenneth, Mexican Democracy: A Critical View, Allyn and Bacon, Boston, 1971, and the revised edition published by Praeger, 1979, Weinert, Richard S. and Luis Reyna, Jose, eds., Authoritarianism in Mexico, Institute for the Study of Human Issues, Philadelphia, 1979.
10. Johnson, op.cit., 1971, p.30.
11. Paz, Octavio, The Other Mexico (a translation of Posdata), Grove Press Inc., New York, 1972, p.75 and pp.26-7.
12. Johnson uses the word camarilla. By way of illustration of mechanisms of patronage he charts the career of Alfonso Martínez Domínguez, whose posts have included Secretary General of the CNOP, President of the CEN of the PRI, and mayor of the Federal District, op.cit., pp.67-73. Schers, op.cit., gives a useful account of recruitment in Chapter 4 of his thesis on the CNOP. Peter Smith also examines the operation of camarillas in his Labyrinths of Power, Princeton University Press, Princeton, 1979.

13. This operates via a political structure which a) allows PRI members and officials to hold high administrative office and b) allows political appointees to such high offices to name their juniors.
14. Anderson, Bo and Cockroft, James D., "Control and Co-optation in Mexican Politics", in Cockroft, Frank and Johnson, Dependence and Underdevelopment; Anchor Books, New York, 1972, pp.219-244.
15. See Stevens, op.cit., Hellman, op.cit., Chapter 4, and Camacho, Manuel, "La Huelga de Saltillo, Un Intento de regeneración obrera", Foro Internacional, Vol.XV, No.3, El Colegio de Mexico, 1975.
16. Johnson, 1971, op.cit., p.47, Stevens op.cit., p.74-5. Madrazo's term as President of the PRI was short as he was killed in a plane crash.
17. Three more parties were registered in 1979, including the Partido Comunista Mexicano, whose support comes predominantly from the middle class.
18. Soledad Loeza, "El Partido Acción Nacional: la oposicion leal en Mexico", Foro Internacional, Vol. XIV, No.55, 1974, p.365.
19. Such differences within the party in the seventies contributed to a division whereby no Presidential candidate was chosen to oppose José López Portillo.
20. Von Sauer, F.A., The Alienated Loyal Opposition, University of New Mexico Press, Albuquerque, 1974. p.143.
21. Bezdek, R.R., Electoral Oppositions in Mexico: Emergence, Suppression and Impact on Political Processes, Ph.D. thesis, The Ohio State University, 1973. See Chapter 4, and for quotation p.107.
22. Von Sauer, op.cit. p.63.
23. Segovia, Rafael, "La Reforma Política, El ejecutivo federal, El PRI y las elecciones de 1973", Foro Internacional, Vol. XIV, No.3, 1974. pp.305-330. Quotation p.318.
24. Ames, Barry, "Bases of Support for Mexico's Dominant Party", American Political Science Review, Vol.64, No.1, 1970. p.163.
25. Bezdek, op.cit. p.118. See also Luis Reyna, José, Control político, estabilidad y desarrollo en México, El Colegio de México, Mexico, 1976.
26. Segovia, op.cit.pp.314-316, pp.322-3.
27. Latin American Political Report, Vol.XIII No.31, 10th August, 1979. p.246.
28. Information on the doctors' strike has been taken primarily from Stevens, op.cit., Chapter 5.
29. AMMRI stands for Asociación Mexicana de Medicos Residentes e Internos, Asociación Civil

30. Stevens, op.cit., p.195.
31. Students wanted more places in higher education, and a more democratic access to higher education including more loan and grant schemes.
32. Stevens, op.cit. p.187.
33. Information concerning student activity and government response in 1968 has been taken primarily from Hellman, op.cit., Johnson, 1971, op.cit., Stevens, op.cit. See also Ramírez, R., El Movimiento estudiantil de México, julio - diciembre 1968, 2 vols., Ediciones Era, Mexico, 1969.
34. Hellman, op.cit. p.133. The Council included representatives not only of public universities and other institutions of higher education, but also of private universities as well as representatives of lower stages of education, of the preparatorias and vocacionales which were usually linked to universities or to the Polytechnic.
35. The three demonstrations took place on 1st, 5th and 18th August. The first involved mainly UNAM students, the second Politecnico students and the third was mixed and included students from provincial universities.
36. Johnson, 1971, op.cit. p.154.
37. Hellman, op.cit. p.136.
38. Stevens, using the New York Times as her source, states that 200 were probably killed at Tlatelolco. The series of events is not clear but most accounts would suggest that the government had intended some such action and that police and army were not merely reacting to snipers.
39. For an analysis of the development and workings of the CNOP and the FSTSE see Schers, op.cit.
40. Ibid. p.136.
41. Reyes Heróles, Jesús, "Nuestras Tareas- Reflexiones y Perspectivas", Linea, No.7, 1974, Mexico City, pp.3-42.
42. Pontones Chico, Eduardo, "Participación de la Clase Media en el Desarrollo Económico", Linea, No.3, 1973, Mexico City, pp.57-64, and Echeverría Ruiz, Rodolfo, "Las Clases Medias Explotadas", Linea No.2, 1973, Mexico City, pp.3-8.
43. López Camara, Francisco, El Desafío de La Clase Media, Cuadernos de Joaquin Mortiz, Mexico, 1973. This general and, on the whole unsubstantiated account emphasises the rebelliousness of the middle class and the discontent of youth. It is seen to be necessary for the government to gain the support of the middle class for the political stability of Mexico, stopping this class moving either to the right or to the left.

44. Segovia, op.cit. pp.307-310. Further changes were made to the electoral laws in 1979, which had the effect of increasing representation of opposition parties. 100 seats of a 400 seat Chamber of Deputies are reserved for opposition parties and distributed according to their share of the vote. In addition three new parties, including the Partido Comunista Mexicano, were allowed to stand in the 1979 elections and achieved definitive registration by each gaining at least 1.5% of the vote.
45. Paz, op.cit. p.53.
46. Punto Crítico, No.7, July 1972, Mexico City, pp.12-13.
47. Fuentes, Carlos, in section "Fundamentos Teoricos", Linea, No.21, 1976, Mexico City, pp.52-3.
48. Gonzáles Cosío, Arturo, "Conceptualización sobre las clases medias en México", El Nacional, 22, 23, 24 and 25 May, 1975, Mexico City. This information was presented to the 'Primer Encuentro sobre Clases Medias' organised by the PRI and held in San Luis Potosí, 20-22 May, 1975.

EDUCATIONAL REFORM: PLANNING IN A POLITICAL CONTEXT

This chapter examines proposals for educational reform put forward between 1970 and 1976. It suggests that while proposals in some areas make serious and detailed suggestions for, e.g. improving participation or more effectively meeting manpower needs, the formulation of policies occurred in a context in which the political impact of proposals was an important and sometimes primary consideration.

Earlier education policies had shared this concern with political impact, although with growth in expertise in forward planning, policy formulation for a while took on a technical rather than a political image. It will be useful to trace the causes and effects of such a trend, this contributing to an understanding of the different form taken by the 1971 proposals. The 1971 proposals will be examined in order to understand the motivations behind reform; this will allow subsequent comparison of declared objectives and policies implemented.

Educational Planning and Reforms before 1970

One of the first instances of forward planning in education on the part of the Mexican government was the 11 Year Plan. It has been suggested before that this plan had a political function; it was introduced at a time of social discontent and political unrest in the late 1950's, showing the greater social concern of the López Mateos government as compared to the previous government of Ruiz Cortines. Such an interpretation is corroborated by the nature of the plan. The 11 Year Plan was initiated by President López Mateos and his advisors, and a Commission set up to formulate a plan of action. The plan did not originate in the SEP. Demand for primary education was estimated

by a sample survey carried out by the Statistical Office of the Secretariat of Industry and Commerce and new places supplied on this basis. The Plan's stated objective was to meet real demand, i.e. of providing places up to sixth grade for those able to attend, excluding those who would not attend due to their social and economic circumstances. However, this was the extent of planning. Benveniste states that the commitment was essentially political; the plan did not specify location of schools or financial details and no economists were involved in its elaboration.¹ Effort was put into the more public activity of building new schools and thus providing more places at lower grades while paying less attention to expanding existing schools. Even so, expansion slowed down after 1964 because such a policy imposed large demands on financial resources. There was a need for fiscal change to provide the needed resources but this was not considered since private sector opposition to such measures was known and acknowledged. Also there was a vast publicity for the plan in its early years but virtual silence in newspapers thereafter. All these factors would seem to indicate that a major objective of the 11 Year Plan was the winning of public support. Planning techniques were quite simple, focusing on gathering of data on levels of participation.

The 1960's saw problems of higher education come to the forefront of public debate and discussion. As in other countries, higher education was experiencing fast rates of growth, but was unable to meet demand. Students were not satisfied with the quality and value of education provided and in addition the government still had problems in finding sufficient resources for improvement and expansion. Furthermore, it was questioned to what extent expensive expansion was only producing more underemployment rather than meeting labour market needs. While some wanted to limit expansion, for example by introducing entrance tests, political pressures from other quarters brought increases in

subsidies from the SEP. This highlighted existing problems; the SEP had little control over expenditure while the universities had virtually no planning organisations to deal with the above-mentioned problems of quality, of demand, and of relation of supply of egresados to manpower needs.

However, at this time planning was achieving a new importance and more sophisticated techniques were being developed. Planning of higher education appeared to offer some solution to current problems. UNAM and IPN agreed to coordinate their planning activities and to exchange and share facilities where possible. Some of the provincial universities also established planning departments. But when under secretaries of technical and higher education suggested a more extensive coordination, in the form of national planning, the Secretary for Education, Yáñez, opted for a plan covering all levels of the education system. In July 1965, Yáñez announced the creation of the Comisión Nacional de la Planeamiento Integral de la Educación. Conceptions of what educational planning should be had by now taken a somewhat different form from in the late 1950's. Expertise in planning had emerged, expertise legitimated by involvement in the international planning fraternity.

In the late 1950's the Bank of Mexico's research department was studying regional development and manpower needs. In 1963 the Bank set up a department of Human Resources research, this at a time when the economics of education was becoming an important area of debate. The involvement of the Oficina de Recursos Humanos in setting up training centres for industrial and rural work, and in the National Council for the Development of Human Resources for Industry meant that it had, as Benviste says, established an undisputed professional reputation within government administration.² In 1965 the Office became the technical staff of the new Commission with its head Méndez Napoles as technical secretary.

The composition of the Commission reflected the manner in which planning was regarded, i.e. as a technical activity, removed from the context of political debate and political pressures. The SEP wanted the best, the scientific solution but did not set a political framework within which this should be reached. Planners were left to specify ends as well as means. The Secretary of Education, Yáñez, was Chairman; there were also two coordinators, one the under secretary of technical and higher education, the other Bravo Jiménez from the Bank of Mexico. As stated, a group of economists, the Office of Human Resources, formed the technical staff. There was no attempt to gauge public opinion, to evaluate political pressures and the necessary response, or even to provide the appearance of doing this, nor even to set politically and socially desirable objectives. Task Forces were established for the purpose of collecting information, but were not integral to the formulation of proposals. The Task Forces involved officials of the SEP, the SNTE and the universities in assembling data and opinions on quantitative expansion, content of education and necessary future policy. This personnel fed the Commission, but otherwise had little importance. A spokesman of the SNTE said,

They did not turn to us, simply told us from above what was expected of us. Planning should imply some kind of discussion, some kind of consultation. This should take place all over the country, not only here in Mexico City.³

The Commission's report was published in March 1968⁴ and appeared to have little effect on policy making. The "technically best solution" selected by experts linked to the government was not suitable for insertion into the political climate of 1968.

Consultation with and participation of students in decision making became an important demand of university politics, and in wider society there were pressures for more open and democratic government. The Commission's report and its recommendations had little public

relations value in winning support for the government, although it contained little likely to offend. The main recommendations of the report were, attention to the education of the campesino, for more research in science and technology, and to provide solutions to the need for more cuadros medios, technicians or sub professionals, and to demand for more places in higher education.

All areas are related to meeting the needs of the economy, via the production of skills which may raise productivity. Education of the campesino is seen as important for its indirect contribution to economic growth. Increased productivity and consumption power of the campesino would help to develop the internal market. It is believed that education will provide knowledge of the technology and skills, and the interest necessary for more efficient production.⁵ But the rural inhabitant was not part of the actually or potentially dissenting political community in 1968. Such a concern was largely irrelevant in immediate political terms. Also the possibility of improving productivity by improving education is simply assumed and not discussed.

The need for more research into science and technology was and is important to reduce dependence on foreign technology, affecting both the balance of payments and the independence of Mexico's industrial development.⁶ But such proposals would not have been perceived as opening up opportunities for the individual although reducing foreign dependence would have met with public approval. Emphasis is placed on the need of industry for more technicians. It is suggested that such qualifications should not only provide middle level qualifications but should also be accepted as a basis for the pursual of higher studies. This might encourage more students to follow such courses.⁷

It is in the recommendations for higher education that the distance of policy formulation from political reality becomes evident. The main problem is presented as one of the nature of distribution of

students between subjects; this must be altered in accordance with manpower needs.⁸ No statement is made on optimum participation, whether it should be in accord with labour market demand, or social demand. Neither is the quality of education a major concern. The Task Force which looked at the content of education only met three times producing a somewhat vague report. Thus the students' main points of discontent, over access to education, employment possibilities, quality of education and participation in decision making, are left untouched or dealt with in an unsatisfactory manner. The Commission saw the structure of higher education in the following way,

It is a problem of an administrative order, more in the short rather than the long term, which must be examined with the greatest possible frequency, in order to adapt, with each new sign of modification in the economic, social, political and technological structure of the country, new methods for modifying in its turn the structure and composition of the student population in higher education, opening and shutting the floodgates according to what the change that appears requires, or to what with foresight can be expected.

In Chapter One the myth of such a solution was examined. Changed distribution between subjects supplies labour market needs if students pursue new courses but does not solve, or even bring into consideration, problems of unemployment or underemployment with the consequence of possible wasted investment and potential student unrest. The Commission's approach was not technically faulty but it ignored the political context of implementation. This is a different point from Benveniste's, that is that planners must take on a political (bargaining, politicking) role in establishing support for their plan, in building a coalition of implementors.¹⁰

As part of its work the Commission undertook in 1967 a sample survey of private industry, public administration, educational institutions etc., comparing requirements for professionals and sub professionals with existing resources.¹¹ This produced similar evidence to that presented from other sources in Chapter Two. Deficiencies were noted,

particularly at subprofessional level, also at professional level in agriculture, some branches of engineering, applied chemistry, public administration and, surprisingly, medicine. Surplus existed in economics, civil engineering, architecture, accounting and business administration. Then in keeping with projected demand for professionals in 1970 and 1980 the Commission projected recommended growth rates for the different disciplines, reducing growth in, for example, economics to 4.3% p.a., to 4.9% in commerce and business administration while recommended growth rates for industrial engineering and agricultural technology were 10.6% and 8.7% p.a. respectively.

Such recommendations do imply, although it is not made clear, an overall ceiling on the number of university places. The weighted average of growth rates specified would come to less than the overall projected demand for places in 1975 and 1980. But the Commission does not recommend rates of growth for either the natural or social sciences on the basis that it is difficult to establish manpower needs for people qualified in such fields.¹² Thus there is no recommendation on overall growth but the impression given is one of restricted or guided growth in relation to manpower needs of industry, agriculture, government administration etc., rather than a political commitment to open access. Such a policy would have been difficult to implement.

A seminar on planning of higher education was held by UNAM and ANUIES in August 1969.¹³ One of the more interesting papers from this seminar, "Aspectos Sociales de la Planeación de la Educación Superior", presented by Pablo González Casanova, is critical of conventional planning approaches as used, for example, by the Overall Planning Commission. González Casanova notes that in general planning pays insufficient attention to the political and social context of its proposed area of action. Not only must this be examined in order to determine the feasibility of plans but also to determine how far

suggestions are rationalizations of a given structure. Planning can add prestige to an education system by hiding its irrationality. Concepts such as equal opportunity, democratization and freedom of choice of area of study, rationalize action while social inequality prevents the real fulfilment of such ideals. In addition planning is not the same as reform; choices need not be oriented to development, (redistribution of resources and wealth) but instead towards preservation of the status quo.

González Casanova states that educational planning must take place in the context of some economic planning, such that demand can be more accurately established. This necessitates a mixed economy with significant state participation. (This exists in Mexico although no overall economic plans are presented.) But in addition there must be a consensus between groups and parties on the area of planning and possible negotiation. Implicit in González Casanova's views on planning there lies a critique of the Mexican political system. He states that it is necessary to have a system where political parties organise around principal options, such that ends are chosen democratically, leaving an area of technical evaluation. This clearly does not apply to the Mexican political system but González Casanova's proposal is problematic for it underestimates the possible political nature of debate over means, and does not explore the concept of an arena of rational choice. However, González Casanova's main thesis that "economic planning is an eminently political phenomenon" is an important antidote to the technical conception of planning.¹⁴

The inadequacy of the Commission's report for both policy making and planning purposes is shown by the fact that firstly, more plans were elaborated in the last two years of Gustavo Díaz' sexenio, and secondly that Echeverría saw it necessary, or advantageous, to promise a "Reforma Educativa" of his own. The form and content of plans

changed quite substantially between 1968 and 1971. The content of 1969-70 and 1971 plans is similar, and moves away from some proposals of 1968. However, the form of the 1969-70 plans is largely similar to the 1968 plan, while the form of the 1971 document marks an important change in the manner of formulation and presentation. The intended political impact of the plans appears to have influenced their formulation.

The next major planning initiative after the Commission's work in 1967 was the presentation of reform proposals at the Plenary session of the 8th National Assembly of the Consejo Nacional Técnico de la Educación (CNTE), in 1969. The CNTE has legal responsibility for all education plans. It is composed of the directors of departments of the education ministry, a representative of each state governor and representatives of the universities. The CNTE does not have a professional staff of its own, thus it acts mainly to discuss ideas for change originating within the SEP, can act to delay change, and provides sanction for plans emerging from the SEP as the CNTE is presented as a body for technical evaluation. The CNTE's recommendations are presented in a document of less than 40 pages,¹⁵ focusing after initial considerations on the different stages of education. The first recommendation is for administrative reform, involving decentralization and the formation of a permanent planning organization to provide advice and information and to produce plans for change in keeping with changes in society, for such an organization had not previously existed. The Comisión Nacional de Planeamiento Integral de la Educación had been formed for the particular purpose of planning in 1967 while the CNTE had never itself had a planning function.

It will be useful to briefly present the CNTE proposals, to distinguish the reforms proposed from those of 1968, and to demonstrate how quite similar proposals were presented in a significantly different manner in 1971.

Proposals for primary and pre-primary education place emphasis on more radical approaches, associated with primary schools of the 1920's and 1930's.¹⁶ Other proposals focus on improvement of the existing structure of primary education, but are not related to the wider economic concern of raising rural productivity as in 1968.

It is suggested that the provision of kindergartens be extended with preferential attention given to low income families. Proposals for primary education include, improved provision through a more equitable distribution of schools, schools for adults and use of the mass media. Improvements in teaching should be achieved through emphasis on 'learning by doing', encouraging students to work together in teams, revision of text books, and the training of teachers in modern methods. It is also suggested that teachers should live in the community in which they teach and coordinate participation in the development programmes of government agencies.

Proposals for the upper cycle of middle education repeat suggestions of the National Commission for an increased number of courses in technical subjects, while ending the terminal nature of such education.¹⁷ The proposals go further in suggesting the unification of vocational and preparatory education. For this cycle of education as a whole courses should be restructured, unifying some areas and reducing class hours so making possible greater practical and outdoor education in place of wholly abstract learning. It is recognised that the nature of participation in middle education affects both manpower supplies, and demand for particular courses at institutions of higher education. This would seem to be why each set of reform proposals examined in this chapter places emphasis on structural reforms in middle education for they might both allow greater flexibility and increase participation in courses on technical subjects.

It is easier for the government to reform middle education than to reform higher education. As the CNTE notes, university autonomy must be respected. In order that planning can be carried out in higher education ANUIES should be strengthened, and coordination between ANUIES and SEP be increased. The section of the plan on higher education notes that reform will be difficult as it is the first real effort at giving cohesion and direction to higher education as a whole.¹⁸ However, each university should have within it a group to review its structure and methods of operation.

