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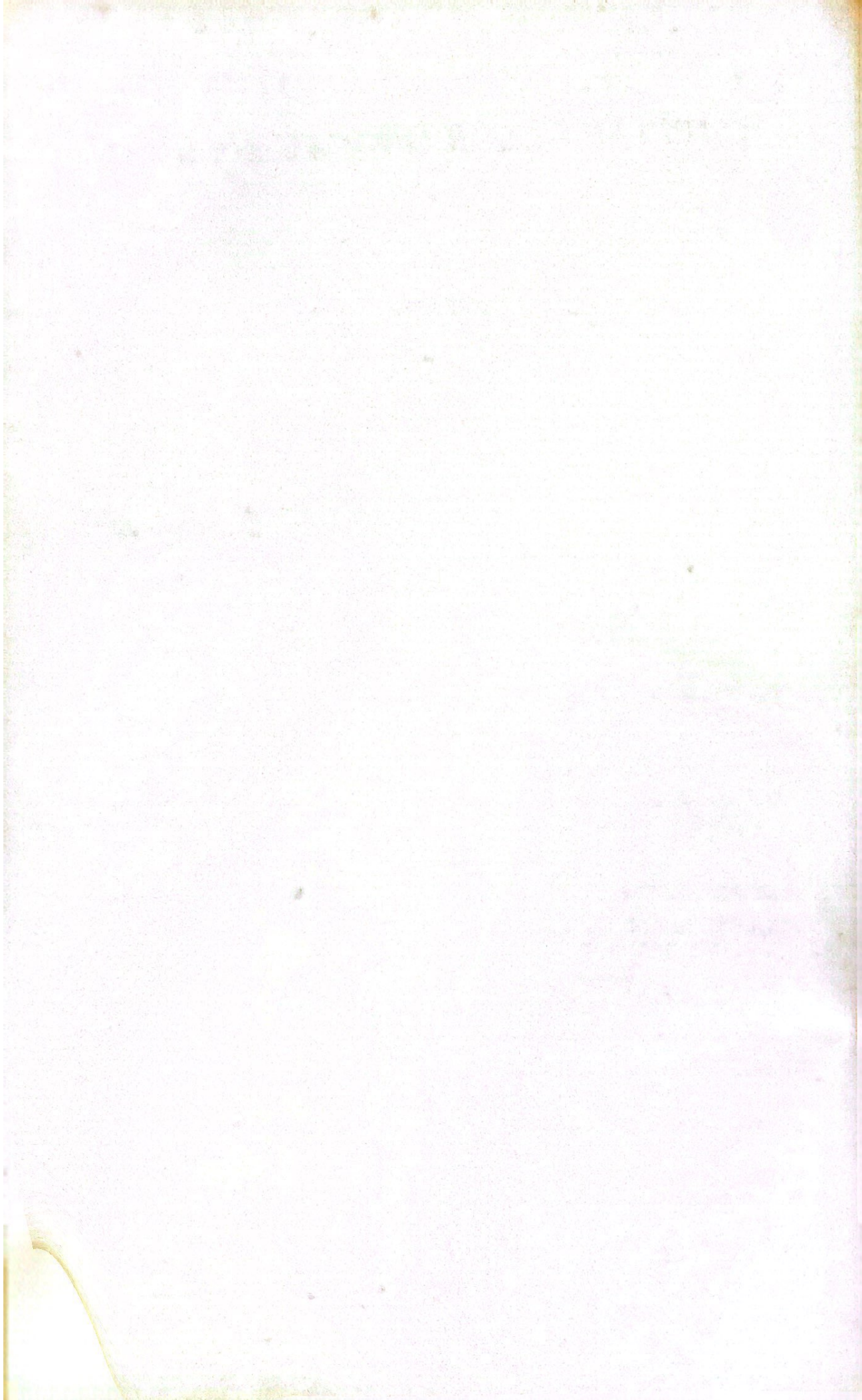
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EDITORIAL

PROBLEMATICAL SCENARIOS ON THE MINDANAO AUTONOMY PLEBISCITE

A Backgrounder

Much has been written and a lot has transpired with regard to the autonomy issue in Mindanao, the Philippines' second largest island. Come November 19, 1989, each of the 13 provinces and 9 cities in the western part of Mindanao will vote in a plebiscite on autonomy for a so-called "Muslim Mindanao." This is provided for in Republic Act 6734, otherwise known as the "Organic Act for the Autonomous Region in Muslim Mindanao." This legislation, which was signed into law by President Corazon C. Aquino on August 1, 1989, is in compliance with the provision (Sec. 15-21, Art. X) in the 1987 Philippine Constitution to enact organic acts creating autonomous regions in Muslim Mindanao and the Cordilleras (in northern Luzon) in response to the historical clamor of cultural communities against the neglect, bias, disenfranchisement and harassment perpetrated by the government and Christian lowlanders and migrants through the years. As President Aquino said, "Historically, they have been deprived of their ancestral lands and their rights to security and integrity have been ignored. They have been marginalized from our economic, political and cultural life."

The plebiscite in Mindanao bears watching because of its potentially explosive nature and its influence on future drastic political restructurings. This laudable, albeit lackluster act, by the government of adjusting its area to the varying cultural groups within its population has actually been triggered by the launching of the Mindanao secessionist movement and the organization by Nur Misuari, a former political science professor at the University of the Philippines, of the Moro National Liberation Front (MNLF) in the early 1970s as a result of more than four centuries of neglect, discrimination and repression committed against the Muslims by the Manila government and Christian migrants. Thus, the first half of the 1970s witnessed Muslim militant groups waging a war of secession against the Philippine government for the purpose of setting up an independent Islamic nation (the Bangsa Moro Republic) in Mindanao. The war took its toll of no less than 60,000 lives but fortunately the carnage stopped on December 23, 1976 when the MNLF and the Philippine government signed the "Tripoli Agreement." The Tripoli negotiations were personally brokered by Muammar Al Ghaddafi, leader of the Libyan

Arab Republic, and participated in by the Philippine government represented by Carmelo Barbero, the MNLF led by Nur Misuari, the Organization of Islamic Conference (OIC) and the Quadripartite Ministerial Commission composed of Libya, Saudi Arabia, Senegal and Somalia.

The Tripoli Agreement, although general in its provisions with its "to be discussed later" clauses, primarily provided for the "establishment of autonomy in the Southern Philippines," particularly in 13 provinces and all cities and villages within these provinces. However, the agreement was not fully implemented by the administration of President Ferdinand Marcos. The Marcos government partly complied with the agreement by allowing the creation of two autonomous regions (Regions 9 and 12 comprising 10 provinces) that provided for their own local laws. But it was only a token autonomous set-up, marked by the government's executory reluctance and by a departure from the degree of autonomy stipulated in the agreement. The insincerity of the Marcos government in implementing the agreement sparked sporadic and pocket ambushes from the MNLF which claimed the lives of many combatants and civilians despite the existing cease-fire and despite the fact that the MNLF later split into three factions — the MNLF proper of Nur Misuari, the Moro Islamic Liberation Front (MILF) of Hashim Salamat and the MNLF-Reformist Group of Dimas Pundato.

After the "EDSA Revolution" of 1986, the Aquino government launched a new peace effort in Mindanao by arranging a meeting in Jolo between President Aquino and Misuari on September 5, 1986 where both parties pledged to recognize local cease-fire agreements already in place in different parts of Mindanao and to find a compromise agreement for an honorable settlement of the Mindanao problem. This was followed by the government's sending of Aquilino Pimentel and Agapito Aquino in January, 1987 to meet with Misuari in Jeddah, Saudi Arabia and discuss the Mindanao autonomy issue. Emmanuel Pelaez later replaced Pimentel as head of the Philippine panel; however, the talks did not proceed smoothly and was soon deadlocked on July 25, 1987. The points of disagreement revolved on matters of geographical area, scope of powers and implementation procedures. The government decided instead to pursue the tack contained in the 1987 Constitution, i.e., Congress would formulate an organic law providing for autonomy in the affected areas and the people would be asked in a plebiscite whether or not they want their provinces or cities to be part of the autonomous region.

Pre-plebiscite Atmosphere

Presently, the rebels reject the Organic Act, pointing out that it does not adhere to the Tripoli Agreement. They have called for a boycott of the plebiscite and threatened to create trouble during the voting. Already ambushes have been staged by them against government soldiers.

This move is understandable since they were not part of the Regional Consultative Commission of 52 sectoral commissioners and over 250 professional and staff members who took part in the drawing up of the Organic Act. But from our perusal of R.A. 6734 and from the government's viewpoint, the law has satisfactorily reflected the Tripoli Agreement and in fact has fleshed out the otherwise vaguely general provisions of the agreement.

The traditional Muslim politicians who either supported or participated in the creation of the Organic Act have been assimilated into electoral politics as they campaign for a "Yes" vote and prepare to contest the regional governorship and key positions in the Regional Assembly. But while it is only the traditional Muslim politicians who may see in autonomy a chance to acquire a fair share of the power and resources of the central government and therefore to increase the chances of improving their constituents' quality of life, Christian leaders and residents are against autonomy for fear of being placed under Muslim leaders. (That is why Christians observe that the use of the emotionally charged terminology "Muslim Mindanao" in the Organic Act is ill-advised with its inequitable connotations). Many Muslim residents, on the other hand, are campaigning for non-membership in the autonomous region for fear of being dominated by Christians in places where the latter prevail in number. Compounding the problem of non-inclusion in the autonomous region of all the provinces and cities in question is the decision of President Aquino to go to Mindanao not to campaign for "Yes" votes but only to conduct an information campaign.

Although the law may have its imperfections, we deem it to be already a long step in decentralization and the chance to extract a large chunk of the government's financial resources such as the P2 billion annual subsidy (for 5 years) as well as the 30% regional allotment and 30% provincial allotment of the total collections of a province or city from national internal revenue taxes, fees and charges, and natural resource taxes. The Muslims and the Christians, conditioned by their age-old prejudices and distrust of each other, have failed to see regional autonomy as pregnant with beneficial changes in their lives. It is right then, as many quarters have urged, that the plebiscite should be postponed to either January or February of next year in order to allow more time for an information as well as a "Yes" campaign. But the Commission on Elections has stood pat on its decision to proceed with the plebiscite as scheduled on November 19, 1989. And herein lies the possible problematic scenarios arising from this inflexible decision as well as from the other dubious steps taken by the government.

The Problematical Scenarios and Hindsight Comments

One important probable problematic result of the plebiscite is the formation of a fragmented and small region as a result of the consti-

tutional and Organic Act provision that "only the provinces and cities voting favorably in such plebiscite shall be included in the autonomous region." Since Muslims are a clear majority only in five provinces, i.e., Tawi-Tawi, Sulu and Basilan on the west and, on the east separated by the Moro Gulf and four Christian-dominated provinces, Lanao del Sur and Maguindanao, it is not hard to imagine the "non-region" that will come out. Perhaps this is still acceptable, considering that the Cordillera Autonomous Region is also small with five provinces and one city, although their important differences are their contiguity and ample natural resources — which assumes that all five provinces will most likely opt for autonomy, being much more culturally homogeneous than those in Mindanao. The disadvantages of this procedure will be discussed below.

It appears that the above plebiscite procedure is the government's way of preventing the Muslim rebels and inhabitants to have a strong politico-spatial base or of "cutting them down to size" and drastically lessening the likelihood of secession in the future. However, the fear of secession appears to be unfounded, for provided for in the Organic Act even in contravention of the Tripoli Agreement provision of setting up "Special Regional Security Forces" is the continued exercise by the national government in the new region of national defense and security functions. Besides, the Christians will still be the majority population in the area. It may be also pointed out that autonomy need not necessarily lead to secession as shown by the existing autonomous areas of China, Italy, United Kingdom, Finland, Burma and Iran.

What the government should have done, therefore, was to simply take the majority of the combined votes of all the affected areas and use them as basis for granting autonomy to the whole region. These lands are actually the ancestral lands of the Muslims and including these in one large contiguous region with the attendant commensurate benefits for all religious and ethnic groups is simply a way of restituting the age-old dislocation and neglect suffered by the Muslims. The dislocation of the Muslims has stemmed from the Manila government's policy since colonial times to relieve Luzon and the Visayas of their population pressure and peasant poverty — a policy that intensified during President Ramon Magsaysay's resettlement program in the mid-1950s. It was also a way of assimilating the Muslims into the national cultural mainstream.

