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REDUCING CLASS TIME IN EDUCATION .

In American secondary schools the dreadful legacy of the Carnegie unit and the persistence of the assign-study-recite method of instruction inhibit intellectual pleasure for both teachers and students. Both notions preclude the development of the school as a center of inquiry. Earning credit for a "solid" requires the payment of five periods per week of sitting time, and many of these hours the captive student must idly listen to the halting recitals of his fellows, foregoing the potential joy of pursuing a subject in his own fashion. If pupils are to inquire into the substance of what they study, we "have to remember," with Whitehead, "that the valuable intellectual development is self-development."

What is the mysterious difference between the senior in high school and the freshmen in college that the latter may stretch his mind in libraries, museums, and laboratories as well as when he listens to instructors? If it be feared that many high-school students are not sufficiently disciplined for self-directed learning, then surely we should recognize that some schools may require other types of personnel in addition to teachers. — *From "The School As A Center of Inquiry" by Robert J. Schaefer 1967.*

- The improvement of the educational institutions of the Philippines depends greatly upon the initiative and knowledgeable leadership of Filipino leaders.

A GLIMPSE OF THE STATE OF PHILIPPINE EDUCATION

Education has become a common commodity and a popular dream in this country soon after Mr. William McKinley, the President of the United States, had announced his decision to subjection in order that American military, political, educational, and religious missionaries would be able to "civilize and Christianize" them. Consequently, public education was at once started on a national scale of some significance right at the commencement of the present century. Before that event instruction for literacy purposes was not uncommon, but secondary education was a rare article and activity, being confined only to the sons and daughters of the small body of this country's social elite. Higher education was open only to a few; and it was largely equated to professional education

such as the education of the lawyer, the physician, and the priest. For almost three centuries, there was only one established university, the University of Santo Tomas, which existed in Manila with only a few students from affluent families. There were a few colleges which also attracted but a limited number of young people mostly from privileged families.

The system of education introduced by the Americans had to be basically American in conception, in organization, and in methods and goals, that being the only way to convert the Filipinos into good believers of democracy.

The system has undergone some modifications during the last sixty and more years, but it still retains much of the original American basic background and fundamental

tradition. The reasons for this are not difficult to discover. One of them is that the men and women who succeeded the Americans in both the policy-determining and other critical posts in the educational structure have been products of American colleges and universities and, in addition, textbooks and other publications used in the training of teachers and school administrators were and, to some extent, still are the works of American professors, writers, and publishers.

We have been told that American political ideas taught in our public schools have produced in many Filipinos a stronger feeling of pride and love of country which has been translated into a growing spirit of militant Filipino nationalism. In my view this sentiment of national self-pride and national self-awareness began to stir the hearts and move the minds of a small but select group of Filipino student's and visitors in Europe years before the arrival of the American soldiers in this distant land. Rizal, Plaridel, Lopez Jaena, and a number

of other young Filipino adventurers in Spain and other European countries struggled with great difficulties during the last quarter of the 19th century to become familiar with Western ideas of nationhood, to learn the free and liberal notions of the Enlightenment, and to acquire the ardor and the value of the evolution and the revolution of national movements. They absorbed them through their senses and imagination and spread them among their countrymen through personal contacts and publications with grave danger to themselves and their relatives and friends. The study of significant events in American history and the reading of lives of American patriots, Washington, Jefferson, Franklin, Madison, and other American heroes, in our schools served as an additional stimulation to the growth of Filipino nationalism.

There is some reason, therefore to believe that our American-oriented educational system has somehow assisted in strengthening the faith of the Filipino people in democracy and its institu-

tions. There is, of course, considerable truth in this belief; but formal lessons in schools are not necessarily effective ways of teaching institutional conduct and national action. These matters are better learned in actual practice and example to give reality to theories, specially the theory of freedom, order, and democracy; and for this purpose, the holding of popular elections for government officials and the exercise of individual freedom of expression, organization, and belief have been invaluable and indispensable factors in the actual introduction of democratic procedures. No other country in Asia has had a long and relatively successful history of national democratic practice as the Philippines. Not a single case of *coup d'etat* has so far marred the image of democracy in this country. This is the result of more than half a century of the study of democratic precepts and their pragmatic implementation in various degrees.

At the same time, however, neither nationalism nor democracy could have been

brought to some degree of robust growth if they had not found a favorable milieu and a friendly atmosphere of receptive readiness in the community and the people.

These factors need to be overemphasized for the nature of the organization and administration of the Philippine public schools were pointed out in the 1925 Monroe Survey Report — one of the most thoroughgoing reports on the Philippine educational system — as so highly centralized and regimented that it failed to encourage individual initiative and originality among the teachers and supervisors. It is thus obvious that the policies and methods of the education authorities in this country could hardly be said to have served as an example of a democratic system and procedure. Fifteen years after the Monroe Report appeared, one of the last American officials in charge of the Philippine educational system, Dr. Joseph Ralston Hayden, Vice-Governor and Secretary of Public Instruction, admitted the validity of this criticism; but he tried to jus-

tify it by saying that a system of regimentation was imperative to establish habits of promptness, precision, and orderly activity, qualities which the Filipinos had not much chance of developing for over three hundred years. As if anticipating this excuse and rationalization, however, the same Monroe Report asserted that "ability in self-government can only be developed by its exercise." But Dr. Hayden shoved this dictum aside with the statement that "the administrative process cannot be safely democratized" until the people who are intrusted with the service have acquired "self-reliance, initiative, responsibility, and a dozen other necessary qualities." It may thus be said that the administration of the public school system has not directly served as a laboratory for demonstrating democratic practices and procedures to the Filipinos. The last survey of the public schools undertaken by a mixed American and Filipino team headed by Prof. J. Chester Swanson in 1960 still repeated the same plea and

excuse expressed by Dr. Hayden twenty years before.

The education of the people has been one of the chief concerns of the government of the Philippines during the last sixty years. This attitude may be always expected as long as this government rests on democratic principles and adopts democratic methods, for under such conditions the selection of its chief officials has to be made by a large proportion of the country's population. This group must necessarily have a sufficient amount of the right kind of education adequate for a free and democratic nation. Thomas Jefferson's trenchant words on this point are: "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be."

With this idea in mind, our present Constitution embraces diverse provisions on the subject of education. To begin with, one of the clauses in one of its chapters entitled "Declaration of Principles" contains the following: "The natural right and

duty of parents in the rearing of the youth for civic efficiency should receive the aid and support of the Government." This is a basic rule which dispels the notion entertained by some people that education is exclusively a state function. It is a recognition of the idea that education itself is a matter of individual concern. The aid and support of the government mentioned in this constitutional provision for the education of the youth may take the form of free public schools for the youth established by the government to private educational institutions possessing the conditions and the capacities to offer adequate education to the youth or it may take the form of free scholarships to be given to the youth who are able and deserving.

One thing is certain: That under these constitutional provisions, the civic education of the Filipino youth is not entirely left to the government to decide as to how and where it should be given and what it should cover. The Constitution recognizes it as a natural right and duty of parents who

should be aided by the Government in their performance. The purpose of this principle is obviously to uphold the freedom of a person to develop himself as an individual in a democracy. To give the government exclusive power to determine the education of the youth might well lead to the establishment of a Spartan-like system of education to be pursued every inhabitant regardless of his personal preferences. Such a system may develop loyal and obedient citizens but not a people who are free to think for themselves. By recognizing the natural right and duty of parents to educate their children for civic efficiency, the Constitution merely prohibits any policy or action of the government which may result in regimenting the Filipino youth and preventing them from developing different ideas and ways of doing things. This practice discourages individual initiative and, therefore, undermines the democratic way of life.

On the subject of instructional objectives, the Constitution provides that "all

schools shall aim to develop moral character, personal discipline, civic conscience, and vocational efficiency, and to teach the duties of citizenship." This is a mixture of subjective values and practical aspirations intended for the creation of a vigorous motherland.

These aims disclose a very broad conception of the role of the school, supplanting the family, the church, the industrial and social institutions. The enumeration seems to overlook the primary or basic object of the school, which is development of the mental faculties of the individual. To entrust to the school the development of the moral character and personal discipline of a child could be risky; it may cause the family to neglect its basic duty towards its children, for the moral upbringing and discipline of the youth is the primary concern of parents and guardians. Unless they faithfully perform their obligation in these matters, the school is bound to accomplish very little, considering that the child stays in it for only a small fraction of his life-time.

The school can do very little in developing civic conscience, which is an important factor for good citizenship, unless the community itself, through its leading citizens, its public officials, the courts, and the police force, is self-disciplined, orderly, and law-abiding. Even if schools spend time and attention inculcating in the youth lessons of citizenship and civic virtues, they can hardly turn out an army of good citizens if government officials and leading persons in society, business, or the profession are corrupt, dishonest, and shameless. We know that verbal admonitions and moral preachments not reflected in the way their authors live are worse than useless. They have no practical value to stop smuggling and gambling; they have no force to prevent men from getting rich by crooked and vicious methods; they have no power to arrest the laziness of teachers and clerks; they have no power to punish dishonest executives, congressmen, and senators; they have no value to produce individual dignity and community pride and civic con-

science. They silence the voice of conscience as they raise false hopes for the credulous.