The CNTE does put forward recommendations for action. It is stated that demand should be met without sacrificing quality. Preference should be given to appointing full time staff, training of staff improved, and resources such as libraries improved. Thus these proposals can be distinguished from those of the Commission by the fact that, (i) attention to demand rather than manpower needs is emphasised, although such points are hardly discussed, (ii) quality of higher education is a major consideration, (iii) the limitations placed on centrally directed reform owing to the autonomous status of universities are acknowledged.

Such proposals would be likely to be more acceptable to the mass of the population than those put forward by the Commission. There is, however, no consideration of how financial requirements, necessary for qualitative and quantitative improvements might be met.

It was reported on the 2nd April that the CNTE's proposals were accepted as the material base of educational reform.¹⁹ No firm programme for further elaboration or implementation was announced; Yanez stated that some recommendations, e.g. promulgation of laws, would be subject to Presidential agreement, and others subject to further analysis. First, it can be noted that implementation of wide scale reform is unlikely in the late stages of a sexenio. Not only

will top administrators probably change with the new sexenio, but the new President is likely to wish to put his own imprint on educational policy. Thus it is likely that emphasis on reform at this stage was intended to help build public support, although this does not mean that the CNTE's proposals were not well considered or subsequently without influence. There was wide press coverage of the proposed reforms.

Most of the reforms mentioned are concerned with the quality and content of education and only suggest major structural reform at medio superior level. This permitted few precise expectations of change. But the overall impression created by publicity relating to the proposals was of a response to demand and a commitment to improved quality, rather than a technically based rationalization of education. Thus reform appeared to meet popular needs rather than being imposed by a closed educational bureaucracy.

Reforms had also been announced in UNAM in March 1969. It appears that there was an initial attempt to defuse tension by maintaining silence, between November 1968 and March 1969. Barrios Sierra then announced in an interview with Excelsior that there would be reform and democratization within UNAM.²⁰ The reforms of 1960 were to be continued. Barrios Sierra promised attention to unsatisfied demand for enrolment, and the construction of extensions to the university city to cope with increased demand. A radical transformation of traditional examinations was suggested, placing more importance on continuous assessment and making final examinations the exception rather than the rule. Barrios Sierra also called for higher federal subsidies and the creation of more regional universities. UNAM then announced the creation of new short courses at técnico level. This can be seen as responding to a long stated necessity and as providing opportunities for many students unable to pursue five years study. Thus UNAM also responded to protest and disillusion by promising reform.

Despite the promise of reform from Yáñez' SEP and from UNAM, the PRI's candidate for the Presidency, Luis Echeverría, still focused on educational reform as an important issue in his electoral campaign. In November 1969 Echeverría promised that as President he would propose a profound pedagogic reform.²¹ His pronouncements on education in the period before becoming President contrast with the Commission and the CNTE's proposals. There is a return to an emphasis on education for work, but this is presented as the promotion of social and economic development, rather than as meeting the current needs of industry, agriculture or administration.

To foster our human resources is to accelerate progress
and social justice. 22

Emphasis on the social value of an education linked to future work is most clearly manifested in comments on professional education. The necessity of more technical and sub-professional level education is repeated. This is seen to be in the interests of economic development but also of the student who is unable to pursue a five year course.²³

But the orientation towards development requires changed attitudes among students and not only changes in education policy. Implicitly, accusations of education oriented to the needs of industry, rather than to the needs of society or of the individual, are turned back on students,

We need to remove ourselves from an old Latin American university tradition which has considered the professional as an individual unaware of social interests who is traditionally endowed with a degree in order to go out into the world in a selfish and individual manner. 24

But over and above this, the main concern voiced by Echeverria was the unemployment and underemployment of the highly educated.²⁵ The political danger of such unemployment and underemployment is noted; large scale political disturbances like those of 1968, could occur again.

But Echeverría finds it necessary to place the cause of employment problems in bad planning, in a maldistribution of students between courses.²⁶ The fact that much more serious problems exist for those wanting high level jobs is an unpleasant truth that is not faced. Despite his analysis Echeverría does not suggest restriction of entry to some courses but still supports open access,

I am not talking of coercion to prevent anyone entering any career. I am saying that we should not stimulate the growth of those careers which do not have a secure future.²⁷

Solutions to employment problems are ambiguous. Anyone may enter his or her chosen career, this apparently demonstrating the government's commitment to equal opportunities. At the opening of the first public meeting of the Reforma Educativa discussions, Bravo Ahuja talked of education as a force which can of itself remove inequalities in society.²⁸ Such a belief on the part of the population may bring support to a government seen to improve educational provision. It is important that such a belief be maintained,

Mexicans have faith in the school. Their determination to improve through culture is the greatest potential with which the country can count. We cannot permit this force to be turned aside nor this hope to be lost. ²⁹

Echeverría became President in 1970. In January 1971 the Coordinating Commission of the promised Reforma Educativa started meeting and approved a sub-committee to produce a basic plan of work. On 21st January a 35 point plan was approved by Echeverría.³⁰ But a new form of planning and reform was introduced. Bravo Ahuja's speech quoted above was from the first meeting of a cycle of seminars and meetings to take place all over Mexico among interested groups, of for example, administrators, teachers and students. The emphasis on consultation and dialogue was, as noted, important after the conflicts of the late 1960's. However, the precise nature of the interaction between work of the SEP and the view expressed by other groups at such

meetings was not made clear, and is difficult to ascertain. The Coordinating Commission's final document published by the CNTE, Aportaciones al Estudio de los Problemas de la Educación, contains what are presented as the views of different groups as represented in the various seminars. Volume One which contains a resumé of all areas covered states that "The document presented is a synthesis of points of views expressed". Volume Two presents statistically the results of questionnaires circulated among professors, teachers, professional associations and the private sector, and discussions held in regional assemblies. Volume Three presents international comparisons and studies of special areas, e.g. teaching of gifted and backward children. Volume Four is a collection, without any particular structure, of critiques of the existing system of education. Volume Five concentrates on higher education and research without detailing sources of views expressed, and Volume Six contains resolutions.

As Pablo Latapí wrote in Excelsior the day after the publication of these volumes, it was unclear as to whether they were just materials for study, whether or not the SEP identified itself with the views expressed, or whether these were in fact the official documents of reform.³¹ However, as the CNTE compiled and published the documents and produced no other proposals it would seem likely that the documents represent the SEP's point of view. The teachers' union, the SNTE, whose bureaucracy appears to be under SEP control, makes very similar suggestions in Volume Six to those made elsewhere, combined with some general criticisms of the economic system of Mexico. But there is no attempt to analyse the cause of economic problems or to examine the interaction between the economic structure and the education system. Thus while the SNTE asks for greater government intervention in the economy, for fiscal reform, and increased capital gains tax etc., no consideration is given to the constraints on the effectivity of educational

reform imposed by economic inequality.³² Some critical analysis appears in Volume Four, Aportaciones al Estudio de los Problemas de la Educación, de la Juventud. This volume consists of essays, the majority submitted by individuals, from universities and from the youth section of the PRI.

Although announcements by Echeverria of educational reform seemed to perform an overtly political purpose, the reform proposals do not commence by providing a political analysis of problems in the structure or content of education. Rather problems are approached in a piecemeal fashion. Important concerns are seen to be non-fulfilment of education policy, e.g. in the continued existence of religious schools, inadequate national planning, lack of continuity between one government and another's policies, and also lack of experimentation.³³ Factors motivating and necessitating reform are social problems or changed social situations, e.g. of demographic growth, economic change, backwardness of the rural sector and inequality of opportunity. Reform in the provision of education is necessary to adapt to changed demographic and economic conditions but is also seen as a potential solution to much wider problems, i.e. backwardness of the rural sector and inequality of opportunity.³⁴ But the origin of such problems is hardly discussed.

Proposals for Educational Reform

While we are concerned here primarily with higher education policy, it has previously been found useful to look at policies affecting other levels in order to better establish 1) ideological orientations affecting the provision of education, 2) the degree of fulfilment of constitutional guarantees, 3) the comparative importance attributed to different levels, 4) the effect of policy at lower levels on higher education. Thus for similar reasons recommendations (and subsequently policy) for primary and middle levels will be briefly examined for the period 1970-76.

Primary Education

Recommendations for elementary education are broadly similar to those presented by the CNTE in 1969. The extension of kindergarten with preferential attention to low income families is again proposed.³⁵ At primary level³⁶ there is again emphasis on learning by doing, first elaborated as national policy in the 1920's. Reference is now made to an escuela activa,³⁷ echoing the escuela de la acción of the 1920's. Thus there is implicit but not precise reference to the more radical policies of pre 1940 education. The escuela activa is to exist in both urban and rural areas with the annexo fulfilling local needs; both rural and urban schools will have workshops, kitchens etc., rural schools plots of land and urban schools a rincón de naturaleza viva. The basis curriculum will be identical in rural and urban areas with adaptations to the regional environment. As in 1969 it is recommended that text books be reformed, (a common criticism being their orientation to the urban child), and that teachers in rural areas should live near their schools. More effective measures than had previously been proposed are suggested to improve participation. The importance of increasing the number of grades in rural schools is recognised, and it is suggested that economic support be given to improve attendance among the poor. To reduce desertion, hours and curriculum should be adapted to local needs, teacher-pupil ratios reduced, and notably, that the conditions of the community as a whole should be improved as part of integral development plans.

Thus the 1971 documents propose education of a similar content to the proposals of 1969, but by naming the model escuela activa, makes greater political impact. Similar suggestions are made regarding teaching methods but a greater commitment is made to improving participation and providing a greater equality of opportunity. Thus proposals for primary education, for more education and fulfilment of constitutional

guarantees, are important in demonstrating the democratic commitment of the government and also in establishing a slightly more radical image than that of recent governments.

Middle Education

Proposals for middle education are of particular relevance to this study as changes at middle level have important repercussions on higher education. Indeed, the SEP may choose to influence the structure and content of higher education through such a mechanism rather than attempting intervention in higher education. As will be shown, much emphasis is put on respect for the autonomy of institutions of higher education and the need for each university to institute its own reform. Moreover, and as has been noted, the nature of higher education is constrained by the preparation, limitations and demands of students emerging from middle education. The proposals put forward in 1971³⁸ were not original but an amalgam of suggestions made in the previous sexenio, by the National Commission for Overall Planning in 1968, by the CNTE in 1969 and by the SEP for reform of the bachillerato in schools in the Federal District.

It was felt that while other countries had simplified their educational structures Mexico still had a proliferation of levels and types of middle education. There existed little coordination between types of schooling and between regions. The preparatoria repeats much of the content of the secundaria and is positivist and encyclopedic in its conception of knowledge. Specialization occurs within the preparatoria to an unnecessary extent limiting future options. The SEP's proposals for reform of the bachillerato criticised the nature of preparatoria education seeing it as an extension from below of university courses. Any courses within preparatorias or vocacionales providing profesional medio qualifications were necessarily terminal, discouraging students who

wished to pursue further studies from taking these courses. The division between 'prepa' and 'voca' necessitated early specialization and tended to place technological courses in a secondary position to 'prepa' courses in terms of status. Attendance at one or the other made difficult access to certain higher educational establishments; UNAM has its own preparatorias, and IPN vocacionales. Therefore, the second cycle of middle education did not provide either an adaptable basis for further study or a very useful training in itself.

Suggestions from earlier reform documents had included an end to the necessary terminal nature of technical education, reduction in specialization and simplification of the curriculum, bringing together some subjects and omitting others. Proposed changes in methods had included a more practical approach, allowance for greater student initiative and a reform of text books which would alter their very positivist conception of knowledge.

The 1971 documents make most of these suggestions. It is seen as necessary for medio superior level to include both formative and preparatory elements for all students. The suggestion to unify preparatorias and vocacionales is not made. There is an added concern for the need to improve middle education in rural areas, to adapt it to regional needs.

The effect of such reforms on higher education would be to 1) increase the possibility of recruitment to technical courses, 2) make the preparatoria a valuable source of education in itself and break its automatic links with higher education, 3) increase flexibility and mobility of students in higher education through the integration of areas of study and coordination of levels of study between regions. However, it should be noted that while these would be positive changes there existed real barriers to effective implementation. It has been noted how, both in Mexico and many other countries, a 'dynamic surplus mechanism' tends to exist.³⁹ Individuals often pursue more education to put

themselves in a position of greater relative scarcity. But as more follow the same path the level necessary for securing scarcity value increases. Such a pursual of further studies is not necessarily linked to skills needed in future employment or to the intrinsic value of education pursued, but more to the need to obtain more and more qualifications. Whether preparatoria acts solely as preparation for university or has a wider value may not alter the race for more education.

Reforms in content may alter the early specialization of students into narrow areas, and allow more emphasis on scientific and technological education. But changes in patterns of study will not only occur with a change in options available but must be accompanied by changed perceptions of the value of previously less popular areas. Such cultural evaluations will not change as rapidly as reforms in the structure of education. However, proposed reforms for the upper cycle of middle education do appear to demonstrate a serious commitment to improving teaching and to more effectively meeting manpower needs. Proposals follow closely those of earlier documents; their presentation, unlike proposals for primary and higher education, does not show any obvious desire for a direct political impact.

Higher Education

It is stated that the base of reform must be a respect for autonomy. Reform must be generated within the institutions concerned and not imposed from outside.⁴⁰ However, certain recommendations are made. The first point made is the link between many areas of higher education and development; the preparation of the work force is an important function of education although education must also form the individual's personality and abilities. As indicated above, there is a return to a strong linking of education and the economy, but now in terms of the needs of development. Teaching is criticised for being very weakly

related to national problems and to the diverse forms of economic activity in Mexico. Higher education must be reformed to meet the current needs of society. There is a strong, but ambiguously articulated, orientation to meeting manpower needs. But the discussion focuses on growing demand and states that limiting numbers is not the solution to any apparent conflicts between growth and efficiency. Thus a major focus of the 1969 proposals is retained and Echeverria's view repeated. There are no recommendations given for growth rates as there were in 1968.

Manpower needs will be met within a general framework of open access. But problems of unemployment and underemployment are again only related to distribution of students between subjects. (Vocational guidance is seen as important.) The possibility of saturation of the job market is not mentioned in context. Rather it is stated that a bigger and better qualified work force is necessary. However, there is no lack of awareness of employment problems; it is perhaps seen better not to elaborate such problems in the section on higher education for it would then be clearly demonstrated that reforms in education are ineffective in solving employment problems. The political problems involved are acknowledged in the section 'Educandos: Juventud',

Student youth, especially in universities and polytechnics, have few prospects for exercising their profession, due to the lack of sources of work, a fact which limits their social participation and produces restlessness and pessimism.

41

Respect for demand, and acceptance of open access are important statements of intent, for in higher education as much as in primary education, the government must show its intent to 'democratize' participation by providing more opportunities. Indeed, response to demand may in some senses be more important at higher levels. As has been shown, those children not attending primary school are usually inhabitants of rural areas, whether non-attendance is due to lack of

places or to social and economic constraints. Such groups rarely pose threats to the government through actual or potential opposition as they are both isolated and well controlled by the PRI. Promises to extend and reform primary education are perhaps more or equally important at an abstract level, in legitimizing a government in power. Provision of at least universal primary education would seem necessary to any government calling itself democratic, while concern for the form and content of primary education identified Echeverría's government with those Presidents or education ministers associated with popular and reforming aspects of post-Revolutionary Mexico, e.g. Vasconcelos, Bassols and Cárdenas. But the provision of higher education responds to the demands of more politically aware and potentially dissenting groups, who perceive higher education as important to their children's future. The reform documents encourage such a perspective,

Education is the cause and effect of a social mobility
which it would be illogical to arrest. 42

Apart from debates on access to education and manpower needs, other problems are recognised. As the CNTE stated in 1969, the quality of higher education, not just quantity, must be considered. An incongruency between accelerated growth in the number of students and the efficiency of teaching is recognised. But as limits to growth have been rejected new systems of teaching and methods of work must be found which will maintain quality. Correspondence courses are suggested, not just to enable those who cannot attend to study but also to reduce costs. So the real problem here, although not mentioned in relation to the quality of education, is one of finance.

It is noted that higher education is competing for resources with other important areas,

In this one cannot cease considering the limitations of economies in process of development, (and) the order of priorities that society and the State together impose for attending to social necessities. 43

But no order of priorities is elaborated, nor are any specific proposals put forward for increasing finance, aside from a broad recommendation for fiscal reform. Public commitment to open access and maintenance of quality seem to be more important than precise proposals for meeting such aims. One factor important to achieving more equal participation and to considerations of economic productivity is the regional distribution of places in higher education. In 1971, as in 1968 and 1969, no clear recommendations for action are made. As we have seen, the main points of the CNTE proposals are covered again, although sometimes with little further elaboration, i.e. meeting demand, the quality of education, regional distribution of higher education and recognition of these institutions' autonomous status.

One new area of debate is introduced and that is the lack of co-ordination between universities and within universities, and the lack of flexibility which existing structures allowed. It is recommended with acknowledgement of university autonomy that higher education should form a national system, rather than acting as independent units. Institutions should provide similarly structured courses, on a universally recognisable credit basis, allowing where necessary, the movement of students between courses and universities. Coordinated national planning is recommended to attack the disequilibrium between areas of study, uneven participation by social sector and geographical regions, and investment needs and demand for human resources.

Of course, the Federal government cannot itself introduce such changes. Its power is legally limited to setting the level of financial allocation made to institutions of higher education. This will affect the degree to which institutions can meet demand for places. The government has no defined powers over the allocation of such finance within the universities. Thus planning in such areas is left strictly speaking to the institutions of higher education and to ANUIES.

However, the exact nature of the relationship between ANUIES and the SEP is unclear; publicly ANUIES is quite independent of the SEP, but it has arrived at policies very similar to recommendations made by the SEP.

ANUIES produced various sets of recommendations in the period 1970-76 with reference to the government proposed 'Reforma Educativa'. A meeting of ANUIES in April 1970, (i.e. in the previous sexenio) resulted in agreement on the objectives of higher education. ANUIES then produced in April 1971, in its next and 13th General Assembly, The Declaration of Villahermosa on the Reform of Higher Education. This was published as part of the above mentioned Reforma Educativa documents. Subsequent meetings, an extraordinary assembly at Toluca in August 1971, and the 14th Ordinary General Assembly at Tepic in October added to the proposals for action.

ANUIES does not make recommendations on the desirable level of future growth, apparently accepting the government's commitment to open access. A credit system is suggested which would allow the validation of different periods of study, reducing the emphasis on the usual five year licenciatura course. Students would be able to enter at different levels, compatible with their achievements, and to leave at different points and be able to enter into productive work. The creation of the latter is referred to as allowing salidas laterales, lateral exits. Such suggestions recognise the problem of those who cannot pursue, for whatever reason, (although often directly or indirectly financial), more than two or three years education. They leave with no accepted qualification and apparently little achieved, a factor which may contribute to student discontent.

Nevertheless, apart from advantages mentioned by ANUIES of greater flexibility and possible greater mobility of staff and students between

institutions and courses, such a credit system might have other effects. While students will gain validation for shorter periods of study, it is not clear to what extent this would represent the technical knowledge often presented as lacking in industry and the public sector, or merely be acknowledgement of courses pursued. As few details are given it is difficult to evaluate how far such a reform represents an administrative and academic simplification and a sop to students in terms of certification, or introduces options important for the country's development. All students would pursue the same basic course which would beneficially eliminate for student and society the necessity of early choice between a técnico or licenciado qualification. It would also lessen academic and administrative work and lessen costs. But an important aim seems to be to make the gaining of paper qualifications easier. It is recommended that the licenciatura be reduced from 5-6 years to a shorter period as new teaching methods make shorter periods of study adequate. Alternatives to the professional thesis were recommended at Toluca as many students had remained pasantes rather than titulados due to non-completion of the thesis. Similarly, the Acuerdos de Tepic recommended looking for new procedures which would eliminate obstacles to obtaining a degree.

It is seen to be important to facilitate the process of achieving a qualification, although not necessarily that of licenciado. But the methods mentioned would seem to impose undesirable pedagogic restrictions; the specification at a national level of the knowledge required for each level of study must limit innovation and the exploration of alternative conceptions of relevant knowledge and areas of study.

Giving a qualification where none would previously have been gained may for a while provide students with the impression of improving job prospects, although this will not occur unless more jobs are created. However, apart from such temporary effects a national system of validation

based on credits has other uses. Previously all students who dropped out of education between completing preparatoria and finishing the licenciatura would have been an amorphous mass competing for jobs. By introducing a credit structure all students can be differentiated according to achievement and slotted into different jobs according to 'qualifications'. There then appears to be legitimate reason for some students finding employment while others do not.