From the standpoint of the common principles or criteria observed in regional delineation, the skeleton of a region that will most likely be formed loses the beauty and homogeneity of a large and contiguous region where our first experiment in "social architecture" and decentralization could be conducted more appropriately. One principle violated by this non-rational process of regional delineation is that of geographic

contiguity, i.e., the region formed most likely will not be compact. The intervening geographical barriers in such a fragmented region will not allow administrative efficiency, which includes the efficient delivery of funds and services. Another principle violated is that of sufficient size, i.e., the region will not be large enough to contain a wide range of natural resources and development functions that would help produce a desired level of viability. A third principle not observed is the presence of developed transportation facilities or of accessibility between different parts of the region. This is created by the maritime and land fragmentation of the anticipated region. Economically speaking, the result of fragmentation and smallness would be loss of economies of scale which can be easily imagined with regard to the establishment of infrastructures. Perhaps the traditional Muslim leaders will accept this configuration of a region but in the long run it may not be a viable region. Needless to say, in order to avoid such future dilemmas, all residents of the affected areas should vigorously campaign for an affirmative vote for all the provinces and cities involved.

An even more problematic outcome regardless of the size and shape of the region that will come out of the plebiscite is the likely resurgence of heightened conflict between the military and MNLF forces especially under Misuari. Left out in the formulation of the Organic Act, Misuari's only recourse is to resume the conflict as his way of avenging his shame and his hurt pride and honor — his *maratabat* — a deeply held Muslim value which the government has taken for granted. The government should not underestimate the popularity of Nurullaji Misuari with many Muslims who look at him as a messianic leader. Among the believers of his cause, it is nirvana for them to be able to hold his hand, to so much as touch him. Neither should the government trifle with the considerable economic and political clout of the OIC under whose auspices the Tripoli Agreement was forged and which agreement Misuari repeatedly invokes and pictures as having been disregarded by the Aquino government. If Misuari succeeds in rousing the Muslim world's sense of *maratabat*, the observer status of the MNLF in the OIC can easily be elevated to full membership. The subsequent promise of arms and funds can easily encourage a full *jihād* or "holy war." Misuari will also find it easier to rally more Muslims to his side once they see the travesty of a tattered three- to five-province region formed by the narrowly conceived exercise. *When the government-MNLF talks were deadlocked, what the former should have done was to have persevered in including the participation of Misuari and the MNLF factions — difficult though it may have been — and exploring ways of coming up with compromise solutions.* Perhaps Misuari must have been intransigent and unreasonable and failed to see a chance — maybe less ideal than what he envisioned it to be — to have his people enjoy more benefits than they ever had or more than what other regions presently

have. Maybe, too, the government in exasperation was justified in bypassing the rebels. But Misuari's threat is real and the government cannot simply wish it away in ostrich-like fashion.

Perhaps the hour is late for postponement of the plebiscite or for negotiations with the rebels. Whether only three or five or all the provinces in the plebiscite area will vote for autonomy is quite irrelevant after the exclusion of Misuari. The nation can only hope that Misuari will fade away into oblivion should the OIC and the rank-and-file Muslim rebels see in the autonomous region formed a chance for peace to reign and for residents to enjoy a large measure of empowerment and entitlement from the central government. Only time will tell the outcome of the plebiscite. Should the region formed prove to be non-viable or should the war resume, then we shall be back to square one and a better plebiscite procedure or multilateral negotiations. Maybe by that time we shall do it "once more with feeling." So for now, as Vic Hurley says, "the Moro is poised at a crossroad. He can accept the peace the Filipino offers or he can, with equal facility, pick up the bloody *kris* he dropped at the battle of Bud Bagsak."

Meliton B. Juanico

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ARTICLES

THE ELDERLY OF CEBU, THE PHILIPPINES

Richard Ulack*

ABSTRACT. *Although the elderly today constitute only a small proportion of the population of developing countries, the trend is towards continuing increase in their number and percentage as life expectancies rise and fertility rates decline. The paper reports on a study aimed at examining and comparing the characteristics of the elderly in some urban and rural communities in Cebu, a province in the central Philippines. In trying to examine the "conventional wisdom" on the Third World elderly, the study gathered socio-demographic data from a sample of 1,300 households. The following conclusions are offered: rural areas have a disproportionate share of the elderly as the young move away to urban areas; the elderly, particularly in the rural areas, are economically active and have relatively high educational attainments; and the elderly, especially in the rural areas, sometimes live alone or in non-nuclear family situations, although it cannot be concluded from the limited evidence presented that traditional family relationships are changing.*

RESEARCH ON THE THIRD WORLD ELDERLY

Until recently, research on the elderly population in the Third World has been sparse. As the Australian geographer Graeme Hugo has pointed out, one reason for this is that the percentage of elderly, usually defined as those 65 and over, is low, about 4 percent in the developing nations compared to 12 percent in the developed nations (Hugo, 1985b). Perhaps, even more importantly, there is a lack of appropriate and accurate data on the elderly. In the first instance, the kind of information available from censuses is limited because it is not asked or because it is not published. In the latter case, age misreporting and other biases in census data collection is especially prevalent among the older population. Nevertheless, it is clear that the absolute number of elderly is greater in the developing world than in the developed nations. Today, there are over 150 million persons 65 years and older in the Third World, whereas there are about 141 million over 65 years of age in the developed nations (Population Reference Bureau, 1986). In many developing nations, life expectancies are rising and fertility rates are declining, which means of course that the number and the percentage increase in the less developed nations. The United Nations estimates that by the year 2000

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there will be nearly 250 million elderly in the developing world, representing 5.1 percent of the population and, by 2025, there will be more than 555 million in the Third World, accounting for 8.2 percent of the total (Martin, 1988:S100). For the Southeast Asian region, 3.5 percent of the population was 65 and over in 1980; by 2000 it is estimated that 4.6 percent of the region's total population will be 65 and over and by 2025 that figure will have increased to 8.3 percent.

Another reason that social scientists have not taken greater interest in studying the elderly in regions such as Southeast Asia is because, until recently, the perception has been that elderly parents and grandparents will be taken care of by younger relatives. But as social and economic conditions have changed in nations like Singapore, Taiwan and South Korea, so too have intra-family and inter-generational relationships. That traditional family relationships and the high status of the elderly are changing is evidenced, for example, by the increasing number of elderly who live alone in such societies (*Asiaweek*, 1984). Thus it is a most appropriate time to examine the characteristics and conditions of the elderly in different Third World settings.

The purpose here is to examine and compare the characteristics of the elderly in several rural and urban communities in Cebu, a province in the central Philippines. Much of the "conventional wisdom" on the elderly in the Third World is drawn from research in developed countries, and from the still relatively few, but increasing number of, studies that have been conducted in the Third World (see Hugo, 1985c; Warnes, 1986; Torrey, *et al.*, 1987). That "wisdom" suggests, for example, that the elderly are predominantly female; that the aged are the people left behind and concentrated in economically depressed rural areas; that the elderly contribute little to the economic well-being of households since they are generally not economically active; that the elderly have lower educational levels and earnings than the younger population; and that the status of the elderly in developing societies is altered as social and economic conditions change. Are these, and other related generalizations supported by findings reported on here?

THE ELDERLY IN THE PHILIPPINES AND CEBU

Estimates for the Philippines closely follow those for most of the Southeast Asian region; in 1980 3.4 percent of the nation's population was 65 and over and by 2025 7.5 percent will be in that age category (Martin, 1988: S100; see also Watkins and Ulack, 1989). Within the Philippines, there are of course variations. Historically densely populated rural areas such as the Visayas regions and the Ilocos coast have higher-than-average shares of the elderly, whereas newer "frontier" settlement areas such as those found on Mindanao, and the nation's major metropolitan area — Manila (the National Capital Region, or

NCR), are characterized by lower percentages of elderly (Table 1). A major reason for these regional disparities, of course, is related to the heavy out-migration of the young from regions like the Visayas and Ilocos and their in-migration to Manila (and other cities) and to the newly settled rural areas. Clearly, this results in significant alterations of the population age structure at both migration origin and destination.

TABLE 1. PERCENTAGE ELDERLY BY ADMINISTRATIVE REGION, 1980

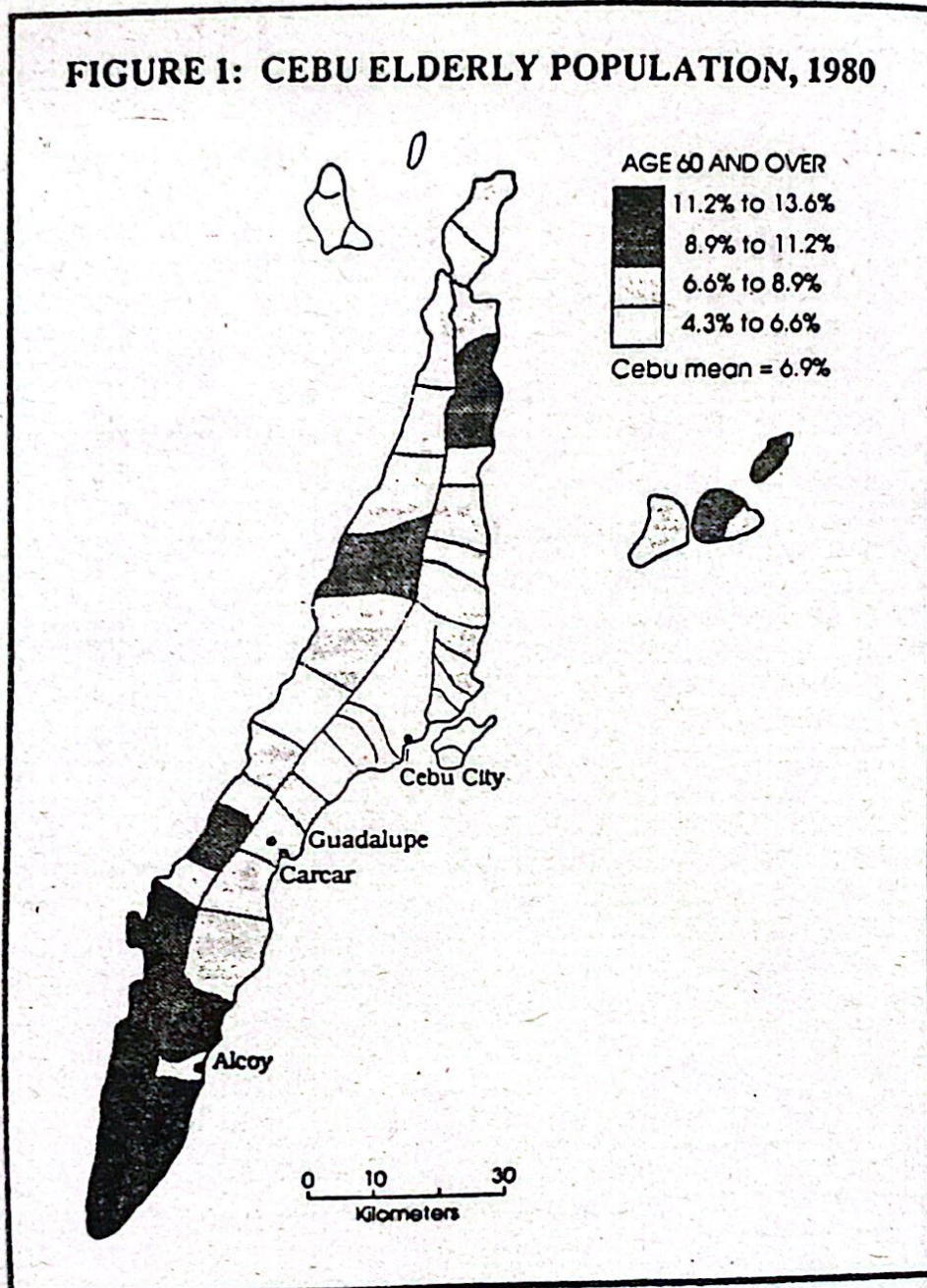
Region	% 65 and over	% 60 and over
National Capital Region (NCR)	2.4%	3.8%
Ilocos	5.4	7.9
Cagayan Valley	3.3	5.3
Central Luzon	3.6	5.4
Southern Tagalog	3.6	5.5
Bicol	3.6	5.6
Western Visayas	4.1	6.3
Central Visayas (includes Cebu)	4.8	7.2
Eastern Visayas	4.0	6.2
Western Mindanao	2.0	3.4
Northern Mindanao	2.6	4.3
Southern Mindanao	2.2	3.7
Central Mindanao	1.7	2.9
Philippines	3.4	5.3

Source: Philippines, 1983.

Overall, of course, the majority of the nation's elderly, like that of the total population, reside in rural areas. In 1980, nearly 65 percent of those 60 and over lived in rural areas (compared to 63 percent for the total population). However, "Despite their predominantly rural background, it appears that the elderly are also being affected by urbanization processes . . . (Studies) point to rising proportions of the total population residing in urban areas as well as the increasing number of urban places . . ." (Domingo and Zosa-Feranil, 1987:12). The share of elderly residing in urban areas increased from 31 percent in 1970 to nearly 36 percent in 1980.