Vocational efficiency is hardly attainable through school training alone. A system of apprenticeship in shops and factories is a more practical means of preparing young people for efficient vocational work. Special schools may be able to give some vocational training but hardly vocational efficiency.

A critical examination of this constitutional provision may lead us to the conclusion that its ideas express an unrealistic conception of formal education which innocently ignores the practical limitations of the role of schools in a modern and pluralistic society. To avoid this conclusion, educational authorities should permit school administrators and teachers to adopt schedules and programs to make these general principles workable and realistic.

The Constitution places all educational institutions, public as well as private, under the supervision and regulation of the state. This broad authority places in the

hands of the government a corresponding broad responsibility in regard to the development of all schools, from the elementary school to the university. But this does not mean powers to direct the policies of a school, to control its activities, to deprive it of initiative, and to subject it to minute rules that could hamper its decision to choose what it may consider most desirable for its own improvement.

At this moment when a constitutional convention will soon be held in our country, the first since the declaration of independence, the following questions may be raised: Should the educational system of this country, which is practically the same system that was established in the first years of this century by the American, be retained in spite of the change of the political status of this country from that of a colony to that of an independent republic? Is the system adequate to the needs of the Filipinos? Is the structure of the public school system not too expensive for a still underdeveloped country that needs immediate so-

lutions of its food and other economic and social problems? Has the system as a whole sufficiently developed in the people a sense of national consciousness and responsibility? Has the system of higher education helped the country's government and people to raise standards of intellectual achievement and to adopt a superior code of values? These are some of the vital questions that the leaders and the intelligent citizenry of the nation should squarely face. The answers have to involve both quantitative and qualitative considerations.

In the report of the 1960 survey of the public schools of the Philippines undertaken by a mixed team of American and Filipino educators, the following concluding comment and query appear:

"Much of the education of the Philippines is simply not good enough to justify the great faith of the people. What will happen to this unquestioning faith in education when the people learn that it is not solving their problems? Will they lose faith in education or in those

who are responsible for their educational services?"

"Educators must work to provide a public school program good enough to prove that faith in education is justified. This will require not only providing good schools, but also creating in the public an understanding of the difference between good schools and poor schools."

In the recently published work (1968) of Jencks and Riesman entitled "The Academic Revolution," we are informed that "during the seventeenth, eighteenth, and early nineteenth centuries, American colleges were conceived and operated as pillars of the locally established church, political order, and social conventions;" but they were not considered very important pillars. It is said that an American "college" was in some respects more like today's secondary schools. It was far from being similar to today's universities. "It did not employ a faculty of scholars. Indeed, only one or two pre-Jacksonian college teachers exercised any significant influence on the intellectual

currents of their time. An always upright and usually erudite clergyman served as president. He then hired a few other men (usually young bachelors and often themselves aspiring clergymen) to assist in the teaching."

The early American colleges did not have much impact on the character of the rising generation. Only a minority of those who controlled the established American institutions sent their children to college, and an even smaller minority had itself been to a college.

Those early colleges "influenced neither the intellectual nor the social history of their era." To avoid any suspicion of partisanship in discussing this interesting subject, I will let Jencks and David Riesman do the talking. They say that "it could be argued that America over-invested in higher education during the pre-Jacksonian years. Perhaps the resources devoted to colleges might have been better allocated to libraries, scientific societies, or primary schooling. But like other more

recent victims of colonialism, Americans during these years were eager to have the outward trappings of equality with the mother country, even if these trappings were neither relevant to the American setting nor notably productive in the mother country itself. Many argued that America should go its own way and that social priorities and institutional arrangements had to vary from one country to another. But in America as in Africa today. Collegiate promoters could and did charge such critics with selling their country short and perpetuating subordination to Europe. England had a few colleges, so America had more."

Perhaps we in the Philippines now find ourselves in the same situation and with similar attitudes as the Americans of the early 19th century. And so why should we not develop our own colleges and universities suitable to our needs and protective of our ideals and dreams as Filipinos living and struggling to make our

country a valuable and proud unit of the world community? This should be the objective of every institution of higher learning planned, organized, and ope-

rated by Filipinos for the advancement of Filipinos as a free and democratic nation. —*Speech delivered by Dr. V. G. Sinco at Foundation University, June 2, 1969.*

BOREDOM AND CRIME

"Crimes that are committed in growing number are not the crimes of poverty but of affluence. The criminals are sometimes men whose enterprise has had no other outlet. Juvenile crime, increasing yearly, is not caused by any lack of schooling but specifically by a schooling which is too prolonged. A wave of drug-addiction and gambling is due to boredom, not unemployment. The Utopia built on wage-packets, dental clinics and dishwashers begin to fall apart before it has been completed. For while a world of social security has something to recommend it to the middle-aged, it offers little, by contrast, to the Mods and Rockers, the Beatniks and Crooners. For the young of any period in history, the quest for comfort is not enough." — From the *Left Luggage* by C. Northcote Parkinson

■ A major problem which is being ignored by today's national leaders who have not been able to think beyond the next election.

POPULATION GROWTH IN THE PHILIPPINES

A boom in babies is rocking the country to its very foundations.

The boom is so strong that the major, perhaps overwhelming, issue for the Philippines in the decade ahead will not be President Marcos or nationalism or even sieve-like civil service examinations.

The issue will be babies — thousands of them — and how to feed, clothe and educate them.

Modern health programs have slashed rates so drastically and improved pre-natal care so well that today we hold the world record for birth. We have a crude birth rate of 3.5 per cent.

What this deceptively small figure means in our population, which stood at 32 million in 1965, will reach 54 million by 1980.

If this rate of growth continues — and respected demographers like Dr. Mercedes Concepcion of U.P. and Fr. Francis Madigan, S.J., of Xavier University foresee no change — the Philippines will join the 10 largest nations of the world populationwise within two decades.

By 1895, this country will be more populous than either France or the United Kingdom. It will have a population bigger than Brazil, the largest Latin American country, by the year 2000.

Figures drawn from the U.P. Population Institute and Xavier University trace this skyrocketing growth thus:

In 1877, the Philippine population stood at 5.5 million people.

At the start of the American regime, in 1903, this had risen to 7.6 million.

When World War II erupted population had already reached 19.2 million — or double the 1903 level.

Growth continued and by 1960, population was 27.4 million. 1965, it topped 32.2 million. In little less than 600 years, population had quadrupled.

Prospects for the 1970s, a year and a half from now, are that population will soar to 38.4 million. Five years more, this will rise to 46.1 million and by 1980, population will reach the 54 million mark.

In the decade ahead, about 16 million more Filipinos will be added to the population. This represents a 40 per cent increase and it will almost total the equal population of the 1948 census.

The Philippines does not have, of course, an exclusive monopoly on rapid population growth. We are just topnotchers in an "industry" that is setting new records the world over.

In an address to Filipino and other Asian editors and publishers assembled at the Press Foundation of Asia

conference in Korea, George Rosen of the Asian Development Bank said:

"The total population of Asia from Iran in the east to Japan, and from south of Siberia to Ceylon and Indonesia, is expected to increase from 1,850 million in 1965 to 2,480 million in 1980 under moderate assumptions of growth.

"The numbers may be difficult to comprehend — but putting it in other terms Asia will be adding a population larger than India's present population (550 million) to its already very crowded area in the next decade."

Obviously just to keep pace with the population growth, both government and the private sector have to marshal its resources.

At the Second Population Conference last November, Adriana C. Regudo and Edmund M. Murphy of U. P. noted:

"Just to maintain current levels of service and facilities, we can guess that the nation must provide between 1965 and 1975 almost 8½

million additional jobs, 12,000 more hospital beds, 9,000 primary schools, 3,500 new churches, 4,700 restaurants and cafeterias, 1,900 more barber shops, 850 new cockpits, more than 20,000 more automobiles, 1.3 million extra carabaos, and over 1½ million cavans of rice."

Another outstanding student of the Philippines, Dr. Frank Golay of Cornell University, agrees and adds: Even assuming a slight decline in the present birth rate, by 1990 — 21 years from now — the Philippines will have to increase its rice production to about 250 per cent of present levels — 10 million tons in contrast to present production of 4 million tons — that means 6 or 7 per cent every year.

For irrigation alone nearly ₱5.5 billion will have to be spent during the next 15 to 20 years if the Philippines expects to feed its growing population. This is more than twice as much as the current total annual national budget.

In an address delivered at Cagayan de Oro, Oxford

University's Dr. Olin Clark said that even if by tomorrow a thoroughly effective control program were implemented immediately in the Philippines, its effects would not be felt until 15 to 30 years hence.

President Marcos and other national leaders, therefore, will have to grapple today with the needs of the people who will be around by the 1970s — and these men and women are already here. It will be their job to lead in the calm appraisal at the situation, study the magnitude of the problem, propose and debate positions — without hysteria or overstatement.

Participants at the Second Population Conference developed the most sober approach to this problem when they declared: "There is no doubt that the very rapid rate of population growth will impose great strains upon the economic and social fabric of the Philippines during the decade of the 1970s. Yet there is nothing in history and little in theory to prove that these problems are insurmountable.

"The greatest potential danger is that despair on the one hand or overoptimism on the other might prevent our attacking these problems with the energy and vision they demand."

The population explosion will unleash hunger and more poverty on this country — unless the government and private sector snap out of our traditional easy-going ways and buckle down to production.