Other ANUIES proposals include courses for the training of teachers in higher education, the national coordination of students' social service, the passing of a new 'Ley de Profesiones' and the expansion of postgraduate study. The latter is necessary, it is stated, to produce researchers, teachers and specialists of a high level for the direction and administration of higher education, industry, science and technology. One might ask how far such expansion is also necessary to make up for the increasing inadequacy of much undergraduate education, or in the production of an elite distinct from the increasingly bigger group passing through higher education who can no longer, without further modification, form a governing or administrative elite. Thus one possible reason for and effect of, expansion of postgraduate study is that mentioned above in reference to a credit structure of study, the differentiating of the work force.

It has been noted above that only ANUIES, rather than the SEP, could effect national planning and coordination owing to the autonomous status of Mexican universities. The SEP's role is strictly limited to financial allocation although this allows considerable control over the direction of growth, i.e. by area or type of institution. However, ANUIES also made suggestions for future growth which were more specific than any included in the Reforma Educativa documents although not recommending rates of growth. These were made in May 1973.⁴⁴ The most significant suggestion, given the concentration of higher education in the Federal District, was for the setting up of a new university in

the Federal District. It is stated that UNAM and IPN will not be able to cope with the demand that is likely to occur between 1973 and 1980. No specific suggestions for regional expansion are made, only that studies should be undertaken to estimate future demand in order that provincial universities are not, like UNAM, unable to cope with demand. At medio superior level the most urgent area for action is again seen to be the Federal District. The creation of more schools is proposed, forming a Colegio de Bachilleres. The only specific suggestion for action outside the D.F. is in the increasing of post-graduate study.

The Reforma Educativa documents emphasised both attention to demand and the importance of education for regional development, the former being slightly more predominant. ANUIES proposals for expansion do not contradict this, but, when placed in a more concrete form, demonstrate that existing inequalities will be maintained if not exacerbated. Attention to demand, demand that is expressed effectively, most usually means attention to the Federal District.

This chapter has shown how the nature and content of educational planning changed between the 1950's and 1970's. While additional resources were devoted to planning in the 1960's in the hope of producing a more efficient system of higher education, recommendations were perhaps too unpalatable in political terms to be implemented. Recommendations for reform made in the early 1970's not only take into account the political pressures on policy makers but also seem designed to create a favourable political image for the government of Luis Echeverría.

Proposed reforms at primary level attempt to provide the government with a popular and mildly radical image in their emphasis on improving participation and changing teaching methods. In higher education the

government appears committed to a policy of open access and therefore an increase in places, rather than restricting entry in relation to manpower needs. ANUIES' recommendation for the establishment of a new university gives the impression that the requirements of economic efficiency or regional equality will be subsumed to meeting politically sensitive demands.

Nevertheless attempts to improve the quality and efficiency of education are not abandoned. Many recommendations are made for change in higher education, although some seem designed to improve consumer satisfaction rather than equality or efficiency. But at middle level, important proposals for reform were made which if implemented would improve the quality of this level of education and have beneficial effects for higher education. Thus reform proposals include many complex elements, - an attempt to improve efficiency and quality, an attempt to meet demands for more high level education, and an attempt to improve the public image of government.

1. Benveniste, Guy, Bureaucracy and National Planning: A Sociological Case Study in Mexico, Praeger, New York, 1973, Ch. 5.
2. Ibid. p.73
3. Ibid. p.54
4. Informe de la Comisión Nacional de Planeamiento Integral de la Educación, Secretaría Técnica de la Comisión, Oficina de Recursos Humanos del Banco de México, 1968.
5. It is not discussed how far rural productivity can be raised without land reform and substantial investment. If such action were taken the political consequences in terms of radicalisation of the rural population might present the government with problems.
6. Such problems are also discussed by Urquidi, Víctor and Lajous Vargas, Adriano, Educación superior, ciencia y tecnología en el desarrollo económico de México, un estudio preliminar, El Colegio de México, Mexico City, 1967.
7. Informe, op.cit. Ch. 4
8. Ibid. p.75
9. Ibid. p.68
10. Benveniste op.cit. p.11
11. Informe, op.cit. fn. p.93
12. Ibid. Ch.4. The report continues, "However, as a general policy recommendation, no doubt seems to exist in respect of the convenience of making the greatest effort, compatible with financial capacity, to increase the number of places available in these disciplines, taking into consideration the small numbers of professionals in certain of the said subjects....and on the other hand, the indisputable necessity of raising, in number and quality, the directors and intellectuals which the same process of development demands.
13. The papers were published as a book, La Planeación universitaria en México: ensayos, UNAM, Mexico City, 1970.
14. Ibid., González Casanova, Pablo, "Aspectos sociales de la planeación de la educación superior", p.36.
15. Consejo Nacional Técnico de la Educación, Asamblea Nacional Plenaria 8a, 1969. (The pages of the document are not numbered.) Mimeo, Mexico City, 1969.
16. Ibid., El Sistema educativo y el desarrollo nacional - educación elemental.

17. Ibid., Enseñanza media, ciclos superiores - Recomendaciones.
18. Ibid., Educación superior e investigación científica.
19. Excelsior, 2nd April, 1969, Mexico City.
20. Excelsior, March 13th, 1969, Mexico City.
21. Excelsior, November 13th, 1969, Mexico City.
22. Praxis Política, Collection in 11 volumes of Echeverría's speeches during his electoral campaign, Volumes 2-3, p.149.
23. Ibid., Vol.5, p.327
24. Ibid., Vol5, p.319.
25. Excelsior, November 13th, 1969, Mexico City
26. Praxis Política, op.cit., Vol.5, pp. 327 and 331.
27. Ibid. p.331.
28. Bravo Ahuja, Víctor, "La Meta que se busca es una cultura nacional homogénea" in Tiempo, 22 February, 1971, pp.33-35.
29. Ibid., p.34
30. Excelsior, January 21st, 1971, Mexico City
31. Latapí, Pablo, Mitos y verdades de la educación Mexicana, Centro de Estudios Educativos, Mexico City, 1973, a collection of Latapí's articles from Excelsior. The article referred to is from Excelsior 28th July, 1971.
32. Consejo Nacional Técnico de la Educación, Comisión Co-ordinadora de la Reforma Educativa, Aportaciones al estudio de los problemas de la educación, in 6 volumes, CNTE, Mexico, 1971. See Volume 6.
33. Volume 1, p.16.
34. Ibid. pp.16-20.
35. Ibid. Ch. 2, pp.36-7
36. Ibid. Ch. 2, pp.33-53
37. Ibid. Ch. 2, p. 33.
38. Ibid. Ch. 3, pp. 55-87
39. See Chapter One of this thesis.
40. CNTE, Aportaciones.... op.cit., Vol.1, Ch.4. pp. 89-102.
41. Ibid. Ch.6. p.121.

42. Ibid. Ch.4. p.91.

43. Ibid.

44. Excelsior, May 28th, 1973, Mexico City.

REFORMA EDUCATIVA: NATIONAL CHANGE IN EDUCATIONAL PROVISION

The first five chapters of this thesis tried to describe the political, social, economic and educational context in which educational reform occurred. The provision of education up to 1970 fulfilled neither the requirements of economic efficiency, of equal opportunity or of accepted pedagogy. Furthermore, the political context of the 1970's suggested the desirability of educational change of a type not necessarily consistent with improvements in economic efficiency, equal opportunity etc. The last chapter analysed the presentation of reform proposals, noting the meshing of proposals designed to improve the democratic image of educational provision, to maintain open access to higher education and to satisfactorily meet manpower needs. The presentation of the proposals was designed to show the compatibility of these aims, producing a reform package of significant political appeal. This chapter attempts to examine to what extent reform proposals were implemented. It is important to establish whether some areas achieved priority over others and to suggest reasons for this. This will allow some assessment of what were the more important objectives of reform and the manner in which different objectives were integrated into educational reform.

The documents which report the sexenio's achievements are the Informe de Labores and La Obra Educativa.¹ The style and presentation of these reports immediately demonstrate their intended public relations value. The documents are important in themselves in their presentation of a particular interpretation of Mexican history, and in their elaboration of government achievements. La Obra Educativa presents the period 1970-76 as a new era in the history of post Revolutionary

Mexico, of desarrollo compartido. Post Revolutionary development is seen as having passed through two phases: the first involved the construction of a democratic, independent, revolutionary and popular nation; the second phase starting in 1940 was peaceful and constructive, involving the structuring of an economy for development. However, it is stated that a necessary effect of this latter period was that,

The economic growth resulting from our political evolution has been obtained at the cost of social factors which determine development.

Only in 1970 is Mexico presented with a choice between further industrial growth which would maintain social inequalities, or models of development which see mechanisation of agriculture and industrialization as means to generate wealth to be shared by all Mexicans. Thus a rather different picture of Mexican development is presented to that elaborated in earlier chapters of this thesis. We saw that whereas the period 1920-40 saw the promotion of rural development (land reform, education) and education for workers in the cities, after 1940 the increasingly controlled political situation meant that resources could be devoted to supporting the industrial activity of a growing bourgeoisie, (infrastructure, urban education).

The SEP document, however, presents government policy as having been wholly determined by a given economic situation rather than open to choice. The analysis of Mexico's development is presented in a deterministic framework and expressed in "Marxist" vocabulary. Thus policies oriented at capitalist development become a revolutionary necessity,

Every revolution is a continuous, dynamic and renovating process which contains a historic mission....Different governmental periods of revolutionary Mexico have corresponded, with clear and concrete objectives, to the necessities of the historical moment from which they emanate.

Economic growth between 1940 and 1970 is presented as having been conditioned by imperialism, a situation over which Mexico is said to

have little control, being one of 'los pueblos proletarios'. Thus the overriding and effective class division is seen as being between countries. Only in 1970 is Mexico presented with a choice of paths of action, (this is completely out of keeping with previous analysis), of either desarrollo capitalista or desarrollo compartido. The basis of the latter will be the existing mixed economy.⁴ Neither the reason why choice can only now exist nor details of the alternative paths of development are given.

Education policy is located within this context of determinist analysis and simple patterns of good and evil,

Some years before the beginning of the present administration contradictions sharpened between the national aspiration to count on a popular education system and the forces that opposed this historic design....The effects of the contradictions added to those of a demographic nature suddenly burst out in 1968.

However, reform does not now appear to be occurring as a result of historic design but rather for pragmatic reasons,

A static education can be the germ of discord and retrogression

but with change in every classroom education would become a

Bulwark of sovereignty and source of constructive patriotism.⁵

So the period 1970-76 is presented as one in which the government decided to pursue policies for shared development, this including educational reform. But when the record of actions taken is examined it can be seen that the ideal of shared development is not met and that many of the 1971 proposals were not implemented.

Primary Education

Reform of primary education is declared to be the most important aspect of the Reforma Educativa because this is the only obligatory level and the basis on which all other action rests. Indicators are given of some change in content but no indication is given of whether or not a more equal participation in primary education has been achieved.

It is stated that primary education has been reoriented to recover the liberating, democratic, national and popular essence of education. But the only solid achievement described is the very valuable reform of text books. Other criteria for restructuring education are given which have little immediate meaning in terms of change in the classroom, e.g. the permanent character of education, inculcation of a historical conscience and of a scientific and critical attitude. However, the SEP did make some practical changes such as considerably increasing in service training facilities for teachers. Such guidelines when considered alongside text book reform may have had a significant effect on the content of education.

But the notion of escuela activa does not appear. While emphasis is placed on learning to learn, "los estudiantes aprenden a aprender", there is little apparent emphasis on aprender haciendo or on the use of the annexo in urban and rural areas.⁶ Those proposals which provided the 1971 plans with their radical image are now ignored.

Important advances are reported in the satisfaction of demand for primary education. It is noted that the number of children never enrolled at primary level has been reduced from over 2 millions to under 1 million. The absolute increase in enrolment amounted to an additional 36% between 1970 and 1976. Potential demand would have increased by 23% over this period (assuming a birth rate throughout the 1960's of 3.5% p.a.) The difference between these figures shows that a substantial improvement in percentage participation was achieved.

Unfortunately no details are given of the relative positions of urban and rural primary education, nor of measures designed to improve participation such as reducing desertion from the system and increasing the number of grades provided. Similarly, qualitative change is recorded on a national basis without special reference to those proposals which had suggested radical action in rural areas. Significant improvements

did occur in the content and methods of primary teaching and Table 8.1 shows that the teacher-pupil ratio improved. But the absence of any report on rural education means that the reform can not be characterised as democratic in its effects.

However, some special services were introduced or expanded which benefited the rural population. Greater efforts were made to improve services to the indigenous populations, including more schools (some boarding schools), more bilingual teachers, and Integration Centres to teach individuals who would then pass on language and work skills within their own community. Extra attention to the rural population is not given in terms of more schools, additional grades, financial assistance or curriculum and timetable change, as was suggested in proposals for reform, but rather by increasing the number of Rural Development Brigades and Cultural Missions. Each brigade or mission serves four or five communities, their aim being to improve the economic and cultural level of these rural groups. Services doubled between 1970-1 and 1974-5 in terms of centres, staff and communities and population served. (Population served and staff increased fivefold, as shown in Table 8.2.) The total population covered by these two services rose from approximately 100,000 to 300,000⁷. Thus this was an important educational provision for marginal groups but is relatively insignificant for a consideration of improvements for the rural population as a whole. But the provision of other similar services did not improve. The number of people served by mobile classrooms stayed roughly the same throughout the sexenio, while the number of Reading Rooms was reduced.

Despite the changes noted above, it may still be concluded that reforms in primary education did not wholly respond to the popular and democratic rhetoric of the reform proposals. Those reforms oriented to improving rural participation were of a small scale and thus it is

Table 8.1 Increases in Pupils, Staff and Schools in Primary Education, 1970-1 to 1975-6.

PUPILS

	1970-1		1975-6		1970-1 to '75-6 % Increase or Decrease
		% Composition		% Composition	
Federal	6,073,924		7,803,915		+ 28
State	2,452,553		2,969,268		+ 21
SUBTOTAL	8,526,477	92.20	10,773,183	94.05	+ 26 <u>A</u>
Private	721,713	7.80	682,142	5.95	- 5
TOTAL	9,248,190	100.00	11,455,325	100.00	+ 24

STAFF

		% Composition		% Composition	
Federal	122,912		171,100		+ 39
State	51,755		65,986		+ 27
SUBTOTAL	174,667	90.03	237,086	92.63	+ 36 <u>B</u>
Private	19,334	9.97	18,853	7.37	- 2
TOTAL	194,001	100.000	255,939	100.00	+ 32

SCHOOLS

		% Composition		% Composition	
Federal	31,638		39,655		25
State	10,424		11,216		8
SUBTOTAL	42,062	93.32	50,871	91.47	21
Private	3,012	6.68	4,743	8.53	57
TOTAL	45,074	100.00	55,614	100.00	23

Source: Informe de Labores, 1970-76, SEP, Mexico City, 1976 p.23.

Table 8.2 Extra-Mural Education in Rural Areas, 1970-76.

1. MOBILE CLASSROOMS

	1970-71	1972-73	1975-76 estimated	Approx. % Increase or Decrease
Centres	270	306	400	+ 50
Pupils - Youth + Adults	1,957	1,766	1,979	-
- Primary	7,308	5,644	11,212	+ 50
Personnel	270	306	400	+ 50
Communities Served	270	306	400	+ 50

2. RURAL DEVELOPMENT BRIGADES

Centres	40	43	98	+ 150
Population Served	11,952	16,005	63,853	+ 400
Personnel	133	258	588	+ 340
Communities Served	222	215	389	+ 75

3. CULTURAL MISSIONS

Centres	84	114	200	+ 140
Population Served	92,400	166,003	238,871	+ 160
Personnel	756	1,026	1,800	+ 140
Communities Served	336	456	862	+ 155

4. POPULAR READING ROOMS

Centres	139	120	66	- 50
Population Served	34,000	32,608	21,955	- 35
Personnel	139	120	66	- 50
Communities Served	139	120	66	- 50

Source: Informe de Labores, 1970-76, SEP, Mexico City, 1976, p.32.

likely that improvements in provision were of benefit mainly to urban dwellers and children of families in a relatively secure economic position.

Middle Education

It was noted how reform of middle education could both alter the quality and usefulness of education at this level and restructure the nature of demand for higher education. In keeping with such aims, the main reforms in secondary education were at medio superior level, although some reforms were made to medio basico education. Resolutions presented by the CNTE in 1974 stated that this level should provide a general and common education as a continuation of primary education, but little indication is given of the effects of this in the classroom. A more accurate guide to change is the fact that, as in primary education, new text books were produced. It is stated that access to medio basico level should be wider so that 9 years education becomes the minimum although no specific commitments to action are given. As with primary education it is difficult to establish changes in participation levels. The absolute increase in enrolments between 1970-1 and 1975-6 was almost 80% but because of the fast rate of population growth this cannot be readily translated into improvements in participation, although a considerable improvement obviously occurred. Table 8.3 shows increases between 1970-1 and 1975-6. It can be seen that unlike primary education the percentage increase in teachers did not keep up with the percentage increase in pupils and therefore the teacher-pupil ratio deteriorated slightly, almost necessarily affecting the quality of medio basico education. However, the percentage of pupils who, having completed primary education, continued to secondary education did improve from 70% to 81%.

Table 8.3 Increases in Pupils, Staff and Schools at Medio Basico Level, 1970-1 to 1975-6.

PUPILS

	1970-1		1975-6		1970-1 to '75-6 % Increase
		% Composition		% Composition	
Federal	605,207		1,113,399		84
State	186,806		294,149		57
SUBTOTAL	792,013	71.86	1,407,548	74.16	78
Private	310,204	28.14	490,505	25.84	58
TOTAL	1,102,217	100.00	1,898,053	100.00	72

STAFF

		% Composition		% Composition	
Federal	31,919		55,765		75
State	10,895		16,263		49
SUBTOTAL	42,814	63.21	72,028	65.05	68
Private	24,924	36.79	38,705	34.85	55
TOTAL	67,738	100.00	110,733	100.00	63

SCHOOLS

		% Composition		% Composition	
Federal	1,533		2,717		77
State	464		763		64
SUBTOTAL	1,997	48.44	3,480	51.20	74
Private	2,126	51.56	3,317	48.80	56
TOTAL	4,123	100.00	6,797	100.00	65

Source: Informe de Labores, 1970-76, SEP, Mexico City, 1976. p.24.

But again no statistics are given for rural-urban participation differences, or permanence within this cycle, so no comparison can be made with earlier periods. While growth was greater in the public than the private sector, 25.84% of pupils were still served by private schools in 1975-6 (as compared with 28.14% in 1970-1).

Thus expansion, rather than improvements in quality or equality seem to be the main characteristic of medio basico reform. However, further changes were made through the expansion of technical education at this level. The number of schools of industrial technology increased from 98 to 234. In addition to improved manpower training such schools also provided more opportunities for the rural population: the number of schools of agricultural technology increased from 70 to 693. In addition 31 escuelas tecnologicas pesqueras (schools teaching fishing technology) were created. Thus the concern for technological development did improve the facilities for rural education. A technocratic orientation led to more equal access, although the latter was not itself a major motive for action. The overall objectives seem to have been a general expansion and an increase in technical skills.

Greater changes occurred at medio superior level; most of the reform proposals were implemented. Action was taken in the area of both preparatory and technical education, but no attempt was made to unite these two areas as had been suggested in 1969.

First we may note the expansion of this sector, the highest rate for any level of education. The number of pupils increased by 130.55% (see Table 8.4). Although participation must have improved greatly no data is given, other than the fact that an increasing number of egresados of medio basico continue to medio superior (from 64% to 76%). The proportion in private education is still high but declining, composing 23.22% of medio basico education at the end of the sexenio compared with 27.42% at the beginning.

Table 8.4 Increases in Pupils, Staff and Schools at Medio Superior Level, 1970-1 to 1975-6.