According to the most recent national census, Cebu Province (the most populous of the four provinces that comprise the Central Visayas administrative region) had a greater share of its population in the aged category; 6.9 percent were 60 years and over and 4.5 percent were 65 or more, than did the nation (Table 2). And within Cebu, rural municipalities such as Carcar and Alcoy had higher percentages of elderly than did urban areas (Figure 1), demonstrating for this province the nationwide trend previously noted. That Cebu, and especially its rural areas, have a relatively high share of elderly is not surprising since the province has experienced massive out-migration, especially by

FIGURE 1: CEBU ELDERLY POPULATION, 1980



younger people, since the end of World War II. Today, rural Cebu is among the most economically depressed areas in the Philippines. Population densities on the hilly island are among the highest in the nation and there is no land remaining for agricultural settlement; indeed, it is estimated that over 80 percent of the province's land area suffers moderate to severe soil erosion (Philippines, 1979). In short, young people seeking work have left their rural homeplaces, either for nearby and accessible metropolitan Cebu (the nation's second most populous metropolitan area with nearly 700,000 persons) or for other cities in the Philippines. Percentages of elderly are particularly high in the remote and poor rural municipalities on the southwestern part of Cebu Island where the young have migrated to cities, or to nearby Negros Island where work on sugar plantations is available (Figure 1).

TABLE 2. NUMBER AND PERCENT OF POPULATION WHO ARE ELDERLY, THE PHILIPPINES AND CEBU

	Total (#)	>59 (#)	>59 (%)	>64 (#)	>64 (%)	>69 (%)
Philippines	48,098,460	2,541,837	5.3	1,636,341	3.4	1.0
Cebu Province	2,091,602	143,611	6.9	94,509	4.5	1.3
Metro Cebu	796,768	37,741	4.7	24,038	3.0	1.7
Carcar	57,822	5,047	8.7	3,393	5.9	3.6
Alcoy	8,129	711	8.7	475	5.8	3.3
Metro Cebu*	5,891	298	5.1	185	3.1	1.1
Carcar*	593	50	8.4	30	5.1	0.8
Guadalupe*	501	36	7.2	25	5.0	2.4
Alcoy*	514	65	12.7	38	7.4	2.1

* Indicates study areas; figures based on data collected. All other figures from 1980 census (Philippines, 1983).

DEFINITIONS, THE STUDY AREAS AND DATA COLLECTION

Typically, in the developed nations the aged population is considered to be those persons 65 years of age and over. Researchers working in developing nations sometimes take issue with such a definition since it is often inappropriate in other cultural and socioeconomic contexts. There is a need to take into consideration such differences as the longevity of a population, recognized local norms regarding old age, local legislation regarding retirement and old age benefits, and other factors before a decision is made on the definition in a particular cultural setting. Generally, it is agreed that when chronological age is used to define the aged, the critical age is younger in developing societies. For example, in their excellent overview of the Filipino elderly, Domingo and Zosa-Feranil (1987) define the elderly as those 60 years and above. Others who have conducted research on Southeast Asia's elderly have utilized the 60 and above definition as well (Cowgill, 1968; Griffiths, 1986).

Two of the problems identified by Hugo and others with regards to

surveying the elderly has to do with the sampling frame and the unit of analysis (Hugo, 1985b). Studies are criticized because the sampling frames are insufficiently comprehensive to allow a representative sample of older people to be drawn and because the unit of analysis is most often the individual, rather than the household, which is more appropriate since it is the basic decision-making unit. The analysis here does not suffer from either problem since the sampling frame includes a random selection of *all* households in the study areas; that is, each household had an equal chance for selection. And, the unit of analysis is the household, although it was the head and spouse who were interviewed and thus there is more information available on these two household members (see Costello, *et al.*, 1987:7-17 for a more detailed explanation of the survey methodology).

Household data were gathered in four communities in Cebu during 1983. Whereas the focus of the study was not on the elderly, data on age, sex, educational level, income, place of birth and occupational status were gathered for every household member in 1,300 randomly selected households. The respondents, nearly always the head and spouse, answered a series of questions about themselves, and about all other household members. Since all data gathered were prepared for computer analysis, it was a relatively simple task to extract that information on the elderly household members, and compare it with that of the younger adult population. It is these data that form the basis for this paper.

Of the 1,300 total household interviews, 1,000 were completed in metropolitan Cebu, the Philippines' second largest urban area with a population of over two-thirds of a million. Interviews were also conducted in 100 households in Carcar, a small urban place (town) of about 10,000 located 40 kilometers south of Cebu City; in 100 households in Guadalupe, one of Carcar Municipality's interior rural barangays; and in 100 households in rural Alcoy Municipality, 100 kilometers south of metro Cebu.

Not surprisingly, among the four study areas, the town and rural places had a greater share of persons in the elderly category than did the city. In metropolitan Cebu, only 5 percent were 60 years of age or more, whereas the proportions in the other study areas were between 7 and 13 percent (Figure 2). Furthermore and as expected, sex ratios for the older age categories were low, that is, females generally outnumbered males. For the entire elderly population in the households surveyed, the sex ratio was 88.7; differences between metro Cebu and the three other study areas were small. Data on age and sex of the population by rural and urban area are usually available from national censuses and therefore these findings simply support the census data and thus do not add to the information about the elderly in the Philippines. Let us now turn to an examination of the other questions posed

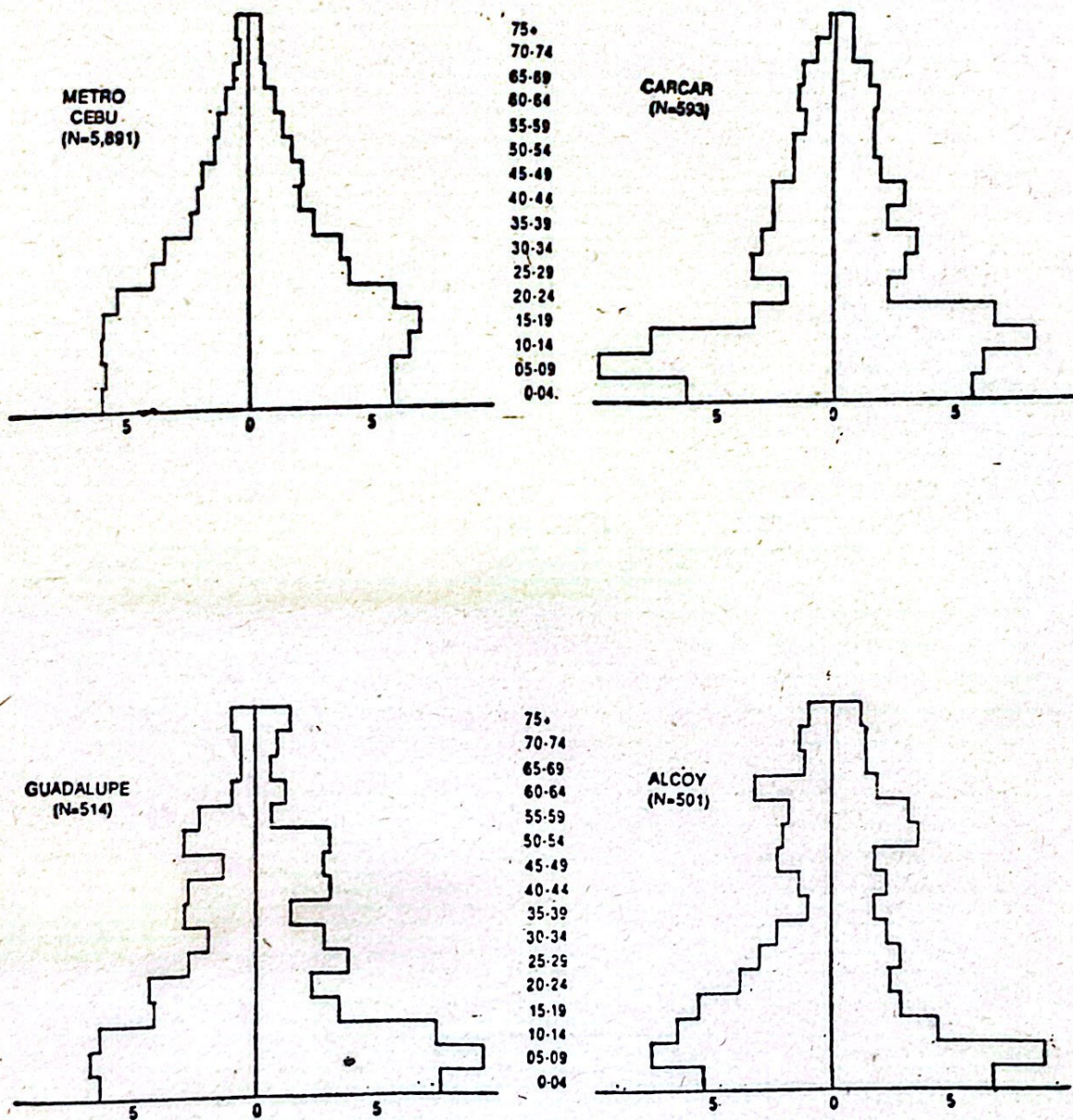


FIGURE 2: AGE-SEX PYRAMIDS OF STUDY AREA POPULATION

earlier, questions for which answers must be derived from special surveys.

Some of the characteristics of the elderly in the four study areas are shown in Table 3. The results are not unexpected in so far as the

TABLE 3. SUMMARY OF DATA ON ELDERLY, FOUR STUDY SITES

	Metro Cebu (urban)	Carcar (urban)	Guadalupe (rural)	Alcoy (rural)
Number in sample	298	50	36	65
% 60 yrs. & over	5.1	8.4	7.2	12.7
Sex ratio	87.4	72.4	80.0	116.7
Avg. # of school yrs. completed, elderly heads & spouses	7.4	7.8	1.6	2.6
Avg. # of school yrs. completed, all elderly	6.9	7.1	1.6	2.2
Average income, all working elderly (pesos per month)	1045 (n=114)	424 (n=22)	175* (n=2)	371* (n=13)
% economically active elderly	39.6	44.0	66.7	68.0
% of all hhld. income derived from elderly	6.7	11.5	1.0	10.7
% elderly who live alone or with elderly spouse	8.1 (n=24)	8.0 (n=4)	25.0 (n=9)	15.4 (n=10)
% elderly who live with unrelated person	3.0 (n=9)	6.0 (n=3)	2.8 (n=1)	1.5 (n=1)
% elderly who do not live with child but with another related individual	5.7 (n=17)	8.0 (n=4)	16.7 (n=6)	21.5 (n=14)
% elderly who live with children	83.2 (n=248)	78.0 (n=39)	55.6 (n=20)	61.5 (n=10)

Source: Survey data.

*Excludes earnings in kind.

socioeconomic differences between the urban and rural elderly are concerned. For example, there is the expected direct relationship between size of place and educational status and between size of place and income among those who worked. The average number of school years completed for those elderly heads and spouses who lived in metro Cebu was 7.4 years (8.4 for male heads and 6.3 years for spouses and female heads) and in urban Carcar it was 7.8 years, whereas in the rural study areas the average was but two years for those 60 and over. Interestingly, the educational levels for those 60 and over in the urban areas did not differ greatly from all heads and spouses surveyed. In

metro Cebu, the average for all heads and spouses was 8.5 years of schooling; in urban Carcar the average for all heads and spouses was 7.6 years. In the two rural sites, however, the combined average for all heads and spouses was 4.4 years, more than twice as great as that for the elderly.

That the total Philippine elderly are active in the labor force is indicated by the fact that during the 1960s about one-half of those 60 and over were labor force members and by 1975 the figure was only slightly less at 44 percent (Domingo and Zosa-Feranil, 1987:17). Similarly, metro Cebu's elderly are also economically active, with about two-fifths of the heads and spouses who were 60 years of age and over employed (47 percent among males and 33 percent among females). In metro Cebu the type of employment among the elderly was similar to that of the larger adult population surveyed. Among male elderly, nearly two-fifths of those working were in formal sector jobs whereas three-fifths worked in the informal sector.¹ Among females, a greater share — about four-fifths of the elderly workforce — was employed in the informal sector. Both the relatively high share of females among the elderly in the workforce, and the high proportion in the informal sector, compares with the characteristics of the larger Philippine urban population. The importance of women in the national labor force is well-documented and this is reflected among the elderly as well.

Another fact which reveals the economic importance of the urban elderly is that 6.7 percent of the total income earned in all households surveyed in metro Cebu was earned by those 60 and over even though they accounted for only 5 percent of the total population. The average income for all elderly who worked in the city was 1,045 pesos per month, nearly the same as the 1,058 peso average for all working persons. In urban Carcar the elderly accounted for over 11 percent of total household income (Table 2).

In the rural study areas, nearly all elderly males and the majority of females claimed to be working as either farmers or fishermen. In many cases, the income received was in "kind," and thus it is difficult to evaluate either employment or income for the rural areas although, as in the urban areas, the elderly appear to be active economically, mostly in the informal sector.