This is not the view of a wild-eyed alarmist; it is the sober warning of a respected scientist: Father Francis C. Madigan, S.J., of Xavier University in Cagayan de Oro.

"The tremendous expansion of population . . . now threatens to reduce the nation to a chronic condition of malnutrition and impoverishment," Father Madigan warned in an article published by the prestigious quarterly *Philippine Studies*.

Lack of public concern over the skyrocketing growth of population — "the paramount problem of the Philippine nation for the next

50 years" — arises from lack of information and illusions about the nation's capacity to meet future needs, Father Madigan added.

This complacency, however, is turning into anxiety.

The work of scientists like Dr. Mercedes Concepcion of the U.P. Population Institute, the United Nation's Professor Frank Lorrimer and Father Madigan himself filter through to the public.

These studies reveal that the need for food, clothing, homes, water, schools, churches and other basic commodities and services stagger the imagination. Here are some dimensions of that need:

The country must treble its 1960 production of rice if it were to feed the Filipinos that will be around three decades from now. To meet this production target will require that ₱100 million be poured into irrigation alone yearly.

Carmen Ll. Intengan of Food and Nutrition Research Center told the Second Population Conference: For 1970

- that's only one year away
- production of cereals must increase by 15 per cent; beans and fats by 100 per cent; fruits and vegetables by 400 per cent; meat, fish and poultry by 14 per cent and milk by 15 per cent.

Dr. Mercedes Concepcion, on the other hand, has warned: "Regardless of what happens to the birth rate, the number of students entering high school will increase to about 917,000 by 1970 and 1,290,000 by 1980.

"The number of persons in the labor force will increase from nine million to almost 13 million between 1970 and 1980. Reducing fertility can not curtail that growth because it involves people who are already here.

"Thus, the hints of a possible decline in fertility can give little comfort to those who must solve the problems of a growing population in the seventies."

A recent U. S. Government study also states that the 1968 housing shortage stands almost at 1,000,000 units. Over the next 20 years, the

country must increase its building rate of two units per thousand of the population to 12 units per thousand.

As these staggering tasks confront leaders who always tended to take things easy, a few grim realities emerge.

First: They now start to see in the slums, the lack of adequate hospitals, power, water, transportation and classrooms, etc. the undeniable signs of population pressure. This pressure is evident too in the crime wave, the brain-drain and the unrest.

Second: Massive emigration is not possible and will not reduce the pressure.

Third: The most dedicated of leadership and wide-based popular support for increased production are needed. Otherwise too rapid a drop in living standards will usher in trouble.

Those cheerful fellows who say that the Philippines can easily support a population as high as 50 million will have the chance to prove their point during the decade ahead.

The population explosion will shove the boundaries of Greater Manila to Calamba (Laguna) in the south and to Baliuag (Bulacan) in the north all within two decades.

Cebu, Iligan, Davao and other cities will also shatter their present city limits from population pressure — and probably leave governments lagging far behind in the provision of basic facilities.

Men who have kept close watch on the galloping population and the way it affects urban areas draw this picture of Philippine cities in 1980.

These men include Thomas McHale, a lecturer at the University of the Philippines school of economics, Major Pedro de la Paz of the Manila Police Department and R. Faithful, a U. P. population institute discussion leader. This is the way they see our cities of the future:

Greater Manila's population, which stood at 2.7 million in 1965, will soar to 7.1 or even 10 million by 1980.

High birth rates and migration from rural areas will also jack up the population of Cebu, Davao, Iloilo and other urban areas.

The 1948 and 1960 census already confirm the bloated city trend. In this 12-year period, about 3.7 million additional people have crowded into the cities, many of them going into squatter colonies.

Thomas McHale has noted that lack of economic opportunities in the rural area will speed the flow of people into the cities.

He wrote in *Philippine Sociological Review*:

"The large urban complex appears likely to outpace the average growth of the nation as a whole.

"It is not unlikely that 10 per cent of the total population of Philippines will be concentrated in the expanding Manila metropolitan area by the 1980s.

"By the 1980s, it is also likely that half of the population will be living in either Manila or those concentrated population points where the only opportunities for find-

ing a socio-economic niche off the land will exist.

"The new heavy industry will seek locations near raw materials, cheap power or convenient transport. The first industrial complex outside of Manila is Iligan. It is the likely precursor of several similar areas that will emerge as significant population centers."

This explosive growth will obviously increase the pressure on the cities and jack up demands for water, sewage, health, housing, police, etc.

"The problem of refuse collection and disposal will plague Manila throughout the seventies," Major de la Paz told delegates to the Second Population Conference. The 750 tons of garbage that are accumulated daily today will probably increase fourfold.

Manila's sewers, built at the turn of the century and damaged during World War II, will simply not meet the need.

The number of cars that already clog Manila's roads will double.

By 1980, the cities of Cebu, Lapu-Lapu and Mandawe will be one sprawling metropolis.

Iligan City will be a major port requiring huge new deepwater piers.

In all these cities, the problem of squatters and slums will increase if present efforts to provide housing remain at current levels.

Unfortunately, the job of preparing for this future expansion metropolitan growth rests on men like Mayors Antonio Villegas, Norberto Amoranto of Quezon City, Macario Asistio of Calocan and Eulogio Borres of Cebu — who obviously have not been able to think beyond the next election.

Many of today's leaders may not be around by 1980. But their success or failure in providing for the foundation of future growth of our cities will be visited upon their children.

Old myths of vast untapped resources mask the grim fact that the Philippines is, in fact, running out of land to feed its exploding population.

Studies conducted at three universities — Xavier, Cornell and U.P. — all point to a complacency-shattering conclusion: The food that's needed to feed the one million more Filipinos added every year will have to come from sharply increased production, not from opening new lands. There just isn't enough land left.

"The illusion of a large frontier of open agricultural land awaiting the adventurous homesteader either in Mindanao or Cagayan . . . is one reason for the lack of public concern about the high population growth," Father Francis C. Madigan, S. J., of Xavier University has noted.

Statistics reveal that untapped land in Cagayan Valley can cover only some 40,000 homesteaders — and no more.

In Mindanao, migration has thoroughly peopled its land. The remaining agricultural land is in isolated areas and would be enough only for 200,000 new farms — far too short for what the population needs.

Out of a potential 10 million hectares of arable land, the Bureau of Agricultural Extension estimates that 8.2 million have been cultivated.

In a paper delivered at the Second Population Conference at the National Science Development Board, Dr. Thomas R. McHale agreed with Father Madigan and asked: What do you do about the millions of job-seekers that cannot be absorbed by agriculture?

By 1970, there will be 12 million people looking for jobs; 14.2 million by 1975 and 16.8 million by 1980.

Some 10 million Filipinos or over half the labor force are likely to be seeking jobs outside agriculture by 1980.

The sharp increase in the number of people looking for jobs arise from the following factors:

Life expectancy at birth has increased from 37.5 years in 1904 to approximately 52.5 years in 1960.

For 1960 to 1965, life expectancy at birth for Filipinos is 58 years.

In the 1980 to 1985 period life expectancy at birth for

the average Filipino is expected to reach 70 years.

With the increasing survivals into adulthood, the Philippine population will become older.

Half of the population will continue to be in the economically pre-active ages under 20 for several decades to come.

This aging process in the population means that for the next several decades the economically active adult segment of the population will be growing at a faster rate than the population.

A corollary of this fact in the parallel growth of the age segment that is most actively involved in the labor market and as decision-makers in investments and in consumption.

Although land is running out, many policy planners continue to assume that agriculture will continue to provide the basic source for growth and labor in the decades ahead, Dr. McHale noted. "Unfortunately the arithmetic of the situation shows there is no hope in this area."

Industry and commerce must furnish the jobs and to do this there is a need to raise P5 billion a year in capital — increasing to about P6 billion in the latter part of the 1970s.

This is about double what the country saves at the moment.

Dr. McHale said: "These problems are not a function of population size. Changing population policy is not going to be the solution to the economic development problems in the Philippines.

"The labor force of the 1970s is already born, no matter what we do with the birth rate this year or next year or the year after."

Obviously, the skyrocketing population confronts President Marcos, national leaders and every citizen with a job that can not be delayed: To restructure the economy decisively that production can be raised sharply while institutions capable of grappling with the birth rates problem within morally acceptable frameworks may be set up.

The population explosion has wiped out hard-won production gains in most sectors of the Philippine economy.

Dr. Mercedes B. Concepcion, population institute director at the University of the Philippines, made this observation in the course of briefing for economic writers. She based her lecture partly on a paper prepared by Edmund Murphy, also of U.P.

Fifteen business editors and reporters are attending a two-day Philippine Press Institute workshop in this city.

Dr. Concepcion told the PPI workshop that the Philippines' population was growing at a rate over 5 per cent higher than the world average. It is also triple the rate of the industrialized nations of Europe and Japan.

About one and a half million babies are born every year, she told the editors. By the year 2000, if present rates of growth continue, there will be 110 million Filipinos.

"Philippine population will double in less than 22 years," she said. "At Japan's current growth rate, its population will take 80 years to double."

Dr. Concepcion said that between 1956 and 1964, the Philippines established a world record by increasing food production by 26 per cent.

"In that time, however, population increased by a little more so that per capita and food production was about the same as it was eight years earlier," she said. "Despite this great increase, therefore, the average Filipino had no more to eat than at the beginning."