PUPILS

	1970-1		1975-6		1970-1 to '75-6 % Increase
		% Composition		% Composition	
Federal	64,130		162,332		153
State + Autonomous	137,966		303,597		120
SUBTOTAL	202,096	72.58	465,929	76.78	131
Private	76,360	27.42	140,867	23.22	84
TOTAL	278,456	100.00	606,796	100.00	118

STAFF

		% Composition		% Composition	
Federal	3,991		10,605		166
State + Autonomous ¹	6,063		9,681		60
SUBTOTAL	10,054	57.14	20,286	66.07	102
Private	7,541	42.86	10,419	33.93	38
TOTAL	17,595	100.00	30,705	100.00	75

SCHOOLS

		% Composition		% Composition	
Federal	65		241		271
State + Autonomous ¹	181		279		54
SUBTOTAL	246	28.68	520	46.14	111
Private	390	61.32	607	53.86	56
TOTAL	636	100.00	1,127	100.00	77

Source: Informe de Labores, 1970-76, SEP, Mexico City, 1976, O.25

A significant proportion of the increased number of places is accounted for by the new Colegio de Bachilleres. This is the collective name of the schools established mainly in the Federal District but also in Chihuahua. Previously much of the upper middle school system had been under the control of the universities; these new schools are under the control of the SEP and their establishment follows the recommendations of ANUIES for an expansion of medio superior education in the Federal District. The Colegio was founded in 1974 and by 1976 had 45,000 students in the D.F. and 5,000 students in Chihuahua. In addition an open system of education was introduced in March 1976.

As at medio basico level the percentage increase in the number of teachers was not high enough to maintain the teacher pupil ratio at the 1970-1 level. When the statistics are elaborated they show a situation where the teacher-pupil ratio improved in federal schools but deteriorated dramatically in state and autonomous institutions. (The rate deteriorated in private schools but remained better than in public schools.)

Changes in the content of medio superior education were made in line with ANUIES proposals. Rather than early specialization which had oriented this cycle to later study, medio superior was now restructured into two areas, the basic or propedeutico, and a particular specialization. This was intended to allow greater choice at a later stage to provide more valuable all round education not only oriented to further study, and to provide some skills helping integration into the labour market. The Colegio de Bachilleres introduced eight technical options; courses provided were chosen after studies had been made with the participation of the private and public sectors on tendencies in occupational demand and growth of the economy.⁸ All these reforms increased the value of medio superior education as a stage in itself rather than continuing the previous situation in which it operated as little more than a

preparation for higher education from below. A further change allowing greater flexibility of movement and choice within the system, but also increasing emphasis on certification, was the introduction of a credit system of study. The number of credits needed for the bachillerato and their equivalence in classroom hours and hours of study were established and made uniform throughout Mexico.

While technical learning and preparation for work were introduced into the restyled bachillerato, concentration on technical studies remained within the orbit of a separate system of education. The two important changes in technical education were i) expansion and ii) a change in structure whereby many courses now allowed the gaining of both the bachillerato and a technical qualification, permitting entry either into further study or into paid work. The IPN's system of upper middle education, the vocacionales was reformed; in addition to providing scientific and technical education students were to pursue studies in a particular occupational area such that, as in the preparatorias, education was both general and specialized. Organisational changes were also similar, e.g. in the introduction of a credit system. The vocacionales became centros de estudios científicos y tecnológicas. 33 such centres had existed before 1971, but by 1976 in addition to the 11 "ex-vocacionales", a further 89 new centres had been established by the SEP. Besides the centres of industrial technology, 76 Centres of Agricultural Technology (CETAs) and 6 Centres of Education in Maritime Science and Technology (CECYTEMs) were established.

One aspect of medio superior education not yet mentioned is the introduction of the CCH, the Colegio de Ciencias y Humanidades. These schools are part of UNAM; UNAM politics formed the background of their foundation and working. They will therefore be examined in this context.

As with medio basico level the objectives of reform were expansions

Table 8.5 Increases in the Number of Technical Schools, 1970-1 to 1975-6.

Type of School	1970-1	1975-6	Increase
<u>Medio Basico</u>			
ETI - Schools of Industrial Technology	98	234	136
ETA - Schools of Agricultural Technology	70	693	623
ETP - Schools of Fishing Technology		31	31
<u>Medio Superior</u>			
CECYT - Centres of Scientific Technological Studies	33	122	89
CECYTs of IPN	11	14	3
CETA - Centres for Studies in Agricultural Technology		76	76
CECYTEM - Centres for Education in Maritime Science and Technology		6	6
<u>Superior</u>			
ITR - Regional Technological Institutes	19	47	28
ITA - Institutes of Agricultural Technology		17	17
ICTM - Institutes of Maritime Science and Technology		3	3
Professional Schools of IPN	11	14	3

Source: La Obra Educativa, 1970-76, SEP, Mexico City, 1976, p.190.

and production of technical skills. The structure and content of medio superior education were changed such that it would not act or only be perceived as a stepping stone to higher education and an extension of a university course from below. Thus the reform both met demand and laid the basis for a more adequate response to manpower needs. But it would appear that the demand being met was essentially urban, most particularly from the Federal District. The CETA's and CECYTEM's were the real extent of rural oriented action. Elsewhere manpower needs were to be met within a broad policy of expansion likely to favour the urban middle classes. However, if expansion were to have served a wider group a broader base would first have to have been laid at medio basico level. As the Informe de Labores admits,

When we began our action, rural youth counted on very few opportunities for pursuing studies after primary level.⁹

With the increase in schools of agricultural technology a start was made but the concentration of opportunities in this area responded to particular economic rather than democratic imperatives. Expansion at medio superior level could only have been expected to favour urban groups of a predominantly middle class background.

This section has examined reforms in schools rather than in university education. Reforms from primary to medio superior level emphasised,

- 1) Expansion of places, especially at medio superior level.
- 2) Increased provision of education in rural areas in order to improve the production of technical skills.
- 3) Changes in structure, mainly at medio superior level. This should act to restructure demand for higher education.

Little attention to rural education for its own sake was evident and many of the more radical proposals for reform were not implemented.

Four conclusions emerge,

- 1) The provision of more places responded to particular demands, i.e. for urban education at higher levels. This was not stated as a priority in the reform document. The provision of more technical education responded to perceived economic needs, and as a by-product increased the provision of rural education.
- 2) Reforms at pre-university level acted as a means to transform the nature of demand for higher education.
- 3) Achievements in improving the quality of education were variable. While text book reforms were important the teacher-pupil ratio deteriorated in middle level education.
- 4) The end of sexenio reports do not mention a substantial number of the 1971 proposals. The reform proposals acted, or were intended to act, to a large degree as a public relations exercise, demonstrating the good intentions of government.

Higher Education

Higher education was examined in earlier chapters in both its quantitative and qualitative aspects and it has been noted that the question of the quality of higher education had been paid insufficient attention during the rapid quantitative expansion of higher education in the 1960's. It was also noted how higher education had expanded to an extent where many graduates were underemployed, while provision of education at lower levels had remained inadequate in terms of quantity and quality. But a further determinant of action in the period 1970-76 might be expected to be a response both to student politics and to the general political climate of the late 1960's.

Reforms at lower levels have been examined giving an indication of government priorities which may be reflected in higher education policy. The remaining section of this chapter will pursue the mode

of analysis employed above (for primary and middle education), assessing reforms in higher education at the macro level, examining the nature of, and relative priority given to, quantitative and qualitative change.

The following chapter will, through the examination of reform in particular universities, i) demonstrate how academic reforms are also linked to a response to students' political activity of the late 1960's and early 1970's, and ii) analyse different responses to the question of university autonomy, in terms of academic organisation and the handling of student politics, as shown by the federal government, state governments, staff and students.

Participation in the higher education system doubled during the 1970-76 sexenio; this cycle showed a faster rate of growth than primary and medio basico levels but slightly slower than medio superior. The total population at licenciado level increased from 252,236 in 1970-1 to 501,250 in 1975-6.¹¹ Expansion occurred both in the Federal District and in the provinces, but was slightly higher outside the D.F. It was shown above that participation levels were far higher in the Federal District than elsewhere by 1970. However, owing to high demand, ANUIES had suggested the creation of a new university in the D.F. and in December 1973 the organic law of the Universidad Autonoma Metropolitana was passed by Congress. By 1976 the university had 7,674 students and was to continue expanding.¹² UNAM and IPN also increased their enrolments, UNAM by over 50%. Thus the SEP seems to have followed its stated policy of open access. Despite far higher levels of participation than elsewhere and the existence of graduate under-employment, the number of places in higher education was expanded such that participation of the 20-24 age group in the Federal District rose from 19.39% to 26.89%.

However, significant expansion did occur outside the Federal District such that, whereas in 1970-1 53.7% of students were studying

in the D.F., by 1975-6 this had dropped to 44.7%.¹³ In order to achieve this, enrolments in state universities rose from 91,697 (1970-1) to 200,906 ('75-6) by ANUIES figures, or according to the SEP, from 116,785 to 277,191 in all state institutions.¹⁴ Important improvements were made in lifting low levels of participation and a small move was made to reducing highly unequal patterns of participation.

But if regional expansion is examined in detail, it is found that expansion in the poorer regions was not greater, or even equal to that, of the more developed regions (see Table 8.6). Absolute increases were far greater in the more developed regions. Highest absolute increase in participation occurs in the regions North and West (which include respectively the Universidad Autónoma de Nuevo León and the Universidad de Guadalajara), while the North-West showed the fastest relative development. Participation in Centre-South, South and South-East remained under 5%. New universities were established in Baja California and Ciudad Juárez and existing institutions achieved university status in Chiapas, Aguascalientes, Tlaxcala and Chapingo (the Escuela Nacional de Agricultura). Thus expansion outside the Federal District did on the whole favour inhabitants of more developed areas as opposed to inhabitants of those states with both a generally low level of development and without very large urban centres.

It has been shown how at other levels of education the SEP made attempts, within its policy of expansion, to produce the human resources most needed by the economy. But the production of such resources cannot be seen as the overriding reason for expansion. Expansion of technical education accounted for 24.41% of all new places at middle and higher levels (Table 8.7). The most important factor in explaining expansion would seem to be public demand for educational provision. Evidence of unemployment and underemployment was presented in Chapter 2; the cause was shown to be rooted in the structure of the Mexican economy

Table 8.6a - Distribution of Enrolment Between Regions

REGION	1970-1		1975-6	
	Number Enrolled	% of total	Number Enrolled	% of total
North-west	11,098	4.4	34,085	6.8
North	29,259	11.6	57,143	11.4
Centre	8,828	3.5	22,556	4.5
West	35,566	14.1	91,729	18.3
Centre-South	17,404	6.9	37,092	7.4
South	12,612	5.0	29,574	5.9
South-east	2,018	0.8	5,012	1.0
Federal District	135,451	53.7	224,059	44.7
TOTAL	252,236	100.0	501,250	100.0

Table 8.6b - Participation of 20-24 Age Group by Region

REGION	1970-1	1975-6
North-West	2.65	6.20
North	7.90	12.47
Centre	2.86	6.11
West	5.05	10.34
Centre-South	2.13	3.56
South	1.81	3.51
South-East	2.31	4.64
Federal District	19.39	26.88
TOTAL	6.16	9.84

Source: Boletín Informativo, Year 1. No.7, 1977 p.12 and 13, Centro de Información de Estadística Educativa, Dirección de Sistemas de Información para la Planeación SEP.

Table 8.7 Increase in Pupils in Technical Education 1970-1 to 1975-6

	1970-1	1975-6
<u>MEDIO BASICO</u>		
Agriculture	16,216	119,510
Industry	87,567	182,261
Fishing		5,183
TOTAL	103,783	306,954
As % of all 'Medio basico' students	9.42%	16.17%
<u>MEDIO SUPERIOR</u>		
Agriculture	125	14,962
Industry	63,946	146,893
Fishing	59	477
TOTAL	64,130	606,796
As % of all 'Medio superior' students	23.03%	26.75%
<u>SUPERIOR</u>		
Agriculture	-	637
Industry	48,741	87,283
Fishing	-	- ①
TOTAL	48,741	87,920
As % of all 'superior' students	17.97%	16.21%

Source: Informe de Labores, 1970-76, SEP, Mexico City, 1976. p.27-29.

① Set up 1976-7.

and not wholly solvable by the alteration of the distribution or improvement of manpower skills. Trained technicians were seen to be necessary, but as an improvement on currently employed manpower rather than to fill vacancies. Reforms in the 1970-76 period attempted to meet such needs, although initially often on a small scale.

So the overall picture presented is of a vast quantitative expansion in higher education, both in the Federal District and the provinces. However, the fact that medio superior and higher education show the highest rate of growth might be attributed to expansion related to the Plan de Once Años now making its effect felt on higher levels of education. More students had passed through primary and medio basico education. However, the provision of places at higher levels cannot so easily be interpreted as a "natural consequence" of past action but must be viewed as a conscious political decision. For many of the children drawn into the education system by the 11 Year Plan were of rural origin and much of the additional provision was only in the lower grades of primary education; pursuit of education to the highest levels by groups benefiting from the Plan was therefore, unlikely. Increased demand for higher education is not so much due to an increasingly egalitarian participation in education as to the increasing size of the urban population, and its increasing demand for education as qualifications become more important in the allocation of an inadequate number of opportunities in the labour market. The government took a decision to meet this demand against possible alternatives, e.g. further expansion of rural education, literacy campaigns etc.

In the analysis of educational provision before 1970 and of expansion between 1970 and 1976 it has become apparent that certain sectors of the community are more favoured than others. An important point may be restated. The situation described is not one where the economically

and socially advantaged take up the more advantageous positions in an education system primarily oriented to meeting manpower needs with the more specialised and skilled being better rewarded. Rather the situation is one in which individuals, often of middle and upper class background, compete for scarce elite jobs by acquiring more qualifications than the next person. But qualifications gained may be over and above the needs of the economy for skilled labour. Such an analysis is of relevance to a situation common to many countries, that of an excess of highly educated manpower in relation to available jobs.

One element of the Reforma Educativa was the passing of a new Ley Orgánica de Educación in November, 1973.¹⁵ The new law brings the legal framework of educational provision nearer to contemporary reality by implicitly accepting the patterns of action described above. The new law does not set any priorities for action which the abrogated law did. It had, for example, stated in Article 92 that,

The State will endeavour to encourage higher, professional education by means of universities and private institutions, with the purpose of dedicating its resources to a greater extent to preferential attention for primary, secondary, normal and technical education, so with the educational activities that are indicated in Article 11 of this law (Literacy and basic culture for illiterates; attention to indigenous groups and campesinos; spreading of primary schools throughout the Republic).

The new law places less obligation on the state to act in the interests of the poor. While,

Inhabitants of the country have the right to the same opportunities of access to the national system with no more limitation than that they satisfy the requirements that the relative dispositions establish.

the state is not clearly obliged to make effective such right to access,

Education services should be (deberan) extended to those who lack them, to contribute to the elimination of economic and social disequilibria.

With no priorities set, and less obligation placed upon the state, the new Organic Law places the government in a position of greater relative freedom of action to orient the development of the education system in the direction it desires. As noted expansion of higher education was more rapid than that of primary and medio basico education. Rural expansion in the latter two areas did not appear to be a major objective of the Reforma Educativa.

Data is readily available on overall quantitative changes in the education system, although a rural-urban breakdown and rates of permanence within the system are not given. For higher education ANUIES provides enrolment data for each university or institution of higher education. Such data are immediately impressive; enrolment more than doubled at medio superior level and doubled in higher education. But it is more difficult to gain an adequate impression of qualitative change although this was regarded as the main priority by Richard King when making his study for ANUIES (see Chapter 4). For while certain aspects are covered by ANUIES statistics, other areas are not subject to measurement or national coordination.

First it is necessary to look at financial allocations upon which many qualitative improvements depend. The SEP budget for higher education increased from 1,147.4 m. pesos in 1971 to 6,792 m. pesos in 1976.¹⁶ This represents an increase of 492%. Increases in expenditure at other levels of education were lower, - primary 212.4%, medio basico 264.4%, medio superior 374.0%, giving an average increase, including other programmes and administration, of 298.6%. So higher education was given a greater relative priority in financial terms by the end of the sexenio than it had had previously.

It is harder to assess the effects of such an increase on higher education. It has been shown that enrolment doubled and so a

significant financial increase would have been necessary to maintain cost per pupil figures. More places, particularly in new universities also require new capital expenditure. Between 1970 and 1976 17% of total expenditure was directed to the construction and equipping of new buildings and facilities.¹⁷ But any satisfactory expenditure per student accounting is difficult without indexed figures as inflation was significant in this period.

One notable factor is the increased SEP allocation to provincial universities; in 1971 this was of the order of 106 m. pesos but had risen by 1976 to 1,500 pesos (717 m. pesos at 1971 prices).¹⁸ But this increase appears to have arisen partly out of a situation of political confrontations which will be analysed below in the examination of government attitudes to student political activity.

Also this increased allocation to provincial universities is deceptive in two ways. Because of initial differences in allocations to provincial and federal universities, a greater increase in relative terms to provincial universities disguises a greater absolute increase to universities in the Federal District. Furthermore, provincial universities also depend on state subsidies and other sources of income. It can be calculated that if provincial universities were to have maintained the 1970-1 federal-provincial ratio of per capita spending, other sources of income, besides SEP allocations, would have to have increased threefold by 1976. It is unlikely that more than this was achieved and thus the relative inequality between provincial universities and universities in the Federal District probably remains largely unchanged, although the SEP had chosen to give a greater priority to higher education outside the Federal District.

General conclusions on the financial position of universities are difficult to make. Improvements were certainly not as great as the aggregate figures for expenditure would imply. The need for large

scale new (rather than recurring) capital expenditure, larger student numbers and inflation must be taken into account. However, allowing for the last two factors, it would seem that there was an approximate increase in per capita spending between 1971 and 1976 of 63.9%, just over 10% p.a. But the relative inequality between higher education in the provinces and in the Federal District does not appear to have been much changed. Perhaps a more important effect of increased federal allocations to provincial universities was to make the federal government the dominant rather than an equal partner in financing, giving it a position of greater influence in decisions being taken in provincial universities.

Increased allocations to universities were financed through existing channels although many analysts and policy makers had declared the necessity of fiscal reform to allow adequate resources to be mobilized for education. The Reform documents made such a suggestion but with no specific recommendations, and no such action was carried out. Thus it is unlikely that the increases of 1970-76 can be maintained as they must be if qualitative as well as quantitative change is desired.

The specific effects of increased financial allocations are not well documented but the problem of limited staff-student contact does not appear to have been alleviated in the slightest. Between 1970-1 and 1975-6 the number of academic teaching staff in higher education rose from 26,485 to 47,832,¹⁹ an increase of 80.60%, this being less than the increase in students at licenciatura level over the same period which equalled 112.34%. Nor was an improvement made in increasing the number of full time staff. Here the increase was of 74.99% such that the proportion of full time staff suffered a very small decline, from 8.83% to 8.56% of the total.²⁰ Such staffing patterns would have made it difficult for the quality of teaching to show much improvement. With deteriorating staff-student ratios the existing emphasis

on lectures rather than seminars or discussions must continue, as must the distance between student and professor when the vast majority are employed on an hourly basis and are only in the university for the period of their lectures. So one of the most important factors affecting the quality of education showed no improvement between 1970 and 1976.

As regards changes in structure and content of education the reasonably limited proposals of ANUIES were not fulfilled. As J.P. Vieille said,

The most fundamental reforms, as were the 'reorientation of curricula towards learning by doing', 'integration and balance between general formation and specialisation', the 'diminution of the duration of studies' did not give rise to specific programmes. On the contrary, emphasis was given to secondary propositions easier to implement ('redistribution of the curriculum into semesters', 'new ways of gaining a degree') or declarations of good intent ('lateral exits', 'adherence to the reality of work').²¹

One proposal which was implemented is the structuring and examination of courses in credit units. The reasons behind and effects of such a change have been discussed above. Whether or not such a reform made the obtaining of a degree less difficult or entry into the labour market any easier cannot yet be known, but the relevance of course content to contemporary society was not altered by this structural and organisational reform. Reforms tended to be limited to organisational change and vague declarations rather than any co-ordinated attempt to modify course content.

Vieille also notes that the original proposals did not include a study of the courses which might promote Mexico's socio-economic development. The only effective concern shown for preparation of particular human resources was in higher education at undergraduate level resulting in the 'Programa Nacional de Formación de Maestros'. This would appear to have been the main source of any qualitative improvement that occurred in undergraduate education.

