

Proseminar in

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A LONGITUDINAL STUDY OF  
THE LATIN AMERICAN UNIVERSITY,  
AND SOME RELATIONSHIPS WITH  
POLITICAL CHANGES.

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## Introduction.

The university has always played an important role in the life of Latin American countries. The universities are the centers of cultural events, the cribs of the political leaders, and the places where political, economical, and technical debates are located.

Several authors have written about the Latin American university. Bascuñan (1963), Benjamin (1968), Latapí (1961), Jaramillo (1972), Schiefelbein and McGinn (1974) have referred to some aspects of its historical development. Atcon (1966) and Pelczar (1972) have tried to prove the existence of a common Latin American model. Liebeman (1972) has described student characteristics. Frondizi (1971), Vasconi (1972), Ribeiro (1972) have been generally critical of the rôle of the University in Latin America.

However, there is not in the literature a complete historical overview of the Latin American university from its beginings<sup>h</sup> until today, an overview which associates changes in the university with changes in society.

This paper attempts to review the historical development of Latin American universities, describing their relationships with society, in terms of "model" or conceptions of the University. I will refer to the University model in general as exemplified by most of the institutions.

I will try to prove that:

- 1.- a relationship exists between historical events associated with political changes in Latin America and changes in the models adopted by universities in this region;
- 2.- models adopted by Latin American universities follow the requirements of their societies.

The paper is organized in six historical periods, each one associated with the adoption of a different model of the University (1), I have organized the analysis of each period as follows.

- Social context: definition of boundaries; main events and their effects on the society; actual philosophical or political ideas.

- Description of the University Model: academic and administrative structure; power generation and decision making; quality education; faculty members and teaching methods; student characteristics, curricula, research extension; budgeting and funding.

- Relationships between University and Society: the social role of the university; university and modernization; autonomy in terms of governmental influence of political groups.

This scheme of analysis is based on the one used in the CHEAR conference in 1974<sup>2</sup> (2). It has the advantage of simplicity and can be used for all the different periods.

## 1 THE COLONIAL PERIOD (1492-1810).

The Colonial period begins in 1492 with the arrival of the Spaniards in Latin America, and ends in 1810 with the annexation of Spain <sup>by</sup> to the Napoleonic Empire. The events that took place during this period influenced the models of development of higher education. Only few of these major events will be described and analysed below.

The Colonial period is characterized, broadly, by three major events:

- The destruction of the Indian empires, through constant warfare against the Indians
- The extension of the Spanish Empire in the Latin American continent, and
- The building of an institutional and ideological base capable of maintaining the Spanish Empire.

The Catholic Church, strongly associated with the crown, served as an ideological basis for the unity of the colonies. The Spanish Empire was gradually extended in the name of "faith". Even today the influence of the Church upon the Latin American societies, and thus upon higher education, is strong (3).

The first university, Universidad de Santo Tomás de Aquino, was founded in 1538 in the Dominican Republic (4). Subsequently the Spaniards created a dozen new

universities in Latin America ( see Table 1 ). All these universities were patterned after the Universidad de Salamanca in Spain (5). They had several predominant features in common:

- Faculties were almost completely independent units organized around fields of work. Four fields constituted the university core: Theology, Law, Medicine, and Arts or Philosophy ( the secondary schools were integrated into the university).

- The power generation was democratic. The governments of the universities were in the hands of the cloister, namely the professors, degree holders and representatives of the students. The administrative organ of the cloister was an elected committee denominated the " councillors", whose most important responsibility was to periodically elect the Rector ( or the President of the University). The Rector had jurisdiction over the academic and civil conduct of all members of the university.

During the XVIII century, the Latin American Universities tended to be mediocre educational institutions, Professors were clergy, judges and government officials. Sometimes, they were appointed by the Rector under the pressure of the authorities. For most of them teaching was more of an avocation than a vocation. They devoted only a few hours a week to professorial functions, spending most of the time on the social honor associated with that function.

Teachers were absolutely autocratic in class, teaching methods were predominantly syllogistic, deductive, and generally failed to motivate the students to innovate or to come to grips with the real world (8). The tutorial method was commonly used (9).

Students usually belonged to the elite. Sometimes formal restrictions were imposed upon blacks and mulattoes, prohibiting their access to higher education. The curricula were related to the professional needs of the colonies: Lawyers, Physicians and Priests. Moreover, it is easy to understand the importance given to theological studies, if we think how critical religion was for the Empire. Arts or philosophy were considered as a preparation for theology.

Although most professors had little inclination to "increase knowledge", some research was done especially by the end of this period. Research consisted in descriptive history, the drawing of geographical charts, and the description of plants and animals in the region.

In general, universities were inadequately financed. In the beginning, they were dependent on the largesse of royal patrons, and then later on states funds. Libraries and other university facilities were generally scarce and inadequate. The professors received minimal salaries.

The Spaniards created universities in the colo-

nies in order to prepare people to become good administrators serving the purposes of the Spanish crown. This was especially true in the case of lawyers who interpreted the Spanish law, and in that of the clergy who preached and extended the crown's religion .

The Church and the aristocracy were the primary agents who communicated the Spanish values both to the society and to the universities. Thus the dominant influence of a rigid and conservative Church within the universities caused them to adhere to the status quo, and become institutions resistant to new ideas and modernizing forces.

The royal and pontifical universities had a theoretical autonomy, but in actual practice this autonomy was often violated by the civil and church authorities as well as by prominent citizens. This intervention generally took the form of interference in the appointment of academic authorities, and pressure to grant degrees to some students who did not achieve satisfactory academic levels.

The University appears as a well organized and managed institution, where only the elite participated "democratically" in its benefits. They supported the status quo dependence on and loyalty to the crown's interests. They were strongly influenced and controlled by the Church authorities. Thus, the University was adopted perfectly to what the society in the Latin American colonies required during this period.

## 2 THE NAPOLEONIC PERIOD (1810 - 1918 )

This period is initiated with Spain's annexation to the Napoleonic Empire . This new event influenced the introduction to the existing universities in Latin America of a new organizational model. As will be seen, the period ends when the " Cordoba Movement " in Argentina restructured completely the scheme of the University of Cordoba in 1918.

When Spain and her colonies were annexed to the Napoleonic Empire, the Latin American colonies kept themselves loyal to the deposed Spanish King and actively demonstrated<sup>ed</sup> their anti-Napoleon feelings.

This was the period when liberal political ideas began to spread among Latin American intellectual and political leaders. Significant representatives of elite groups were influenced by these new ideas. This helped the shaping of new cultural values in Latin American societies. Moreover, the Catholic Church , which had been strongly associated with the European crowns, lost part of its traditional political power, when the European Kings were deposed.

The breaking off of the colonies from the "Metropolis " , caused by Napoleon, became useful to the progressive native leaders to bring about independence in their own countries.

During this period, the newly independent countries began to evolve as nations and to seek their self-determination . Wars among the Latin American countries started in this historical period , and by the end of the XVIII century a more or less definite geographical map of the



region was established.

The universities during this period changed from the traditional Spanish model to the Napoleonic model(10) Briefly the model's features were:

- The universities became professionally oriented institutions, designed to prepare students for specific careers (11) . Each, or similar careers constituted a faculty.

- The curricula were rigid and quite similar for the same career among different universities in the country. The faculties provided all courses required by their students.

- The isolation of each academic group resulted in the creation of feuds around different areas of knowledge . Faculties continued being independent among themselves but dependent upon the Rector.

An important characteristic of the Napoleonic model of education was that education became centralized around the State. This meant transfer of the Church's influence upon education to the State. Consequently , several governments created national universities in their countries( i.e. : Universidad de la Paz, Bolivia, 1829; Universidad Mayor de la República , Uruguay, 1833; Universidad de Chile , Chile, 1839; Colegio Nacional de la Capital, Paraguay, 1877.) The rectors of these non- sectarian universities were appointed by the Ministry of Education. The rectors were responsible <sup>for</sup> of appointing the deans, directors and others university authorities. The participation of students in decision-making was usually scarce or null.

By the end of this period as reaction against the State centralism in educational matters, the Catholic Church created additional universities of their own. This occurred especially in countries where the relationships between the State and the Church had deteriorated (i.e.: Universidad Católica de Chile, Chile, 1888.)

The tutorial relationship between professors and students was replaced by the "Catedra" (or chair). This means a long life tenure by a professor considered "sage" in this area of knowledge; the catedra provided him absolute freedom in teaching. The professors only saw the students in the class-rooms. The quality of teaching was not high, and tenure was sometimes more honorary than professional. (12)

The teaching method was the lecture, and class attendance was compulsory. There were detailed syllabuses for courses, sometimes approved by the Ministry of Education for the national universities. There seems to be a contradictory situation here. On one hand, professors had to follow the syllabus imposed by the Ministry of Education; on the other, university professors had academic freedom due to their tenureships. It is my assumption that university professors at that time, rather than comply with the Ministry's impositions, tended to follow their own designed curriculum.

The independence movement slightly influenced the social class composition in Latin America. Furthermore, because of the Napoleonic pyramidal structure of education, the university students continued to belong to the social

elite. They had to demonstrate their capabilities, passing general and specific exams; however, the certification of these capabilities appeared to be more important than the real acquisition of skills. At the end of the period some women were accepted as students at universities.

As already indicated, due to the influence of French philosophers, the positivism was introduced in the sciences. At the same time, theology lost its relative importance at universities. The study of these philosophers, and other liberal thinkers of the French revolution, gave the university an important role in the independence movement in Latin America.

After the independence struggles, the Napoleonic educational model, due to its centralization, contributed toward national unity, and provided the professional manpower required by the new governments. Thus, the university structure during the Napoleonic period fitted the needs of the Latin American society.

## THE UNIVERSITY OF CORDOBA (1918 - 1923 ).

In 1918 , in Cordoba, one of the Argentine universities, the students supported by blue collar workers asked for the democratization of the university, for its autonomy , and for student participation in the university government. These ideas contained in " El Manifiesto de Cordoba " were eventually accepted by the Argentine Government.

In 1923, a new Argentine government intervined with military force in the University of Cordoba and changed its prevailing structure.

It easier to understand the Cordoba movement if we consider some important events which occurred during that time . These were: The end of the World War I (1918 ); the Russian revolution, whereby a worker-supported government replaced the Czarist regime(1917) ; the political revolution in Mexico (1910 ) . Presumably, these circumstances had an influence in Latin America on the increase of socialist movements, and resulted in the gradual incorporation of the middle class to political life in several countries.