Half of the trade-deficits come from food imports alone, she added.

The same pattern of production-being-chased-by-population appears in all sectors of the economy, Dr. Concepcion said. Production increases are not felt because bigger outputs are needed to keep pace with population.

Population density is 110 persons per square kilometer and is already high, Dr. Con-

ception noted. The U.S. has 21 per square kilometer; Argentina, eight and Canada, two. "The Philippines is, indeed, a crowded nation," she added.

She told the assembled editors that just to keep pace with population increases — without raising living standards — will require tremendous capital and efforts.

From 1965 to 1975, population will shoot up by 40 per cent, she added.

The prospects for a decline of population growth in the near future are uncertain, she said.

Taiwan and Japan have been able to keep rates of population growth manageable while India and Pakistan have not, she noted.

What the Philippines will do is one of the most significant decisions in the decade ahead, she concluded.

The rapid growth of population is cutting deeply into your chances of landing a good job, sending the kids to a better school or the wife buying nutritious food at reasonable prices in the near future.

Basilio Aromin, a Filipino demographer now working with the United Nations in Bangkok, presents this conclusion in a new analysis of the population explosion.

The study, prepared for the University of North Carolina, is entitled: "The population base of economic development problems in the Philippines."

Economic writers from metropolitan papers and wire agencies analyzed the 141-page study at a Philippine Press Institute workshop in this city.

Earlier, Drs. Mercedes Concepcion and Wilhelm Flieger of the University of the Philippines' Population Institute told the editors: within 23 years, population here will double since the Philippines has one of the highest growth rates in the world.

Aromin said there were already strong indications that the high population growth rate was placing increasingly-felt pressure on the country's scarce resources and starting to drag back economic growth.

These indicators are found in the latest data on land, food, income, employment, capital formation and savings, the study added.

Rate of capital formation here is no higher than that of Europe 125 years ago, Aromin said. But population density and rate of growth are two to three times as high as Europe of that day.

Since investments are lacking, Aromin expressed doubts if the Philippines can do two jobs that the high population growth imposes: prevent consumption standards from back-sliding and increase production radically to provide for the one-and-a-half million babies born yearly.

"Improvement in standards of living in the Philippines can be attained only if economic development is accompanied by a reduction in fertility," Aromin said.

Among the indicators of population pressure cited by Aromin were:

1. Heavy consumption patterns of Filipino families. The Philippines has the biggest proportion (45.8 per

cent) of children under 15 in all of Southeast Asia.

"This unfavorable age structure compels the population to support a far greater number of children who are not only non-productive but also heavy consumers," Aromin wrote.

"In Manila and suburbs, 47.5 per cent of the average family budget goes to food. In farm households, it is 69 per cent."

2. Substantial increases in food production over the last decade have been wiped out by an equally sharp increase in population.

"From 1951 to 1960, food crops production increased by 71 per cent," the Aromin study noted. "This substantial growth has not offset the effects of rapid population increases will be noted in the almost stationary level of production per person..."

The Philippines produced 7.1 million metric tons in 1960. This is only 81 per cent of its food requirements and nutritional levels are low, he said.

The country will have to raise more food — or import more in ever increasing quantities as population shoots up. This means producing 7.7 million metric tons in 1970 and 20.5 million metric tons by 1980.

3. Under the impact of population increases, the number of new jobs needed will shoot up from 393,000 per year between 1960 to 1965 to 839,000 per year in period 1975-1980.

"On New Year's Day in 2000 A.D., what will Manila look like?"

The Institute of Planning at the University of the Philippines has studied this question. It has come up, not with a crystal bowl, but with a 47-page study entitled: "A Planning Strategy for Metropolitan Manila A.D. 2000."

Metropolitan Manila's population will escalate from 2.9 million in 1960 to 11.6 million.

"By the year 2000, Metropolitan Manila will have expanded to the north to include Malolos, Guiginto, Balagtas, Pandi, Angat, Norzagaray, Sta. Maria, Bulacan,

Obando, San Jose del Monte, Meycauyan, Valenzuela, Malabon, and Navotas," the study predicted.

Prof. Leandro A. Veloria, Institute Director, said Manila would also spread eastwards. It will then include: Montalban, San Mateo, Marikina, Antipolo, Teresa, Angono, Taytay, Cainta and Pasig.

Southward, the U.P. paper said, Manila's growth would sweep in the following towns: Rosario, Noveleta, Kawit, Cavite City, Bacoor, Las Piñas, Biñan, San Pedro, Muntinlupa, Taguig and Pateros.

As the city spills over, pressure on facilities, infrastructures and industries will sky rocket.

Water: the present expansion program of the National Waterworks and Sewerage Authority will start to lag by 1975.

Come 1980, the Angat-Ipo river will have to be tapped. It will pump in an additional 100 million gallons daily. By 1990, Marikina River will have to be brought into play. And when 2000 comes, Laguna de Bay will

have to be harnessed into a multi-purpose scheme: power, flood control, navigation and industrial uses.

There will be need for housing, roads, cemeteries, sewerage, schools, markets, police and fire-fighting equipment, etc. The needs will spiral on an ever-increasingly rapid basis and will not be met — unless the government acts now, the study said.

"Now is the time to concertededly tackle the problems of the Manila Metropolitan region on a more comprehensive and integrated approach," Professor Veloria said. "Any other time will only prolong the uncertainty of the region's rational and orderly growth."

The U.P. group said that assuming the present city administration check the chaotic and "frightening" use of land and adopt a rational plan, the following picture in 2000 A.D. could then emerge:

"Development corridors" along the region's seven major transportation routes could be set up. These corridors will have industries

and firms alongside them and siphon people and factories away from the congested central city.

The seven potential "development corridors" are: North Diversion road up to Malolos; south road up to Biñan; Cavite national road up to Rosario; the Taguig, Angono and Montalban roads in Rizal plus the Novaliches artery in Bulacan.

"Guided growth along the north-south corridors will be stressed as these are the preponderant directions of urban growth flow," the report said. "It arises in part from the geography of the area, bounded on the east by the mountains and Laguna de Bay, on the west by Manila Bay, on the north by the plains of Central Luzon and on the south by the rich rolling terrain of the southern Tagalog region."

Development corridors, by the year 2000 A.D., will result in more towns built on dominant industries, the report predicted.

Thus, Norzagaray will have cement, dairy and other related industries. Rosario in Cavite will be petro and

ishing-canning centers. Cainta, Taytay and Angono will be bustling with light and medium industries. The towns along the north diversion road will be probably industrial estates.

By the 2000 A.D., "most of the national offices will have moved out to the capitol site in Quezon City," the report said.

Manila and the old downtown center will expand and be characterized as a port and office area. "It will be the principal commercial and office employment center of the entire region," the report said.

The swift expansion of family planning services in Manila and other cities will not curb the galloping population growth of the Philippines.

A Ford Foundation survey of population problems in the Philippines also adds to this prediction a warning: the government has no alternative but to continue diverting scarce investment funds to support a population that will double, again, within 23 years.

Dr. Gordon W. Perkin wrote the report after a survey of six Asian countries. The Philippine study was made available to *Philippine News Service* here.

The Manila Health Department and voluntary agencies like the Asian Social Institute (Catholic) and Planned Parenthood Movement (Protestant) have increased family planning surveys "dramatically" over the last two years, Perkin said.

He revealed that the 300 private agencies are located in separate places mostly in urban areas. Some 50,000 women have been served, Perkin reported, and about 60,000 pills are sold every month.

"No more than two per cent of the eligible population are being served," Perkin reported. "Services have thus far remained largely concentrated in Manila and the surrounding suburbs."

By the end of February this year, the 23 of Manila's 41 clinics offered intrauterine devices (IUD); the rest gave pills.

Manila City's latest budget provides funds for eight full-

time workers in this program, Perkin said. "This represents the first overt use of public funds for family planning in the Philippines."

Government, church and private groups are cooperating in research projects, he added. Among the institutions leading in this area are: Population Institution at U.P.; Santo Tomas Institute for the Study of Human Reproduction; Silliman University in Negros; Xavier University in Misamis; San Carlos University in Cebu.

Perkin said that data from the first surveys show Filipinas marry early: 19.3 years. The studies also reveal 46 to 85 per cent of women want smaller families.

If present fertility trends continue, however, they will bear five to 16 per cent more kids than they want.

Preparations for a national demographic survey are under way in the census bureau.

The absence of a government population policy has induced private voluntary groups to take initiative, he observed. Recent availabili-

ty of large funds from the Agency for International Development (AID) for these programs have complicated coordination efforts, he added.

Even if family planning services were to become readily and widely available, it would not slice deeply enough into population growth, Perkin cautioned.

Over the last eight years, increase in food production (26 per cent) barely kept pace with population growth, the report observed. Education alone eats up one-third of the budget.

Perkin wrote: "The combined activities of these institutions are unlikely to have any measurable effect on the birth rate in the foreseeable future.

"The Philippines must therefore prepare to assimilate a 100 per cent increase in its population in a single generation and to accept the fact that a major share of its investment capital continue to be diverted to expansion of social and educational programs," he concluded.

— *From a pamphlet by Juan L. Mercado.*

■ Romulo, the immediate predecessor of Lopez, claimed he was better than all his predecessors.