Attempts to improve the quality of manpower training appear to have been focused outside undergraduate education, on the expansion of postgraduate education. Between 1970 and 1976 the number of postgraduate students rose from 6,461 to 18,944. This represented an expansion of postgraduate education within existing institutions of higher education and the establishment of new centres of research and postgraduate training within both the natural sciences and the social sciences. Such growth appears to have been directed, not to meeting popular demands for further education but rather at improving human resources and at increasing knowledge, use and control of science and technology in Mexican economy and society. One of the most important steps taken by the Echeverría government was the foundation of the Consejo Nacional de Ciencia y Tecnología (CONACYT) as a federal government agency for the planning and execution of a national science and technology policy. CONACYT became important in determining manpower needs at high levels and in funding students in postgraduate courses both abroad and increasingly in Mexico. Between 1970 and 1976 CONACYT funded about 9,000 students.

It would appear that postgraduate education was expanded for two purposes. Between 1970 and 1976 undergraduate education was expanded to meet popular demands but without significant improvements in quality which had earlier been found wanting. Postgraduate education is possibly being used not only to give specialist training but also to provide, for those who are likely to take up elite positions, a better basic training than that given by most universities. Thus to some extent the nature of expansion of undergraduate education itself produced pressures for an expansion of postgraduate education.

However, the attempt to increase scientific and technological capabilities through increased research activity is also important. Many regionally based research institutions were created, linking their

activities to regional activities and problems, e.g. the Institutions of Research in Applied Chemistry in Saltillo, of Research into the Ecology of the South-East in San Cristobal Las Casas, and of Research in Machinery and Equipment in San Luis Potosí, etc.

This chapter has attempted an assessment of the effects of the Reforma Educativa on Mexican education and an analysis of motivations determining policy. It was noted that the education ministry in its reports on the activities of the sexenio attempted to provide the Echeverria government with revolutionary image, in for example its choosing of a policy of "desarrollo compartido". But actions taken did not appear primarily designed to provide a more democratic or equal provision of education. For the main thrust of expansion and new expenditure was directed at upper middle and higher education.

The provision of primary education was improved to an extent that participation rates rose, rather than merely coping with an increasing population, and qualitative improvements would have resulted from the drawing up of new text books and from better teacher-pupil ratios. However, little mention is made of attempts to improve participation in and facilities for rural education, or of pedagogic reforms. At middle level, expansion mainly benefited urban areas. Action was not directed at rural areas, rather these benefited indirectly from the government's concern to improve the country's stock of technical skills. Thus although expansion was primarily of a general nature, meeting public demands for education, steps were also taken to improve the efficiency of schooling.

Participation in higher education almost doubled between 1970 and 1976, and on a per capita basis expenditure increased approximately 10% p.a. in real terms. This enormous expansion occurred both within and without the Federal District but provincial universities benefiting

from expansion were primarily those in the more developed areas of Mexico where provision was already higher than elsewhere. Despite underemployment of the highly educated a new university was established in the Federal District to meet demand for more places. Thus the process of qualification escalation was allowed to continue.

Given the scale of expansion it would be expected that this should have occurred in all subjects for which 'private' demand existed, rather than only in those for which there was obvious economic need. However, as at lower levels there were attempts to meet the need for an increasing stock of technological skills.

The degree of qualitative improvement is not clear. The staff-student ratio did not appear to improve. As noted, a major reason for the expansion of postgraduate education which occurred between 1970-76 appears to have been compensation for previous inadequate education, in addition to providing more specialised training.

Thus while steps were taken to improve manpower resources, the primary emphasis of education policy seems to have been on the expansion of provision of upper middle and higher education in large, urban areas. We saw how changes to the education law prevented this emphasis from contravening obligations on the federal government.

1. Published by the SEP in 1976, the Informe de Labores is attributed to the SEP and La Obra Educativa to the Secretary, Víctor Bravo Ahuja and the Subsecretary for Planning, Jose Antonio Carranza.
2. La Obra Educativa p.21.
3. Ibid. p.20
4. Ibid. pp.27-8
5. Ibid. p.7 and 8
6. La Obra Educativa, op.cit., Chapter 2, and Informe de Labores, Chapters 1 and 2.
7. Informe de Labores, op.cit. p.32.
8. La Obra Educativa, op.cit. p.93.
9. Informe de Labores, op.cit. p.10
10. This was not only an attempt to modernize agriculture but a small attempt to reduce rural to urban migration by improving productivity on the land. It was also desirable to make rural education more relevant to the rural child's experience.
11. Boletín Informativo, Year 1, No.7, p.12. Centro de Información de Estadística Educativa, Dirección de Sistemas de Información para la Planeación DGP-SEP, Mexico City, January, 1977. The figures given here were issued subsequently to those of the Informe de Labores and La Obra Educativa, both of SEP, and to ANUIES figures. The earlier figures all show higher enrolments. For 1970-1 to 1975-6 SEP gives 271,275 to 542,292 while ANUIES gives 256,752 to 545,182.
12. La Educación Superior, 1976, ANUIES, Mexico City, 1976.
13. Boletín Informativo, op.cit. p.12.
14. ANUIES figures are taken from La Educación Superior, op.cit., and SEP figures from Boletín Informativo, op.cit.
15. The new law came into effect on 14th December, 1973, having been published in the Diario Oficial on 29th November, 1973, after being expedited by the Executive on 27th November. The previous Organic Law was passed in December, 1942.
16. La Obra Educativa, op.cit. p.198. 1976 figures are given as estimates.
17. Ibid, calculated from statistics p.196 and p.198.
18. Ibid p.92. These spending statistics do not appear to be wholly compatible with ANUIES statistics for 1967 presented in Chapter 4. These showed a federal allocation of 138 m. pesos for state

18. Continued.....

universities out of a total federal subsidy to higher education of 855 m. pesos. Thus the figure of 106 m. pesos may be unreasonably low for 1971.

19. La Educación Superior, 1976, op.cit.

20. Ibid.

21. Vieille, Jean Pierre, "Planeación y Reforma de la Educación Superior en México, 1970-76", Revista del Centro de Estudios Educativos, Vol. VI, No.4, 1976, Mexico City, p.14.

22. La Obra Educativa, op.cit. p.107.

23. Interview with a director of an institution of postgraduate education, October, 1976.

24. See La Obra Educativa op.cit. and Informe de Labores op.cit.

CHAPTER NINE

REFORMA EDUCATIVA: EDUCATION POLICY FOR AUTONOMOUS UNIVERSITIES

The previous chapter examined education policy of the Echeverria government as it affected changes in the quality and quantity of educational provision at a national level. This involved looking at response both to manpower needs and to the ideals of open access and equal opportunity. However, a more complete analysis of government education policy necessitates examination of two other areas which do not fall within the scope of general proposals and actions of the Reforma Educativa.

Firstly, as has been noted above, reforms within universities were not centrally directed. Most institutions have autonomous status and have the right to formulate policy independent of government. Informally, government proposals and suggestions may be followed. ANUIES, the voluntary association grouping institutions of higher education is attempting to facilitate communication and planning and appears to work quite closely with the S.E.P. However, in order to adequately evaluate the extent of change in university education between 1970 and 1976 it would still be necessary to examine universities individually. Such an enormous project cannot be undertaken here. Rather, two universities will be examined for the light they throw on federal government education policy, this being our major concern. The establishment of the Universidad Autónoma Metropolitana (UAM) will be looked at, for one may perhaps see in the setting up of a new university, in its organisational and academic structure, what the government perceived as the most appropriate form of university. Developments at UNAM will also be examined, noting debates on proposed reforms, (involving government and university) and the effects of reforms.

However, the attempt to introduce academic reforms at UNAM became embroiled in larger scale conflict on the UNAM campus. This leads us to the second major area of enquiry - government attitudes to, and actions related to, university autonomy and students' political activity. For education policy does not only involve the provision of finance or the formulation of policy directives in areas in which the federal government has control.

In the 1970-76 sexenio Echeverría's policy of an apertura democrática was also intended to affect to some degree the context in which academic study took place. As noted earlier it had been politically desirable for Echeverría to officially encourage a climate of debate and criticism, thus rejecting the distant, closed and repressive image of the government of his predecessor, Gustavo Díaz Ordaz.

Although governmental interference in affairs of universities was officially rejected and a respect for university autonomy officially declared, it is important to assess the effectiveness of these statements. The need to isolate student political activity and to prevent it from spreading into a wider political arena remained. The events of the late 1960's had not only pointed out the need for more support from students but, also, as a corollary, the need for better control of student activity. This chapter, therefore, will examine the ways in which the government sought to manage student activity by structural changes, as in UNAM and UAM, and by creating new forms of intervention in student politics and organisation.

As noted in the previous chapter the Echeverría sexenio saw the foundation of a new university in the Federal District, UAM. In looking at the structure of UAM and the nature of courses provided, one is not, of course, examining educational reform but entirely new structures. But such an institution is more likely to demonstrate what the government sees as an ideal form of university than would an

existing university adapted to changing reality. No existing forms of organisation or interests are present to inhibit action. Nor, once finance has been allocated for a new university, will action be inhibited by cost constraints in the way adaptation and reform may be in existing universities, where the temptation may be to make do with what exists and to save money.

Rather than having a faculty structure the university is structured in departments which fall into four academic areas, - basic sciences and engineering, biological and health sciences, social sciences and humanities, and art and design.¹ Students in the same subject area follow a common introductory course for three terms, only then pursuing a course within a particular department. The student follows some basic modules and assignments with a choice of options allowing further specialisation. Such a structure avoids the rigidity of faculty boundaries bringing pedagogic and economic benefits. New interdisciplinary courses can be developed more easily within these wider areas and duplication of teaching and facilities is avoided; in other universities each faculty has its own staff and facilities for teaching basic subjects. Also the ANUIES proposal designed to improve the quality of education, for general and specialised elements in course structures (noted in the previous chapter), is followed at UAM.

However, the innovative structure at UAM, of departmental and area divisions, does not only have implications for the quality and cost effectiveness of education but also for administrative structures within the university. With the department as the basic unit the faculty structure no longer exists. In many universities significant power resides within the larger structure of the faculty and a rector and his administration may find it difficult to impose a desired policy line. The departmental structure, which creates far smaller and more disparate units, makes more difficult the emergence of strong groupings

among academics, and for students destroys both a unit of organisation and recruitment, and a focus more accessible than the rectory for the placing of demands.

UAM is located on three quite separate sites, and more units are planned, none to expand to a population of more than 16,000 students (exceedingly small by Federal District standards). It is stated by the SEP that this maintains a human scale within each unit. However, it is suggested, and will be further examined when looking at UNAM that such a structure is also intended to allow the isolation of disruptive student activity, preventing the interruption of the university's work as a whole, and to make far more difficult united and large scale student protest, such as occurred in 1968.

The education ministry states that courses offered meet two criteria. As the university was created to meet a growing demand for higher education the courses most popular or overcrowded elsewhere are offered at UAM.² Social Science and Humanities was the most populated subject area by 1976. In addition, new courses were introduced with the intention of serving "development needs". Thus one sees more students being enrolled in Medicine and Economics, but also substantial numbers in Agronomy, Science and Engineering.

So the foundation of UAM responded to strong demands for more places in higher education, particularly from inhabitants of the Federal District. But within this broad political response one also finds a concern for meeting manpower requirements, for pedagogic improvements, and for the political implications of the organisational structure of the university.

UAM may represent the Mexican government's ideal university, in course content and structure, in the location of power in matters of administration and academic decision-making, and in its physical conception, while meeting popular demand for places.

Attempts to introduce similar reforms at UNAM illustrate how much more complex was the task of educational reform in existing universities. Debates at UNAM in the early years of the sexenio were only finalised in concrete action in the second half of the sexenio. Policies which emerged after struggles in mid-sexenio reflect many of the ideas inherent in the establishment of UAM. Only by examining debates, events and reforms at UNAM in a chronological fashion will the development of government policy emerge.

A special commission was set up in the second semester of 1970, the 'Consejo de la Nueva Universidad', with participants from the government and from UNAM, the aim of which was to produce proposals for the renovation of the structure of UNAM.³ A divergence of opinion emerged between the rector, Pablo González Casanova and some of his colleagues, and a sub-secretary of the SEP and president of the commission, Roger Díaz de Cosío.

González Casanova's appointment as rector in 1968 had responded to particular needs of the time. He was moderate; as director of the Faculty of Political Science he was known for his good relations with left groups, and both in the faculty and later in the Institute of Social Research had promoted critical analyses of Mexican society.⁴ As rector he recognised the need for UNAM to respond to the reformist policies of the new government and to the demands of students. But from the beginning of discussions in late 1970, members of government showed themselves to be primarily interested in changes which would make UNAM more efficient rather than in responding to popular pressures for change. González Casanova might provide a liberal image but reforms had to meet other criteria.

The initial project of 'La Nueva Universidad' (the New University) proposed the creation of an 'Escuela Nacional Profesional' and a 'Colegio de Ciencias y Humanidades'. The former was aimed to improve

both the efficiency of UNAM and control over student activity, and the latter to improve the meeting of manpower requirements while introducing a more satisfactory curriculum in pedagogic terms.

One of Díaz de Cosío's main concerns was dealing with the growth of UNAM; he suggested the setting up of multiple, smaller and separate units, (a pattern seen in UAM), and which subsequently took the form at UNAM of the Escuelas Nacionales Profesionales, units of UNAM on sites separate from the University City. In a document of 1970 Díaz de Cosío began with the thesis that,

The concept of a large university campus is in crisis....
We also accept that we cannot continue expanding with
the form of organisation we have at the moment. ⁵

He therefore suggested that,

It seems reasonable to think that the models of growth that we must accept should be cellular, like a large business with many units, with great decentralisationThe well known advantages of a cellular model are: (a) what happens in one part does not affect the working of the whole; (b) a human dimension is maintained in each cell; and (c) we can intend that, according to the future requirements of the country, some cells will reproduce themselves on a wider scale, others stay the same and still others come to die, without affecting the quality, efficiency and solidarity of the whole. ⁶

The political thinking behind these remarks is clear. The possibility of isolating any conflicts which emerge will contribute to the fracturing of the student movement. González Casanova did not agree with the government's proposals for the physical location of the new units which would be distant from the University City and from each other. Such a policy could not aid internal communication at any level; and this attempt at restructuring was delayed until his successor as rector, Soberón, was installed in 1973.

However, González Casanova did favour the project of a National College of Science and Humanities.⁷ He wished to see the integration of a humanist perspective into scientific and research work, and to break down barriers between disciplines emphasising historical analysis

as a method for the study of political and social phenomena. The college would produce specialist scientists, technicians and social scientists according to national requirements, who had also pursued wider scientific and humanistic study and were therefore better able to tackle the reality of interdisciplinary problems.

The proposed institution, which became the Colegio de Ciencias y Humanidades (CCH), allowed alternative forms of education to be explored (recognised as necessary by the SEP) without an upheaval of the existing structures of UNAM. The CCH developed initially at medio superior level, with a number of separate units, aiming to provide between 150 and 210 options in technical subjects. But the CCH was not initially successful, partly because of the hasty attempt at an ambitious project of uniting general humanistic education with specialisation in technical subjects, and because of staff and student discontent which prevented the experiment from having a smooth beginning.

Because of the rapid implementation of the CCH plan it was impossible to provide all the facilities necessary for teaching the technical courses. Also this very idea seemed to have ignored the composition of students entering UNAM who were unwilling to see themselves as technicians, viewing traditional paths through higher education as the chief avenue of social mobility. Thus we meet a problem presented earlier; student aspirations do not change at the same rate as changing conditions on the labour market or take into account the increasing numbers in higher levels of education, nor does the individual student gain by stepping out of the race for more education.

But the major problem was the confrontations which disrupted academic activity. Ochoa observed that the academic staff included a strong contingent of professors who had been involved in the activities of 1968 and that their teaching involved approaches and interpretations disliked by other groups in UNAM. In the event opposition from left wing professors to the College authorities led to the fall of the Co-ordinator, the General Secretary and four directors of the schools.

The CCH established itself as a source of dissent and opposition to establish authority in any and every situation. None of the varying expectations held out for this institution were fulfilled.

Disruptive political activity was not limited to the CCH but affected the rest of UNAM, particularly the University City, holding up the introduction of reform measures. An examination of these events gives some impression of the complicated and (sometimes deliberately) chaotic nature of political activity within the university and its preparatorias. Student politics form an arena in which conflict between much wider political forces may be acted out. The government is not the only external party interested in student politics; other groups of left wing or right wing tendencies may try to win support or to influence government by their exploitation of student activity. The government can be seen as attempting a dual policy of demonstrating support for university autonomy and an apertura democrática, while also attempting to defuse any strength in the student movement.

At the beginning of the sexenio the government was most anxious to declare its support for the principle of non-intervention in university politics. In part this was as important a feature of the 'politics of higher education' as its promise to respond to demands for more student places. Thus the Minister of Education, Bravo Ahuja, could declare in March 1972 that,

Young people are free to make demonstrations, and that is the idea of President Echeverría, that new generations have free access to dissent, for logically one foresees that a conglomerate such as university is not always in agreement with everything. Young people will express their thoughts freely and dissent from some political pronouncements.⁸

However, Bravo Ahuja seemed to leave open the possibility of intervention by state governments in the affairs of provincial universities. Here the sovereignty of state governments as well as university

autonomy had to be considered. The federal government did itself later intervene, officially in a mediating role in provincial universities. But to UNAM students Bravo Ahuja was apparently unambiguous,

I reject any possibility of meddling in the internal affairs of the universities on the part of the Federal GovernmentI am saying that President Echeverría's government maintains a strict respect for the authority of centres of learning and I reject that the office in his charge will try to intervene in these centres.⁹

However, this policy of non-intervention, made clear from the beginning of the sexenio was challenged by quite varying groups. The government itself did not have the power or support to make respect for freedom of expression and university autonomy general throughout Mexico. Some groups were committed to promoting disruption in the hope that it might provoke the government into adopting more repressive policies, while other groups simply encouraged repressive activity openly. This had become evident during the first year of Echeverría's Presidency.

On 10 June 1971 a student demonstration in Mexico City had been violently broken up, with an estimated 50 students killed.¹⁰ The attackers were a para-military, non-uniformed group, the 'halcones' (falcons). Initially moves were made to interpret the fighting as between rival student groups, but the nature of the attack suggested that the group had external support. Hellman describes the halcones as,

sponsored by Monterrey capitalists and equipped and trained by the Department of the Federal District under the authority of a political enemy of Echeverría, Alfonso Martínez Domínguez.¹¹

Hellman does not give evidence of this, and although it would seem a plausible interpretation it is possible that the Federal government was aware of the intended attack. An investigation was started but a year later had not been completed. As an Excelsior editorial said on 10 June 1972,

One has waited, without results, for the culmination of judicial investigations, which the government had not only promised but to which it was obliged; only in this way will we consider that on that ill-fated date simple assassinations were committed. 12

But the government did not move in any obvious manner against right wing groups. About a month after this editorial it was noted, in a very small front page article in Excelsior, that six men had been demoted in relation to the events of June 1971, but apart from this the investigation was dropped. The six included the president of the PRI Manuel Sánchez Vite, the head of the Department of the Federal District, Martínez Domínguez, and the chiefs of police and riot police (granaderos) of the DDF.¹³

Echeverría's government was shown to be weak against such right wing tactics (if it was not involved). It was both encouraged to pursue a more repressive policy itself to deal with further possible occurrences, and discredited in the face of students who had been presented with multiple declarations of their right to express their political opinions. For students the event had highlighted their difficulty in finding effective forms of political activity, tragically reiterating the question of whether or not mass demonstrations were a useful tactic. But the violent disruption of demonstrations (now by non-uniformed, 'unidentifiable' groups) was not the only tactic which served to paralyse student activity.

During the first two years of Echeverría's sexenio there had been demands from students, staff and parents for police intervention in some schools in the Federal District. The problem involved was groups of 'porras', who are individuals often only posing as students, who take part in student activity with the aim of disruption and distortion. Their involvement produces a climate of confusion and fear which discredits active students, discourages other students from becoming active, and may discredit the relevant authorities, school,

university or government, for their inability to handle student politics. It is often difficult to determine whether such groups are the paid provocateurs of the government, groups to the right of the government or less frequently, on the far left. It is clear that the government can use these tactics to diffuse student activity in such a way that there is no open contravention of declarations of freedom to organise and non-intervention of the government. Right wing groups are also sometimes interested in such activity for the general climate of unrest it produces, which both works against the 'left' and tends to push governments towards repressive and generally authoritarian practices. Left wing groups may either merely hope to weaken the government, or to force it to more repressive policies which it is hoped will ultimately bring about a strong public reaction.