Student movements, similar to the one of Cordoba occurred also in other Latin American countries e.g.: in Perú in 1919; in Colombia in 1922; in Venezuela, and in México in 1928 . (13). Several manifestos had circulated earlier in Latin America, for instance: " El Plan Emancipador of the Rector of the Universidad de Buenos Aires, Argentina " , in 1811; the papers of the Rector of of the Universidad de Chile in 1894; and the " Ley Orgánica de la Universidad

de la República de Uruguay" in 1908. These papers confirmed the existence of a generalized concern about the inadequacy of the university to face the social problems of the region.

The movement of Córdoba implied reorganization of the university faculties in professional schools and departments, that is a team of professors around some areas of knowledge . Also there was a closer relationship among faculties

The main authorities were the Rector, the vice-rector ,and the general secretary. They had the responsibility of the general management of the university . There was a university council: "Consejo Superior", constituted by: the deans; representatives of teachers; representatives of students , and, sometimes, representatives of the Ministry of Education. The Consejo Superior established specific policies and had a control function . The university assembly was the "Claustro" constituted by professors , alumni delegates, and student representatives. The Claustro established the general policy of the university , and elected the Rector.

The individual faculty had the same decision making structure: the dean, the vice dean and the secretary with managerial functions; the faculty council who established the specific faculty policies, evaluation and control, and the faculty assembly with all professors and student representatives who elected the dean and established the general policy of the faculty.

The administrative structure mentioned above was followed by the national ( or State) universities, but the private- the most of them owned by the Catholic Church- continued the napoleonic structure.

In spite of the representative that the ministry of Education had in the Consejo Superior, the autonomy of the University from the government was one of the strong differences between the Córdoba model and the Napoleonic centralized Model. The autonomy was reflected in the election of authorities, appointment of professors and decisions about course programs and research. However, some authors (14) deny that autonomy. They base their arguments on the fact that the funds were provided and controlled by the State.

Teachers were appointed by open competition and were periodically evaluated. So I can assume that the quality of education was improved . Teaching went on through lectures, but it considered the introduction of class-discussion as a new method. Also, student attendance became optional .

In the State universities, the tuition was almost free, and the students came not only from the social elite, but also from the middle class families. Students were concerned about the social situation in their countries. They became powerful; and they used the power of their unions, not only for academic innovations, but for political goals; they also became internationally organized(15) . Acting together with blue collar workers, students pressured the governments of their countries to improve the economic

situation of workers and promote social change. The student participation in the administration of the university was another important innovation introduced by the Córdoba movement.

Because of the world events already indicated, the universities became increasingly concerned with the main problems in their societies. Social sciences were built up, and research about social problems in each country was emphasized.

Because of the inclusion of middle class people in the political life of the countries, the universities became the most important institution for social mobility in the region. This characteristic continues until today.

In addition, because of university autonomy from governments, <sup>and</sup> middle class students' aspirations to social change in society, the university became a center in which governments activities were criticized. Consequently the political party came into the university.

During this period, the changes promoted by the students within the universities, went further than, or were in contradiction with, changes occurring in society. For example, university students attempted to open up the university to working class; yet this initiative was resisted by the power elite. It is my assumption, that this new movement of university democratization was a reflection of an increasing political power crisis in several Latin American states. Also, it explains why this period was so short.

#### 4 THE POST CORDOBA PERIOD (1923-1962).

The movement of Cordoba finished in Argentina in 1923 when a new strong government intervened militarily in several Universities. Authoritarian governments started in several countries, (16) and in the thirteen, there were dictatorships in almost all Latin American countries. No great innovations have introduced in the universities in general. However, in 1962 a new Brazilian university model started.

Several important events during this period affected the Latin American society. They were: the Economic Crisis in USA, The Spanish civil war, The European Fascist dictatorships in Germany, Italy and Spain. The Second World War.

Because of the world economic crisis, the developed countries could not supply the necessary goods for the Latin American countries. Consequently the production of basic goods started in the region. The traditional, agricultural, social structure- almost feudal-was affected by industrialization, and urban centers with poor suburban neighborhoods started to grow. The urbanization implied an increasing of workers' organizations, and the authoritarian government tried to control them during a difficult economic situation.

During that period, the universities returned to the Napoleonic structure. The autonomy was violated by the authoritarian governments and they had a strong influence over the appointment of University authorities and profes-



sors. The councils and student participation were abolished.

The predominant teaching methods continued being lectures. The technical careers have expanded, and courses in economics, business, and accounting started, in order to serve the new industries.

Students belonged to the upper and middle class. Sometimes they were the only organized force against the dictatorships.

The universities became more oriented to serve the new industries and started to be an important factor of modernization of the countries. Thus, the professionalism of the Napoleonic model, fitted better the new social needs.

## 5 THE REFORM PERIOD ( 1962 - 1976 )

Toward the end of the fifties , there was a return to less repressive and more democratic regimes in Latin America. People became more aware of the under development and dependence of their countries. Under these circumstances, in 1962 a new university was created in Brazil(18) This university followed the structure of the Cordoba University . Many universities in the region adopted the Brazilian model ( denominated also the Reform Model. )

In 1964 the military took the power in Brazil, subsequently in other Latin American countries. In 1976 the military took the government in Argentina, which was the most recent coup d'etat. Under the military dictatorships a new model of university started.

The arrival of Fidel Castro to power in Cuba (1959) had a great impact over the region . As a result of this impact USA began <sup>the</sup> the Alliance for Progress, defined as..."an effort to create a social framework within which all of people of a nation can share in the benefits of prosperity, and participate in the process of growth (19).

Also Vatican II, and the Latin American meeting of bishops in Medellin (1966) - who were concerned about social justice - had a great influence in Latin American countries , where most people are Catholics.

This period could be associated with idealism and humanism in the world , probably as a result of the pressures imposed by industrially developed societies over individuals . Marcuse characterized this looking for human

values as follows: " The society should have to develop first of all the requirements of freedom for its members before it could be a free society (20).

In the Brazilian (or Reform ) model the basic academic unit was the Department . A group of departments could form: (a) a School , if they were oriented to the professions (i.e.: School of Administration ); or (b) an Institute, if they were oriented to the basic sciences (i.e.: Institute of Physics). A school or institute had a Director . The department provides teaching in its area for all students from different faculties of the university. Faculties were constituted by a group of similar schools or a group of institutes. The faculties were led by a Dean. In addition , the Centers were "temporal" departments created by the Rector in order to study an specific problem.

Like in Cordoba University, in each decision making level, there was a council with representatives of both professors and students . Also, there was the "Consejo Superior" and the "Claustro " (21) with similar constituents and similar functions as in the Cordoba model. The responsibility of the management of the university was given to: Rector, the vice-rector of academic affairs, the vice rector of administrative affairs and the general secretary. All these authorities and the representatives were elected. Sometimes the differences in opinion between the Rector and councils implied serious problems in the university administration.

The academic and administrative structure mentioned above avoid the differences between poor and rich faculties depending on the personal power of deans(22) In addition, almost

all universities started with planning offices which provided an accurate control and forecasting.

Teachers were usually selected from the best students, and the number of full time professors increased. They intended to start with more participative teaching methods, like group discussion, and Socratic methods. The integration of theory and practice was another goal. Also, practical experien<sup>ce</sup> was introduced in order to have more linkage with the national reality. In this sense, interesting workshops were considered, and later some interdisciplinary departments started.

Democratization of higher education was reflected in a considerable increase in enrollments (see table 2.). The democratic governments enlarged expenditures in higher education in order to enlarge their constituency. Therefore, the quality of education tended to decline. On the other hand, because the tuition was cheap or free<sup>and</sup>, because of the increase of socialist ideas, the workers families started to come to the university, but in small proportion. Also, some universities gave special access to workers enrollments, or occasionally, started with vocational programs for blue collar workers.

Because of the concern with individualized learning, and because of the USA influence, the university started with flexible curricula<sup>and</sup> semester courses. The career programs had core courses and optional courses.

Teaching, research and extension was initially considered as inseparable functions. In practice this did not

occur; a lot of courses continued only with lectures. But the increase of full time teachers implied an increase in research, especially applied research. That expansion was greater in social sciences. The extension was oriented to develop or to preserve the cultural values of the nation. This extension was made through the university theater, orchestra, editorial and sometimes by mass media controlled by the university.

In spite of the increase of higher education expenditures, funds were scarce, because of increased students enrollments and the expansion of the universities. Funds were provided by the State (most of the private universities included.)

The Latin American University continued being an institution contributing toward the social mobility of middle class people(23), who put pressure on the governments in order to get more education and a better future for their families . In other countries, like in Venezuela, the enlarged enrollments had been considered by the governments in order to avoid unemployment. Also , in spite of some efforts done in order to give more integral education, most of universities continued being professionally oriented, creating overeducated people in some careers (24).

The present Reform established the concept of "compromise" in addition of the Cordoba's concept of autonomy. That is to create a University which served especially

the postponed people of their countries (25). As a result the University began to criticize itself, other public institution and the class-structured society in their countries. Thus, especially supported by the students, the University oriented its action around the underdevelopment problems, and became the center where the social economic and political issues of the nation were debated .

Therefore, the political groups came into the universities in order to criticize or support the governments. The political life in the universities became a mirror of the external political struggles in a pluralistic society. Because of the autonomy , the university campuses were not violated by the police, and occasionally they served as a shelter for student guerrilleros . Sometimes, strikes of students , supporting blue collar worker requirements, created serious difficulties for the universities to finish the academic calendar on time. In this sense, the university became absolutely autonomous from the governments, but dependent upon political groups.

The democratization and the participation of professors and students within the universities -which is the basis of the Brazilian model- fitted accurately with social trends in Latin American countries at this period. These trends were strongly influenced by the Alliance for Progress and the Catholic Church recommendations. On the other hand the increase of freshmen enrollments (26) is probably an important factor of modernization when the countries were switching from a basic to a more complex industrial structure. In addition, the political crisis at the university was coherent with the power crisis in their

countries . Therefore the change in the university model followed changes in societies.