Another important question for research on the Third World elderly regards the changing pattern of intergenerational relationships. As explained earlier, we are told that the esteem with which the elderly

¹ Informal employment is here defined as that for which cash or other payment is *not* received on a set, regular basis. Coupled with this employment, type and job characteristics are sometimes used to provide a meaningful allocation to the informal (as opposed to formal) employment sector. For example, domestic help and self-employed professionals clearly belong in the informal and formal categories, respectively, despite the fact that the former group receives regular wages while the latter does not (see Costello, *et al.*, 1987:96-97).

are held declines with social and economic advances. Thus far, most of the evidence for this has come from developed nations and the more developed LDCs like Hong Kong, Singapore and Korea; however, there is increasing support for this notion based on studies from nations such as India, and even Nepal (Sorensen, 1986; D'Souza, 1971; Goldstein and Beall, 1982; Goldstein, *et al.*, 1983). For the Philippines, one study noted that between 1968 and 1983 the percentage of nuclear households increased from 74 to 81 percent "at the sacrifice of the extended forms of households" (Domingo and Zosa-Feranil, 1985:20). A major study on *Aging in the Western Pacific* by the World Health Organization (WHO) found that 79 percent of the elderly Filipinos surveyed (age 60 and above) lived with their children and only 2 percent of the elderly lived alone (Andrews, *et al.*, 1985:58-59).

Based upon analysis of household composition and proportion of the elderly living alone in the survey households, the survey data revealed that intergenerational relationships in Cebu are similar to those for the entire nation, at least when compared to findings reported above. There are important differences, however, between urban and rural areas. The majority of elderly in urban and rural Cebu, as is true elsewhere in Southeast Asia, do not live alone (e.g., Cowgill, 1968; Andrews, *et al.*, 1985). Approximately 8 percent of the elderly sample in the two urban study areas lived alone or with an elderly spouse (most often the latter); in the two rural study areas the figures were about 15 percent in Alcoy and 25 percent in Guadalupe (Table 2). Thus, a relatively large share of elderly live alone, with one another, or with relatives other than children. On the other hand, about four-fifths of urban elderly lived with children in the two urban areas studied, a figure the same as that found in the WHO study. In the rural study areas, however, only one-half to three-fifths of the elderly resided with their children (Table 2). As discussed earlier, poor rural areas such as Alcoy and Guadalupe have experienced heavy out-migration of young adults, leaving the elderly behind, sometimes with grandchildren to care for. In rural areas such circumstances are often mitigated by the cash (and other) remittances sent from the destinations by the migrant or circulator parent, and by their frequent visits (Ulack, 1986).² It cannot be concluded from the limited evidence here that traditional family relationships are changing but, in rural areas of Cebu at least, the elderly are more often left on their own.

CONCLUSIONS AND IMPLICATIONS

Several conclusions can be offered based on findings here. First, it is clear that rural areas do have a disproportionate share of the elderly,

² A circulator is here considered to be one who temporarily moves to another location for a period of time that is usually short-term and with little or no intention of residing there permanently (see Ulack, *et al.*, 1985).

especially in a depressed area like rural Cebu Province. Many young continue to move away, leaving behind elderly parents. Second, the elderly, especially in the urban areas, are in fact economically active and do have relatively high educational levels. A large proportion of both male and female elderly are gainfully employed and often add significantly to the household income. Third, the elderly in Cebu at least, sometimes reside alone or in non-nuclear family situations, especially in rural areas. Whether or not traditional family relationships are changing cannot be established based on the evidence presented here.

It seems clear that traditional Philippine family support systems are still evident in the two urban areas studied. This is so in part because in the Philippines, as is so of nearly all developing nations, there is only limited government-supported programs for the elderly. Only 8 percent of the Filipino elderly are supported by retirement or pension programs and there are essentially no institutional homes or care services available specifically for the elderly (Abaya, 1982:299-301). Another reason for the continuance of traditional family interrelationships is, of course, because of the existence of Philippine values like *utang-na-loob* (i.e., gratitude, as for example of children toward their parents). If in fact the trend toward increasing nuclearization of Filipino households continues, then greater public support (e.g., housing, medical care) for the elderly will be needed. In rural areas, the "flight" of the young to the cities means that the elderly left behind may also need greater support systems. In any case, as the proportion and number of elderly continue to increase in nations like the Philippines, and if the relationship between the elderly and the younger population does indeed begin to change, then much more information will be needed in order to plan for the changes, such as increased demand for support and services, that are inevitable.

ACKNOWLEDGMENT

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POPULATION, RESOURCES AND ENVIRONMENT: A FRAMEWORK OF INTERRELATIONSHIPS*

Candido A. Cabrido, Jr.**

ABSTRACT. *A framework for expressing and understanding the interlocking relationships between population, resources and environment within a dynamic system is presented by the paper. The framework takes into account the immediate, intermediate and long-term behavior of the system under the assumption that the quality of the variable relationships determines the quality of the environment and of life. The main hypothetical model presented portrays the system's behavior under sustainable and non-sustainable development, with the concept of sustainability being conceived as multi-dimensional and anchored on the concept of carrying capacity. Aside from the main model presented, the author also presents hypothetical models/scenarios on: the effect of exceeding the maximum sustainable production level; population oscillation about the carrying capacity threshold level; the impact of conservation measures on renewable resources; the impact of recycling and substitution on nonrenewable resources; and the determination of potential surplus production of a given resource.*

THE NEED FOR A FRAMEWORK

A simple way of expressing the interrelationships between population, resources and environment is warranted for a better understanding of the factors or elements, processes, interactions and outcomes involved in a dynamic system. A framework is considered as a first step in laying the groundwork for the future development of quantitative models. This paper attempts to depict the interlocking relationships between population, resources and environment using a simple framework. The framework formulated is founded on the theory of systems dynamics which focuses on the immediate, intermediate and long-term behavior of the system under investigation. It caters to the fact that the quality of relationship determines the possible outcomes or quality of environment and quality of life. However, such framework is not a tool by itself but leads to the development of planning, policy and decision-making tools by quantifying the relationships (i.e., mathematical modeling) and fitting reliable data to derive better accuracy and specificity of results.

* Paper presented to the Roundtable Discussions on "Environment and Development" sponsored by the Program Committee of the Second National Social Science Congress, which was held at the Philippine Social Science Center, U.P., Diliman, Quezon City on July 13, 1988.

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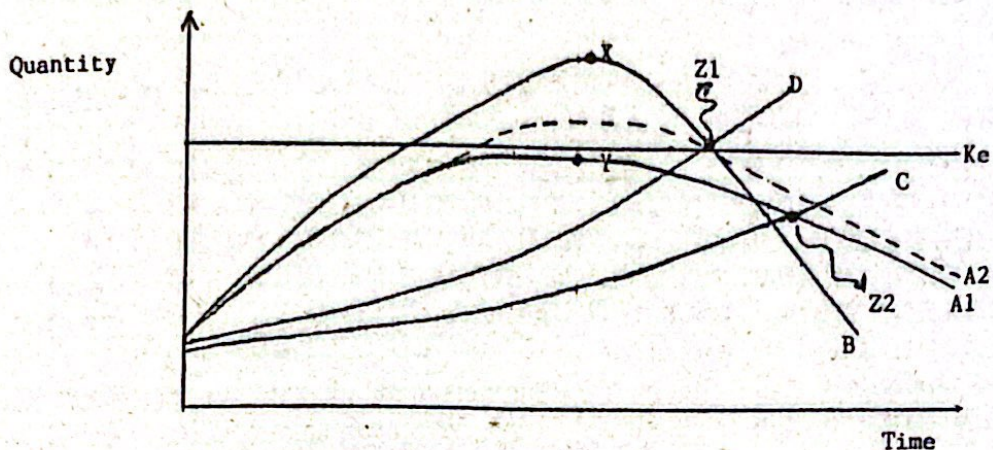
THE FRAMEWORK

A framework illustrating the relationships between population, resources and environment is graphically presented in Figure 1. The state variables involved in the model include population dimension (size, age/sex structure and spatial distribution) with future projections ($t_0 - t_x$); population requirements of basic materials (such as food, fiber, shelter, etc.); resources stock (e.g., land extent and quality, fisheries, minerals, forest, water, etc.); and environmental quality (land, air, and water quality). The driving variables inputted into the model are consumption habits, resource utilization (i.e., exploitation and conservation), management and technology inputs (including investment inputs), and other exogenous factors such as climate and industrial pollution. The modes of the system's behavior could be categorized into increasing, decreasing, expanding, stationary and collapse. Thus, the model under given inputs will project the trends and ultimate outcome of a system under study.

The model shown in Figure 1 depicts the system's behavior under sustainable and non-sustainable development. The concept of sustainability is multi-dimensional. It consists of ecological, socioeconomic and political dimensions. In ecological terms, sustainable development refers to exploitation without degradation. Operationally, this means that the rate of resource use is equal to the rate of resource renewal or the equilibrium between off-take and regeneration. Sustainability from the perspective of socioeconomics means that the available/exploitable natural resources have the capacity to provide for the basic requirements of the local populations such as food, shelter, fuel, fiber, employment and income. This is based on the premise that there is equitable access to resources and equitable sharing/distribution of the fruits of production. Politically, sustainability means a continuing political will and social responsibility in protecting and conserving (i.e., maintenance and renewal) of environmental quality and natural resources integrity. Sustainability also adheres to the principle of intergenerational equity — ensuring adequate supply for future generations. Without these necessary ingredients, claims of sustainable development become mere fiction.

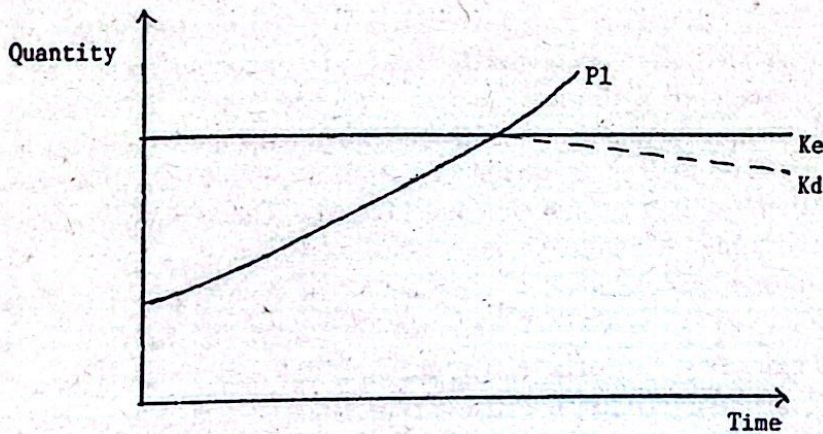
The challenge confronting human ecology research is the operationalization of the concept of sustainable development. The simplest and fastest method to get some answers is through quantitative modelling but the surest method of obtaining the accurate answers is through experimentation (integrating social, economic and ecological research). The framework/model presented in Figure 1 is just a small step towards this direction.

The objective of the model presented is to project the system's behavior under different scenarios. The model is more applicable to



- A1=production with conservation measures
- A2=production with conservation measures and material and technology inputs/investments
- Ke= maximum sustainable production level
- B = production without conservation
- C = population requirements with conservation measures adopted
- D = population requirements without conservation measures adopted
- X = maximum momentary production possible
- Y = maximum sustainable production level possible
- Z1=maximum momentary population
- Z2=maximum sustainable population

FIGURE 1. A HYPOTHETICAL MODEL SHOWING THE INTERRELATIONSHIP OF POPULATION, RESOURCES AND ENVIRONMENT



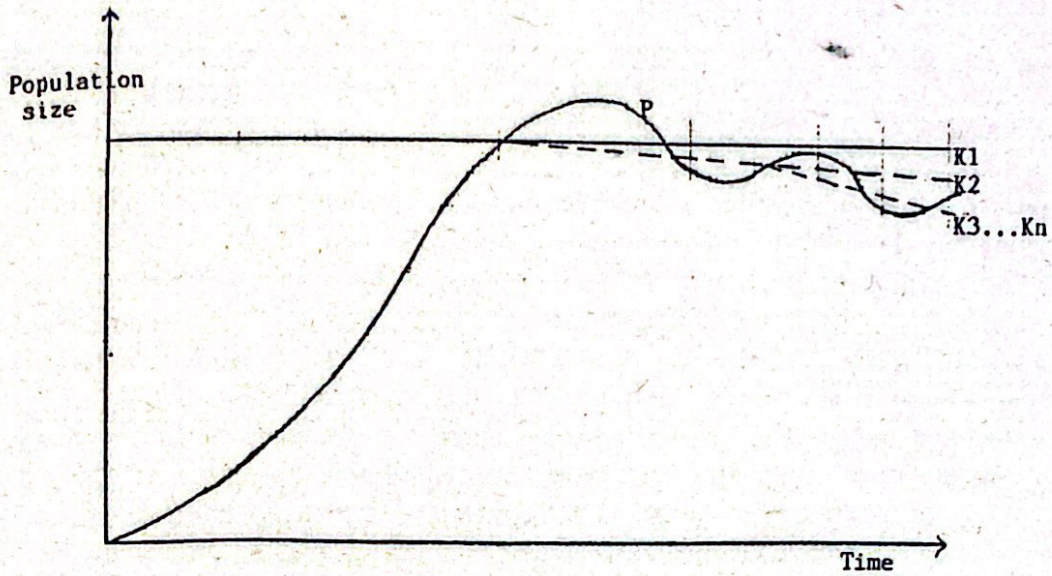
- P1=production level
- Ke= maximum sustainable production level
- Kd= lowered production capacity

FIGURE 2. A HYPOTHETICAL MODEL SHOWING THE EFFECT OF EXCEEDING THE MAXIMUM SUSTAINABLE PRODUCTION LEVEL

countries which rely heavily on their natural resources to propel economic growth.