UP PRESIDENT SALVADOR LOPEZ IN RETROSPECT

UP President Salvador Lopez was sworn into office on January 23, 1969. Part of his statement clearly defines the direction of his efforts: "I shall have constantly before me the policies and programs of my distinguished predecessors, and will endeavor to build upon their achievements. God willing, and with the support of the faculty, the students, the alumni, the Regents and the Government

of the Republic, we shall strive to make the University of the Philippines an institution more hospitable to the positive idealism of our youth and more relevant to the true priorities of our national life, an instrument more responsive to the irrepressible clamor of our people for the rapid transformation of our society so that all may enjoy the blessings of a better life in larger freedom."

BARS TO PUBLIC OFFICE

It is a sad commentary on our contemporary politics in this country, that it is getting harder and harder for poor but decent and capable men to run for public office and win. — *Jaime Ferrer, Chairman, Commission on Elections*

■ It will be a question involving color and hereditary factors, apart from other considerations.

SEX ORGAN TRANSPLANTS POSE RACIAL PROBLEM

A Select Committee of the South African Parliament has been warned that racial complications can arise if the new science of organ transplants is extended to include reproductive organs — or "gonads" as they are known.

The Committee was told that although a successful gonad transplant resulting in procreation had not been performed anywhere yet "it is not impossible that it will be performed in the future." Some authorities even think a gonad transplant would not be as difficult as a kidney transplant.

Gonad transplants — of ovaries in women and testes in men — would throw up the whole question of recipients of one colour receiving reproductive organs from donors of another colour.

For example, if testes from a black man were transplanted into a white man, the

child which the white man "fathered" with a white woman would be coloured — because the black man's genes would be transferred with the testes. The implications of this happening in a racially-structured country like South Africa are obvious.

The question of gonad transplants was raised before the Select Committee by Professor S. F. Oosthuizen, chairman of the South Africa Medical and Dental Council. Professor Oosthuizen discussed transplants of testes in men and ovaries in women.

Gonad transplants could benefit women — admittedly, there is only a small number of them — who are unable to have babies either because they lack ovaries, or because their ovaries are defective. The implantation of new ovaries, or even of

ovarian tissue, might enable them to raise a family. Similarly, the transplantation of testes would enable a sterile man to impregnate a woman.

The Select Committee was appointed primarily to draw up legislation covering organ transplants, following the pioneering of heart transplant operations in South Africa by Professor Christian Barnard. Professor Barnard was one of a number of leading doctors who testified before the Committee.

The question of gonad transplants arose almost as a side-issue. The Anatomical Donations and Post-Mortem Examinations Bill, which the Select Committee drafted, and which has just been passed by the South African Parliament, contains a clause referring to such transplants, which reads: "...the use of any gonad without prior authority granted by the Minister (of Health) in writing shall be unlawful where the result of such use may be procreation, and such use without such prior authority shall constitute an offence..." The penalty for an infringe,

of this clause could be a £250 fine or six months' imprisonment.

Professor Oosthuizen told the Select Committee: "As far as the man is concerned, transplantation can be justified only on two grounds, namely sterility and impotence...)

"Personally I am naturally totally opposed to the transplantation of gonads. The testes are related to the gene and the chromosome. In this regard there are endless difficulties."

Pointing out that genes determined colour, racial characteristics as well as illnesses, like haemophilia, diabetes etc., Professor Oosthuizen said: "In other words, they determine colour, sickness and also the personal conduct of a person."

This placed an "immense responsibility" on the doctor and it would be advisable, declared Professor Oosthuizen, to leave the decision to the Minister of Health.

"These things, in my opinion, are too dangerous. It is not only the colour aspect but it is also dangerous as

far as illnesses and personality are concerned. There are literally hundreds of genes, of which one for example can determine colour. Others determine racial characteristics, the colour of hair, intelligence, physical build, baldness, wavy hair, etc.

"Who of us can say with any certainty that in our ancestry one or another event did not occur? I am no politician. I am not expressing an opinion on anything except science. I can make out a case for being opposed to this... too many possibilities could flow from it."

Professor J. N. de Villiers also representing the South African Medical and Dental Council, said sometimes a perfectly healthy ovary was removed from a woman. "If, for example, a patient has carcinoma of the breast, then the ovaries are removed prophylactically to exclude her hormones. Such ovaries would then be very suitable for transplantation. The transplantation of gonads is not something which is very practical at the moment. It is however not impossible that it will be performed

in the future, if the problem of blood supply can be overcome."

The Chairman: For what purpose would it be done?

Professor de Villiers: Mainly with a view to procreation. The ovary which is transplanted would then discharge a female eggcell, which could be fertilized and enable the patient to procreate.

The Chairman. As soon as procreation becomes the intention, the permission of the Minister should be obtained?

Professor de Villiers: Yes. There should be very stringent precautions when an ovary transplant takes place. For the reasons already mentioned by Professor Oosterhuizen, namely that all the hereditary factors would come into operation. That child would receive all the hereditary factors from the donor and none of her (host mother's) own.

The Chairman: Does this not amount to a sophisticated form of insemination?

Professor de Villiers: Exactly. Only in reverse.

Insemination occurs when the woman is normal and the semen is obtained from a donor. Here it is just the opposite. In this case it is the woman who does not have a gonad. This type of case occurs very seldom. There is a condition known as Turner's Syndrome where a woman is born without any ovaries. She has tubes, a uterus and a vagina, but no ovaries, while the rest of her procreative system is perfectly normal.

They lead a perfectly normal life except that certain growth processes are changed and they are tall and thin. This would be the type of patient in which one would consider such an organ transplant.

Continuing his evidence, Professor de Villiers said it would be of great value to such a patient. She would then be able to give birth, which she would otherwise not have been able to do... "I think one would be justified in transplanting an organ in such a patient. Her alternative would be to adopt a child."

Professor De Villiers said that such a transplant would have to be preceded by a thorough inquiry into hereditary factors. The donor's family history could be investigated, and even an analysis of the chromosomes undertaken. This would enable the Minister of Health to decide whether there were any undesirable hereditary factors.

The Chairman: Would this not create a new world for barren women? Would this type of transplant not become one of the most popular transplants?

Professor De Villiers replied that no successful gonad transplant had yet been performed.

Referring to artificial insemination by a donor (AID), Professor De Villiers said that he had never procured it for any of his patients because he was not sure that it was legal in South Africa. He felt all AID cases should be channelled through a central donor-control institution, because of the problem of hereditary factors.

Objections to gonad transplants were submitted to the Select Committee by Monsignor Galvin, representing the Roman Catholic Church in South Africa. He said: "The problems that would arise after an ovary, for example, has been transplanted, have not yet been satisfactorily answered. According to medical opinion, all the ova are present in the ovary from the time of birth. Hence, if an ovary is transplanted one could not call a child conceived after the transplant the child of the woman who bore it, since the ovum would not have been hers, but would belong to the woman from whom the ovary was taken.

"Such a transplant would as a consequence lead to difficulties in establishing the true parents of the child in matters of heredity and claims under parents' wills. There would also be the possibility of marriages tak-

ing place between half-brothers and half-sisters. If a testis were to be transplanted similar difficulties would also arise."

Monsignor Galvin said the term "gonad" in the new Anatomical Donations and Post-Mortem Bill did not include "semen" in its definition. But the definition given of "tissue" in the Bill seemed to be wide enough to include it, hence the Bill appeared to be permitted "artificial insemination."

Artificial insemination, inside or outside marriage, was immoral in the Catholic Church's view. The husband and wife alone had a reciprocal right over their bodies to engender new life. His right was exclusive, untransferable and inalienable. Also, the normal method of collecting semen appeared to be by masturbation, which was contrary to divine law. — *By Stanley Uys in The Observer.*

■ Problems besetting Tokyo and other Japanese cities. Manilans might as well study them.

BIG CITY CONGESTION AND FUTURE CITY PLANNING

Tokyo and other big cities in Japan present a dramatic sight that seems symbolic of the nation's economic prosperity. The construction of high-rise buildings, expressways and subways continues in high gear day in and day out, while projects which are opening more residential lands and building more houses are gathering momentum day after day.

But a closer look at everyday life in these big cities reveals that their substance is not yet as perfect as their outer appearance suggests. It must be admitted that the big cities of present-day Japan are beset with a host of problems, which tend to impede the smooth development of the economy and the growth of industry while, at the same time, ignoring the welfare of the people. The urban problem is now called one of the biggest domes-

tic issues confronting the Japanese Government.

Over the past decade and a half, the Japanese economy has achieved a degree of rapid growth with few parallels in the world.

In the process, there developed a massive concentration of central administrative functions in the big cities. Head offices of private enterprises, governmental administrative agencies, mass communications media, cultural, educational and informational institutions, distributive and banking organizations, etc. established themselves in rapid succession in the urban centers as if in a race against time. This is because Tokyo and the other big cities are centers of information and management.

Private enterprises expand their survey, research and publicity activities parallel to

increases in their production scale. In this case, they place emphasis upon the big cities where it is easy to keep in close touch with administrative authorities and to gather relevant information, both internal and external. Moreover, it is evidently advantageous to set up headquarters in large urban centers if sales efficiency is to be enhanced by making the most of mass consumption trends. Therefore, concentration in big cities may well be called a law of economics.