## 6 THE UNIVERSITY GUARDED BY THE MILITARY. ( 1976 - )

The economic crisis in the world , especially inflation derived from the energy crisis, affected the Latin American countries. On the other hand, the Alliance for Progress did not represent a definite solution for underdevelopment(27), it neither avoided the increase of communism nor the negative feelings about the USA. (28)

The reforms derived from the Alliance sometimes impelled the poor to go further, and they organized themselves to obtain these reforms, which implied serious difficulties among: the entrepreneurs of the modern sector of the economy , who asked for more warranties ; the land owners deprived of their farms , because of the land reform; and, the blue collar workers , aware about their life conditions ,asked for higher salaries . Thus the democratic governments became inadequate to control the situation.

As a result , in almost every Latin American country, the military took the power. The latest was Argentina in 1976. The military argued that it was motivated by: national security reasons, the politization of every institution, the lack of real power of the democratic governments, and the ideal of saving the countries from falling into communism. All the military governments followed the National Security theory for politics, and each (except the Peruvian ) followed the theory of the Modern Sector of economic development(29).

One of the first actions of the military in several countries was to appoint a high rank military official



as Rector of universities (include the privates) . The university returned to the archaic Napoleonic model with a centralized and hierarchical structure based on the notion of order and discipline as in the army. The universities became more directly dependent of the Ministry of Education. Sometimes a National University System was created ( i. e. : Universidad Boliviana or CONUP in Peru .) in other cases the National Board of Higher Education, constituted by the rectors, became more decision making oriented (i.e. : Chile )

The powerful rectors were absolutely responsible for all the decisions. They abolished the authority of councils and the participation of professors and students on decision making. Also the rectors appointed all authorities under their command, eliminating every elections.

As a result of the political problems or the budget restrictions, an important retrenchment and a resignation of many professors resulted . I can conclude that teaching and research deteriorated, especially in social sciences , because marxian theories were forbidden.

Autoritarianism made difficult students participation, and lecture again became the most common teaching method.

The model of development adopted by the military implied drastic reduction of the State expenditures; therefore, the universities- almost all dependent on the State funds- had economic troubles. As a result , the tuition increased , making the university accesible only to upper middle class and rich families. The enrollment

continued increasing in small rate or decreased (30). On the other hand, a self financed campaign started in the cities. They begun to do only profitable cultural events and they increased the sponsored research. The economic efficiency became a goal, sometimes only confused with the decreasing of the operation costs,

As a result of orientation to the modern sector of the economy, the universities were adequate to provide professionalism mainly in technical areas and the research way preferably oriented to serve the modern sector industries.

As in the non-pluralistic model (31) the University was an institution of the state strongly compromised with it. Almost all authorities were appointed with political criteria. Thus the University plays an intensive role of political support and legitimation of the non-democratic governments. The control imposed by the Military was very strong. For instance most of teachers, administrative staff and students with ideas against the government were fired and occasionally put in jail. Under these conditions no-opposition to the government was possible, except the clandestine activity of the political groups. In addition, in some countries the secret police infiltrated among students and faculty professors, and checked carefully all university members. So, the apparent political peace and quietness was another characteristic of this period.

The Theory of the National Security of the Government, and nationalism supported by some groups was reflected on the exaltation of National Heroes and traditions the introduction of courses of National Security and the celebration of patriotic acts. This nationalism replaced the concern about the national social problems established during the Reform.

Therefore, the model of the University followed the changes in the structure of society ( class society) pressed by the Military governments, and oriented to the modern sector of the economy. The authoritarian and controlled peace and quiet were characteristics of the vigilance of a university.

## 7.- A BRIEF LOOK AT THE FUTURE.

Based on the cyclical experience of this century, and because the pressure of *the USA* on Human rights, perhaps, we would expect that right wing or centralist and more democratic governments, would follow the Military in this region. The new governments would probably have a military influence, and leftist ideas would be forbidden.

During the next five or ten years the University might face several apparent dichotomous alternatives which are:

- Massive vs Personal Learning.
- Participation vs Authoritarianism
- Democracy vs Elitism
- Autonomy vs Dependence
- Cheaper vs Well Financed Education
- Political Unrest vs Political Calm
- Professionally Oriented Education vs Science Oriented Education
- Large Size vs More Manageable Universities
- Planning following country requirements vs Planning according to students' personal requirements.
- Greater Especialization vs General or Liberal Arts training.

Some of these dichotomies were analyzed in the Latin American and Caribbeans Conference for Post-secondary Education ( LACFEP ), which took place in Caracas in November

1976 (32), initiating two important trends: first, the consideration of the post-secondary education instead of the University, because the professional oriented University was the exclusive alternative of a third level of Education in several Latin American countries. Second, the consideration of new experiences in the post secondary level.

Some of these interesting innovations in L.A. were:

- The University of Peru, which introduced an intermediate post-secondary level ( similar as the Kenian model) totally changing the educational system.
- The Simon Rodriguez University and the Institutos Tecnicos of Mexico, which introduced some ideas of personalized instruction
- The increasing of the Educational Technology in some Brazilian Universities as a result of the country's accelerated industrial growth
- The Open University of Venezuela oriented to solving the insufficient supply of intermediate level technicians
- The initiation of TV programs at the post secondary level in Chile.

The above alternatives and education innovations, tried to make some of these dichotomous alternatives compatible. Probably the North American experiences (i.e.: Antioch College, the SUN project) suggest additional ideas for the future changes. In addition, the North American Model of a more general education at the co-

llege level with further specialization at the University level probably, will have increasing influence on the Latin American model.

Finally, as is clear in this historical overview the future of the Latin American University will be the product of external situations and the model of development adopted by different countries.

## FINAL COMMENTS

The models and the periods mentioned above had been practically followed by universities <sup>in</sup> all the Latin American countries without much difference between the state and private ones. However the boundaries of these periods differ from one country to another, as it was displayed with some specific examples in the paper.

It is impossible to give in this paper a complete description of Latin American societies during 500 years and establish their relationships with the University. For this reason, I only enumerated the relevant world events, or ideas, which influenced political changes in the region and a brief description of some relevant aspects of these political changes in the University models.

The first of these models started with the Spaniards' arrival and the settlers of the Spanish Empire in the Latin American Colonies. Three centuries later some world events like: the French Revolution; The American Independence; and the increase of the liberal ideas against the Catholics, influenced political changes in Latin America. Thus, when Napoleon annexed the Spanish Empire, a new political structure started in Latin American colonies which began as independent countries. This change in the political structure implied a change in the model of the

universities: the " Napoleonic model " .

At the beginning of this century , World War I and the Russian Revolution influenced changes in the political structure of Latin American countries , which moved toward more participative societies, incorporating middle class into power. This change in the political structure implied a change in the university model: the "Cordoba model" started.

The economic crisis in the world and the establishment of European nationalist dictatorships was simultaneous with the increase of authoritarian governments in the earlier thirties in the Latin American countries. This change in the political structure was followed by a change in the university model: the "Post Cordoba Model". Some authors establish another step in the fifties. However, there was no substantial change in the universities until the early sixties.

The increase of humanism after World War II, and specifically the Alliance for Progress in response to the Cuban Revolution implied, again, a more participative and democratic political structure in the Latin American societies. This change in the political structure was followed by a new model of university in the region : the "Reform model " .

A few years later a new economic world crisis took place . The democratic and participative governments were in trouble because of struggles among social group with different economic interests. Then, the military took power in almost all Latin American countries. The change in the political structure implied change in the university model: the "military guarded university".



Following the six periods I can conclude that external events influenced political changes in Latin America, and consequently the university changed its model.

Also it is interesting to examine the relationship between the university models and the society's needs for higher education.

During the colonial period, the Spanish Empire extended and then remained within a status quo. The model of university was centered on theology, because faith and the Catholic Church was its base of support. Moreover the university was elitist, being democratic structured, but only for this elite. Also the university provided clergies and lawyers who were needed to administer the colonies. Thus, the university followed requirements of the colonial society.

When the colonies became independent countries, the governments had to control and to centralize education in order to serve as a base for national unity. The Napoleonic model fitted with these characteristics. The universities became dependent from the governments, and they were professionally oriented in order to serve the new nation requirements. The society remained elitist, so <sup>did</sup> the university

The University of Cordoba model, which was non-elitist, and more participative fitted with the inclusion of middle class people in the political life in their countries. In this period, universities became the base for social mobility.

The model of university under the authoritarian governments in the Post Cordoba period turned <sup>out</sup> to be quite similar to the Napoleonic structure. The model follows the

requirements of more centralization and control by the governments. In addition, the professional oriented model, fitted with the requirements of new industries in Latin America, and the university became a factor of modernization. Thus, during this period the university model followed the requirements of society.

During the Reform period, the tendency toward a more equalitarian society was associated with the increase of enrollments in higher education, and a return to a more democratic and participative model in the university. The concern of personalized instruction in the university fitted with humanism and the importance given to individuals in society. The autonomy of the university from the government served political groups who wanted social changes in their societies. The compromise of the university with the national environment is associated with the increase of awareness of people about their underdevelopment. Therefore, the Reform model of the university followed the requirements of pluralistic and democratic societies.

The military model of the university follows the needs of authoritarian governments which use the university to support themselves. The model is similar to a Napoleonic one, that is controlled and centralized. The university became elitist and oriented to support the modern sector entrepreneurs as required of their societies.

Therefore I can conclude these six models adopted by the Latin American universities followed the requirements of their societies during these periods.

Also it is interesting to observe that , authoritarian periods were followed by democratic ones. Because of this observation, I could assume that the future model of university in Latin America would be more democratic and participative. Also, because of the improvement in learning and teaching approaches in higher education - like open education, <sup>and</sup> C.L.S.- I could conclude that the model would incorporate some of these approaches.