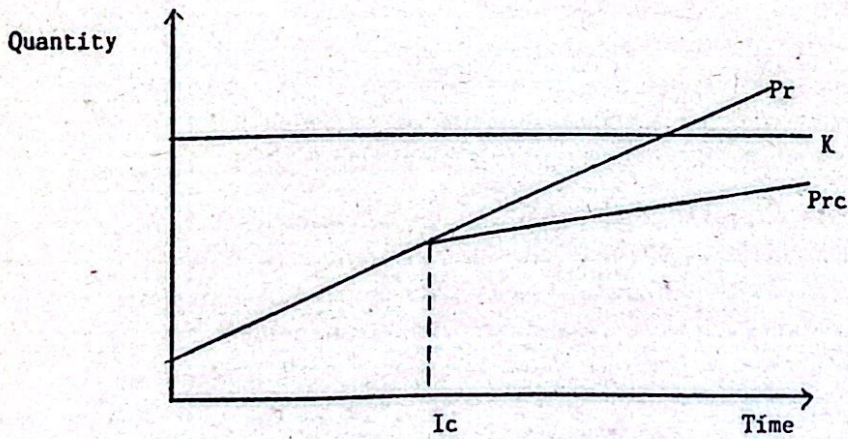
Growth means an increase in productivity/production per capita. However, there is always a limit to production, much more to sustainable production. The limits to production are expressed in two curves: the upper or maximum production curve and the optimum production or sustainable curve (Figure 1). The former means the maximum exploitation of natural resources (e.g., cutting as much trees as possible with minimum or no conservation such that the rate of use is faster than the natural rate of regeneration or reforestation; overgrazing is another typical example) while the latter balances rate of use and regeneration capacity either in the natural way (e.g., maintaining a fallow period to allow the soil to restore its fertility; allowing the fish population to regenerate its stock) or by artificial means (e.g., applying fertilizers; or seeding of fish fry). Maximizing production in order to maximize income has several long-term repercussions: exhaustion of renewable natural resources which eventually lose their capacity to regenerate; depletion of nonrenewable resources; and degradation of the environment. The tendency of the system would be to collapse as depicted in the graph.

Any ecosystem has a threshold limit or carrying capacity. Carrying capacity may be described in various ways: it is the number of people which could be sustained indefinitely by the given resources of an area (e.g., the number of persons that could be fed on a sustainable basis by the produce from land and aquatic resources of an area); another interpretation of carrying capacity is that it is the equilibrium between exploitation and renewal or regeneration of resources. Carrying capacity level (K) is therefore the level at which maximum sustainable production is possible. It is axiomatic that any production exceeding this level is no longer sustainable unless the ecosystem is subsidized by external inputs or investments. Furthermore, overshooting this level has catastrophic consequences in terms of resource depletion and environmental degradation. When production level exceeds the carrying capacity (Figure 2), environmental degradation ensues (K_e is degraded to K_d). In the case of human population, an overshoot will result into a different system's behavior (Figure 3). When K_1 is degraded into K_2 , the population growth curve adjusts itself to stabilize below the K_2 level until another overshoot occurs because of time lags and K_2 is further degraded to K_3 and so on. An example to illustrate this phenomenon is the intensive/extensive cultivation of land in order to produce more to feed the growing population. When such continuing practice strains the soil resources and results to soil degradation (soil fertility depletion, soil erosion), production declines and many suffer and die of starvation and diseases. The remaining population is then able to subsist with the present production level until its growth overshoots again the food



P = population size
 K1 = carrying capacity level of a given resource
 K2, K3, Kn = degraded carrying capacity levels

FIGURE 3. A HYPOTHETICAL MODEL OF POPULATION OSCILLATION ABOUT THE CARRYING CAPACITY THRESHOLD LEVEL



Ic = initiation of conservation measures
 Pr = population requirement of resource x without conservation
 Prc = population requirement of resource x with conservation

FIGURE 4. A HYPOTHETICAL MODEL SHOWING THE IMPACT OF CONSERVATION MEASURES ON RENEWABLE RESOURCES

carrying capacity level which is characterized by time lags (conception and parturition; childhood and puberty; etc.).

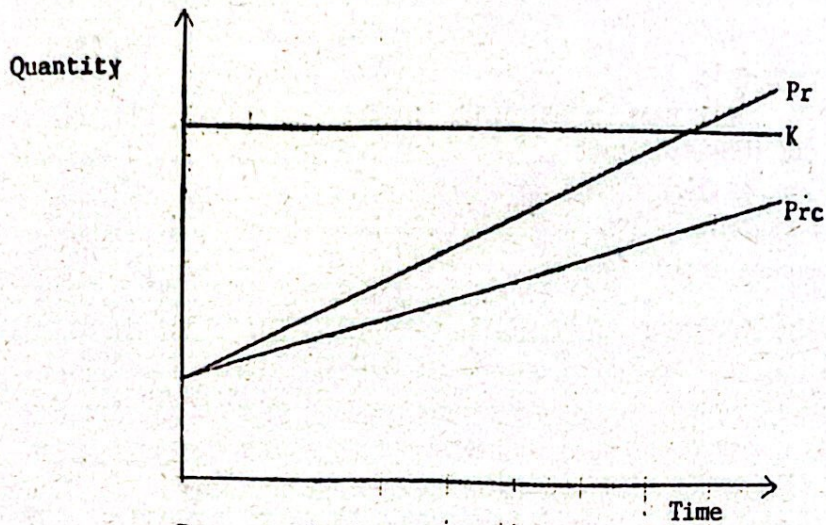
In any case, the carrying capacity level should not be exceeded to be able to achieve the objective of sustainable development. Sustainability in this case refers to sustainable resource production and sustainable population. Population requirements of basic materials are also charted in the model in relation to natural resources production and environmental quality. Population requirements could be calculated by estimating per capita standard requirements and adjusting the values by the consumption pattern of the population under study. With proper conservation measures practiced by the populace, it is observed that the level of requirements decreases through time. This is due to the fact that reduction in the level of wastage and losses on the part of the producers and consumers increases the stock and available resources (Figure 4). Similarly, recycling or reuse of nonrenewable resources reduces the rate of stock depletion (Figure 5). Conservation, therefore, when taken as a social responsibility, promotes sustainable development. Moreover, investments (public and private) on resource development and conservation and technology improvement increase production level (productivity levels) beyond its natural sustainability level (Figure 5). This is due to the fact that these investments hasten the resource renewal process and rehabilitate worn-out or degraded environments. A strong political will and cooperative venture with the private sector will catalyze this aspect of sustainable development.

Technology development and discovery of material substitutes prolong the life span of nonrenewable resources in particular. Renewal management coupled with environmental protection and rehabilitative measures enhances the productivity of renewable resources. An assessment of the present situation reveals the fact that we are lagging behind (time lag is wide) with respect to these concerns of sustainable development.

A composite expression of the system's behavior resulting from the postulated relationships and interactions of population, natural resources and environment is depicted in Figure 1. A further analysis of the results reveals the fact that sustained production delays the occurrence of resource-deficiency years (i.e., $t_d - t_x$), thus providing ample time to remedy the impending resource problems. Sustained production also renders an area (e.g., a nation) less vulnerable to external manipulations because of its capacity to be self-sufficient in basic items. The system's behavior is far from collapsing under sustained production.

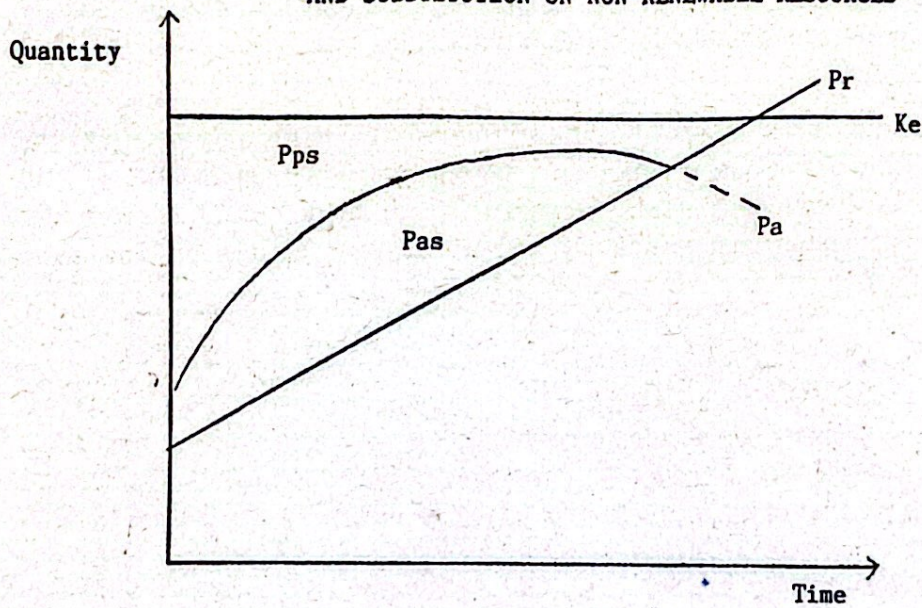
CONCLUSION

Sustainable development is a slow and painstaking process. Any attempt to maximize resource production in order to speed up economic



Pr = population requirement of a non-renewable resource without adopting measures on recycling and material substitution
 Prc = population requirement with recycling and substitution measures

FIGURE 5. A HYPOTHETICAL MODEL SHOWING THE IMPACT OF RECYCLING AND SUBSTITUTION ON NON-RENEWABLE RESOURCES



Ke = maximum sustainable production
 Pa = actual production
 Pas = surplus of actual production
 Pps = surplus of potential sustainable production
 Pr = population requirement of resource x

FIGURE 6. A HYPOTHETICAL MODEL FOR THE DETERMINATION OF POTENTIAL SURPLUS PRODUCTION OF A GIVEN RESOURCE

recovery is catastrophic to environmental quality. It is also probable that maximizing momentary production (Figure 1) may artificially raise the population carrying capacity level such that this may trigger a higher population growth rate (i.e., due to in-migration) during the period of momentary elevation. Apparently, in the long term, this policy of maximum production will have a reversed effect (i.e., resulting to resource degradation, environmental quality deterioration, lowered quality of life and out-migration). The collapse of the system as depicted in Figure 1 then becomes inevitable.

By plotting the maximum sustainable production of any renewable resource and the current level of production of that resource, a planner is in a position to determine the possible increment in production without hurting ecological integrity or environmental quality and resource-generating capacity (Figure 6). The model presented in Figure 6 also determines the surplus produced from actual production at time t_0 and the surplus that could be produced if production is increased to its optimal level. From this information generated by the model, the nature and magnitude of investments required and the amount of revenues that will be generated could be calculated. Likewise, it will also be known whether the maximum sustainable level of a particular renewable resource has been exceeded.

The framework/model presented is currently being developed by the author. The functional relationships of the variables involved are still being defined and quantified. Hopefully, such model could be formally established, tested and validated, and iteratively refined in the near future.

THE VALIDITY OF A WESTERN PLANNING CONCEPT IN THE PHILIPPINE CONTEXT: THE CASE OF PLANNED UNIT DEVELOPMENT (PUD)

Berhane Belay*

ABSTRACT. *The PUD (planned unit development) strategy is designed to help ease land use and housing problems in urban areas. It is a viable unitary site plan which allows flexibility in building location and in housing type and land use mix, as well as permits preservation of natural features. There is a need to reexamine the applicability of this new concept in developing countries, considering its successful application in the U.S. Philippine application of the strategy has been lackluster and this may be attributable to: lack of public acceptability of the concept; inadequate financing support to developers; poor coordination among parties involved; and lack of planning guidelines, standards and regulatory mechanisms for effectively implementing and administering PUDs. Attention given to these constraints will produce the necessary setting that will make PUD a valid concept in the Philippine context.*

INTRODUCTION

Most developing countries are known to be liberal adoptors of the development or planning methods of the West, particularly during the post-war period. More often than not, the common argument is that Third World countries implement such methods without due regard for the method's applicability and suitability to local social, political or economic conditions. This tendency has been attributed to historical influences arising particularly from external assistance and professional training in Western schools which have acted as channels for transmission of Western methods and technology.