In March, 1971, the rector and principal authorities of UNAM issued a statement condemning violence in the university.¹⁴ The following day the students of seven schools and faculties took action by forming self-defence and information brigades, so that golpeadores, pandilleros and porristas (all names for porras) would be expelled from the university. Buildings were also occupied as a move in maintaining vigilance against porristas. The students were not on strike and declared their desire to discuss the problem with staff and to unite with them in facing the porras.¹⁵ In December, representatives of prepa 2 of the Escuela Nacional Preparatoria met with Echeverria, claiming that they had been seeking an interview for a year and a half to discuss the problem of porristas in their school. One representative quoted in Excelsior stated their hope,

that the apertura democrática comes to be an authentic democratic opening, not only from the point of view of juridical forms that we know of, but also from the point of view of its content, such that we are conscious of our liberty, a liberty that implies responsibility.¹⁶

The representatives complained of delinquents and drug trafficking and the impunity which individuals concerned enjoyed, and asked for judicial action to be taken. Echeverría's reply was vague, avoiding the question of police intervention, agreeing to future discussions and focusing on the problems the period of adolescence brings for teachers.¹⁷

In May 1972, students at I.P.N. asked for the intervention of Bravo Ahuja against porristas and demanded that the director of I.P.N., Manuel Zorrilla Carcano, adopt a more open and decisive attitude to porra activity.¹⁸ In UNAM the Rector, González Casanova had spoken out several times against acts of violence in the university, but introduced no measure to counter such activity and was totally opposed to any intervention on the part of government or police in the university. González Casanova had been specifically asked to act against porras by teachers of prepas 4, 7, 8 and 9 in May 1970, the month in which he took over as Rector. His response was vague. He would not deny or accept the existence of such groups; he stated that further proof was needed.¹⁹ He refused to use any form of repression to deal with violence which he saw as partly arising out of wider social problems, e.g. of poor home situations, of a lack of full time teachers and the need for active co-operation with families. The problems, he believed, were not solvable by repressive actions. The teachers were not satisfied with such a reply and, while avoiding a call for a general and indefinite strike, agreed that porristas should be expelled and subject to penal authority. Later in the year UNAM, in the person of the Rector General of the National Preparatory Schools, did make a request to the Procurator General of the territories of the Federal District, for help in eradicating 'pandillerismo' and drug consumption in the schools. It was to be achieved, however, without any breach of the principle of non-intervention.²⁰

González Casanova's reaction to the request to Echeverría from the teachers of prepa 2 was similar to that of 18 months before. The soliciting of justice on such individual cases could not solve the national problems which formed their basis; in acting against isolated problems, rather than resolving national and university problems,

One sees the characteristic foundations of policies which in contemporary history have been called fascist, corporatist and dictatorial.²¹

The long adhered-to principle of university autonomy was presenting considerable problems for university authorities and for students committed to non-violent political action. The government could not be held responsible for inaction in the face of groups of porras as intervention had to be requested. It was, however, still possible for the government to stimulate chaos on campus if it so desired. And if the university were then to ask for police intervention this could be interpreted as an abdication from its right to autonomy and as a move towards repression on campus. But inaction only allowed violence to continue. The liberal principle of non-intervention was slowly discredited without the government being seen to play any part in university politics.

In June 1972, a dispute began in UNAM which further demonstrated the difficulty of non-intervention for the university authorities. On 14 June, it was reported that two people had been killed in a student meeting, in the Faculty of Engineering during an attack by porristas. The meeting had been called by students to organise against porra activity. According to Excelsior, the two killed were members of a recognised porra organisation, the Francisco Villa group.²² The Rector claimed to have inadequate information to pursue the matter although he interpreted the conflict as a purposeful attempt to discredit the university,

We are convinced that numerous actions are planned by which it is intended to bring groups of university students up against situations which each time are more dramatic for the institution (UNAM) through the intervention of shock troops and agents provocateurs who do not only accomplish their mission of large scale harmful action, but try to demonstrate to university opinion that UNAM is incapable of governing itself. ²³

Allusions were made to the wider context in which such university conflict fitted,

It concerns a new manoeuvring of forces which does not rest in corruption and violence to reach the objective of bringing the country to situations each time more unjust for the Mexican people....The relationship that exists between the offensive on the university and on the people is very obvious.²⁴

González Casanova was still unwilling to act against individuals, and furthermore would not identify the links to wider forces which he frequently cited. This refusal to act, or to call on the police only left a vacuum; mere condemnation was not a viable strategy in the struggle against porra activity. Six months later a further problem arose. On 31 July more than a hundred normalistas²⁵ occupied the Rectory tower of the University City, expelling the rector from his office and demanding automatic entry into the Law Faculty without examinations. These students were led by Miguel Castro Bustos and Mario Falcón. Castro Bustos had been enrolled in UNAM since 1938 (so deserving the title of fósil estudiantil),²⁶ had been expelled and in 1972 held an invalid registration. Falcon was a painter of murals. They were aided by two students of the Law Faculty, Antonio Casillo and Carlos Arango, who had been denounced as agents provocateurs not only in relation to student and university problems but also in the railway unions.²⁷

On 5 August, the university authorities accused the above individuals of the acts committed in the Rectory. The university also accused the judicial authorities of negligence in not having previously apprehended them for their violent activity in Mexico City (possibly suggesting

government complicity in the events at UNAM).²⁸ But police intervention on campus was again rejected. On 8 August the Francisco Villa group dissolved itself, disassociating its members from those persons involved in the present conflict. But Bustos, Falcón and the normalistas remained in the Rectory. Further declarations denying the possibility of intervention were made on 17 and 18 July. On the 21st, 10 individuals led by Falcon attacked two members of the Law Faculty but neither did this provoke action. On 30 July, the Rectory was evacuated only for the Law Faculty to be occupied instead. The dispute remained in a stalemate situation until 21 September when Falcón broke relations with Bustos. So the dispute faded away without university or outside intervention, but nevertheless, it had serious repercussions for the liberal non-interventionist policy of the Rector and his supporters.

As before, González Casanova tried to explain the university's problems in terms of wider social problems, explaining internal conflict by referring primarily to forces active outside the university, and at all times rejecting police or government intervention on campus. He interpreted the Bustos-Falcón episode as an attempt to force the university to adopt more repressive policies,

Faced with these acts of provocation, the university authorities reiterate once more that they intend to maintain internal juridical order exclusively by means of dialogue, persuasion and majority consensus. And they also reject once more the provocateurs attempt to make the university respond with repression to violence which has been brought into the university from the outside.²⁹

He stated that the university had no power of sanction over those who did not belong to it and implied that the offenders should have been dealt with earlier by the judicial authorities. His overriding consideration seems to have been to resist the intrusion of what were seen as right wing pressures, but to an extent that allowed the university

to fall into a state of chaos. Sanctions were not taken in the cases described; and all critical action, whether from the student left or the student right and its external backers, was seen as similar. The origin of disruptive action was never specified, and in not adequately condemning such action, the university appeared to have no policy or approach of its own. This lost the Rector support within the university. González Casanova's classical interpretation of university autonomy, that the university must organise its own affairs in a democratic manner without outside intervention, was effectively invalidated by facts González Casanova had identified, the links between groups within and without the university.

When González Casanova took over as Rector, his reforming, democratic and liberal orientation responded to widely perceived needs. He attracted support from the School of Political Science, from the Faculties of Philosophy and Science, from Psychology and some of the research institutes in the Humanities. Another grouping, more oriented to efficiency and to rationalization of the university structure had support within and without the university. This position was represented in the Rectory by Manuel Madrazo Garamendi who had been director of the Chemistry faculty and then became Secretary General of the university.³⁰ These groups tended to take up positions not only around academic reforms analysed above but also on the handling of student politics. Whereas some forms of compromise had emerged in the academic sphere, (although not always in very workable forms), this appeared impossible in the area of university politics. The alternatives had been presented as matters of principle, and in a far more stark and public manner. But a non-interventionist approach seemed inadequate to deal with the problems that emerged. Firmer action was seen to be necessary and possible, both by those who had aligned themselves with a popular and democratic tendency and by

those of a more technocratic orientation. The disputes had their desired effect in pushing some to support a more repressive policy.

Government support for González Casanova's policies had been waning; the government wanted more decisive action both in relation to student politics, but also on the introduction of reforms in UNAM. Support for a liberal Rector was not so great, nor so dominant within government circles that considerations of efficiency could be abandoned. Moreover, as students attempted to organise themselves it was necessary to present a firm, if not repressive, rather than a weak and divided university administration. Echeverría appeared to express the growing displeasure with González Casanova's position when he said at an ANUIES conference in Tepic,

We are not unaware of the intimate links which exist between all social phenomena. But when the explanation of all phenomena which afflict the university is systematically looked for outside the same institution, one runs the risk of abdicating the responsibility of resolution.³¹

The events described provoked new divisions of opinion and a climate of discontent. But the issue which finally brought about González Casanova's downfall and the introduction of fresh policies, was union activity within UNAM.

The dispute began as other problems seemed to have drawn to a close. On 17 October 1972 a series of stoppages began in UNAM in support of a demand for a collective contract for non-academic staff. About 20,000 workers were involved.³² The university authorities had been unwilling to recognise the unions STEUNAM and ATAUNAM³³ because of their demands for a collective contract and respect for closed shop legislation. The 'closed shop' was deemed to be contrary to university tradition of freedom of association and expression. But the Rector, González Casanova was willing to discuss the issue and to take it to the Secretaría de Trabajo (the Labour Ministry). A commission of the University Council was set up proposing to produce a collective

contract. It was hoped that this would fall under the scope of a proposed reform to Article 123 of the constitution whereby the exclusion clause (closed shop) would not apply to university workers.³⁴ Workers were not satisfied with such a solution and the strike continued, disrupting teaching. Students with sufficient resources tried to enrol in private universities having lost a considerable part of their education in 1972.³⁵

It would seem that the government was not in any hurry to help González Casanova by introducing relevant legislation (proposals for which were revived in the latter part of the sexenio). It is possible that there was a conscious effort to embarrass the Rector. On 17 November, González Casanova presented his resignation noting that his efforts had not been able to produce a situation in accordance with his principles, and that he would not allow a seige of the university to continue which was preventing its independent and democratic organisation from functioning.³⁶ While González Casanova was asked to withdraw his resignation by student and staff groups and by the junta de gobierno, a compromise solution could not be found and the resignation was made effective on December 8th, 1972.

The choice of the next Rector reflected changing opinion in government and related circles, and the changing balance of forces within UNAM. The ruling group around González Casanova had split. The main protagonists were less committed to the principle of absolute non-intervention and also probably less in favour of a critical and independent style of academic endeavour, whereas liberals, like González Casanova, were concerned to provide a broad critical framework for the analysis of Mexican society, other groups were more concerned with the immediate problems of policy-making. They were content to operate within existing, often unstated, frameworks of analysis. These groups were more willing to alter the structure of the university in line with the government's proposals, whether they be designed to meet manpower requirements or to meet particular political requirements.

The new Rector, Guillermo Soberon, had been director of the Institute of Biomedical Research and was known as a good administrator and his successful introduction of reform at UNAM would suggest considerable accord with government policy. A change of approach was signalled in the official Informe of UNAM in March 1973 which was critical of past policy. Excelsior reported that,

The document warns that up until this date the allies of violence have been impunity and indifference. It is precise in stating that the university community has tacitly come to accept violence against the institution.³⁷

The communique defined autonomy as the freedom to teach and to do research without outside interference. However, it also stated that autonomy did not equal impunity for acts of delinquency: the Procurator Generals of the Republic and of the District and Federal Territories,

Must undertake an extensive investigation, and strictly apply the law to those found responsible for crimes against the social order, committed within the university precincts and without, affronting and endangering professors, students, and workers.³⁸

The communique was signed by members of the higher echelons of the university administration and by all directors of faculties, including those who had previously supported González Casanova. A possible interpretation of this new attitude to violence was made evident when the police entered the University City on 9 August 1973 to arrest about half a dozen 'delinquents'.³⁹ However necessary a new approach was (and it has been demonstrated that previous liberal attitudes were unrealistic) its operation seemed to allow not only response to specific events but shows of force designed for their repressive effects on student activity.

An immediate problem with which Soberón had to deal was the unionization of university workers. Agreement with the striking workers was arrived at on 23 January 1973. Wage increases of between 10% and 50% were granted, and a collective contract was signed but without

agreement on an exclusion clause.⁴⁰ It was widely felt amongst the university authorities that Article 123 of the constitution was not suitable in its existing form in relation to university workers.⁴¹ But for the meantime Soberón had effectively dealt with labour unrest, both with wage rises and by delaying discussion on the issue of principle, of the suitability of exclusion clauses in universities, thus allowing the university to resume work.

After at least two years of confusion a climate now existed in which reforms to UNAM's structure and courses might be introduced. Most students had gained little from the political activity of the last two years, apart, perhaps, from those who wished to see installed an administration less favourable to critical activity. Many students would have welcomed a chance to pursue their courses, while those still wishing to be active found a more unsympathetic student body and an administration more likely to repress disruptive activity.

In the academic sphere the project of decentralization and expansion was now given priority but with some modifications. Initially at least, the CCH project was stalled. As noted above it had not been successful, and, after the South and West units were completed in 1972, building was halted. The CCH operated primarily at medio superior level, feeding students into conventional licenciado courses at UNAM, rather than providing a new and experimental form of education. But the decentralization favoured primarily by government members of the Consejo de la Nueva Universidad, was now begun. By the end of 1976 five new units, the Escuelas Nacionales de Estudios Profesionales (ENEPs) had been built, three in the north west, and two in the east of the Federal District.⁴² Factors influencing the location of these units included student demand, availability of transport, availability of land, and the proximity of business and services which might be linked to undergraduate and postgraduate teaching.

From 1974 onwards, although UNAM's total higher level enrolment continued to rise the number in the University City (CU) fell as the ENEPs grew. At the beginning of the programme in 1974 there were 85,000 students attending courses in the CU, 3,500 in the one ENEP then existing and 17,300 in other units which had traditionally operated off-campus.⁴³ By November 1976, the number in the CU had fallen to 77,300 while the ENEPs enrolment had soared to 42,000. It is envisaged that by 1984 there will be more students off the University City than on it, 81,000 in ENEPs (51,000 in the north west and 30,000 in the east), with 71,000 in the CU and 14,000 in hospitals and clinics. If this is accomplished, the character of UNAM will have changed fundamentally in a period of just 10 years.

The main aim of the ENEPs was to supplement places for the most popular courses in the CU. Each school specialises in some rather than all academic areas, e.g. Acatlán offers 13 courses within the areas of socio-economic studies, humanities, engineering and architecture, while Cuautitlán offers 9 courses principally in biological and chemical sciences, administration and engineering, but also in agriculture and veterinary science.⁴⁴ So although social demand has determined the general direction of growth, those areas seen to be of immediate national importance (e.g. agriculture and veterinary medicine) are represented in undergraduate and postgraduate courses. New course structures were introduced in 1976 in most arts and social science subjects. In Acatlán this involved an interdisciplinary base (tronco común) as used at UAM. In UNAM as a whole three new courses were introduced, general medicine, biomedicine and agricultural engineering.

New forms of academic organisation were introduced throughout UNAM. In the ENEPs this involved the introduction of a departmental structure rather than a faculty structure. Each department provides a particular course, and there is no intermediary body, such as a

faculty, between department and university administration, nor are the departments of the ENEPs linked in any formal sense to the faculties of the CU. It was noted above, with reference to UAM, how such a structure prevents the forming of any sizeable power blocs within a university.

In the CU a plan of desarrollo por areas was introduced.⁴⁵ This involved grouping schools and courses in the same broad academic field into units of a broader area. Thus the area of Ciencias de la Vida (Life Sciences) would be composed of units from the Faculty of Veterinary Medicine and Zoology, and the National School of Dentistry. The research institutions in this field would also be included. This structure appears to move some way towards departmental units, as some faculties may necessarily be broken down by the new concept of areas. Basic units become smaller, but are grouped together at a physical level. The plan envisages each area having its own zone within the CU, which both allows better communication and the isolation of conflict such that it does not affect scientific research.

A further academic innovation was the initiation of an open university system. This was in fact a project particularly favoured by González Casanova who envisaged such a university serving numbers and types of students with which a conventional university could not hope to deal. Programmed study with learning packages and small groups meeting to discuss their work need not rely on the existing form of the university, but can operate from the home and local library. This Open University system began in a modest way in 1973 with a tiny budget. It operated in the first years as a support system for traditional teaching and as a part of the teacher training programme for university academic staff.

Changes at UNAM between 1973 and 1976 firstly involved an expansion of the number of places available at licenciado level. This primarily

occurred on courses for which substantial demand already existed, but also in areas of apparent manpower needs. But as noted elsewhere it was not only desirable for the government that popular demands be met but also that political opposition be controlled. Changes in the physical and organisational structure of UNAM tended to disperse students and to break down intermediate bases of power.⁴⁶ This was a long term policy intended to diffuse conflict, and complemented the shorter term policy of accepting some level of police intervention on campus.

However, it should not be thought that the policies pursued by Soberon's administration had wholly political ends. Important efforts were made to improve the quality of education, through the creation of new courses and by altering the structure of courses. For the creation of departments within subject areas sharing common basic courses had pedagogic as well as administrative benefits.

Few reforms had been introduced at UNAM from 1970 to 1972 and two reasons can be isolated for this caution. Firstly, the Rector González Casanova and other members of the university were not in full agreement with the government on the course reform should take. And secondly, the introduction of any reforms was made difficult because of disruptions to university life caused both by student activity and by union action, although some disputes may have been promoted to embarrass González Casanova. The politically liberal and independent orientation of the Rector did not allow him to accede either to reform measures which might have had a detrimental effect on academic work, or to the intervention of forces external to the university to quell disruptions.

It was not until a new Rector was installed, and a greater measure of sympathy to government aims and control of disruptive activity established that the desired package of reforms could be introduced. These aimed at meeting popular demands, meeting manpower needs, but

also to better control disruptive activity in the short and the long term.

The Federal government did not openly intervene in any dispute at UNAM. The police were not instructed to operate on campus, nor was the government seen openly in an advisory, negotiating or mediating role. In disputes at regional universities the situation was different. However, it is not possible to give any one single reason for the acceptance of intervention in provincial institutions. In UNAM the government appears to have achieved its desired end without direct intervention. Had the government been more open in its opposition to a notably liberal Rector, it might have mobilised more students for González Casanova and against a less liberal replacement. Furthermore, open conflict in such a nationally and internationally "visible" area as the Federal District was to be avoided. In Nuevo León and Sinaloa on the other hand, the contexts of intervention and mediation were quite different. Interventions were in favour of student demands, showing support for university autonomy, although in some senses they were also directed against state governments hostile to the federal government.

In 1971 a dispute arose at the Universidad Autónoma de Nuevo León (UANL), Monterrey, after the passing of a new Organic Law of the university which contravened many people's definition of university autonomy. Differences between UANL and the state government had become evident in March 1971. The Rector, Leal Flores, appeared on television in debate with the state governor Elizondo. The Rector asked for an increase in the state's subsidy to the university but the governor was firm in his refusal stating that no funds existed. On the 16th March a document published by the university pointed out that both the Mexican Constitution and the state education law required that education provided by the state should be free. Moreover, a proposal from the university for a new Organic Law for the university suggested that a

fixed percentage of its total budget should be supplied by the state government. This would help to insulate the university from political pressure from state governors. While in 1970 the state subsidy had been 44,508,000 pesos for 21,759 students, in 1971 the proposed subsidy was only 35,758,000 pesos for 23,082 students. This represented a drop in the per capita subsidy of 24%.

But the dispute reflected a wider disagreement over control of the university and, it would seem, between state and federal government. The Governor's proposed Organic Law for the university was rejected by the University Council on 29th March. It was seen as a threat to university autonomy and as ineffective in dealing with UANL's financial problems. A strike was declared throughout the university. Despite this the new governing body established by this Organic Law, the Popular Assembly, dismissed the Rector, Leal Flores, and appointed in his place Arnulfo Treviño Garza. The new law aimed to bring the university under far greater local control. University representatives formed a minority on the Popular Assembly. The role of the University Council was severely reduced and student and staff participation cut to a minimum. Thus the university's control over its own organisation, including academic affairs such as the appointment of a rector, was violated. Elizondo claimed that in the past outside groups had used the university to threaten the state government. Justifying non-academic representation he commented,

Why will representatives of all sectors of the city of Monterrey enter into the Popular Assembly of the University Government? By virtue of the fact that Congress considers the university to be the patrimony of the people, that they have a duty to serve it and of course to decide on the system of government.⁴⁹

The Governor maintained that the Assembly would have no control of academic affairs but only on the direction of expenditure. It is difficult to envisage how the latter could exclude the former without

strict guidelines. This degree of control was seen to be justified because,

The university is not the patrimony of its present students or of the teachers who give courses. These are the beneficiaries of the university, but they cannot be masters of the university.⁵⁰

Such reasoning was not of wide appeal. Opposition continued within the university and on 22 May the police took control of certain university buildings and a short battle occurred between students and police.