## FOOTNOTES

- (1) I did not include in the analysis the Cuban University, since it represents a a - typical case in the development of the Latin American University in the last two decads.
- (2) See McGinn and Tierney (1974)
- (3) For instance ins Argentina and Colombia ,there are no separation between the Church and the State.
- (4) Benjamin (1965) pl5. However there were some Higher Education Institutions in the Indian Empires when the Spaniards arrived. The two more important were the Eztec Calmercac from Mexico and the Inca Yacchaconno from Peru. Also, when the Spaniards arrived they created the "Colegio de Cacique " in order to socialize and educate the Indians leaders in the Catholic religion.
- (5) The Salamanca University in Spain followed the Bolognia model or Universitas Scholarium, which was founded in the XII century by the students organized themselves in order to look for "masters" and learn from them. See Tunnerman (1971)
- (6) Liebman et al.(1972) p 2
- (7) Mac Lean (1956)
- (8) Liebman op cit p3
- (9) Quezada(1918)
- (10) The Napoleonic educational structure was a pyramid, with elementary education in the bottom, secondary education in the middle, and the university at the top. Each educational level was oriented to the next highest one. That structure was coherent and centralized by the government

throughout the country. Thus, all the ~~programs~~ <sup>Uniform</sup> were established by the Ministry of Education, with unitarian criteria. So all French students had to learn the samethings following the same steps in the same period of time. Also the univer-  
sity had some control over the others educational levels.

(11) This career-oriented <sup>model,</sup> taken from the French model, was really different from the North American model, where the universities were more oriented to liberal arts. As in the Spanish colonial period.

(12) For instance in 1833, the University of Mexico was closed by the government because <sup>it</sup> was considered useless and noxious.

(13) Some of these movements took place in 1919 in the University of San Marcos , Peru, in Venezuela and Mexico in 1928 and in 1922 in Colombia. Also, it is interesting to remark that the first Brasilian universty started operations in 1920 and the University of Mexico was closed until 1910.

(14) For instance Atcon (1966)

(15) The first International Congress of Latin American students was held in Montevideo , Uruguay in 1909.

(16) For instance Peru had a coup d' etat in 1928; Venezuela had a dictatorship until 1936, and few years later a new one until 1957; Bolivia had a political revolution in 1930 and continue a long time with dictatorships; Uru-  
guay in 1934 and Chile in 1932 had dictatorships for a few months. ;Argentina had a dictatorship from 1945.

(17) For instance in Peru the university was closed from 1932 to 1935.

- (18) See Ribeiro 1972. Also there were some similar previous experiences like the University of Nicaragua, see Tunnerman (1971)
- (19) See O.A.S. (1961)
- (20) Translated from Marcuse (1969) p 20
- (21) See the Cordoba period p 12
- (22) See Atcon(1966) and Jaramillo (1971)
- (23) In Latin America about a 5% of student enrollments were from blue collar worker families, not only because the differences in salaries between intellectual and manual workers, but because of cultural reasons . However this figure is not very different from European countries.
- (24) See Schiefelbein (1970)
- (25) It is interesting to remark that some French students expressed almost the same ideas during a parallel movement in the University of Paris.
- (26) This happened in spite of the fact that only a few students finished their careers, for instance: 10.6% in the University of Chile; 19.2% in the University of Rio de Janeiro; 5% in the National University of Uruguay; 8.2% in the Central University of Venezuela. See Ribeiro (1972)
- (27) See in Andre Gunther Frank Chap II #8 the letter from the Ministry of Economy of Brazil to the Ambassador of USA. before the Brazilian coup d'Etat.
- (28) For instance, in the later 60's Rockefeller , the USA. Secretary of State could not visit several Latin American

countries because of the public demonstration against the States. Then , he recommended Military Governments for these countries.

(29) That means concentrating resources under the management of entrepreneurs of the modern sector of the economy , who would save, and would use these savings to create employment, with low salaries , given the unlimited labor force of the underdeveloped countries. In addition, the government would reduce its expenditures . See Lewis (1965).

(30) See UNESCO, Statistical yearbook 1975

(31) See Vasconi (1974)

(32) See papers submitted to the Conferencia Latinoamericana y del Caribe para la Educacion Postsecundaria, Caracas Venezuela november 1976.

TABLE No 1.

Some of the first Universities in the Latin America countries

Year	Total	Name	Country (the first)
1538	1	Sto Tomas de Aquino	Dominic. Rep.
1551	3	Mexico	Mexico
		Sm. Marcos	Peru
1563	-	Nacional	Colombia
1613	7	Cordoba	Argentina
1622	-	Sn. Gregorio Magno	Ecuador
1624	-	Sn Fco Javier de Chequisaca	Bolivia
1676	-	Sn Carlos	Guatemala
1738	13	Sn Felipe	Chile
1900	36	-	-
1920	-		Brasil
1950	105	-	-
1976	280	-	-

Source: 1) R. King N. Mc Ginn et al, Nueve Universidades Mexicanas, Un Analisis De Su Crecimiento Y Desarrollo. Bib de la Ed. Sup. Mexico 1972 p3

2) H. Bendiain, La Educacion Superior en las Republicas Americanas Mc Graw Hill Espana 1974.

3) Darcy Ribeiro. La Universidad Latinoamericana Ed. Universitaria Santiago 1972.

4) U.C.L.A. Statistical Abstract of Latin America U.C.L.A. Los Angeles 1976



TABLE No 2.

Population, Number of Universities and Number of University Students per year by country

Country	Populations in Millions	No of Univ.	No of students in thouthans		
			1965	1970	1973
Argentina	20,050	(38)	222,2	236,5	369,2
Barbados	0,238	(1)	0,2	0,5	0,9
Bolivia	5,470	(9)	13,9	21,7	29,0
Brasil	93,139	(63)	155,8	430,5	785,1
Chile	10,405	(8)	43,6	78,4	127,2
Colombia	21,069	(36)	44,4	85,6	124,2
Costa Rica	1,873	(1)	5,8	12,9	16,9
Cuba	8,860	(4)	20,6	26,3	55,4
Dominic.Rep.	4,305	(4)	6,6	23,1	35,3
Ecuador	6,500	(15)	13,7	38,6	45,0*
El Salvador	3,864	(2)	3,8	9,1	18,6
Guatemala	5,540	(4)	8,4	15,6	21,9
Haiti	5,073	(1)	1,6	1,4	1,6*
Honduras	2,752	(1)	2,1	4,0	4,5*
Jamaica	1,997	(1)	1,9	2,8	3,6
Mexico	56,247	(44)	-	-	369,3
Nicaragua	2,048	(2)	3,0	8,6	10,0
Panama	1,570	(2)	7,1	8,1	21,7
Paraguay	2,500	(2)	5,8	7,8	12,0
Peru	13,572	(33)	64,5	105,6	149,2
Pto. Rico	2,987	(4)	40,3	59,1	79,4
T. Tobago	1,048	(1)	0,9	1,6	2,1
Uruguay	3,028	(1)	16,9	-	26,3
Venezuela	11.993	(10)	43.5	95.5	148.5

Notes for the table No 2.

\* Implies estimate values.

- Sources: 1) UCLA: LATIN AMERICAN STATISTICS, Los Angeles 1975.
- 2) UNESCO: STATICS YEARBOOK 1975.
- 3) Europa Publication Lim. The World Learning, Stales press, London 1975.

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I FOUR THEORIES FOR DEVELOPMENT.

EDUCATION AND  
DEVELOPMENT

SOME ASPECTS OF DEVELOPMENT  
AND EDUCATION

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HGSE

FALL 1977.

## FORWARD

Is very difficult to summarize in a paper the think of a lot of authors who spend almost all their lives studying underdevelopment, and of course, elaborate an own theory during a half course. Thus when I write this paper I am not thinking in an publishable study but in a work to serve myself to understanding better underdevelopment and its consequences, in order to be more effective in my future job. I wrote it as educator and not as economist.

In this sense I started the second part with a typical case which has served me to understand, and to be more realistic in solutions. Also in this part I have been optimistic in relation with education, but these is the role that I must assume.

I really have a lot of ideas which can help " Pedro Gutierrez" the man of my case.

The paper is focused more in Chile because I think that each region, and opportunity, has its own alternative for development. Usually countries limited to copy other solutions instead of to look for themselves.

The paper is organized in two parts. In the first I summarized the four theories covered by the course. In the second part I start by a case, following by my goals. Then an elaboration of a personal approach and finally some comments about education and Health..



## I THE MODERN SECTOR THEORY

### A- Capital Formation and Savings

This Theory emphasises the economic aspects of underdevelopment and underemployment. Thus Hirschman (1) establishes that the causes of underdevelopment are the capital, the entrepreneurial and managerial abilities. Also the insufficient of savings is the most important factor of holding back development (2). On the other hand Hirschman establishes that the problem in underdeveloped countries is structural because underemployment occurs with other unutilized factors of production (3).

Lewis (4) emphasises even more the unemployment. He establish that an unlimited supply of labour exist in those countries where population is so large relatively to capital and natural resources, that there are large sectors of the economy where marginal productivity of labour is negligible zero or even negative.

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(1) Hirschman, A.O. The Strategy of Economic Development, New Haven: Yale University Press, 1972 p. 1.

(2) Hirschman A.O. Op. Cit p. 3.

(3) Hirschman A.O. Op. Cit p. 6.

(4) Lewis, Arthur "Economic Development with Unlimeted supplies of Labor in Agarwala, A.N. and Singh, S.P. (eds) The Economics of Underdevelopment N. York Oxford University Press 1976 p. 402.

Following the law of demand supply and considering the price of the labor as a wage at the subsistence level, so long as the supply of labor at this price exceeds the demand, it is possible to say that the supply of labor is unlimited. The subsistence sector of the economy is continued mainly by farmers, casuals, petty traders retainers, women in the household. Under these circumstances the Capitalist sector of the economy can grow in pace with the rate of unskilled labor. The only bottlenecks are the capital and the natural resources and when development starts the necessity of technicians this an additional bottleneck.

The solution that this theory assumes is that the Capitalists in the modern sector reinvest the surplus obtained in the economic process, increasing the fixed capital and pushing the marginal product of labor to a higher level. Thus the subsistence sector of the economy becomes integrated into the Capitalist modern sector (5).

This assumption denies the Marxian assumption which establishes that the capitalists have the passion for accumulating Capital. This assumption also denies the classical assumption in Ricardo (6) in the sense that Capitalist

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(5) Lewis, Arthur in Agarwala A.N. and Singh S.P. op cit. p. 412.

(6) Lewis, Arthur in Agarwala A M and Singh op cit p. 414

consume instead of saving.