However, only very few developing countries have been successful in adopting Western ways of planning and development in the light of local conditions. As explained by various writers, this is mainly due to: (1) application of planning methods unsuited to the problems; (2) non-involvement of the public in the planning process; (3) various technical inadequacies such as deficiencies in experience, procedures and data; (4) inability to administer planning; and (5) lack of capital and too much dependence on the West.

This paper therefore serves to illustrate a planning concept — the planned unit development (PUD) — which has its roots in the West (i.e., developing originally in Great Britain and later becoming popular

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in the United States) and was considered for implementation in the Philippines as part of the strategy to deal with the closely intertwined problems of land use and housing.

The paper's objective is to examine the PUD concept in general and to determine its applicability to the Philippine setting. The discussions will be structured into four parts. The first part will present the definition of PUD in general and its advantages; the second will deal with the study of the US experience with PUD; the third with the efforts exerted by the Philippines to implement the concept; and the final portion with conclusions on the validity of the concept to the Philippine situation as well as some recommendations.

THE PUD CONCEPT AND ITS ADVANTAGES

The concept of PUD, as indicated in some reference materials, varies from country to country. Although it is not possible to pinpoint precisely when PUDs started to emerge, it is generally considered to have originated in Great Britain and subsequently became popular in the U.S. in the 1930s. However, while there may be slight differences or variations in the terminology (e.g., "planned development," "planned residential development," and "planned community development"), there are also certain features common to all of them, as some authors have claimed. For instance, So, *et al.* (1973:2) view the PUD concept in general terms as a national and standard alternative to the so-called traditional land development schemes. More specifically, it is a means of designing residential development through a flexible but unitary site plan which integrates housing types, circulation systems and non-residential facilities, and which cluster dwelling units for the preservation of open spaces and natural features. In other words, the PUD is defined as a viable unitary site plan which allows flexibility in the location of buildings and mixtures of housing types and land uses, as well as permits the preservation of important physical features.

Another definition is presented by the U.S. Urban Land Institute, which describes PUD as:

a project, predominantly of housing, with the following elements: dwelling units grouped into clusters, allowing an appreciable amount of land for open space; much or all of its housing in townhouses or apartments or both; most economical and efficient use of land, making possible higher densities without overcrowding; where desired, part of the land is used for non-residential purposes, such as shopping and employment centers (Burchell; 1972:74).

In terms of size, it has been said that there is no such thing as a typical PUD, the flexibility factor being considered as one of the "beauties" of the concept. Considered as the key words in its definition

are "planned," "unit," "flexibility" and "process." The PUD process allows a much freer placement of buildings on the land than conventional lot-by-lot systems.

According to M. D. Rivkin, the unit of regulation is the total parcel rather than a single lot and controls apply to the entire development area. Calculation of densities may be on a project basis, allowing the clustering of buildings to create useful open spaces and preserve natural site features. Increased flexibility allows project elements — housing, transportation systems, open spaces, non-residential uses — to be interrelated and integrated (Burchell, 1972:74).

Lately, there has been a pronounced departure from the conventional practice of lot-by-lot schemes in the planning of housing systems and land uses particularly in Western countries. The trend towards the popular use of PUD was due to particular advantages which have outweighed the disadvantages derived from the acceptance and application of the concept. According to Rivkin, it is important to note, however, that while PUD is the basis for most new town planning, it is more commonly employed in suburban subdivisions of metropolitan areas, assuming various ranges of size (Burchell, 1972:74). As seen from the experience of the U.S. lately, the concept involves: (1) high inputs of investment or capital; (2) special zoning techniques; (3) the presence of well-capitalized and efficient corporate builders; and (4) a review process before implementation.

PUDs have certain advantages, as mentioned earlier, which follow basically from their definitions and origins. As identified by Rivkin (1-4) and Scattergood (5-8), these are:

1. Under the PUD concept, the cost of land except parks and open space is considerably less, and the added increment for amenity is only a small portion of the total savings.
2. The land absorption requirements for the anticipated level of growth are considerably smaller with PUD than with sprawl.
3. The cost of water and sewer installations as well as utilities is lower. Savings are incurred due to the shorter length of pipes required under clustering as compared to the conventional subdivision.
4. Substantial savings are likewise incurred from road construction, maintenance and other services.
5. Land utilization has been more efficient in PUDs. Odd-shaped parcels are incorporated into projects more effectively, and installation costs for streets and public utilities are reduced.
6. PUDs offer more opportunities for higher quality architectural design than conventional developments.

7. Wider choice of housing available to more people in one community.
8. More convenient shopping facilities (Burchell, 1972).

THE U.S. EXPERIENCE WITH PUD

The PUD Process

In the U.S., the PUD process is a series of guarantees beginning with the adoption of the local ordinance and extending throughout post-development content of a specific project. Fundamental to the process is site plan review which is the major tool used to implement the objectives of PUD. Three basic groups of actors constitute the PUD process, namely: the developer submitting the application for a PUD project and his clients; the public review authority, usually represented by the professional planning staff, the planing commission, legislative bodies and other agencies/departments of local government; and the general public or those who reside in the site of the proposed new development.

In terms of procedure, most proposals or preliminary sketch plans, which include site planning concepts, densities, uses involved and impact on environment, are directly submitted to the planning board, agency or commission authorized to review the subdivision plots often accompanying PUD applications and to conduct rezoning hearings. The conduct of a major substantive review involves public hearing on the PUD application. The planning entity is also the official body which should conduct substantive design reviews of all PUD applications. Such body confers with other government agencies and then recommends approval or disapproval to the governing body. A public hearing on the detailed final development plan is held within a specified time period after application and the project is either approved or disapproved on the basis of compliance with the conditions for approval. These include general standards covering the following areas:

1. *Type of development control (during and after development):* Approval is based upon demonstration that the area is under unified rather than fragmented control which may be accomplished either by single ownership, long-term lease or by other legal devices.
2. *Minimum size requirement:* This will vary with the type of development and specific location and may be stated in terms of dwelling units or land size.
3. *Permitted land uses:* These are in the form of acceptable percentages of residential, commercial and industrial land usage.
4. *Maximum density:* In most of the ordinances, density is strictly regulated either through maximum number of units per certain

land size or by a minimum lot area per dwelling unit, including a shared common space.

5. *Requirements for open space*: This covers provisions on its quantity, location and maintenance.
6. *Provision of community services (as the need arises)*: This includes land requirements for schools, hospitals, etc. (Burchell, 1972:46-47).

If the project is granted tentative approval, the detailed plan is again reviewed by the planning agency to incorporate comments raised during the public hearing. After this, the final plan is presented to the local government or local elected officials for implementation on a specified time period and without deviation from the agreements reached by the parties involved. If the applicant does not commence and substantially complete the planned unit, or any stage of it, within the time limits imposed, the planning department shall review the planned unit and may recommend any of the following: the extension of the time for completion of the planned unit; the revocation of the planned unit's approval; or the amendment of the planned unit.

Factors Behind the Success of the PUD

The above process has fostered the successful implementation of PUDs. This new approach has produced an unprecedented level of community building throughout the U.S. In each state, there was a marked increase in the number of PUDs in 1971 compared to 1967 (Burchell, 1972:48). Such positive developments have been attributed to certain factors which are discussed below.

First, since not all communities have comprehensive plans nor sufficient time to update them, the PUD process has often been resorted to as a device for reacting to development proposals. According to planners, one of the reasons for PUD's wide acceptance is that communities themselves are undecided on what to develop on their vacant land, and that the PUD process forces developers to make specific proposals to which the community can react. In this manner, the PUD process does not afford greater public control, providing a review process with which to evaluate new development proposals (So, *et al.*, 1973:6).

Second, an increased degree of negotiations has taken place between the developer, the local government and the public parties who believe they have something to gain. The local governments have welcomed the PUD process partly because of the increased level of discretionary control it has afforded them. Moreover, it has enabled them to perform their duties with greater confidence. For developers, the PUD process has allowed them flexibility in the design specifics instead of

forcing them to comply with present standards. For the public, the PUD process has catered to the basic needs and interests of the community and its residents (So, *et al.*, 1973:5-7).

Third, due to the basic economics of PUD, it has resulted in cost savings over conventional development practice. Developers have incurred cost savings from the process due to: reduced infrastructure costs (on account of reduced length of streets and utility systems possible with flexible site designs and clustering); lower unit costs due to higher densities; and higher turnover rates — all of which have contributed to the lower cost of housing (So, *et al.*, 1973:5-7).

Fourth, the entry of large corporations into the home building field has provided the organizational structure and financial backing needed to maintain viability. Moreover, despite the lengthy processing of PUD applications which has been viewed as a major problem of developers because it slows them down and costs them money in staff, overhead and carrying charges, this has been offset by the savings incurred and the availability or presence of highly or best capitalized developers who can undertake PUDs (Burchell, 1972:49, 76).

Fifth, the process has also been a success because PUD approvals frequently require the developer to specify his construction schedule. If the project is delayed or a period of 1 to 5 years passes with no activity, local authorities can revoke the permit (Burchell, 1972:76).

PHILIPPINE EFFORTS AT APPLYING PUD

Unlike in the U.S. where the PUD concept is well-defined, organized and widely accepted, in the Philippines there is no PUD system as such. It is important to point out, however, that although such a system has not been officially recognized locally, the concept of housing which has evolved and developed through the years has considered the various elements that constitute a PUD system (HLURB, 1982). In fact, as early as 1974, the PUD concept was suggested as a new approach to land and housing packages by Filio during a national conference on housing and as an attempt to adapt the American concept to the peculiar nature of housing needs in the Philippines (1974-75:44). In 1982, standards and guidelines for planned unit development were developed. In other words, because of its advantages and the perceived need for it, the basic idea of PUD has been strongly recognized in the country's housing program, but efforts toward this has not been as well pronounced as that in the U.S. Rather, the basic elements of the concept has been taken into account as guidelines in the operation of the country's overall housing program or strategy (particularly since 1982) which has helped focus attention to the multi-faceted problems of housing in the Philippines. Hence, a general view of such program is briefly presented in the following pages in an attempt to show the

adoption or consideration of the PUD concept in the housing efforts of the government as well as the problems encountered in its adoption.

General View of the Philippine Housing Strategy/Program

At the top of the housing regulatory and implementing entities is the Housing and Urban Development Coordinating Council (HUDCC) which is mainly charged with coordinating the activities of different housing agencies to insure the accomplishment of the National Shelter Program. In terms of regulatory functions, the strategy of the National Shelter Program involves the rationalization of subdivision standards, with the Housing and Land Use Regulatory Board (HLURB) acting as the implementing agency.

On the other hand, with reference to the production or construction of housing units, the strategies to lower costs and increase construction efficiency include materials standardization, programming of bulk purchases and stockpiling, with the National Housing Authority (NHA), the Home Insurance and Guarantee Corporation (HIGC) and private contractual developers as implementing agencies.

The financing aspect has for its strategy a savings program, the trading mortgages and the extension of incentives to ensure the provision and availability of sufficient funds for housing purposes. The support agencies that provide long-term financing are the Home Development Mutual Fund (HDMF) or PAG-IBIG, the Social Security System (SSS) and the Government Service Insurance System (GSIS). The National Home Mortgage Finance Corporation (NHMFC) operates a viable home mortgage market, using funds provided by the above funding agencies to purchase mortgages originated by public and private institutions (Executive Order No. 96, 1986).