The most significant change in university organisation that had occurred at UANL was the appointment of a rector by an outside body. This was quite uncommon in Mexico, and was found unacceptable by other academies and by the federal government. On 28 May Gonzalez Casanova, rector of UNAM, made known his view of the situation. He stated that the Organic Law should be repealed because it contravened the autonomy of UANL. The next day, the Secretary of Education, Bravo Ahuja, added his views. He made a general statement on government policy and in reference to UANL stated that,

In this matter I wish to demonstrate to them that the government of the Republic has absolute respect for the internal government of universities.

Concluding after a long statement, Bravo Ahuja said,

In relation to the intelligent declarations of Mr. Pablo González Casanova, Rector of UNAM, with respect to the problems of UANL, I wish to say that his statements coincide with the thesis sustained by the federal government.⁵¹

However, such comments did not imply that the government would force any action; it was stated that the conflict had to be solved by the state and university involved. However, the next day it was announced that the President had sent Bravo Ahuja to Monterrey in order to try to bring about a dialogue between the two sides. Thus on this occasion the government gave its opinion on a particular university conflict and aligned itself with the views of González Casanova.

On 31 May, the day Bravo Ahuja arrived, students occupied the university rectory expelling Treviño Garza. Their demands for entering into dialogue were,

- (1) freeing of detained students and an end to repression by the university,
- (2) a declaration of nullity for all acts following from the new Organic Law, in respect principally of the expulsion of those who had not attended classes,
- (3) revocation of the dismissal of several teachers,
- (4) immediate payment to university workers whose salaries were owed,
- (5) abrogation of the Organic Law of UANL.

Bravo Ahuja was involved in lengthy discussions, particularly with the governor of Nuevo León. On 3 June Bravo Ahuja announced his five recommendations emphasising both Echeverria's respect for state sovereignty, but also the freedom of institutions of higher education. The recommendations were for

- (1) the convocation of extraordinary sessions of congress to make modifications to the Organic Law, which was necessary to underline the principle of autonomy which Mexican juridical tradition recognises in respect of university institutions,
- (2) that this should be preceded by finding out the opinions of all groups in the university,
- (3) in the meantime normal activity in the university should be resumed,
- (4) the position of those individuals subject to investigation by the judicial authorities should be resolved as quickly as possible,
- (5) means should be found to pay workers whose wages and salaries were owed.

As a result of these recommendations the state legislature appointed a commission of seven ex-rectors to recommend reforms to the Organic Law. Their proposal was passed in the early hours of 5 June. The main change was the abolition of the Popular Assembly. But this

repudiation of attempts to increase the state's power in university matters was not without repercussions. A few hours before the new law was approved the rector of UANL resigned. Then on 5 June the governor Elizondo also tendered his resignation. He stated that he had radical differences of opinion in respect of the criteria on which the law was based and that to promulgate and publish the law would be acting against his convictions. Elizondo was replaced by Luis M. Farías, senator for the state of Nuevo León. At the university, Lic. Alfonso Guerra Leal, was appointed as acting Rector.

In Monterrey in 1971 the federal government saw it to be necessary to step into a local conflict over the meaning and importance attributed to university autonomy. This occurred in the form of mediation, a strategy never formally accepted or rejected but not used in relation to problems at UNAM. The federal government was promoting in state politics its own more popular and reformist policies. But this dispute is not merely the confrontation of two different approaches to education which reflect different ideological tendencies within political debate. We are also moving into another area of 'the politics of higher education policy'. The state government in Nuevo León, in passing a new Organic Law and in only offering low subsidies, was openly challenging the federal government's policy on the provision of cheap higher education.

It is no coincidence that this challenge occurred in Nuevo León. The capital city, Monterrey, is the biggest industrial centre after Mexico City, and one that is economically thriving. The powerful economic interests of the area are generally seen to be more conservative than their counterparts elsewhere in Mexico, favouring greater emphasis on free enterprise and less on mixed economy and government intervention, and opposing Echeverría's reforming and redistributive policies or policy declarations. Thus intervention was important to assert the power of the federal government in relation to one of the most

powerful state governments which was opposed to much of federal government policy. It allowed the removal of an obstructive state governor, appointed during the previous sexenio of Díaz Ordaz.⁵²

The dispute on higher education epitomised the line of political division between centre and region. Education did not get 'caught up' accidentally in a simple power struggle, but rather the very nature of debates on education, i.e. their political character, meant that this was a potential area on which the ideological conflict between federal government and state government might fall. The nature of this political division is demonstrated, if superficially, by various articles which appeared in Excelsior. Carmona Neuclaus wrote,

So private enterprise wants the university to belong to it like an intellectual tool; it has the money and it wants to have control of the university's conscience in the same way.⁵³

And an ex-rector of UNAM, Mario de la Cueva commented in a similar vein that the problem at UANL was,

The defense of the liberty of cultural activity against a class which seeks that UANL prepare young people for the service of that class.⁵⁴

Flores Olea, director of the faculty of Social and Political Science at UNAM pointed to the wider context of the university conflict in an interview,

In no way can what has occurred today in Nuevo Leon be considered an isolated event, rather it is symptomatic of conservative tendencies which are being manifested across the length and breadth of the country.⁵⁵

A somewhat similar situation occurred at the University of Sinaloa (UAS) in Culiacan. Students opposed the Organic Law of the university and the Rector appointed under the procedures set by this law. The conflict grew to an extent where Bravo Ahuja was again sent to try to bring about a solution. This mediation, however, was not as decisive as in Monterrey.

The trouble started in February 1970 when a new Organic Law of UAS was approved by the state's Chamber of Deputies.⁵⁶ This located supreme power, including the appointment of rector, in a Junta de Gobierno. This was to be formed from representatives of the outside community as well as the university. The students association was strongly opposed to such a body appointing a rector, believing this to be the function of a university body, the University Council. The new law had immediate effect in the appointment of a rector which was pending, and on 22 February 1970 Armienta Calderón's appointment was announced.⁵⁷ He stated his willingness to consider changes in both the Organic Law, and an unpopular grant system, but students maintained their opposition because of the method of appointment. It was also later stated that confirmation of the appointment by the University Council was only achieved at a very poorly attended meeting which occurred while police surrounded the building.⁵⁸

A high level of student activity continued throughout March with pro- and anti-strike students in turn occupying university buildings. Problems continued, but with a lower level of activity, throughout most of 1971, building up again by September and October 1971. In September the State Congress announced an increase in taxation on industrial goods, the revenue allocated to UAS. In October Bravo Ahuja visited UAS and was expected to announce an increase in the Federal subsidy. However, he did not do this as the meeting was interrupted by students. Some reports claim that the students belonged to the Students Federation (FEUS)⁵⁹ while members of FEUS later claimed that those involved belonged to porra groups financed by Armienta Calderón.⁶⁰ The purpose of such porra activity would have been to discredit the student body which desired the removal of Armienta Calderón. Bravo Ahuja left without announcing the increased subsidy because of the disruption. (The size of the new higher subsidy was then not announced until January 1972).

Strikes occurred in various schools and faculties of the university throughout October and November 1971. These were supported by the FEUS, although opposed by the University Council, the body which the students wanted to become sovereign. The following January demonstrations were held involving students from several other universities, accusing the Rector of having converted the university into a centre of repression. In February the police intervened, seemingly with the Rector's approval, or even petition for action, to take back buildings occupied by the students and to arrest those involved.⁶¹ The Rector stated that the students were under communist leadership, that although he respected the autonomy of the university, such abuses could not continue and while no university should be subject to public control, neither should it be subject to anarchy, deceit or mediocrity.⁶²

The local paper El Sol de Sinaloa supported intervention while the national paper, Excelsior, noted the intransigence of the state authorities, stating that police occupation and imprisonment of 250 students could only aggravate the lack of understanding between the university and the state authorities. Armienta Calderón had been unpopular since his appointment, not only among students but also with a substantial number of staff. The governor had only prolonged the conflict by the use of force.⁶³

González Casanova again spoke out against outside intervention in university affairs, as did Flores Olea.⁶⁴ On 17 February Bravo Ahuja arrived to try to mediate, making no public comment other than to note Echeverría's respect for autonomy. After discussion Bravo Ahuja made three recommendations, that those detained be set free and that two investigating commissions be set up, one on the current situation, and another on overall reform of the university.⁶⁵ Those detained were set free but the FEUS kept up its demands for Armienta Calderón's removal. The commission to study the problems of UAS was set up to

which the University Council proposed a new Organic Law. This involved quite radical change. The University Council would have supreme power instead of the Junta de Gobierno but the former would become two-tiered. Teachers and students were to have parity in the University Council and it was suggested that councils be created in schools and faculties, also with equal representation. One qualification on these arrangements was that only students with a good academic record would be allowed to act as representatives on the University Council.⁶⁶ On 4 April, the special commission presented a proposal for reform of the Organic Law to the State Congress which incorporated the above suggestions.

Although this proposal was made on 4 April, violent conflict broke out on 6 April. Press reports give no indication of the cause of these conflicts, although they involved those students on strike against the Rector and other groups. On 7 April two students died from gunshot wounds and on the following day Armienta Calderón resigned, because, he said, recent events had been attributed to his presence.⁶⁷ On 10 April the State Congress accepted the new law and while students had some complaints the FEUS allowed the new Rector into the central university buildings and classes began later in the month.

A vital issue at UAS, as at UANL, was the autonomy of the university, in particular whether persons outside the university should be involved in appointing the Rector. The state government wanted some control of university affairs. But the account presented has given little impression of the chaos which surrounded UAS for over a year. The causes and participants in many incidents are very difficult to trace. As in the case of Nuevo León there were political difficulties between the state authorities and the federal government. But in Sinaloa it seems that these were highlighted by an aspect of the students' political activity. Students had tied their complaints against the state government to those of groups of peasants who were demanding that

the state government provide them with land. This upset state politicians whose power base is found in the control of the state CNC organisation and its links with large, commercial agricultural interests. Thus it was important for the state government to control students activities. But at the same time the dispute gave the federal government the opportunity to assert its power vis a vis the state government and to demonstrate its support for popular causes, i.e. those of the students and the peasants. Excelsior's editorial had commented just before Armienta Calderón's resignation,

The Rector is not popular, he does not have a university history and his appointment was the result of political decisions alien to academic interests. What is being debated at the heart of it is the urgency that the university links itself to popular needs, and stops being, as it has been up to now, a scholarly community in the service of immediate development which benefits the most privileged sectors.

The federal government put pressure in its mediation in favour of autonomous higher education and against legal provisions which would have allowed state governments greater power in universities. This had the dual effect of showing support for student demands and of acting against the interests of state governments whose policies were not wholly acceptable to the federal government.

This chapter has attempted a more detailed examination of the Echeverría government's education policy than was possible in the previous chapter by looking at four Mexican universities, one of which was established in the 1970-76 period.

The establishment of UAM demonstrated two major aspects of higher education policy. Firstly demands for more places were to be met, and only within this general expansion would an attempt be made to meet changing manpower requirements. But in addition to an attempt to allay discontent by meeting demands, it was necessary to better control opposition. It was shown that UAM's geographical location

and its organisational structure served such a need.

Introduction of such changes at UNAM was more difficult. The existing administration did not wholly agree with reforms that the government wished to be introduced. Secondly, disruptive political activity at UNAM meant that reforms came to be seen as a secondary consideration to the achievement of a working university undisturbed by strikes or by violence. But examination of events at UNAM demonstrated the government's rather ambiguous role in achieving the implementation of its desired reforms.

Echeverría had consistently maintained his government's respect for university autonomy. A university's freedom to run its own affairs and students freedom to express their own views was seen as an important part of an apertura democrática, a policy designed to increase support for the government. But we saw that student politics may be disrupted and lose its direction because of the operation of unidentifiable groups, whether porras within the universities or non-uniformed troops on the streets. Such disruption may serve the government's interest in controlling student opposition and so the possibility of government complicity in many events is raised. (However, such tactics may also be used by other groups to force the government into openly repressive policies.) González Casanova, the Rector of UNAM thought it necessary to reject police action on campus as a means of dealing with the violent disturbances that were occurring there. And the government gave González Casanova little other support in dealing with these problems. It seemed that the government may have provoked González Casanova's downfall in order to allow the installation of a rector willing and capable of introducing reforms desired by the government.

Events at UNAM are important for their illustration of the effects of the government's public declaration of support for university autonomy. Such a policy may be popular but results in the government finding new and non-public methods of controlling student politics.

The methods that were used would appear to have been effective in that those staff and students interested in non-violent political activity found few channels of action left open to them.

In provincial universities the federal government did not seem so concerned to control students' political activity. It is less likely to be of national political significance than events in the Federal District. Rather the government's declared respect for autonomy was effective, although its motivation was not only that of winning popular support. Whereas at UNAM "non-intervention" served to discredit the Rector, in Nuevo León and Sinaloa mediation strengthened the federal government's position. The federal government was able to take a popular step in supporting autonomy while taking important steps to weaken independent bases of power in the state governments of Nuevo Leon and Sinaloa.

This chapter has shown that the government's policy of meeting demands for more places in higher education and its support of autonomy involve more complex transactions than might be expected. A large part of Echeverria's higher education policy involved controlling opposition as well as winning support. Methods were found to deal with opposition, whether from state governments, university rectors or students, which did not openly contravene policy declarations or the notion of an apertura democrática.

1. Bravo Ahuja, V. and Carranza, J.A., La Obra Educativa, 1970-76, SEP, Mexico, 1976. p.76.
2. Ibid p.97.
3. Other members included Henrique González Casanova, Eduardo Césarmen and Juan Manuel Terán.
4. Ochoa, Cuauhtémoc, "La Reforma Educativa en la UNAM, 1970-74", Cuadernos Políticos, No.9, July-Sept. 1976. p.74.
5. Ibid p.68. Ochoa refers to an unpublished document produced by Díaz de Cosío in August 1970. Very similar points are made by Díaz de Cosío in an article, "El Futuro de las universidades mexicanas", in Los Problemas Nacionales, a collection of essays published by UNAM, Mexico, 1971, pp. 187-199. No editor is given.
6. Ibid.
7. Ibid p.69.
8. Excelsior, 23rd March 1972.
9. Ibid, 23rd May 1972.
10. This estimate is taken from Hellman, Judith Adler, Mexico in Crisis, Heinemann, London, 1978. p.162.
11. Ibid p.161. Martínez Dominguez was head of the Department of the Federal District (DDF), the local government body for the Federal District which does not fall under the jurisdiction of any state government. This meant that Martínez Dominguez was responsible for the keeping of the peace and police activity within the DDF.
12. Excelsior, 10th June, 1972.
13. Ibid, 19th June, 1972.
14. Ibid, 29th March, 1971.
15. Ibid, 30th March, 1971.
16. Ibid, 12th December, 1971.
17. Ibid.
18. Ibid, 29th May, 1972
19. Ibid, 28th May, 1970
20. Ibid, 1st September, 1970.
21. Ibid, 14th December, 1971.
22. Ibid, 14th June, 1972.

23. Tiempo, 1st January, 1973, Mexico City, p.6.
24. Excelsior, 14th June, 1972.
25. Normalistas is the name given to a student of 'normal' school, i.e. one which prepares students for a teaching career. These exist at medio superior level but also at higher level.
26. Fósil estudiantil translates as student fossil.
27. Excelsior, 8th July, 1972.
28. Tiempo, 1st January, 1973.
29. Excelsior, 3rd August, 1972.
30. Ochoa, op.cit., p.72.
31. Ibid. Ochoa quotes Excelsior, 25th August, 1972. However, Echeverría had indulged in vague forms of explanation. About a month earlier when asked for an explanation of current violence, he replied, "I attribute it to a mental state, to worries about war, to the anxieties of the contemporary world, to the problems found in large cities." But he denied the existence of outside interference in universities. Excelsior, 15th August, 1972.
32. Tiempo, 1st January, 1973. p.8.
33. STEUNAM stands for Sindicato de Trabajadores y Empleados de la UNAM, and ATAUNAM for Asociacion de Trabajadores Administrativos de la UNAM.
34. Excelsior, 29th October, 1972.
35. Tiempo, 1st January, 1973, p.9.
36. Excelsior, 18th November, 1972.
37. Ibid, 29th March, 1973.
38. Ibid. The communique quoted in Excelsior was issued in response to an attack on an official of UNAM, Fernando Flores Gomez.
39. Ochoa, op.cit., p.80.
40. See Excelsior, 6th, 9th, 12th and 16th January, 19th, 21st and 24th February, 1973.
41. Proposals were made in 1978 for introducing a further section (c) to Article 123 to cover university workers.
42. The ENEPs to the north-west of the Federal District are Cuautitlán, Acatlán and Iztacala, and to the east, Aragón and Zaragoza.
43. The units which operated off campus included the National Schools of Plastic Arts, Music, Nursing and Obstetrics and some branches of Medicine and Dentistry located in hospitals and clinics.

44. Informe del Rector, 1973-1976, UNAM, December, 1976. pp. 12-13.
45. Ibid p.48.
46. Changes in the administrative and governing structures of the university would appear to have reduced the power of academics in favour of professional administrators. The central administration was reorganised in five sub-systems, each headed by immediate colleagues of the rector, probably reducing the influence of the Council of Faculty and School Directors. Informe, op.cit. p.37.
47. Except where reference is made to other sources, this account is taken from Tiempo, 7th June, 1971, pp. 47-50, and Tiempo, 14th June, 1971, pp. 27-29.
48. The previous rector Dr. Oliveiro Tijerín had resigned claiming that the students pressing for his resignation were directed by state functionaries. Excelsior 15th January, 1971.
49. Tiempo, 7th June, 1971, p.48.
50. Ibid.
51. Tiempo, 14th June, 1971
52. Each President has to deal with state governors who may have a substantial period of their office to run, but who achieved power under the previous President. Their loyalty to the succeeding federal government is often not as great as the new President would desire.
53. Excelsior, 1st May 1971.
54. Ibid, 30th May, 1971.
55. Ibid, 1st June, 1971.
56. El Sol de Sinaloa, 13th February, 1970.
57. Ibid, 23rd February, 1970.
58. Excelsior, 11th February, 1971.
59. El Sol de Sinaloa, 9th October, 1971.
60. Excelsior, 13th February, 1972.
61. El Sol de Sinaloa, 12th February, 1972.
62. Ibid, 13th February, 1972.
63. Excelsior, 14th and 15th February, 1972.
64. El Sol de Sinaloa, 14th February and Excelsior, 16th February, 1972.
65. Tiempo, 6th March, 1972.

66. El Sol de Sinaloa, 9th March and 13th April, 1972.
67. Tiempo, 17th April, 1972.
68. Excelsior, 8th April, 1972.

CONCLUSION

In the introduction the question was posed as to why the government of Luis Echeverría of 1970-76 should continue to expand Mexico's higher education system. After all it seemed that the existing provision of higher education had already exceeded manpower requirements of the economy in its training of skilled labour. If this were the case, investment might sensibly have been directed elsewhere. Equal opportunities for education had been a declared objective of all post-Revolutionary governments yet the achievement of universal primary education still needed considerable effort while participation in middle level education was low even in comparison with other Latin American countries.

It has been suggested that the continued and rapid expansion of higher education which occurred in Mexico between 1970 and 1976 was a response to political tensions which had become evident in the late 1960's. It seemed that the government was not secure of its support from white collar or middle class groups. It therefore took steps to both win support or allay discontent, and also to control potential opposition. Whereas most manual workers, urban and rural, were effectively controlled and incorporated into the structures of government through membership of unions, the majority of which were affiliated to the CTM and CNC, this was not true of white collar workers only a very small proportion of whom were CNOP members. The attempt to better incorporate the middle class into the political system did not occur through the mechanisms of union and party structures but by use of other specific measures of control and by appearing to meet the particular concerns of white collar workers, one of which was the seeming absence of opportunities for social mobility.