We can observe that the Modern Sector theory is based on the " well intentioned " capitalists of the Modern sector who take the risk to invest in these circumstances(7). However, my own experience confirms more both the Ricardian and Marxian theories. For instance in Chile during the Jorge Alessandri Government (1958-1964) and especially under the military Junta (1973) the entrepreneurs in the modern sector invested and are investing following the 'maximize profits' criterion with the minimum possible risk. This means they care mostly for accumulating capital outside the country or in investing commercial transaction that are highly profitable in the short run. Also they consume a lot of imported luxury goods. The consequences of this saving or consume means the unemployment of an important sector of the population (8) .

Though Lewis refers to the modern sector of the economy as a group of " advanced people " we can understand that he doesn't completely close the possibility for this " advanced people " to be in the government. The alternative between public and private investment is discussed too. He establishes that the most important decision to be made is to invest in the more productive sectors of the economy. However he recognizes that there are non-typical patterns

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(7) W.W. Rostow, The take off into self sustained growth in Agarwala AN and Singh, op cit p. 177.

(8) Official records in Chile show about 16% of unemployed. Unofficial records suggest up to 50% for some sectors of the labor force (i.e. construction workers.)

of capital investment to which any particular country should be expected to conform (9). Thus, when the capital is invested in a public utility but also in the rest of economy. Hirschman adds that, in spite of the difficulties, it is necessary to look for the optimum point investing in social overhead capital (SOC), and the Direct productive activities (DPA) ratio (10).

Lewis urges the government to create public financial institutions, what springs from the desire to make finance available to groups who have especial difficulty in raising money from the private lenders (11).

Also Ragnar Nurske establishes for the governments the necessity of a policy regarding domestic savings and luxury imports restriction in order to increase the rate of capital formation (12). The amount of investments or savings (13) recommended by Lewis is about 12% of the National Income (14).

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(9) Lewis Arthur The Theory of Economic Growth R. Irwin Inc. Homewood, Illinois 1955 p 213.

(10) Hirschman A.O op cit p. 96.

(11) Lewis Arthur, op cit 269.

(12) Nurske Ragnar. Problems of Capital Formation in Underdeveloped countries. Oxford University Press N. York 1953 p. 116.

(13) Savings plus taxes is equal to Investment plus Government expenditures Derburgand Mc Dougal, Macroeconomics Mc Grow Hill, N. York 1976. but for the model we can consider them

(14) Equal. Chip Myers class notes October 1977. op cit

(14) Lewis Arthur, The Theory of Economic Growth op cit p. 274.

We can define the general growth of a country as:

$$g = \frac{I}{K \cdot Q}$$

where

- g general growth
- I National Investment
- Q National out put
- K Capital

and an usual value for growth is 0,9 /3, that is g 0.3 in the underdeveloped countries.

Thus the problem is that the ratio is smaller in the underdeveloped than in the developed countries and consequently the investment is less productive in terms of the National out put. This situation must be considered in this Theory.

Hirschman establishes that the investment are composed of two parts: first the " induce " portion resulting from recent increases in demand or somewhat more realistically from past profits, and secondly " autonomous" investment which is described as principally influenced by new inventions expectation public overhead investment etc. (15).

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(15) Hirschman op cit p. 104

Another source of capital formation that Lewis mentions is the net increase in the supply of money, which permits to control inflation (16)

The extra money put in circulation will lead to increases in prices along with a forced distribution of consumption. Consumer goods will be redistributed to the newly employed workers when its output is held constant.

The raises in prices on consumption goods will represent taxes for the small incomes dropping them close to the subsistence. That the outputs of inflation will go to the people with higher incomes who is supposed to invest them better.

We can mention the ethical problems derivative from this process.

Because capital is formed by a small number of people who profit from the existence of a vast number of individuals living at the subsistence level ( or that are simply unemployed ) usually the majority of the population.

Lewis also recognizes the importance of foreign aid, and that almost all the developed states have had the assistance of foreign finance to supplement its own meagre savings(17) . He establishes as well that the greater the

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(16) Lewis Arthur, op cit 225

(17). Lewis Arthur, op cit 224.

the possibilities of specialization. In this sense he considers important the training of handicraft workers in order to become more productive (18)

In summary, this theory is based on the confidence in the modern sector entrepreneurs, who would use the unlimited supply of labor to produce and save and to make profitable investment, this people has the ability to optimize the use of National resources. The government must support this entrepreneurs with public financial institutions and controlling the amount of circulating money with taxes and inflation in order to put the capital in the hands of the best ones. Foreign aid use to help in the process. The modern sector which usually is different to the traditional one will increase and will eventually involve all the country.

#### B- Social Mobilization

Social mobilization, following Lewis is produced by the gradual slow incorporation of those who are in the subsistence sector into the modern sector of the economy (19)

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(18) Lewis Arthur op cit p 270.

(19) Lewis, Arthur in Agarwala and Singh op cit p. 412.

This implies in the long run full employment, higher incomes access to higher levels of consumption and greater share of the national income.

On the other hand, the capitalists grow, if they use their capital to build up more capital.

Thus becomes the emergence of the capitalist class, that is to say, a group of men who think in terms of reinvesting profits productively. The dominant classes in a pre-capitalist economy (the land-lords, traders, money-lenders, priests, soldiers, princes) do not normally think in these terms (20). It is interesting to mention the case of Japan where there was a swift transformation of land-owners and nobles into progressive capitalists.

Economic growth creates or expands the middle class mainly by recruitment from below (21)

Another interesting aspect of social mobility in this theory is associated with the path of the agriculture sector to industrial sector (22). Also the incorporation of women in the household into productive activities (23)

The population increased especially in the first period (24). This would imply changes in the social struc-

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(20) Lewis Arthur, op cit p. 237

(21) Lewis Arthur op cit p.88

(22) Lewis Arthur op cit p. 192

(23) Lewis Arthur in Agarwala and Singh p 404

(24) Lewis Arthur in Agarwala and Singh p 405.



ture because this increasing is produced mainly in the sector who has entered in the modern sector. So the modern sector is the most expanded.

C- Coordination and Control.

The activity of entrepreneurs seems to be given the highest importance by Lewis in the coordination and control of the process of development. This assertion may be argued against only to say that this same group may control the government as well. Lewis adds that the economic growth requires that men should be free to hire resources and enter trades (26). Moreover organization becomes necessary in order to have a co-ordinated specialization in productive activities (27)

But this freedom is solely apparent because of the few people involved in these countries. The majority of the other people must be under the control of the government becomes an instrument of the modern sector.

Therefore the government ought to the political security of capital investments (28). Also the law of pro-

- 
- (25) Hirschman A.O. op cit p.54.  
(26) Lewis Arthur op cit p. 90.  
(27) Lewis Arthur op cit p. 74.  
(28) Lewis Arthur op cit p. 234.

perty is one of the necessary conditions for capital formation (29).

In the financial aspect the Government plays an important rôle in the regulation of prices and of inflation. Also the Government should create the institutions which permit the investors not to use their own savings.

Summarizing, Lewis distinguishes nine categories of functions for the government, as follows; (30)

- maintaining public services
- influencing attitudes
- shaping economic institutions
- influencing the use of resources
- influencing the distribution of income
- controlling the quantity of money
- controlling fluctuations
- ensuring full employment
- influencing the level of investment.

D- Attitude Change.

Under this theory the most important changes in attitudes are the will to economize, and the attitude to work.

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(29) Lewis Arthur op cit p. 60.  
(30) Lewis Arthur op cit p. 376.

In this sense , it is interesting to note that the output usually grows not because people are working harder but because they are working more productively, using more Knowledge or more capital. Also they are taking more favourable opportunities for specialization, for trade and for investment (31) . Moreover Hirschman adds that is necessary an attitude to the " big push" in order to start at once at the same time a large number of new industries (32).

The situation requieres a " Spirit of Adventure" that is the willingness to take risks and the Willingness to move from one place to another as usually the occasion demands (33). Also it is necessary a competitive spirit which runs through all human activities (34)

Appart from government action, a strong sentiment of national cohesion may be helpful to economic development. (35). In addition individuals will think of economic change as something that must affect equally all members of the groups with which they identified themselves. The idea of changes then transforms the image of a stationary society where every body plays his assigned role into one of a progressive or dynamic society with the individuals remaining

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(31) Lewis Arthur op cit p. 39.

(32) Hirschman op cit p. 51.

(33) Lewis The Theory of Economic Growth op cit p. 43.

(34) Lewis The Theory of Economic Growth op cit p. 46.

(35) Lewis Arthur op cit p. 79.

at their previous (36) places in relation to the group (36). Also individuals conceives changes as something that is open to him essentially at the expense of the rest of society (37).

The problem of incentive and authority are common to all large scale organizations and implies any new attitude. In this sense cooperativism is a good alternative which Lewis discusses for the future (38)

The change from the traditional stage to modernism and the change from the subsistence agriculture to the modern industrial sector with more technology is very important (39) Consequently knowledge in the next steps is important too (40). Moreover a change in attitudes toward new ideas, will be accepted more rapidly in those societies where people is used to vary of opinion or to change , and are therefore pragmatic in their outlook (41).

#### E- Dependency

The relation between dependency and development are established by Lewis in a more economic sense , He says that the cause of imperialism are not entirely unrelated to

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- (36) Hirschman op cit p. 12
  - (37) Hirschman op cit p. 23
  - (38) Lewis Arthur op cit p. 66
  - (39) Lewis Arthur op cit p. 92
  - (40) Lewis Arthur op cit p. 174.
  - (41) Lewis Arthur op cit p.178

the stage of economic growth (42). The alternative remedies are then: migration, because increase the level of developed population; or developing and export trade in manufactures; or leveying tribute upon some other country (43).

On the other hand the foreing investor was generally attracted not by opportunities in the underdeveloped countries' domestic market, but rather by expectation of higher profits from its exports receipts. According to the traditional theory of foreing investment, when the capital flows from areas where it is relatively abundant and has a low marginal product, to areas where it is relatively scarce and has a high marginal product, the flow contribute to the achievement of an optimum distribution of resources in the world economy (44). The first part of this assumption related with the invest justified the Lewis words in the sense that almost always the foreing capital has been involved in the delopment of the underdeveloped countries (45). But the consequently world redistribution of capital real-ly never occurs.

In relation with the international trade Lewis (46) in 1950 establised that it is impossible to prophesy

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(42) Lewis Arthur op cit p.365.

(43) Lewis Arthur op cit p.365.

(44) Gerald M. Meier, in Agarwala and Singh op cit p.67

(45) Lewis Arthur op cit p. 224.