Standards and Guidelines Affecting PUD

The HLURB in June, 1982 came up with standards and guidelines for PUD, which it considers as one concept of real estate development and aims to optimize land use and help solve housing problems. The elements of the definition which it has adopted is basically the same as that of the U.S., as may be observed from the following: "The PUD is a land development scheme wherein project site is comprehensively planned as an entity via unitary site plan which permits flexibility in planning/design, building siting, complementarity of building types and land uses, usable open spaces and the preservation of significant natural features" (HLURB, 1983:1). The HLURB (1983:1-8) standards and guidelines include:

1. *Zoning regulations* which consider the following approaches:
 - a. Overleaf approach, where PUD is included in the zoning map enacted by a legislative body; and

- b. Amendment of zoning ordinance wherein there is no specific area designated as PUD. Such area may be affixed in the zoning map if the developer applies for a PUD development and is consequently approved by a designated public body.
2. *Physical suitability* — by allowing flexible and positive response to the environment (through contours, water bodies, open spaces, trees, etc.)
3. *Land use allocation* — for housing, community facilities, utilities and open space requirements, taking into consideration provision for common space, soil land-bearing capacity and provision for basic utilities and facilities (e.g., roads, water supply, drainage and water system, etc.)
4. *Circulation system* — the establishment of a hierarchy of roads in accordance with certain specifications. These include major and minor roads, alleys, pathways, sidewalks and pedestrian ways.
5. *Accessibility* between residential units and commercial and other functional areas
6. *Lot sizes*
7. *Limits on maximum block sizes or length*
8. *Easements* for power, water, sewer and utilities
9. *Housing units* — observation of minimum floor area requirements per dwelling unit, depending on the type of dwelling unit, building height and other technical specifications, and exterior design of dwelling units
10. *Facilities* for recreation, health care, parking area, etc.
11. *Provision for utilities* — water, power, sewerage/drainage system and waste disposal
12. *Allowable uses* — commercial facilities which may be allowed within the PUD provided such are complementary to residential use, are economically feasible and adequately serve the needs of the residents

Differences Between Philippine and U.S. PUD Practice

It may be observed from the foregoing guidelines that these are similar to the conditions for preliminary approval imposed on a proposed PUD in the U.S. as cited earlier. However, what may be noted in the case of the Philippines is the absence of provisions for the necessary type of development control. While the U.S. system provides for a unified control (during and after development) through long-term lease or individual ownership, this aspect is not explicitly provided for in the PUD guideline of the Philippines.

A second difference that may be observed is the absence of limitations on maximum density requirements in the Philippine PUD guidelines. In the U.S., this takes the form of either maximum number of units for a certain land or lot size or in terms of minimum lot area per dwelling unit, including common space.

A third difference is that in the U.S., three parties are involved in the negotiations underlying the PUD process, namely, the developer, the general public and the local government who all bargain with each other until they reach an agreement. The developer is the one who submits a PUD proposal. In the Philippines, on the other hand, the PUD standards and guidelines imply the direct involvement of only the developer and a designated public body. Zoning ordinances will not designate specific areas for PUD unless the developer applies for a PUD development which is consequently approved by the designated public body.

Lackluster Application of PUD

In an interview with an officer of the HLURB who is knowledgeable on the design guidelines of the PUD concept, the following were cited as possible reasons for the reluctance of land developers and designers to introduce PUD in the market:

1. The PUD concept, where features of clustering of dwelling units, common space and common community facilities differentiate it from the conventional subdivision project, does not suit the desires of the Filipino homeowners who attach high value to the exclusiveness of owning their own house and lot, no matter how small.
2. The designers themselves are not ready to assimilate the doctrine of the natural features, including the natural terrain. Conventional designers prefer to bulldoze the whole site to attain as flat a terrain as possible, and then start designing the physical layout of the site.
3. Land developers do not savor the idea of maintaining an open space greater than the required 30 percent of the gross project area as mandated by Presidential Decree (P.D.) 1216. Most developers argue that beyond 30 percent of open space, the project would not be profitable. The tendency is usually to build on as much land area as permissible.
4. The government at present still lacks the regulatory mechanism to implement the PUD concept (Sotto, 1985).
5. Financial constraints on the part of the corporate builder or developer is also a major problem in the Philippine setting. Any developer of a PUD project needs a huge amount of capital

in the Philippines, and very few possess the financial resources needed.

6. The approval procedure, as it exists in the U.S., is not provided for in the standards and planning guidelines in the Philippines, and this could be one major factor why land developers and designers are not encouraged to undertake a PUD project.

It is important to emphasize that cultural values and social practices influence strongly the construction of dwelling units in the Philippines and render it difficult for developers to undertake PUD projects. The cultural context or interplay of social, cultural, economic and physical factors does exert influence on decision-making relative to the construction and occupation of a dwelling unit by the Filipino individual or family. Furthermore, the reluctance of developers to introduce PUD may be attributed to the various forms of housing projects and design to which Filipinos have been accustomed and this would range from single-family and two-family detached units to single- and two-story houses, walk-up apartments, high-rise structures and neighborhood development. Thus, since PUD is a very recent concept for both the public and the developers, it is difficult for them to take the risk and consider this system over the traditional concept of housing.

CONCLUSIONS ON THE VALIDITY OF THE CONCEPT AND RECOMMENDATIONS

Success in the introduction and implementation of development concepts by one country triggers the adoption of such by another with the hope that the same success will be replicated in the latter. This particularly holds true for the majority of developing countries which usually pattern their development concepts and strategies after the experience of the West. It may be pointed out that nothing is intrinsically wrong with cultural borrowing and after all developing countries are often in an advantageous position because by observing the Western experience, they avoid the costly mistakes attendant to pioneering undertakings. However, in adopting Western innovations, Third World countries fail to consider such aspects as: (1) the validity or suitability of whatever development concept they are attempting to adapt to their particular situations; (2) a thorough study of the concept; (3) the degree of their resolve to accomplish the adoption of such concept; (4) the timeliness of introducing and implementing it; and (5) their capability to handle such concept.

This leads us to the discussions in the previous sections on the U.S. experience with the PUD concept and the attempts of the Philippines to adopt such, representing a clear-cut illustration of the argument raised above. We have seen that while the U.S. has experienced success in implementing the concept, the Philippines has not been successful for

the past few years in its attempts to adopt PUDs despite the existence of *the need* for them. The local failure stemmed from the non-recognition of certain constraints in the process of adopting the concept and these constraints include: inadequate financing facilities for developers; lack of public acceptability, largely due to Filipino cultural values and social practices; insufficient and inefficient coordination between the parties involved; inadequate expertise pertaining to the regulatory mechanisms by which PUDs may be implemented and administered; and lack of more concrete guidelines, rules and regulations concerning procedures for approval.

It is therefore timely to point out at this juncture that the validity of the PUD concept depends on the *setting* of its implementation and the attendant *conditions*, i.e., whether it is in a developed or developing country like the Philippines. Such a setting must provide for a *strong foundation* to ensure sufficient and successful implementation of the PUD. This means that for a PUD to be valid and for it to respond to critical problems confronting housing, this setting must *satisfy major prerequisites* which address the problems raised earlier. These prerequisites include:

1. Acceptance by the general public of the concept. It has been mentioned earlier that cultural values and social practices do exert a strong influence on the Filipino's perception of housing. Thus, unless his conventional way of thinking is altered, the validity of the PUD concept may not be ensured. The people as the ultimate market for housing may have to be educated or made aware of the advantages that may be gained by adopting the concept. Acceptance by the majority of the people will convince the developers to proceed with the PUD designs, knowing they are assured of a ready market.
2. Provision of an efficient and responsive financial assistance program by the government at reasonable terms and conditions in order to attract developers to undertake PUD projects.
3. Smooth coordination between the developer, the general public and government authorities concerned. The relationship between these three parties must be clearly established and set forth in the guidelines, rules and regulations for implementing PUDs. Furthermore, a well-defined PUD process, including requirements for the conduct of public hearings, has also to be built into the system.
4. Presence of technical expertise in all aspects of PUD practice and an efficient regulatory mechanism by which PUDs may be implemented and administered.

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HARTSHORNE AND ETHICS IN GEOGRAPHY

Mumtaz Khan*

ABSTRACT. *Among the pioneering works of note on the issue of ethics in geography were those of Mitchell and Draper. But their works have dealt narrowly with geographic research processes and consultancy and neglected the ethics of geography as both a discipline and a profession. Their restricted view of ethics in geography resulted in the incomplete historical treatment of the concept and consequently they neglected the contributions of many scholars including Hartshorne. Hartshorne, in particular, dealt with the ethical concerns of methodological discussion in geography, pointing out that criticism is not concerned with writers but with writings. In the field of political geography he has very clearly expressed his views regarding the freedom of expression and pleaded for professional solidarity against attacks from political demagogues.*

INTRODUCTION

Unlike most of other social sciences, geography as a discipline displays little evidence of sustained interest in issues of ethics, although such issues have not been infrequently encountered in geographic research during the last few decades. Mitchell and Draper, for example, in their pioneering work (1982, 1983), have analyzed these issues and tried to promote the awareness of geographers on the question of ethics in geography. After a brief historical survey, they observed that with few exceptions the discipline has hardly given attention to ethical problems. But the question of ethics is much broader than what they conceive. Moreover, their historical treatment of the geographic literature is also incomplete. It is true that this question has never been raised in the discipline of geography in its entirety, but it should also be emphasized here that a number of geographers have frequently expressed their views on the issues which may definitely be topically considered ethical. Richard Hartshorne, for example, has raised the issue of mores of methodological discussion in geography and explicitly stated his views on other ethical questions. However, his contribution has been ignored all throughout by Mitchell and Draper (1982, 1983). The views of Hartshorne, in general, have frequently been ignored in geography. It would thus be worthwhile to evaluate the ideas of Hartshorne on the issues of ethical nature in geography. In this study, an attempt has been made to:

1. emphasize that Mitchell and Draper have taken a narrow view of ethics and, consequently, their historical treatment of the concept is incomplete; and

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2. analyze the ideas of Hartshorne about ethical problems in geography and underline his contribution in this field.

THE CONCEPT OF ETHICS

Ethics is the branch of philosophy concerned with the standards of behavior among people in society. "The term 'ethics' or 'ethic', from the Greek *ethicos* ('moral') and *ethos* (character), also refers to the values or rules of conduct held by a group or individual..." (*The Encyclopedia Americana*, 1983:610). Ethics is generally divided into two major sub-groups, i.e., normative ethics and meta-ethics. While the former, "also called moral philosophy is concerned with presenting and justifying a guide to right conduct..." (*The Encyclopedia Americana*, 1983:610), the latter, "also called analytical or critical ethics, systematically studies the meanings of ethical terms and of judgments used in normative ethics, their function and the means of supporting normative judgments" (*The Encyclopedia Americana*, 1983: 610).

One of the important branches of normative ethics is professional ethics, which is arousing considerable interest these days. This refers to

the attention given by scientists, engineers, lawyers, physicians, journalists and others to the ethical problems involved in the practice of their professions. Some of these occupational groups have formal codes of ethics, which set forth principles of conduct deemed appropriate to the special objects and responsibilities of each profession (*Lexicon Universal Encyclopedia*, 1984:251).

Here it should be emphasized that there is a wide disparity in responses to ethical dilemmas, not only among the various professional groups but also within the different components of these groups themselves. Various social sciences like anthropology, political science, psychology and sociology have been addressing themselves to ethical questions. But according to Mitchell and Draper (1983:9), the discipline of geography in general has not exhibited the type or level of concern shown by related disciplines which have extensively discussed the appropriateness of ethical codes and certification to improve the resolution of ethical problems.

MITCHELL AND DRAPER ON ETHICS IN GEOGRAPHY

Mitchell and Draper (1982) in their book have thoroughly analyzed the ethical dilemma faced by geographers while pursuing pure and applied research roles. They have envisaged that researchers face the tension which exists "because commitments to attain full understanding may be incompatible with a geographer's obligation to respect the personal privacy and integrity of his subjects" (Mitchell and Draper, 1982:187-9). In their opinion, all the ethical dilemmas in geography are concerned with (1) invasion of privacy, (2) harm-benefit considerations, (3) use of deception, and (4) government/sponsor relationship. After an ex-

haustive analysis of these problem areas, they have critically evaluated the four alternative strategies of (a) individual self-regulation, (b) disciplinary response, (c) institutional controls, and (d) external controls. Likewise, they have recommended individual self-regulation as the best alternative for resolving ethical dilemmas in the discipline of geography.

A close perusal of the views of Mitchell and Draper (1982) reveals that their model of ethical dilemmas, borrowed from other social science disciplines, has, to a large extent, *reduced ethics in geography to the level of research processes and consultancy only, instead of including the ethics of geography as both a discipline and as a profession. Apart from research and consultancy, ethics in geography encompasses the ethics of admission, teaching and evaluation of students, appointment and service rules of teachers, publication of books and research papers, and discussion — both verbal and published.* Teaching and research should be concerned not only with the methods and procedures but also with the content, perspectives and emphasis on the issues of vital societal relevance. Geographers owe these ethical responsibilities not only towards their profession but also towards their locality, region, nation, society and humanity. All these areas have their own multi-faceted ethical dilemmas.

In their later study which tries to encompass a relatively broader field of ethics, the authors have conceded that "this discussion, by focussing upon ethical issues in research, has only touched upon the broad field of ethics" (Mitchell and Draper, 1983:16). They take cognizance of the fact that during the last two decades geographers have digressed on such sensitive matters as the roles of minorities and women, the propriety of the Vietnam war and CIA activities, violations of human rights in certain countries and the desirability of alternative ideologies; however, they have eschewed from them by just pointing out that, "these issues deserve recognition in a more detailed assessment of ethical issues in the discipline" (Mitchell and Draper, 1983:10).