The provision of more educational facilities met some of the demands of discontented sectors of the middle class because the availability of higher education is important to white collar workers and their families either in maintaining their social position or in achieving a degree of social mobility. But this was not the only way in which the Echeverria government's higher education policy reflected political concerns of the period. The higher education system became the site of an attempt to improve control of opposition or disruptive action which had threatened political stability.

However, while higher education policy focused on the provision of more places, other than political concerns were not forgotten. Within a general policy of expansion an attempt was made to increase the provision of those skills needed in the economy and thus make some improvement in the efficiency of the higher education system.

This brief and oversimplified resume of the concerns determining higher education policy in the 1970-76 sexenio gives primary attention to the state of Mexican politics during this period. Such an interpretation was built up through the course of this study after finding existing analysis inadequate in the explanation of the overall direction of higher education policy. Study of the economics of education had tended to dominate academic interest in education policy, particularly in the late 1950's and in the 1960's. Human capital came to be recognised as being as important as physical capital to economic growth. This suggested that expansion of education could be seen as an economic rather than as a social expenditure because of the value of the production of skilled labour to the economy. Economists developed methods of evaluating a country's educational needs in accordance with its pattern of economic growth. The apparent possibility of planning educational expansion in accordance with overall development strategy promoted both expansion of higher education and an interpretation that expenditure

was determined on economic grounds. But indications of increasing unemployment and underemployment suggested that some investment in education was not being profitably used. Either planning methods were inadequate or policy makers were not primarily concerned with the productivity of education.

Chapters One and Two showed that the productivity of education did not appear to have been the overriding concern of policymakers in either 'developed' or 'developing' countries for which evidence existed. However, the estimation of the degree of productivity of educational expenditure is not straightforward. Assumptions are built into techniques of analysis which make their findings questionable, while a lack of relevant information made an exercise such as the estimation of underemployment of the highly educated difficult. But information available questioned the economic need for the level of increase in the provision of higher education which occurred in 'developed' and 'developing' countries between 1950 and 1970.

Rates of return analysis was seen to be a somewhat questionable guide to the relative cost-effectiveness of different levels of education but it did suggest a useful direction of enquiry in the explanation of expansion of higher education. Blaug et al's study of Indian education demonstrates the difference between private and social returns to education. The individual may receive a favourable return on his or her pursuit of education while the society as a whole may not. Firstly the cost of education differs in each equation if, as is the case in most countries, educational provision is free or subsidised. Secondly, for the individual education provides qualifications which allows entry into jobs. If jobs become scarce individuals may seek more education to better compete for jobs. This may impose an added cost but one which is often accepted if it leads to employment. Thus a process of qualification escalation occurs which serves the individual in so far

as it leads to employment but which is unlikely to be of benefit to the economy unless the additional training received contributes to the future worker's productivity. Rate of returns analysis shows that the different imperatives of cost-effectiveness and of meeting private demands for education can point to quite dissimilar provisions of education. Thus Blaug et al suggest that the "inefficiency" of education systems may be explained by governments' response to certain private demands which are not compatible with the demands of cost-effectiveness.

Information available on the employment of the highly educated in Mexico showed that a substantial proportion of investment in higher education was not productively utilised. Although rates of unemployment of the highly educated were low it was shown that unemployment was becoming severe among younger sections of this group, i.e. those who had recently left higher education. Furthermore, "qualification escalation" was occurring. Data collected for the 1970 census showed that about one third of those who had pursued some higher education were in occupations which only necessitated middle level education.

However, one has to ask why a process of qualification escalation is allowed to proceed when the investment in education it reflects is largely wasted in economic terms. As noted, rate of returns analysis suggests that educational provision may be explained by a government's response to certain private demands for education rather than by a search for the best social return on investment. If this is the case explanation of such behaviour is unlikely to be found purely within the field of economic analysis. For a government's decision to respond to particular 'private' demands suggests the need for examination of the political context which occasioned such a decision.

An unsophisticated approach might expect such political decisions to directly reflect the interest of economically dominant groups. In this view politically influential groups, deriving their influence

principally from economic power, would desire a provision of education directly functional to the economic organisation of society. But substantial evidence was provided showing that this has not occurred in Mexico. Rather it appeared that the political and economic concerns of government while being interdependent are sufficiently distinct to indicate different directions of action. This was demonstrated by examination of education policy from the beginning of state provision.

In the 1920's and 1930's Mexican governments took great steps in improving the provision of education, especially at primary level in both urban and rural areas. Education was seen as a necessary prerequisite of development, both in inculcating a desire for 'improvement' and in providing basic skills. However, the extension of educational facilities met other demands. Mexican governments of the period faced considerable opposition from those unsympathetic to Revolutionary goals and so it was particularly important to maintain the support of those groups sympathetic to the Revolution and those who had themselves taken part in the long struggle that had occurred. The extension of educational facilities had been an objective of peasant groups, of the small urban working class and of professionals and intellectuals. Indeed it was the political beliefs and objectives of such groups which determined the precise form which educational provision was to take. For example, strong opposition existed to religious education and to church involvement in education and both were precluded by the 1917 Constitution. This reflected antagonism towards the conservative power which the Church had represented and a realisation that education had been an important mechanism by which the Church had disseminated its views.

By the 1940's political and economic pressures influencing educational provision had changed considerably from the immediate post-Revolutionary period. The active promotion of industrialisation on the part of the government, given an important start in the Cárdenas sexenio, brought about far-reaching changes in Mexico's social structure. A changing

economic and occupational structure meant that new demands were placed on the Mexican education system for skilled labour. But industrialisation did not only affect education in terms of new manpower requirements of the economy. New social groups were developing who would pressure government for an educational provision more suited to their interests.

Economic growth did not only involve growth in the urban proletariat, i.e. manual workers in the developing industrial and manufacturing sector. It also necessitated an increase in the number of 'white collar' workers, i.e. workers using mental skills in, for example, office, managerial and professional occupations. Such work requires a significant degree of previous education, although this may vary from lower middle to higher education. Thus educational facilities had to be provided to meet manpower requirements but were also likely to be demanded by all those who aspired to white collar jobs. It was shown how educational provision developed after the 1940's to meet these two imperatives. Middle and higher level education were developed, particularly in the rapidly expanding urban areas. Previous priority areas such as rural primary education and technical education were now given less attention. This was politically feasible because the social groups interested in these areas were less powerful than they had been directly after the revolution. The development of stronger governmental and bureaucratic structures during the 1930's and 1940's led to the increasing incorporation of peasant and working class organisations into the dominant revolutionary party with a subsequent decline in their capacity to influence government policy.

Patterns of educational development which were pursued meant that by the late 1960's participation in education was profoundly unequal between different social and geographical groups. In rural areas many primary schools did not have the full six grades and middle level education was almost non-existent. In urban areas there were insufficient places in

middle level education to meet demand with the result that higher income groups have tended to use private, including church, education at this level. This has meant that students who have achieved the qualifications to enter higher education have come predominantly from urban areas and from higher income group families.

Of course participation is not a direct reflection of the availability of educational facilities but of students' decisions as to whether or not to pursue more education. Many poorer families may not see education as a worthwhile or even possible investment when it a) brings little return in terms of useful knowledge, e.g. in an agricultural community, and b) involves forgoing earnings or valuable labour time. However, this does not mean that the patterns of educational participation that we saw in Mexico in the late 1960's would not be influenced by a different provision of education. For a government may both act to make curriculae relevant to wider groups of students and may, subject to finding necessary finance, provide incentives for the disadvantaged to stay at school.

By 1970 education policy in Mexico had not met the Constitutional objective of an equal provision of opportunities for all students. But as we have seen, this was not to be explained by the government's pursuit of economic imperatives in education policy. For the path pursued was not meeting the manpower requirements of the economy in an efficient and cost-effective manner. This had two possible causes; first, that increased provision of higher education had been uncritically accepted as beneficial to the economy, and secondly, that educational provision had responded more to particular 'private' demands than to economic objectives. While the manpower needs of the economy and the desire for more education from aspirants to white collar jobs had probably increased at similar rates during the 1940's and 1950's, it was possible that during the 1960's the latter had outstripped the former and had been allowed to influence the quantity and quality of educational provision.

The political realities of the late 1960's and 1970's, however, meant that it was unlikely that the effect of such private demand would be curtailed and that the objectives of cost effectiveness of education or a democratic provision of education would come to dominate the Reforma Educativa of the Echeverría sexenio, although both were significant considerations in the formulation of policy. Rather, the provision of higher education doubled between 1970 and 1976, a far more rapid growth than occurred in either primary or lower middle education. As such a huge increase might suggest, expansion occurred in all subjects, and not only in those in demand in the labour market. The background to such a policy lay in an apparent growing discontent among certain sections of Mexican society, the most extreme manifestation of which was the student movement of 1968.

It was shown how political and economic conditions emerged in the 1960's which were likely to produce disillusion and discontent both with existing policies and patterns of development, and with methods of government. Economic growth had been rapid from the late 1930's to the early 1960's but from the mid 1960's a slowdown in growth was evident, both in the manufacturing and in the agricultural sectors. Such a slowdown, combined with the general effects of Mexico's development strategy affected employment opportunities and possibilities for improvements in real income. What was significant for the Mexican political system was that discontent was most evident among groups not fully incorporated into party structures.

Growth in the agricultural sector has to a large degree been a result of irrigation and mechanisation and the turning over of more land to cash crops for sale, particularly to the United States. This pattern of development was not job creating. Furthermore, the reduction of land area devoted to subsistence crops has caused the prices of basic foodstuffs to rise, thus affecting the standard of living of poorer groups

in Mexican society. However, the ability of the mass of the peasantry to make effective demands for policies which would both create employment and bring about a rise in, and more equitable distribution of, income in rural areas is severely limited. The PRI, as the dominant channel of resources for improvement can also act as an effective measure of control on attempts to instigate change. The last resort of the government in the crushing of independent action is usually violence.

A paucity of the benefits of growth is not limited to the mass of the rural population. In urban areas growth has been greatest in those sectors of the economy and those businesses which use capital intensive production techniques and which have substantial levels of foreign investment (apart from nationalised industries). Others are employed in smaller more 'traditional' concerns which generally show slower rates of growth, or are found in occupations often described as marginal but more accurately seen as part of an 'informal' sector of the economy. Many in the latter group may be migrants or the children of migrants who have moved in order to improve their economic position. The benefits of growth which those in such occupations have received are few. While some are unionised their power to improve their situation is limited. The union is likely to be affiliated to the PRI with membership more important as a means to secure employment and government services than as an effective channel of economic and political action. Few weapons exist for making effective demands on the government for a more equal distribution of goods. A worker in the informal sector has no economic sanctions whatsoever, that he or she can impose, and for workers in small businesses withdrawal of labour is unlikely to have any effect on the national economy while co-optation of labour leadership makes such action unlikely.

The support of employees in the 'modern' sector is of greater importance to the government. A breakdown in, for example, the government bureaucracy, the nationalised industries or in large scale private

sector operations is likely to affect both economic and political stability. The government, therefore, has attempted to both win the support of, and control the actions of such workers. In this the union has been a most important instrument of control, maintaining support through ability to deliver wage rises and as the source of social services.

The support of industrial workers is most important to economic stability although a government's treatment of particular issues or inability to deal with some disputes may threaten political stability. The support of government employees, or rather an absence of any disruption to the machinery of government is most important for political stability. However, apart from government employees, white collar workers have been weakly unionised. Two factors might explain this situation. Firstly, that this group has on the whole, had less cause to complain in relation to its economic condition; and, secondly, that white collar workers have only limited power. From the mid 1960's, however, the first factor became less compelling. Moreover, it became clear that while the economic power of professional, managerial and office staff was different to and perhaps less than that of industrial workers, their opposition could challenge the legitimacy of the political system.

If any important determinants of the legitimacy of the Mexican political system can be identified these would surely centre on the promise of development and possibilities for social mobility, rather than on the democratic nature of the polity. But if those who have succeeded in the eyes of most of the population then show dissatisfaction with government policy and with opportunities for advancement open to them, the legitimacy of the political system is likely to be reduced. While Mexico's 'one-party' system was able to deal quite effectively with agricultural workers, workers in small scale business and commerce,

and workers in modern factory employment, it had not by 1970 produced many structural mechanisms for dealing with what has been described as the 'new middle class'.

The period of rapid economic growth and industrial development that occurred after World War II brought a rapid increase in the number of office and managerial occupations. As the scale of such functions increased, mental work became increasingly separate from manual work. The need for relatively high levels of education to undertake mental labour created further separation from the majority of manual occupations. This specificity of economic function and particularity of educational/cultural background gave rise to specific characteristics, strengths and interests such that this group of white collar workers can usefully be identified as a social class. This, however, is not to say that Mexicans have taken political action in defence of declared 'middle class' interests. Nevertheless, quite separate and distinct political actions (electoral, trade union, intellectual etc.) can be seen to share common concerns. And by the early 1970's the Mexican government was openly identifying "middle class" discontent.

The benefits accruing to white collar groups as a result of rapid development were reduced during the 1960's. Economic security and opportunities for advancement were threatened. In this context the scarcity of political channels through which discontent could be expressed became important as various but quite disparate political actions demonstrate. An attempt was made by doctors to build an independent union but this failed under the weight of government opposition. Voting patterns might be interpreted as demonstrating not so much an opposition to recent government policies as a distaste for the 'closed' nature of the political system. And an important feature of the student movement of 1968 was an attempt to challenge government strategy for dealing with opposition. The students wished

to avoid the normal government practice of co-optation and private negotiation and also to force the abandonment of certain legal provisions for dealing with opposition, the abolition of the riot police and the freeing of political prisoners. As the student movement grew in 1968 it was evident, both from the spontaneous support students attracted on the streets and from the sympathetic comments made in intellectual and journalistic circles, that groups beyond the student participants shared many of the students' complaints.

The political climate of the late 1960's appears to have demonstrated to Mexican governments the need for better control of, and a lessening of discontent among, the middle class. The latter was achieved both through an attempt to increase apparent opportunities for social and economic improvement, and by making the political system appear more open to criticism and change. Suggestions were made within the PRI for improved organisation of the middle classes, i.e. their greater incorporation into party structures through unionisation. This, however, was not implemented and the government concentrated on controlling student activity. It may be, although this can in no way be proved, that it was desirable to leave the middle classes largely unorganised in a one-party system. The organisation of the more articulate and politically conscious members of society held some risks. It might provoke those people into creating organisations independent of government control, thus creating more problems than solutions. Of course, the FSTSE has quite successfully controlled government employees (mainly white collar) although the cost has been preferential treatment in terms of conditions of employment and pay in relation to most other workers in similar occupations.

Rather than improving control through direct organisational mechanisms, the government of Luis Echeverría attempted to win support by appearing to open up the political system to the criticism and influence of wider

groups. Members of the middle classes had voiced their political views primarily through the vote and through intellectual criticism, as has been the case in most liberal-democratic systems of Western Europe. But as noted such actions had been largely ineffective in Mexico. Thus a much publicised policy of the Echeverria government was the encouragement of an apertura democratica. In practical terms this involved changes in the electoral law to increase representation of opposition parties and calls for open debate and criticism. However, neither was seen to make any real impact on the existing political system, but were primarily of public relations value.

But as we saw, there are two main ways in which non-propertied groups may make their influence felt in most societies. One is through political channels, i.e. through the formal processes of representation or through forms of pressure group activity. The other is through their achieving occupational positions where important policy decisions are made, either in the private sector or in the sphere of government. This may result from promotion on the basis of merit, and in the first instance on educational qualifications. Of course many of those achieving high ranking positions do not only have high level educational qualifications but also important social connections arising from ascribed status and inherited wealth. But the availability of education is crucial for all aspirants to high level positions.

We saw that in the 1960's the opportunities for achieving desired employment were reduced. In such a situation there was a race for more qualifications. It was shown that demand for places in preparatorias and universities exceeded supply, despite the fact that more education was not an economic necessity. Thus a further method of improving support was to increase and improve the provision of education in areas demanded by middle class groups.

It was shown how the announcement of a Reforma Educativa and the

form of its presentation were intended to win support for the Echeverria government. But action was not confined to statements of intent or cosmetic change. Education policy of 1970-76 did involve substantial quantitative and qualitative change, although not necessarily on the scale promised by proposals for reform. It was also noted that the production of plans involved very different considerations from plans drawn up in the late 1960's. The social and political context into which plans were to be implemented was now a vital consideration not only in terms of the public relations value of the proposals but also in terms of the political viability of proposed policy.

Chapters Eight and Nine demonstrated that the specific nature of, and determination of priorities in the Reforma Educativa can only be understood in the light of the political climate of the period. Policies demonstrate a concern to both help win more support from the middle classes and to improve the government's control of potential opposition groups. However, this does not imply that the economic approaches considered in the early chapters of this thesis are irrelevant to the analysis of education policy. Meeting manpower requirements of the economy and achieving greatest possible cost-effectiveness were shown to be crucial policy considerations. However, analysis of Mexican education policy suggested that these considerations have not been primary determinants of the size, shape and quality of the education system. They were given attention in so far as they were compatible with other policy aims.

It was shown that considerable emphasis was put on the expansion of educational provision, particularly at upper middle and higher levels. And the creation of new establishments such as the Colegio de Bachilleres and UAM meant that many of the beneficiaries of increased provision were inhabitants of the Federal District which was already advantaged in its educational provision. Expansion occurred in all subject areas, regardless of whether underemployment was already evident among those

who had pursued any particular specialisation. Thus 'private' demand appeared to determine the overall pattern of provision of places. Attempts to improve the efficiency of the higher education system which were compatible with such expansion included the introduction of new courses to meet specific manpower needs, e.g. in technological subjects, changes in the content and structure of courses and increased attention to teacher training.

But higher education policy cannot be understood in terms of a simple duality of meeting 'private' demands for education or pursuing cost-effectiveness. As noted the political climate of the late 1960's and early 1970's imposed not only a need to win more public support for the political system but also a need to better control opposition. The latter objective was reflected in organisational innovations both at the new university, UAM, and at Mexico's largest institution of higher education, UNAM. The division of a university into physically separate units was designed to limit the disruptive effects of student activity, and changes in administrative structures reduced the possibility of strong power blocs emerging outside the rector's control.

The Echeverria government's dealings with students' political activity demonstrated both its desire to gain support and its desire to improve control. For at the same time as a critical environment was encouraged and intervention in universities forsworn, the government was involved in finding new and less overt methods of control. Such 'unidentifiable' intervention was used generally to inhibit effective political activity on the part of students. It was used to more specific ends at UNAM to produce a climate critical of González Casanova, and favourable to the installation of a new rector more sympathetic to the government's objectives. The importance of controlling opposition and achieving policies sympathetic to government objectives was also

evident in the federal government's dealings with disputes in provincial universities. The federal government adhered to its policy of support for university autonomy and in so doing weakened the opposition of recalcitrant state governments.

Thus the major determinants of higher education policy in the Echeverría sexenio appeared to be political. An attempt was made to both improve support for the political system from middle class groups and to control opposition, which in 1968 had been catalysed by student politics. In the late 1960's middle class discontent had appeared to be a potential threat to the stability and legitimacy of the Mexican political system, but the strategy adopted to deal with this situation represented a break with the strategies previously adopted in relation to other workers. Rather than attempting to control political activity of white collar workers by means of formal incorporation into the political structure through union and party organisations greater emphasis was laid on improving support, and on specific measures of control, in crucial areas such as the universities.

Educational reform was a major element in the attempt to improve support. The provision of more education both met the immediate demands of those who saw educational facilities as lacking and encouraged a general belief in the possibility of meritocratically based advancement.

This orientation to acting in the interests of a particular social group was not an isolated instance of political concerns predominating in the formulation of education policy. We saw, for example, the way in which political concerns, if of a quite different nature, had influenced policy making from the beginnings of state provision of education. Thus one must question not only the degree of importance of economic considerations to education policies of 1970-76, but also the general relationship between economic and political factors in the formulation of education policy. The concerns of economists, such as the productivity of education and levels of manpower resources, are obviously relevant

to any society in which there are constraints on expenditure but where an important goal is promoting economic growth. However, we have also seen the importance of education in the political sphere, in its general role as apparent provider of "equal opportunities" and as a good demanded by different social groups to promote their own advancement. No precise equation can be provided to predict or explain the weight likely to be given to any particular consideration. This will vary between societies and over time according to the historical specificity of each situation. Any general conclusions could only emerge after a considerable number of detailed historical analyses had been undertaken. But this particular study does indicate the importance of the influence and aspirations of those social groups whose political and economic position is heavily dependent on educational qualifications in determining the shape which educational provision will take.

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