Furthermore, industrial concentration spells population concentration. In the decade from 1955 to 1965, the population of three metropolitan areas — Tokyo, Osaka and Nagoya — and their vicinity (within 50 kilometers of the urban center) rose by 41.8, 34.8 and 25.3 per cent, respectively. In the same period, Japan's total population increased by only 10.1 per cent.

As a result, the population density in the big cities now stands at 6,000 per square kilometer (average of seven big cities) or nearly 30 times

as high as the national average.

Such an excessive concentration of industry and population has given rise to numerous urban problems that are prone to harm the health and the cultural well-being of the city residents.

First, the accumulation of industries has upset the balance of land supply and demand, bringing about a land price spiral. Then there are the so-called "industrial public hazards," such as air pollution by smoke issuing from factories, contamination of rivers and the sea water by waste from manufacturing plants, noise and vibrations from construction and heavy traffic, and the sinking of the ground level due to the pumping up of underground water.

The population concentration, meanwhile, has created a serious shortage of residential land and housing, and produced tremendous amounts of sewage and garbage that are beyond the disposal capacity of the big cities. Furthermore, the expansion of residential areas into suburban and neighbor-

ing areas has drastically increased the number of people who must travel a considerable distance to offices or schools in the urban center. This has created daily traffic jams on streets and highways and fantastic crowding on the public transportation systems, especially in the morning and evening rush-hours.

The heavy concentration of motor vehicles has brought the so-called "automobile public hazards," such as noise, exhaust fumes and traffic accidents.

Urban improvement programs in Japan started later than in Western nations. Therefore, the accumulation of social overhead capital is still far from adequate. Moreover, with the sharp rise in urban population in recent years, most of Japan's big cities can hardly be called ideal places for the enjoyment of a cultural life.

For instance, major Western cities are covered by city-wide sewerage disposal networks. But the sewerage coverage ratio in Japan is still only 30 to 60 per cent even in the seven big cities.

Moreover, park areas in Western cities average out to a per capita figure of 10 to 15 square meters. In Japan, however, the per capita figure is only 0.9 square meters in Tokyo and 2.6 square meters even in Nagoya, which has made relatively fast progress in urban improvement. The ratio of streets (that is, the ratio of street area to total urban area) in Japan is also estimated to be less than half of the ratios in Western countries.

The shortage of social overhead capital in general does more harm than merely making daily life inconvenient and unpleasant. For instance, the shortage of residential land housing invites a qualitative deterioration of housing soon or later, resulting in the congestion of small houses. Therefore, once a fire breaks out or other accidents occur, large numbers of people are bound to suffer.

As residential areas expand into the suburbs, relatively low-priced land is sought out and numerous houses are built without regard to city planning.

This is very uneconomical from the viewpoint of making the most of available land as well as for improving urban facilities.

Children's parks are also indispensable for fostering athletic nimbleness, sociality, spontaneity and originality. But, it is said, a shortage of such parks is partly the cause for a high incidence of obesity, autism and the refusal to attend school among city children. In many cases, a shortage of playgrounds causes children to enter undesirable places, resulting in juvenile delinquency.

Meanwhile, a shortage of day nurseries has given rise to the so-called "key children," whose parents entrust them with keys to their apartments while they are out to work. It is evident that the untended, unnatural life of these children adversely affects their character formation in the vital years of their mental growth.

Not only to traffic accidents and public hazards harm human lives, but also daily long-distance commuting by electric trains crowded to

twice or three-times their capacity serves to intensify both physical and mental fatigue and thereby lower productivity.

The worsening of the urban living environment results from policies which have in the past given preference to the development of the economy and industry over the improvement of the citizen's welfare. To be sure, the expansion and growth of the economy is a basic requisite for improving the people's living standards and well being. In this sense, it was only natural to attach importance to economic growth.

Nevertheless, now that the adverse effects of urban congestion have become more and more pronounced even to the extent of obstructing a smooth advance of industry beyond the present level, the problem of how best to rectify such defects has assumed great urgency and importance.

The problem of promoting social development in order to remove the backward aspects in the urban living environment and to improve

the people's welfare has been a major political slogan since around 1964.

Urban redevelopment plans have been mapped out to elevate the degree of urban land use, improve and expand roads, parks and other public facilities, build houses systematically, relocate factories to mitigate public hazards, etc. At the same time, pertinent laws for readjusting land and reconstructing urban centers have been enacted or revised. Urban redevelopment projects of the past were far too limited in scale to resolve the growing severity of urban problems. In retrospect, they were in the nature of inefficient "aftercare" investments. Recognizing the defect of this approach in the past, the various urban renewal projects currently under way are marked by large-scale and comprehensive planning.

One of these projects is the Comprehensive National Development Plan now being revamped by the Economic Planning Agency. The second draft plan as announced in December last year envisages in its chapter on cities

a set of new measures as part of overall national land development — for instance, a thorough dispersal of industries, reorganization of urban centers, strengthened steps against urban disasters, and construction of suburban "new towns" geared to providing adequate housing.

There are also two laws designed primarily for urban development in the context of national land development. One of them is the City Planning Law, which was wholly revised last year. The other is the Urban Redevelopment Law, now being formulated.

The City Planning Law, aimed at curbing unsystematic urbanization, prohibits any development projects in designated urban areas unless they are accompanied by the construction of roads, sewerage and other urban facilities of certain standards.

The Urban Redevelopment Law is intended to encourage the construction of joint, multi-story buildings through the joint use of land and to use surplus land thus created for parks, roads and other public facilities.

Tokyo perhaps best illustrates this new trend in urban renewal. Last October, the Basic plan for the Improvement of the Metropolitan Region which sets forth guidelines for the city's development underwent a wholesale revision.

The previous basic plan for Tokyo's redevelopment tended to lay primary emphasis upon preventing the concentration of people and business in the heart of the city. Moreover, concern for improving the people's well-being was liable to be subordinated to the goal of promoting smooth industrial development.

The revised plan, reflecting an awareness of these negative aspects, avoids making any forcible attempt to stem the trends of urban concentration. Rather it calls for positively guiding such centripetal moves to reasonably selected areas with a view to encouraging systematic urban construction on the basis of a "greater sphere" concept.

Under the plan, Tokyo and seven surrounding prefectures (Kanagawa, Saitama, Chiba,

Ibaraki, Tochigi, Gumma and Yamanashi) are regarded as an "integrated giant regional complex" with a total population of 30 million. And various functions currently concentrated in Tokyo will be distributed within the region so that the existing urban centers, suburban areas and adjacent "development areas" may be improved and developed further, each with its appropriate function.

The area within a 50-kilometer radius, centering on 23 wards of Tokyo, is to be considered a complete "one-day life sphere."

As for the use of land in the area, efforts will be made to form a "multi-core center" for the Metropolis. To that end, functions presently concentrated in the heart of Tokyo will be redistributed to those areas now called "sub-hearts of the Metropolis," such as Shinjuku, Shibuya and Ikebukuro, and other adjacent areas, including Yokohama.

In the suburban areas, giant "new towns" will be constructed in southern Ibaraki Prefecture, western Saitama Prefecture and eastern

Chiba Prefecture, for instance, in addition to existing projects, such as Tama New Town, Kohoku New Town and Kita-Chibu New Town. It goes without saying that these new towns are to be something more than a simple collection of houses.

In the areas adjoining these new towns, various centers will be organically distributed and developed, such as "urban development districts based on the greater sphere concept," industrial regions, tourist centers, and academic cities. At the same time, prosperous agricultural districts with high standards of living will be fostered, while efforts will be made to preserve the beauty of nature.

The plan also calls for constructing about 4,400,000 housing units and securing 40,200 hectares of residential land by 1975. Besides, the per capita park area in the urban centers of the Metropolitan Region will be raised from the present 1.6 square meters to three square meters, while the coverage ratios for service water supply

and sewerage in the cities of the region will be increased to 90 and 50 per cent, respectively.

Urban reconstruction in line with these laws and plans is already taking concrete shape.

In the heart of Tokyo, streetcar lines are being steadily removed, while the subway network is being rapidly expanded. High-rise buildings are being planned and built one after another, and underground shopping centers and parking areas, which have become deeper and wider, are being successively opened.

Big private enterprises are showing signs of removing factories and offices to adjacent areas, now that they have realized that the earlier advantages of concentration are being more than nullified by the adverse effects of congestion. For instance, the automobile industry, one of the most promising "strategic industries," appears willing to build assembly plants in vast, low-priced sites away from existing urban centers.

Other urban projects are also now under way: Senri New Town on the outskirts of Osaka, where the Japan World Exposition will be held next year; Kozoji New Town in the suburbs of Nagoya; Tama New Town of Tokyo; an academic city in Tsukuba, Ibaraki Prefecture; replacement of old bridges with new ones; the construc-

tion of elevated highways and expressways in and around urban centers, etc. These may appear unrelated to each other at first glance. Actually, however, all of them form integral parts of comprehensive programs for the reconstruction of cities and adjoining areas to be completed 10 to 20 years hence.

WORLD'S GREATEST PROBLEM

The greatest problem the whole world faces is the tremendous gap in the wealth of nations. —
Edwin O. Reischauer, professor at Harvard

■ The threatening spoliation of one of the natural resources of the Philippines.