(46) Lewis Arthur op cit p. 357

what will happen to world trade. Since some countries of the world can not feed themselves, the division of the world into net importers of primary products must continue, and must even intensify as some of the over populated countries develop and come on the market in a big way ( India China). These countries can be expected as their industry grows to generate an ever increasing demand for food and raw materials. It will be largely a question of relative prices and supplies that will determine which other countries are net importers or net exporters (44). It seems to me that Andre Gunther Frank would give him latter in the next theory of development an answer.

## 2- THE POLITICAL - ECONOMIC THEORY

### A- Capital Formation and Savings

Capital formation in this theory will result from the mobilization of the country's potential economic surplus indeed a first decisive step to be done. This means the expropriation of foreign and domestic capital including large states in the country side and, as a consequence, the elimination of the drain of current income spent in unproductive activities and luxurious consumption goods. However; this may bring up problems in the allocation of idle manpower resulting from the transition in the path from capitalism to socialism.

Celso Furtado specifies that the surplus results from the added value of "Labour" which is an abstract construction equivalent along the world (47).

One of the most important concepts is that of surplus, defined by Furtado (48) as :

$$S = ( C+V ) - M$$

where:

S: surplus

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(47) Furtado Celso. Development and Underdevelopment Berkeley University of California Press 1971 p 22.

(48) Furtado Celso op cit p. 20.

- C Constant capital ( comprises the depreciation of equipment considered)
- V Variable capital ( or wages paid)
- M Price of Market.

The allocation of economic surplus resulting from the social control over production is determined and kept within the limits drawn by the needs of the whole society and it is mobilized to bring about equity for the total population.

It is used as to provide for the optimal development of both human and material resources in society.

Industrialization and improvement of agriculture are simultaneous processes. The diversity of the output of industrial production ( producers' goods or consumers' goods, what determines the type of industry) is the result of planning activities that regulate the relationship between production, surplus, incomes and consumption. The planning authority has to decide according to societal needs, whether capital-intensive versus labor-intensive techniques are to be used in attention to desired rates of economic growth (49). In the planning of development Celso Furtado recommends the use of operational goals like " to go on full employment in six years " (50).

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(49) Amin, Samir. Accumulation on a World Scale: A critique of the Theory of Underdevelopment. Monthly Review Press N. York 1974 p 216.

(50) Furtado Celso in Agarwala and Singh op.cit p.309.



In order to expand production it is necessary to produce first the means of production, and this requires, consequently the expansion of that branch of social production which manufactures means of productions (51).

One of the applications of this model is in the Soviet Union where the state exerts a sufficiently powerful influence on accumulation by the collective farms (through purchasing prices) and, what is most important, stimulates production by embodying these accumulations in the latest agricultural machinery, fertilisers, land improvement, electrification and others instruments and means of production in crop and animal farming. It is this State "interference" that has now created in the Soviet Union the conditions for an unprecedented independence of the collective farms in solving their internal economic problems (52)

In relation with the use of the supply labor force that is available today Samir Amin says that is useful to employ it in the construction of plants that will serve to increase substantially the level of production tomorrow (53).

Thus an increase of markets will be observed because full employment would imply the increasing of basic industry some how subsidized by the state.

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(51) Baran Paul The Political Economy of Growth Monthly Review Press 1964 N. York p 285

(52) Ulyanovsky, R and Pavlov V. Asian Dilema: A soviet View and Myrdal's Concept, Moscow, Progress Publishers 1973 p. 109

(53) Amin Samir op cit p. 207.

Also in the transition period, where the state may subsidize production in some areas, the surplus can be invested in activities that are not attractive for the capitalist system, like activities non profitable in the short run.

The essential contradiction that defines the capitalist mode of production is that which counterposes the relations of production and the productive forces (54). Also it is interesting to mention that the formation of capital tending to merge ideally with the mode of production (55) in this case the socialist.

In this sense the difference between private and social rationality is that the social criteria permits to invest in things which permit to increase productivity in National scale, like road building and harnessing of water power (56).

Gurly, (57) comparing capitalism and Maoist China establishes that both were concerned with ways of increasing a country's national product but the values and aspirations are quite different. The most important differences are the centralized planning, public ownership of industries and agricultural cooperatives or comunes existing in China (58)

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(54) Amin Samir op cit p.24

(55) Amin Samir op cit p.21

(56) Baran Paul, in Agarwala and Singh op cit p 84.

(57) Gurly John G. " Capitalist and Maoist Economic Development" in Uphoff, Norman and Illichman, Warren S. The Political Economy of Development Berkely, The University Press 1972 p. 145 p.148.

(58) Hoffman Charles " The Maoist Economic Model" Journal of Economic Issues Vol 5 No 3 Sep 1971 p 15.

However a general difficulty is foreseeable rapid increase of the size of the labor force that is already unutilized (82).

Industrialization plays a role in the process. Small producers in the industrial sector may significantly contribute to increase total output coordinating their production with the needs in the agricultural sector, and will offer employments in the cities.

B- Social Mobility:

With this theory social mobilization is not a consequence but necessary for development.

The social mobility is associated with the full employment and for the redistribution of incomes. As is possible to observe in the table mentioned above the poor became involved in the market and even began to save. On the other hand the high class people decreased.

Social mobilization implies the participation in the distribution and changes in consumption process. Also the Modernization for Owens and Shaw implies the participation of people at all levels in the planning of their future (83).

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(82) Myrdal Gunnar The Challenge of World poverty op cit p89

(83) Owens, Edgard and Sam Robert op cit.

Table 1

## Current Distribution

Class	%People	% Nation Income	\$ Per Capita Income
Higher	10	40	4.0
Middle	40	40	1.0
Poor	50	15	0.3
Invest	-	5*	-
Total	100	100	-

## Redistribution

Class	%people	% Nation Income	\$ Per Capita Income
Higher	10	40	1.0
Middle	40	40	1.0
Poor	50	30	0.6
Invest.	-	20*	-
Total	100	100	-

(\*) Comparing the investments is possible to observe an increasing from 5% of the National Income to 20%

- In addition the dynamics distribution implies to distribute the new income generated by the process of development itself.

Thus it is clear that are compatible the redistribution of income growth. Wid fall income among poor will be

The roles which implies the labor intensive agriculture reduce the migration to the big cities. This problem is not as important in Asian or African countries as in Latin American because the incredible increase of the cities, For instance the urban population of Chile increased from 3.29 to 7.07 million in the period 1950-70. Otherwise the rural population decreased from 2,7 to 2,5 million in the some period (84). Thus the solution of agriculture development became crucial for this problem.

On the other hand this theory requires mobilization of people traditional sector for labor intensive . Also need for mobilization an effort to build rural structure. Which permit to organize and to finance the farm cooperative.

Thus the traditional social mobilization in the Capitalist society, class-structured, from the lower to the upper class change in the model for a more equitable tendence based mainly on redistribution of incomes. So the mases of people who ussually are object of politics became subject (85).

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- (84) Kingsley Davis, World Urbanization 1950-1970 Vol. I Basic Data for cities countries, and regions. Berkely University of California press 1969 p 69.
- (85) Myrdal Gunnar, The Challenge of World poverty op cit p 63.

Government tends to be authoritarian and exerts control over local Governments by means of three instances judicial legislative and administrative. However local institutions have to keep some autonomy, actually these institutions are instances of solutions for the problems because of they have the authority and the resources to carry out their own decisions.

Frederick Harbinson recommend the development of the institutions and the administrative capacity for the implementation of rural development programs in order to:

- Use of productive but labor intensive farms.
- Encourage of small holder farm.
- Developed a land reform coupled with technical and financed assistance to the new owners.
- Encourage of rural based industries and commercial enterprises.
- Invest in rural public works, and public services.
- Help farmers in the subsistence sector. ( 86)

The birth control is also assumed by this theory. In this sense, in spite of the rate of growing in the Latin American countries it doesn't appear as an important problem to day.

Finally the Government itself must change in order to become more national planning and to supervise the production. Myrdal establishes that it doesn't matter of their ideology the government must be authoritarian to start with the development process.

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(86) Harbinson Frederick op cit p 38.

D- Change in Attitudes

Myrdal establishes that the masses are mostly passive apathetic and inarticulate( 87 ) . So it became crucial a change in attitudes in the population of the new structured society.

In this sense one of the most important change is the invest criteria developed among the poors , who must substitute the traditional investors, supplying capital to agriculture . Also change in belief that means of production should be owned by a few to a belief that they should be distributed more equitable among the people.

Equitable modernization moves toward a belief in the common citizens' trustworthiness to further development Workers productivity is to be rewarded for moral as well as economic reasons.

Myrdal establishes that the redistribution for instance through land reform should not create a relationship between man and work that thwarts his ambitions.

Education has an important role in to diminish illiteracy and to acquire new knowledge and skills , especially for farmers. Also increasing the confidence that economic growth and equality is possible and creating an favorable attitude for farming . In this sense primary, adult and vocational education are the most important.

It is necessary to increase the mutual confidence and respect between the government and the people, what can be

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(87) Myrdal Gunnar, The challenge of World Poverty op cit p 62.

translated into a sense of belonging . So it will growth  
the concept of nationalism since the unit of transition is  
teh nation state.

During the process it must be grwth the self confi  
dence that the country can many of this problems with solutions  
that they work out themselves for their particular setting  
using more labor - techniques than imported machinery. That  
would be done because workers' imput advice and effort is valued  
But also encouraging them to, accept authority and participating  
in a de centralized process.

Gunnar Myrdal (88) establishes that the institutions  
and the people must change . He make a list of the most important  
changes whichare in:

-Efficiency

diligency

ordiliness

punctuality

- Frugality

- escrupulous honesty

rationality in decisions on action(belief, favoritism)

preparedness for change

alrtness to oppportunity as they arise in a changing world.

energetic enterprices arise in a changin world

- intengrity and self reliance cooperativeness

- willingnew to take the long view.

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(88) Myrdal Gunnar Asian Drama op cit



These changes implies a new attitudinal poeple very differnt from the previous passive masses.

E- Dependency

In this theory a self centered non dependent economy and natihal consolidation are necessary (89) Economic Growth is necessary to overcme dependence , and this growth is related with the internal redistribution. Consequently domestic resources are linked to domestic production and demand.