AS THE COUNTRY TURNS TO DESERT

If nothing is now done to stop the wanton destruction of our public forests, watersheds and national parks, soil erosion will turn the Philippines into a wasteland and a desert. And not for long too, for we have the fastest rate of forest destruction in the world, says a United Nations report; and the National Economic Council says that 172,000 hectares, or one hectare every three minutes, are destroyed annually. So, it is feared that the Philippines will face a water crisis in the next decade that will affect the homes as well as the industrial and agricultural sectors.

When this happens we will have little or no water at all for drinking, our food production will be set back because there will be no water for irrigation; and our pigs, fowls, and cattle will die for lack of water and feed. Our industries will

cripple and bog down for lack of electricity, and our cities and towns will be plunged into darkness, like Hades! "When the rainy season sets in," the *Philippines Free Press* reported on June 1969, "destructive floods will be the order of the day. Homes along river banks, bridges and other public works and private property will be washed away and thousands of human lives will be lost." But the irony of it all is that when summer comes we will have longer droughts: sweltering and oppressive.

The Philippine News Service reported that "the longest and worst drought recorded by the Weather Bureau since 1885" as a result of the criminal destruction of our forests was primarily responsible for the following:

Continuing destruction of rice and corn crops which

have been affected by lack of rain since October last year. The Bureau of Agricultural Economics estimated a total loss of 7,697,200 sacks of palay as of December 1968; in Bataan, production would fall short by six per cent due to lack of irrigation, and in Batangas the dry spell destroyed some 787,200 sacks of palay.

Considerable losses suffered by the livestock and poultry industries. Production of milk and eggs had decreased by 10 and 20 per cent respectively, the Bureau of Animal Industry reported. Meanwhile, the government has been spending ₱31,000 more every month for cattle feed.

Continuing loss of electric power and the immobilization of irrigation and waterworks systems in at least seven provinces in different parts of the country as a result of the drying up of some rivers and streams in those places. As a result of the long drought, vital sources of water dried up in the provinces of Bohol, Cebu, Samar and Leyte in the Visayas and Nueva Ecija, Tar-

lac and Bataan in Central Luzon. In Bohol, the water level at the reservoir of the Tontonan hydroelectric plant has gone down so much that there are frequent brown-outs; the Bulalacao River in Cebu, which is almost drying up, has reduced the irrigated portion of Cebu City from 76 to only six hectares; in Leyte, the home province of the First Lady, water is rationed in some places like Tacloban City, and brought about losses of rice and corn crops; and the more than ₱21.5 million in waterworks system in Masbate was forced to shut off the precious water when the water level at the reservoir dropped to a record low, and Masbateños were so alarmed that when the President visited Masbate, they greeted him with placards which said: "No Water, No Marcos."

Alarming destruction of agricultural plantations, including tree and crop seedlings, in coconut and sugar producing provinces. The long dry spell has caused incalculable damage to the sugar industry, especially in

the northern towns, in Negros Occidental. And this despite the cloud-seeding operations by the National Federation of Sugarcane Planters and the Philippines Sugar Institute. And the rice and corn crops were so seriously affected that the Irrigation Service Unit and the Presidential Arm on Community Development had to distribute more than 1,000 pumps to help the farmers save their wilting crops.

In his *Pakinggan Ang Pangulo* program, President Marcos observed that the Philippines has a vegetative cover of some 30 million hectares, with 11,752,056 hectares as commercial forests. Of this 11,752,056 hectares of commercial forests, 4,762,418 hectares are covered by logging permits. Fine.

But what is really happening? Well, about 1,400,000 hectares of the nation's watersheds have been denuded, ostensibly through the clandestine activities of certain favored loggers, Nicolas Capistrano, Jr., president of the Philippine Lumber Association, revealed. And the Senate Committee on Natu-

ral Resources also reported that "some 30,392 hectares of the nation's 26 national parks all over the country are already denuded."

In the President's *Pakinggan Ang Pangulo* program, he asked — "What is a watershed?" Here, in his own words, is his answer:

"A watershed is an area which, because of the vegetation, becomes a sponge. It catches and absorbs the rainfall during the wet season. And like a sponge, during the dry season too, it releases this water that it absorbed during the rainy season.

"Thus, you see that where there is a lot of trees or thick vegetation, there is plenty of water. Once you remove the vegetation, however, the sponge turns into a tin roof, a hard tin roof. There is no vegetation to catch, absorb and hold the water. The water instead runs off the surface of the ground, just as water would if it fell on a hard tin roof.

"So, you have floods, floods during the rainy season, but drought during the summer. Floods because there is an

oversupply of water that runs off down into the valleys and into the lowlands. During the rainy season, we in the lowlands catch this excess water. They are the floods that we worry about, and we suffer from.

"During the summer, however, there is no water that can be released by the mountains. The water that is supposed to be held there is no longer available, because the vegetation that holds it is no longer there.

"And thus you have drought." *Amen.*

Who are to be mainly blamed, then, for this wan-

ton destruction of our forests? Obviously, not the kaingineros! For all the kaingineros in our country, working together, cannot possibly destroy 172,000 hectares of our forests a year — with only their bolos! Which, then, inevitably points to these fatted culprits: the illegal loggers.

They must be stopped, and stopped now, in their indiscriminate deforestation of our watersheds and national parks — "lest, when an aroused people and government finally take drastic measures to stop ALL logging as the country turns to desert.

OF SOCIO-RELIGIOUS ACTION

Catholic action is also social action because it promotes the supreme good of society. — *Pope Pius XI*

■ This paper shows how progressive and prosperous Norway and the Norwegians are in spite of their small size. ■

A GREAT SMALL COUNTRY

Today is Norway's Constitution Day, commemorating one of the oldest existing organic laws — the Norwegian Constitution which was signed on May 17, 1814. An intriguing fact about this Constitution is that during the one and a half centuries it has been in force, it has undergone only minor changes and modifications.

But what is important for us to note is that the Norwegians, today's descendants of the fierce and ancient Vikings, may be a small nation in terms of population but they are SMALL in nothing else. Norway is a country with only 3.8 million people living in the vicinity of the Arctic Circle in a land so mountainous and sparsely populated that there is — as one humorist put it — only "a quarter of an inhabitant to every mountain." And yet, the Norwegians maintain the biggest whaling

fleet in the world, one of the biggest merchant fleets (about 17 million gross tons), own at least 500,000 private cars and the same number of television sets.

A country's greatness, on the other hand, does not lie in private cars and television sets. For a nation with a population smaller than that of Greater Manila and the Southern Tagalog provinces, the Norwegians have made a large imprint on the civilized world. The Spaniards particularly the citizens of Cataluña who claim Cristobal Colon (Columbus), may resent it, but 492 years before Columbus set sail, a Norwegian Viking named Leif the Fortunate, landed 35 men on Labrador and called it "The Land of the Flat Rocks." (Some critics now refer to North America as the land of the Fatheads). Then he ventured onward to New Foundland and Nova Scotia.

A few years afterwards, another Viking called Torfin Karisevne sailed into Hudson Bay with 160 men aboard his three ships. His son Snorre, born to his wife Gudrid, was the first European, born on the American continent.

It was also a Norwegian, Roald Amundsen (1872-1928), the famed Arctic explorer who discovered the South Pole. (The Americans beat him to the North Pole). In 1911, with four men and a pair of dog-sleds he fought his way through blizzard, ice and snow to the South Pole where he planted the Norwegian flag. Again, it was a Norwegian who discovered the leprosy bacillus — name-

ly G. H. Armauer Hansen (1841-1912), which is why leprosy is sometimes known as "Hansen's disease." In recent years, Thor Heyerdahl, sailed the Pacific in the raft Kon-Tiki and probed the mysteries of Easter Island. Then there was Fridtjof Nansen (1861-1930) who was both explorer, scientist, and humanitarian diplomat who resettled refugees after World War I. Finally, there is Trygve Lie who became the first secretary general of the United Nations.

Not bad at all for a "small country." What about us? With 37 million Filipinos, let's stop thinking of ourselves as "small." — *From the Manila Times, May 17, 1969, by Maximo V. Soliven.*

FACTORS OF SUCCESS

Every success in life depends upon a man's love of work and power of will. — *Ignacio Villamor*

BIRTH CONTROL NOW: A SURVEY

In Asia, most countries are trying to contain populations which are increasing 3 per cent or more a year. But finding effective ways is proving difficult.

Two or three years ago, the intrauterine device was hailed as revolutionary — the cheapest easiest way to cut the number of births to reasonable levels. Asia, with at least 2 million insertions, has become the largest market in the world for the loops.

Today, enthusiasm for the loops has waned. Results have been less than satisfactory. Some programs have been supplemented with the more expensive, more controversial pill.

Experts ask, what are the alternatives? Older contraceptive methods are unreliable. Injections and experiments with "immunization" are inadequately tested. The conclusion now being reach-

ed by leaders in family planning:

Induced abortion may be the only effective means of reducing population, particularly in areas of the world where education standards are low and poverty is widespread.

In three Asian countries, abortion is already considered the most dependable check on spiraling populations.

Japan pioneered, legalizing the operation in 1948. Abortion by qualified doctors gets major credit for reducing the birth rate to a modest 1 per cent gain per year — one of the lowest in the world.

In two neighboring countries, abortion is illegal but widely practiced. An estimated one out of every three pregnancies in South Korea is now terminated by abortion. The cost is \$3 — is at least as important as the loop in curbing population growth.

Family-planning programs have been under way in Taiwan since 1964, with the aim of reducing the population growth rate from 3 to 2 per cent a year. Results of a program to insert 600,000 loops by 1970 have been mixed. Many women complain about them for one reason or another, and the retention rate is only 60 per cent after 18 months.

The Republic of Korea has had comparable experience with a program begun in 1962. Over 1 million loops have been inserted, but at least 2 out of every 10 are removed for various reasons.

Both countries are supplementing their IUD programs with pills, a more complicated and costly procedure.

In South Asia, the world's most critical area of population growth, only three countries — India, Pakistan and Singapore — have national programs aimed at controlling births. Malaysia is beginning one.

The Philippine Republic has no program, and is further inhibited because about 85 per cent of its popula-

tion is Catholic and leans toward the "conservative" wing of the Church.

Thailand, a relatively underpopulated country by Asian standards, but one which is beginning to feel the pinch of population versus agricultural productivity, has no program yet. Indonesia, a nation of more than 110 million people and a high-density population in some areas, has no program worth mentioning.

Pakistan and India — both growing rapidly — have had major birth control programs for years. But neither has made much of a dent in its birth rate.

Pakistan aims to have 5 million couples of childbearing age practicing birth control regularly by 1970. Right now, it looks as if the goal will be met. Some 2.4 million couples have begun some form of birth control: the loop, the pill or conventional contraceptives. In addition, 180,000 men and women have been sterilized.

India's program is 15 years old, but the population is nevertheless growing at a

rate of about 2.5 per cent a year — and threatens to climb to 3 per cent, which could mean disaster.

At first, the loop was seen as the answer to India's control needs, but results have been disappointing. Now,

sterilization is being stressed, and a "finder's fee" of \$1.33 is being offered to anyone who brings a person to a clinic for the simple operation. — *From U.S. News & World Report, March 17, 1969.*

For the salvation of our country and our national honor, let us fight while a grain of strength is left us, let us acquit ourselves like men, even though the lot of the present generation is conflict and sacrifice. It matters not whether we die in the midst or at the end of our most painful day's work... — *Apolinario Mabini*

WHY MORE FILIPINOS BECOME TEACHERS

There is a phenomenon in the choice of careers by Filipinos that cannot be arrived at by simply looking at the composition of registered professionals in the Philippines. The list of registered professionals in the Philippines does not include thousands of college graduates every year in the field of education, many of whom end up teaching in the country's numerous elementary and high schools. Among those Filipinos who hold college diplomas, elementary and high school teachers are not numerically insignificant.

At the beginning of the decade of the sixties, elementary and high school teachers numbered 140,000. In the mid-sixties, they grew to almost 200,000. Even now, teachers in the elementary and secondary schools outnumber all registered engineers, physicians, lawyers, pharmacists, C.P.A.'s, plus

some other selected professionals combined.

There seems no end to the phenomenon of teachers in the Philippines unless choices of career courses of college students change. But if any change at all appeared in the sixties, it was a case of an increasing percentage of Filipino college students enrolled in teacher training courses.

At the beginning of this decade, slightly more than a fourth of college graduates were teachers. In the mid-sixties, education graduates were already more than half of total college graduates. It is estimated that among those who would be in their fourth year in school year 1969-70, at least 30% are in teacher-training courses. Teacher-graduates this school year should be more than 30% of all college graduates, since some fourth year stu-

ents, those in chemistry and engineering courses especially, would take at least one more year before they graduate.

A few reasons come up as explanations for the teacher-phenomenon in the Philippines. One reason is the continuing popularity and prestige the teacher enjoys, especially in Philippine barrios and towns. Another reason is dictated by economic means and opportunities.

It is relatively less expensive, for instance, to send a child to a normal school to become a teacher than to a university to become an engineer. It is also much easier for a teacher to find a job that pays a modest and regular, oftentimes lifetime income. Furthermore, a teacher does not need to stay in the city to earn a modest income that is pulled down by a higher cost and standard of living. Teaching opportunities are usually available in public barrio and town elementary school and in rural high schools (places where prestige is bound to be high and living standards and prices are low.)

One consequence of the sharp rise in the number of elementary and high school teachers in the Philippines (their annual increase should be close to 10 per cent in the sixties) is the decreasing ratio of elementary and high school teachers. At the start of this decade, there were close to 70 elementary-school-age children per elementary school teacher. In the mid-sixties, this was down to 50. At the close of the decade, it should be no higher than 40.

Similarly, there were some 120 high-school-age Filipinos per high school teacher at the beginning of the decade. In the mid-sixties, this ratio fell to 115 and should fall further down to 110 at the end of the sixties.

There is nothing wrong with many Filipinos aspiring to become teachers. From the present trend of college enrollment, however, there is a danger that there will be too many Filipinos who are teachers, and very few Filipinos who are good teachers. This would be a real pity — because a vast quantity of ill-trained teachers can produce ill-educated and ill-

motivated masses. What we need above all now are qualified and highly-trained educators in our elementary and high schools, who can motivate school children, who can train and prepare them properly for a higher standard of college education.

It can be debated whether we should perhaps redirect the stream of college enrollment each year away from

the crowded teacher-training courses into engineering and technical fields which the stage of our economic development clearly demands. Whatever the resolution of such a debate, the solution would be for our system to have an appropriate balance between what the school system needs in terms of both quantity and quality of school teachers. — *Manila Daily Bulletin*.

OF MABINI'S COURAGE

It will surely take men with the courage and sincerity of the Sublime Paralytic to arrest the disunity, immorality and greed gnawing at the roots of our society. — *Cesar Majul*

■ This is an exaggerated column based mainly on information later discovered as wrong.

THE CORRUPT WORLD OF DIPLOMA MILLS

The wailing of the elders and of the stockholders of the diploma mills can be heard above the shouting of protesting students. To what lowly state have the students degenerated? seems to be the common theme of the lamentation. And the *Philippine Association of Colleges and Universities*, which is nothing but a *syndicate of diploma mills* out to preserve the high rate of profit of its members, has invoked peace and order and demanded that the needed permits for demonstrations be denied to the students.

The syndicate has every reason to be afraid, for the first fruit of the student demonstrations was the discovery by government inspectors of something which is known to all except to those who are born defenders of the profit-makers, and that is, the diploma mills in and

around the center of Manila which go under the name of *colleges and universities* are declaring *unconscionable dividends for the stockholders, granting huge salaries to presidents* and stockholder-administrators — all at the expense of the students and their miserably paid instructors and professors.

According to the definitive audit made by government auditors, only one of the 15 institutions which had been subjected to scrutiny was found to be operating at a loss. The conservative estimate is that most of the rest — certainly six — were earning an average of from one to two million pesos a year. One broke the record by claiming a net income of ₱9-million.

If a college or a university were a sausage or soft drink factory, a profit of one or two million or even nine mil-

lion is a badge of honor. It attests to the efficiency of the management and to the superiority of the inanimate product.

But for an institution of higher learning to declare such a return on investment is a mark of disgrace. It would not be easy to find a better proof that the faculty and the non-teaching staff are being exploited and the students cheated.

The salary scale, as the government auditors must have learned by now, is one of the major sources of high profit. The usual salary per hour is from ₱5.50 to ₱6.75 an hour. If an instructor or professor is favored with a ₱10.00 rate or anything above, he has a right to consider himself exceptional. The salaries of ₱15.00 or ₱20.00 are reserved for the professionals who are either in the government or in well-known private enterprise.

If the instructor or professor is in the good graces of the all powerful dean, he is given a load of four or five classes a day, but whether he is in the good graces

or not, the size of his class ranges from 60 to 85 students. And this is the source of high profit. He is under pressure at all times to feel the humor of the owners, and he is under a severe compulsion, not so much to teach as to tolerate students.

He cannot assign collateral readings for the good reason that in the majority of instances, *the libraries are rudimentary in nature*. If he teaches any of the natural or physical sciences, he is forced to confine himself mostly to the theoretical aspect of his subject because *laboratory facilities are lacking or incapable of being used*.

The *environment* into which he and the students are thrown *are humid and primitive*, and staying in it four or five hours is an unforgettable olfactory experience. But worst of all, *the rat race* he must run at the beginning of each semester — the race for class cards — either hardens him or destroys him. But to survive, he finds the ways and the means to be hardened.

In the meantime, the college or university *president spends his time abroad* or at home preaching the doctrine of sacrifice to improve higher learning. The *press relations office*, which did not exist when schools were really schools, is *kept busy grinding out releases* describing the civic spirit and dedication of university officials and stockholders, who are also stockholders of other mills and corporations.

Consider all this and consider the demands of mo-

dern industry and business on the student who must be prepared or suffer the consequences of underemployment; consider further the real sacrifices that the student must make to be able to pay his tuition and the thousand and one hidden fees imposed on him; consider, above all, his helplessness after graduation in the intricate and competitive world of the twentieth century, and you have some of the causes of the demonstrations. — *I. P. Soliongco, Manila Chronicle, Feb. 9, 1969.*

WISDOM

Wisdom is inseparable from knowledge; it is knowledge plus a quality which is within the human being. Without it knowledge is dry, almost unfit for human consumption, and dangerous in application. — *I. I. Rabi*

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THE COVER — Shown in cover photo is a cheese maker in action. The manufacture of more food, sufficient to feed a growing population, is a problem developing countries like the Philippines are being confronted with.