They du not accept policies of riches countries and agencies carried out because they have limited participation to a few. The autonomy of nations is important ,and the little countries can takeadvantages barganing in the international markets by means of cartels.

We can think than the same frame work utilized into teh country ,especially trugh the green' revolution could be utilized as criteria in the international trade. That will bring to a more equalitarian situation .Inthis sense they do not admit that rich countries condition they aid to the politics of the poor countries which receives they aid. . We would add except in the case of the human rights.

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(89) Myrdal Gunnar Asian Drama op cit p

#### 4 Social Change Theory.

##### A - Savings and Capital formation.

David McClelland tries to isolate certain psychological factors, and to demonstrate rigorously by quantitative methods that these factors are generally important in economic development (90)

He asked by himself for the reason which explained the increase of the capital in some places and not in others. Also he asked himself why some countries have more development during some historical periods than others. The explanation must be in the psychological characteristics of people during an historical period, and he checked them by the needs of achievements (nAch) the need for power (nPw) and the need for affiliation.

He has corroborated his these with an international study and with experiences realized with American Indians.

McClelland studies show that the people with and High nAch are more propensity to save and invest productively. However we can think about the difficulties to control a society to be more need achievement, and the ethics problem derives psychological control of people. But on the other hand we can use the data to prevent conflicts.

Another author Alex Inkeles suggest almost the same, utilizing a different pattern: A modern man. This modern man possible to be created with education not only formal but in labor.

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(90) McClelland David C. The Achieving Society Van Nostrand N. York 1961.

This modern man is likely to afford innovation and change and he should be able to forsee the benefits of savings and productive investment.

Both authors agree in considering industrialization as critical for the development or at least both place the modern man in the industrial sector. McClellan also suggest that investing in heavy industry is preferable to light industry .Also he suggest the building up of the traditional capitalist model of development with capital centralized in nAch entrepreneurs.

Inkeles establishes that his modern man model can be use for development of both socialist or capitalist countries.

#### B- Social mobilization.

D. McClelland establishes that nAch will result in higher individual ambitions and aspirations , what is required for economic growth.

Alex Inkeles establishes that modernization is equivalent to social mobilization. The exposure to modern institutions like large factories and schools, will made modern rising aspirations as well.

D. Mc Clelland establishes that the introduction of modern machinery represents symbolically the new age and it promate the social mobility.

C- Coordination and Control.

The coordination and control could be done following Mc Clelland through campaigns in mass media to stimulate nAch, perhaps also nAffiliation and In Power to keep its peaceful. Also laissez-faire toward businesses is recommended.

For A. Inkeles, Government could influence factories, but mainly schools in order to have a more modern attitude man.

Mc Clelland has suggest that any government has to seek

- to break the orientation toward tradition
- to increase the nAch
- to Provide for a better allocation of existing nAch
- resources.

D- Change in Attitude.

David McClelland is a psychologyst and based his theory in the change of values and the attitudes and behaviours derivated from. As it is explained above this theory is based that the need for achievements is present in varying degrees in different population at different stages of thier history. Also that there is a clear assoiation between a country"s rate of economic development and the amount of achievement motivation found when psychological test were

applied to school populations in his sample, along with the analysis of cultural products. Studies of written materials had demonstrated another types of association like n Pow, war and less development. In this sense with this theory we could assume that it will possible to predict and avoid wars controlling people attitudes (91).

In the Mc Clelland theory the family became an important agent for changes in attitudes, Also the acquisition of foreign values could be an aid for changes.

For Inkeles changes in behavior is associated with change in attitudes. (92) Some of the characteristic these attitudes forward modernity are:

- Openess to change
- awareness in front other opinions
- people have opinion fover a lot of things.
- orienting toward the present or the future
- people believe on planning
- people believe on a reasonable world
- respect for the dignity of other people
- faithnes on the Science and Technology
- Belief on redistribution and justice

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(91) One interesting study had been starting at the Programa Interdisciplinario de Investigaciones en Educacion. (PIIE) by N. McGinn and E. Schiefelbein, analizing School textbooks under different government using Mc Clelland Theory.

(92) Inkeles Alex and Smith David Becaming modern: Individual change in six developing countries Cambridge Harvard University 1974.

The Inkeless man hypothesis are that this attitudes must be on adults, and that modern attitudes implies some level of participation in some kind of organization. So the school is necessary for change in attitude. Also the people who has an attitude favorable to modernization became an agent for modernization and so the Factory (93).

E. Dependency.

McClelland establishes than the introduction of foreing values could and toward the change.

On the other hand Inkeles say that the introduction of modern machinery serves to increase the man modernity.

Thus we can conclude that both authors do not see any problem with dependence. Moreover they look the introduction of foreing values as a healthy thing for underdeveloped countries.

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(93) R. Jarry a PIIIE researcher, working with Chilean data collected 1964 did not have good results with the factory as agent of socialization. ( Doctoral Thesis, Stanford University 1977).

II DEVELOPMENT AN APROACH OF AN  
EDUCATION.

## 2 THE GOALS OF DEVELOPMENT

I understand the goals of development as the goals of the human history. In this sense I will begin these pages with some utopic ideas founded basically in my own values about manhood. I know my inter-subjectivity, but I am sure that through dialogue among the people with different values we can approximate the truth better.

Let us agree that the main goal of the world development is a society where each one can develop as much as it is possible within his capability ( In the sense of St. Thomas), together with all the man/woman and harmonically with the ecological environment.

Behind this assertion there are three main assumptions:

- A- all men have a right to life
- B- all men are made to live in Society.
- C- Man must utilize the natural resources taking care of the future.

I will explain now how these assumptions could be associated with stages of development, but I

A- All men have a right to life. The society must be organized in such a way that guarantees the basic necessities of the people. These are, in order of importance:

- The right to exist meaning that nobody can



kill another, or put him/her in jail, or to obstruct the development of his/her potency.

(This is very important for Colonialism, or dependence, authoritarian governments, or the increasing military forces). Exceptions can be done in self defense cases, or when someone is obstructing other people thier development.

In this case the criteria must be put in a written law, and must be accepted by the majority of the people.

- The right to eat being the most basic necessity for the human being, which must be me according with different requirements ( age,work,region,etc) sharing criteriously the dispoible goods.
- The right to health services for all the population.
- The right to dwellings and housing and minimun utilities ( water , tec).

In this case of Pedro Gutierrez that means the right ot develop his potence, for instance to became a good farmer like his family was, Also he must have the oportunity to eat with an adequate nutritional balance, to have a good helth service an a housing ficilities like current water, garbage service and so forth.

B- Men are made to live in society. For men today, there are three mains center of socialization: Work, the family, and the local community. Without doubt the mode of production

characterizes the relationship established among the members of the society. All people have the right to get a job, and to receive a wage for it but retaining what the capitalist keeps for himself as surplus in the capitalist of production. There aren't specific differences between intellectualism or physics, or between man and woman, or races.

The family and the social organizations, reflected on the political organization and social maturity, are two order goals in our model.

In the case of Pedro he had to have the possibility to work and to share the ownership of the means of production with his peers. Also he must have the possibilities of a better future for his ~~son~~<sup>son</sup>. In addition he must have the possibility to participate in a local organization expressing his advise decided about their future and elect the local and country authorities.

C- Men must utilize the natural resources taking care of the future. If we look at development with a historical perspective one of the most important things is to keep the natural resources. In this sense the resources can not belong to someone. They belong to all of humanity. This is very important in the capitalist model, in relation to the patterns of land ownership, for example. But Societies by means of their.

Government, can assigned individual or cooperative responsibilities of the administration of some National resources.

For instance Pedro could have not only a coopera-

native farm. Also he should have the necessary knowledge to cultivate it and improve the harvest by himself.

This outline of goals expressed by himself in terms of one typical citizen, must be expressed in terms of a national government plan, as policies, targets, and goals with specifics dates and assigned resources.

### 3- OUTLINES OF A PERSONAL THEORY OF DEVELOPMENT.

#### A- Capital formation and savings.

We define Capital : as something produced by the economy , in order to produce after , something new. (94) That include land goods and human capital. We can think that non human capital , like energy, is a Universal constant which through permanent transformations became more and more utilized. However Human capital is always growing , ad infinitum, and it is the last cause of the transformations. Under this assumption , education became crucial for capital formation because its influence for the growing of the human capital. We also ought to think in terms of goods as the utility (95) or, happiness or development of personal capabilities , that the things or events produces, more than in physical things, to be consistent with ours goals of development.

Therefore we emphasize the increase of human capital, especially through the motivation to change; the increasing of knowledge; and the inventions, the technology , and the improvement of the resources derived from.

On the other hand , transformations are made also by labor . We assume the full employment as necessary: and the redistribution the savings and the increasing of markets

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(94) Ch. Myers Class notes. Sep 1977.

(95) Nicholson. Water, Intermediate Microeconomics and its application, The Dryden press, Hinsdale, 1975 p 42.

derivates from.

Chronologically we can establish three man stages for development for the small countries:

- The subsistence level: where the most important is the process of incorporation of all sector in a full employment but with subsistence wages.

- The full employment: which correspond to the increasing of wages and the improvement of life conditions.

- The extension of markets, when the nation's products became competitive at the international level and there are an equilibrium, or a national surplus, in the external trade.

We are going to describe some of the aspects mentioned above.

a) The motivation to change

One of the most convincing examples of the importance of motivation to change as a factor to capital formation is that in Chile the G N P, used to increase the year after a presidential election. But not only the desire to change but the climate of order and work, and clearcut of the economic policy for the period, probably had influenced the increasing of the G N P. The motivation is most important in the first stage to go from the subsistence level to the full employment.

b) The knowledge and the improvements of the current resources.

The better use of resources derivates from the

the improvements of the knowledge would imply to extend the cultivated soil, the use of better seeds and more productive plants (changes of sun plants by raps for oil production in colder clima for instance ). Other idea could be the fish, rabbit birds and other growing and the cultivating of other sea foods, Also it is important to use the inventive and knowledge in the formation of the new labor intensive rural industrie in order to increase the number of employements and avoid the migration to the large cities

On the other hand the improvement of resources have to avoid the duplications and the intermediate traders, For instance in Chile the intermediate tradres in foods usually gets more profits than producers some times without any real add value.

Also it is important to use the knowledge for improve the living facilities without much resources like japaneese houses without much furniture

c) Full employment and redistribution.

Full employment must be used as soon as possible in the creation of a new production structure which permit the equilibrium of supply -demand . As the Allende's experience in Chile demonstrated , in small underdeveloped countries the productive sector is not prepared to receive a full employment market. So in the first period it is necessary to go on with the subsistence wages . Assuming that there are a large amount of people under or unemployed , we can diminishe in the first period the number of hours (from 8 to 5 ) and introduce two teams

compulsory ( 10 hours a day) with different workers. The control in the equilibrium supply -demand is necessary to avoid the scarcity of foods and the black market. Also it is preferable to work less time but hard in order to avoid the leisure produced by the underemployment.

Full employment must be use first in foods production, especially in non traditional , directly or indirectly, .So the watering projects, rural roads, refrigerated storage places , seed section plants tanks for fish growing and so forth became important. Second the full employment can be used to the basic structure and industry for future which require public investment as hydroelectric centrals, but mainly which not require large investments as woods plantations.

Redistribution for poor came from the full employment, but for the entrepreneurs became for the State ownership of the large industries , farms and banks( or at least state control) which should be paid by certificates to the shareholders. This certificates could produce rent or at least guarantee a welfare for the old people. In this sense is very important to make the difference between technicians and the entrepreneurs. Technicians must continue on factories. The intermediate and small factories have to incorporate the workers as share holders with production certificates or in a cooperative systems. So the surplus must be reinvest as come to the government for a public investments. Also redistribution became for taxes for the

luxurious goods.

d) Savings and investment.

The basic assumption is that neither poors or riches are good investors because of the lack of information about the community requirements and overevaluation of the personal requirements. Thus the State because the best investor and must centralize savings.

The government receive money from taxpayers; surplus of industries land mines and other natural resources appropriations; and the savings derivated from itself and the diminishing of expenditures in the service sector, where the student could play a role . This savings must be invest criteriously as large as possible in the productive, especially labour-intensive, sector.

e) Extension of markets.

The scale economy implies reduction in costs of production. That is a problem of the small countries with scarcity level of consumption. So extension of markets at National but especially at international level became crucial.

In this sense the multinational alliances and cartels of underdeveloped countries, the more elaboration of the primary materials traditionally exported, the increase of non traditional exports and the control of the international transportation and comercialization of products became very important.

Also the government must control the nation's external trade, increase the exports, diminish the imports.



Moreover the external aid and foreign investors could be necessary for the pick of the take off and it must be controlled by the state, considered then as loans or controlling the majority of the shareholder and applying for the foreign investor the same rules of the nationals.

### B Social mobilization

Full employment and redistribution of incomes above results in a social homogeneity. Also the slow change from a subsistence consumption of the most of the people to a better level implies a "social national mobilization" and the lost of power of the traditional dominant class and the full participation of all the sectors mainly through the local community organization.

The changes of people from the services to the productive sector, the stopping of migration process, and changes in knowledge skills and abilities, also implies a social mobilization.

Blue collar workers are very important in social mobilization because they are the majority and because of their subsistence level they push for change as soon as possible.

### C Coordination and Control

Changes require a authoritarian Government but

democratic, free accepted by the people by means of elections and guided by written rules. Also government must be decentralized in order to incorporate the participation of citizen through the local community. So changes became a personal and collective defying.

We can establish some of the roles of the Government in the control as follows:

\_ Control for everyone have a job food, basic services and living facilities.

- Control over the means of production in order to avoid bad intentioned campaigning of the traditional entrepreneurs and also in order to guarantee the increasing in production especially in the small private owners cooperatives.

- Control over the services in order to avoid duplications and provide good services.

\_ Control over the foreign investors, foreign aid and possible-cooperative-monopolies.

- Control over the public investment, and savings so over taxpayments.

- Control for prices especially for the basic consumption products.

- Control for the circulating money.

- Quality control of production especially for the exports.

- Control for himself in order to be criterious and honest.

Also government have to provide technical support for the new farm and industry. Also it must lend money for new investors who want to developed their own cooperative industry, but only in the sectors were the planned economy requiere it.

D- Attitude change

One of the most important change, as we can observe in Pedro Gutierrez, is on the hope of a better world for poors. Also is important changes in values which implies to emphasize non materials aspects on the life and the use the materials things as means more than ends. That implies the necessity of social and political maturity in order to establishe changes sharing responsibilities.

We can think that the most idealistics middles 70's. However sometimes the idealism, necessary for changes conduce to wrong assumptions. For instance one of this typical assumptions under Allende's Government was the belief than the blue collars or the party supporters are good people but not the resting.

One of the main difficulties is to establish changes without violence. Because violence generated more violence. (96).

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(96) Enciclica of Latin American bishop, Medellin 1966.

So the more massive, and the more prepared is people for changes the less violent they are in this sense education for a favorable attitude for change became crucial.

Changes in consumption nutritional foods and clothes are very important. Also change in attitude for hard work and innovation is so important.

Education is very important for changes. So the school and teacher became different. This last must change from an information traspassing to an agent of development and he/she has an imporant role in local organization.

#### E- Dependency

We can assume that dependency it is not only economic but ideological .

The Metropoli impose its solution political and economic, and requiere high profits by its invesments. So it is difficult for the periphery became really independent. When a country became to raise a different solution that the Metropoli wants usually was cut drastically ( For instance Checoslovekia, Hunger, Dominican Republic and Chile are tipical examples). But today Metropolis are not only associated with countries but with multinationals (97).

A partial solution could be raised increasing the

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(97) Allend, Salvador, Lecture on United Nations 1972.

markets (i.c. ALAC, Pacto Andino) with countries specialization. Also the cartels give more possibilities of bargaining in a more equalitarian conditions. That is the case of the OPEP which became very effective until The Arabics became investors in the multinationals.

In addition of the enlarying of markets the non traditional exports became important. Also it is necessary to substitute imported goods, changing the national consumptions.

Also became important to produce more ellaborated goods for exports in stead of the traditional non ellaborated materials and minerals. The control of the Transport And International trade is so important in this case it would be easier because the multinational alliances, which could permit even to open big competitive store in the big cities.

#### 4- DEVELOPMENT EDUCATION AND HEALTH

##### A-Education

Perhaps influenced by the last theory, I would like to finish this paper being more optimistic in relation with the role of education in development.

In this sense I am going to summarize some specific ideas which can be applied in an underdeveloped country.

Education in the wide sense can be important in a developing process because it influence to promote change as the preconditions and also for the future necessity of adaptation that the changes requier. As a consequence the increasing of the Government expenditure had been remarkable (In Chile had rised from 2,5% to near 20% of the Public expenditure in the period from 1950 to 1970). But the results obtained are not so remarkable, I think because of the School has not adapted to the development requierements.

I think that is possible to diminishing considerably not only educational expenditures using student labor force in public service. That implies governemts investments in a productive labor intensive-sector. For instance if a higher scholar cleans an Hospital, the guide who used to work-without any additional government expenditure- in a watering project, creating a new cultivable land and raising

employment for more people, In addition two works are well doing, the hydraulics and the cleaning creating a considerable added value to the National economy.

My suggestion is based in my own experience working with adolescents. ( Boys Scouts) I know what can be done by students who usually came for a half a day to school and their are hanging around the other half. So they can help in the hospitals, take care of babies, and old people traffic control, fire alarm-because there no phone in poors neighborhood, cleaning the street, and provide garbage services, watering the parks and recreation areas, mail delivered and selection, clerks in the public offices.

The critic that could be done to the model is that there a lot of unemployed people who came do the some. My answerd is: in the underdevelopment countries the expenditures in services are very high if so , to reduce it implies to increase the productive sector, especially in the model wher the State is the main investor.

Of course the school should be very different. In my way of thinking it should be a cultural center which provide services and oriented to changing local people toward development ( in the sense of our model ) through long life education structure.

The school ought to supplie the majority of its requierements. For instance the school should provide foods for children from the birth day to 16 years old when the chil-

dren left it. The foods can be results of the non cultivate soild around the school, (street areas) birds, rabbits and other animals grwing , fish tanks using without any cost the garbage of the (vegetable) markets. Also the student can make their own clothes, tools and toys.

The school should provide other services to the local community like libraries, increasing of: political, healt and echological conciencious using P. Freire methods (98) , film discussions, sexual and familia information, agriculture coursesse peinture, music, folk dance, and other cultural aspects, cook etc. Also it is possible to think in mobile school like in Thiland.

Local Parents shoud be integrated to the School given courses of their specialities (i.e. cook electricity) taking care children at the brakes an other tasks (99).

Teaching and Teachers should be different. I think that is possible to reduce the number of teacher considerably using students leaders, community resources and cheap teaching machines (i.e. books and newspapers) So teachers should change their information attitudeness and became comunity organizators and leaders for development and centrated more in student with difficulties.

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(98) There some experiences in Chile. Gajardo Marcela El desarrollo de la capacitacion campesina en Chile. Chile Santiago PIIE 1974.

(99) There are two interesting works about parent participation at the school in Chile made for PIIE researchers, Liliana Vaccaro, Algunos factores relacionados con la colaboracion de las madres de Familia en una escuela basica. Stgo CIDE PIIE 1974 y Abraham Magenzo: Padres voluntarios en al Re-habilitacion de niños con problemas Stgo PIIE 1975.



Consequently basic and secondary education results with its own objectives and not and school to prepare people to get the University, where really only a few (5%) arrived and producing frustration (100).

The vocational and post secondary education also should be different more integrated the National community problems and combining studying and work. The University education must be productive for instance the government could give the land and factory which replaced the annual expenditure, and which permit student to practice. One excellent experience that I have was the interdisciplinary workshop at engineering school where docence was vinculated to solve community problems. In this case an incubator was designed in order to avoid one of the cause of babies mortality in rural hospitals.

Also research and training in factories and public services must be vinculated with the University system stabilizing diversed steps from blue collar worker to the most sophisticated technician with stages at work and stages studying (101).

These ideas could be utopics for the general education system but it is necessary to have data and experiences so when the politics conditions are given educational sector will be prepared.

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(100) Julio Fernandez Satisfaccion y Frustracion en una muestra de alumnos vespertinos Stgo PIIE 1973.

(101) This a part of my thesis as engineer where I developed a "progressive curriculum in electrical area. Thus as consequence I stated with a coordination among enterprises and I with a reciclage courses for four yeas training engineeres.