While attempting to analyze the issues of research ethics, Mitchell and Draper (1982) have reviewed the responses of various disciplines and societies out of which the attempts in geography are briefly summarized here. In 1971, "a call to the socially and ecologically responsible geographers" was made by a group of geographers (Kates, *et al.*). In 1972, White called for geographers to discuss professional responsibility. The American Political Science Association, on the issue of confidentiality of sources of data in social science research, spearheaded a multi-disciplinary enquiry in 1975, with the Association of American Geographers (A.A.G.) as one of the co-sponsors. This was necessitated by the imprisonment of Samuel Popkin, a Harvard University political scientist, who refused to identify his source of research data. The New Zealand Geographical Society's call to geographers in 1977 to explore ethical problems elicited

no response at all. Apparently concerned with the relations between researchers and the CIA, Larry-Wolf in 1977 raised the question of ethics for geographers and questioned the A.A.G. for its lack of interest and confused stand on ethical issues. In 1979, the *A.A.G. Newsletter* published a report on the role of geographical analysis in public policy and pointed out the ethical difficulties. Excepting these and few other studies which were recognized by the authors in their latter study, they have concluded that the discipline of geography "as a whole has been relatively unaware of or unconcerned about questions of ethics" (Mitchell and Draper, 1982:128).

But this historical assessment by Mitchell and Draper is incomplete, constrained as it is by their *restriction of ethics to research processes and consultancy only*. This has resulted in overlooking the contributions not only of radical geographers but also a number of other scholars who have raised ethical questions during the long history of geography. Bunge's (1973) interesting article which raised some very fundamental ethical issues was completely overlooked by the authors. So was the case with Hartshorne who was perhaps the first geographer to analyze one important aspect of ethical concern, i.e., *the mores of methodological discussion*, apart from his clear statement on some ethical issues in the field of political geography. This article is precisely in response to this explicit neglect of Hartshorne's contribution.

Unlike Mitchell and Draper, Hartshorne never raised the question of ethics in its totality, hence it is not fair to compare their works. However, Hartshorne is more clear and insightful. Since he took a broader view of these issues, he was more free to tackle the problems of objective study, the mores of methodological discussion, and the competence of political geographers to indulge in the questions of politics and their freedom of expression. He expressed his views in no uncertain terms when the occasion came in respect of an attack on an academician by the state politicians. In such a case, perhaps, Mitchell and Draper would have suggested calculating the harm-benefit ratio, but Hartshorne clearly supported the freedom of expression of the academicians.

One more characteristic of the work of Mitchell and Draper is that their arguments sometimes overemphasize the problems which are extremely peripheral to the field of geography, e.g., while evaluating the "welfare issue" — one of the two kinds of ethical problems encountered in the use of harm-benefit ratio — they focused their attention only upon the use of animals in research (Mitchell and Draper, 1982:148-59). Their discussion in this issue revolves around the alternative capturing and marking methods, the practical value of observing animal behavior, killing animals in field studies, and exposing animals to stress in natural and controlled situations. Such a lengthy treatment gives an erroneous

impression that they are more worried about the welfare of animals than that of human beings.

It is also to be emphasized here that the issues of ethics are inextricably linked with the class structure of society and differ considerably according to the relevant ideologies and political systems. But such fundamental questions are completely ignored by Mitchell and Draper.

HARTSHORNE ON ETHICS IN GEOGRAPHY

A close perusal of the writings of Hartshorne reveals that although he has not raised the issue of ethics in geography in its entirety, he has thoroughly discussed the mores of methodological discussion in American geography and laid down certain common guidelines. Apart from it, he has explicitly stated his views on questions of ethical nature in the field of political geography. Therefore, it would be pertinent to discuss his ideas on these two fields.

Methodological Discussion in Geography

Methodological discussions among American geographers in annual conferences that lacked an understanding of the ideas of previous scholars on the basic nature of the discipline forced Hartshorne to dig deep into the questions of geographic thought. In his own words,

there was need, it seemed, for a thorough, even exhaustive, examination of what our fellow-workers in previous periods and other countries had learned from serious study of the problems which we were debating orally. Such a study might, it was hoped, make unnecessary much of the seemingly endless argumentation into which our method of discussion had let us and, for questions still unresolved, would prove a background of learning that might make future discussions productive (Hartshorne, 1948:116).

Under these circumstances came *The Nature of Geography* (Hartshorne, 1939). But the type of criticism, both oral and written and not only on the works of Hartshorne but on other methodological studies as well, prompted him to discern "...the existence of rules of proper attitudes and conduct, unwritten rules more or less generally accepted by American geographers" (Hartshorne, 1948:113). His paper "On the Mores of Methodological Discussion in American Geography" (Hartshorne, 1948: 113-125) is perhaps the first attempt of its kind in the discipline of geography which has raised an ethical problem and set up certain rules for its resolution. Mores may be used as a synonym for ethics (*The New Encyclopedia Britannica*, 1977:977).

For critically evaluating the mores of methodological discussion, Hartshorne has raised five questions and then set up certain general rules. While analyzing his first question — why talk about geography? — Hartshorne has observed that there are divergent views among geographers as to the value of methodological discussion. The basic

question is not the importance of these discussions but their outcome. Their popularity is due to the fact that American geographers are seriously concerned with these questions. Therefore, the issues are significant for geographers to study and discuss among themselves. In his second question — to talk or to study? — he has criticized the general view that methodological questions are suitable only for oral discussions, whereas it is a fact that the scholarly studies have immensely affected the thinking and substantive works of geographers. Hence, he concluded that the common understanding can be expected by the application of responsible scholarship and that oral discussions should utilize the results of such scholarship rather than the opinions of the individuals. In his third question — is serious criticism desirable? — Hartshorne has criticized the view that it is not fair to take the methodological writings of an author too seriously and criticize them accordingly. After a critical evaluation of the problem, he has concluded that it is not the author's own assessment regarding his study but the degree of its importance for the readers that determines the seriousness of the study. Furthermore, both methodological and substantive studies require equally serious scholarship and that methodological writings should be subjected to rigorous evaluation. He has analyzed his fourth question — may one ask 'is it geography'? — by considering four sub-questions: (a) Is the question relevant?; (b) Who shall set the limits?; (c) For what purposes is the question relevant?; and (d) Is the question an attack on the author? He concluded that the question is relevant only to methodological purposes. In so far as it springs from a person's need to categorize and systematize in his mind a piece of information revealed in a certain study, he is merely concerned with his own answer to the question and therefore should expect no one to be interested in his answer. For general discussion, the question is proper only if the subject of discussion is a methodological one. In that case, classification of major works may lead to critical thought on methodological theories. In no case can they be misconstrued as being critical of the substantive studies themselves or of their authors (Hartshorne, 1948:122). The most fundamental difficulty which transcends all these questions is analyzed in his fifth question — the personal problem. In spite of the fact that writings have their existence independent of their writers, the authors feel personally attached to them, more particularly the methodological ones. This has resulted from the situation that, more than the substantive works, the ideas are considered more personal and in methodological discussion the writings are generally referred to their authors rather than their titles. Apart from it, at times, a number of articles of an author spread over a long time are also tied up with his name. Consequently, the debate in methodological writings is considered a personal conflict instead of a sincere effort to reach the truth. This really creates an ethical problem for the critics. To eliminate this personal problem, Hartshorne has

concluded that *the universal rule in all branches of human knowledge applies to discussions of methodology and that scholarship is not concerned with persons but with writings*. To him, there is a constant obligation to concentrate on writings in methodological criticism rather than on writers and to maintain the tone of the exposition on the objective, impersonal level (Hartshorne, 1948:124).

Although critical of some customs and standards of methodological discussions of American geographers, Hartshorne was proud of an established custom that, "...even when a methodological discussion appears to produce conflicts between persons rather than between ideas, the engagements are regarded, at most, as those of a tournament, not of a battle, and certainly not of a war" (Hartshorne, 1948:124-125). There may be some exaggeration in this assertion but the situation during those days was more or less conforming to these standards.

A close perusal of the writings of Hartshorne reveals that he was following these mores or methodological discussion much before he set them in print. All these important mores of methodological questions, responsible scholarship, very high standards of scholarship for dealing with methodological questions and critical evaluation of previous writers, and the repeated assertion that criticism applies to the writing, not the writer, were the hallmarks of his methodological writings. Since his book *Nature of Geography* was based on a critical evaluation of all the geographers past and present, it was especially kept in mind that the criticism applied to the writing and not the writer, thus leaving little scope for personal enmity. In the writing of the book great effort was made by the author and his editorial critics to avoid provocation that could lead to the disruption of fellowship among geographers (Hartshorne, 1948:125). In one instance, while trying to test theoretical proposition by considering the substantive work, Hartshorne pointed out that the possibility of protest from authors was eliminated by including examples from the writer's work though the act may give such examples undue importance (Hartshorne, 1948:120). He was so committed to this principle that he clearly stated that, "if the present writer has at any time failed to adhere to these standards, he expresses his regrets to any who may have been offended" (Hartshorne, 1948:124). Even while critically dissecting Schaefer's paper (1953) as allegedly the most unethical writing, Hartshorne fully adhered to the mores and clearly stated that,

the use of such terms as false and deceptive throughout this article is to be understood solely in the critique as it exists as a fact in itself, and without reference to its responsible author. Our concern in methodological discussion . . . is with the writing and not the writer whose name we use as a convenient label (Hartshorne, 1955:206).

Before objectively examining Schaefer's paper, Hartshorne has again amplified the mores of methodological discussion and observed that the

manner by which standards may be applied in a specific case can be judged by the reader from a second perusal of the article under study within the main body of the paper (Hartshorne, 1955:207).

Hartshorne's paper (1948), which was later included in a newer edition of his book *The Nature of Geography*, was one of the pioneering articles on scholarly mores and if followed properly most of the bickerings of geographers during the conceptual revolution in geography could have been avoided. But contrary to the expectations of Hartshorne and others, the mores of methodological writings declined with the publication of Schaefer's paper (1953) and during the period of conceptual revolution in geography. Even after Hartshorne's critical evaluation of Schaefer's paper (1953) and his conclusion that, "in total, almost every paragraph, indeed the great majority of individual sentences in the critique, represents falsification, whether by commission or omission" (Hartshorne, 1955:243), Schaeferomania is still observed to continue in geography and to represent an ethical fallacy (Khan, 1978).

In methodological discussion, there is a specific problem which arises "when one writer represents ideas of a former writer — especially of a writer with whose views he is in disagreement" (Hartshorne, 1976). In this regard, the record during the revolutionary period was extremely unethical (Hartshorne, 1976). Not only is the period full of examples of misrepresentations and distortions of the views of opposite groups, but also with personal bickerings. A few years back, after pointing out a number of cases of misrepresentation in the writings of Schaefer and his followers, Hartshorne concluded — rather came out with the challenge:

the low level of reliability in representing methodological reviews of previous students and the continued reliance on a source long since shown to be of negative reliability — these constitute facts in the writings of the disciples of scientism in geography. If they do not accept my suggested explanation, it is for them to offer a better one (Hartshorne, 1976).

Thus, it can be fairly concluded that as a critic Hartshorne has faithfully followed the mores which he himself set, but on him as a target of criticism, they were often violated by Schaefer and his followers.

Political Geography

A highly relevant example is that of political geography. Are the political geographers, at this stage of development of their field, capable of recommending solutions to the issues of political affairs of their country? Should they limit their studies to the understanding and analysis of phenomena or contribute their share in solving the critical problems of the world and recommend the courses of action? What is the duty of other professional colleagues in case anyone of them is attacked by the state politicians for his views which do not conform

to the state policies? These were the basic and real issues related with the professional ethics to which Hartshorne has clearly responded. While strongly recommending to raise the theoretical status of the field of political geography before suggesting the right course of action, Hartshorne has expressed his views categorically on the freedom of expression of geographers and pleaded for professional solidarity in case of attack from political demagogues of the state.

While introspectively reviewing the competence of geographers in this regard, Hartshorne has raised some fundamental questions regarding the ability of the geographers to express their views on political issues, particularly at a time when the field of political geography was not developed theoretically. He has warned that,

amateurish ideas or foolish proposals from men of no standing may do little harm. But when we write as professors and as geographers, the public presumes that we speak with some authority and cannot know how little that authority may be in the field of political geography . . . some of us may contribute only misunderstanding. In particular, the publication in critical times of mis-information, or of irresponsible recommendations . . . of such a character as to arouse animosity in foreign countries can do serious damage to this country as we learned during the last war (Hartshorne, 1950:103).

But on the question whether academicians, while discussing a problem, should stop at the level of analysis or be concerned with finding solutions, he clearly observed that academicians should not stop at analysis and leave to practical people the working out of solutions or to prophets the prognosis of future disasters. The interest of academicians, like those of national leaders, extends to implementation of solutions and its outcome (Hartshorne, 1946:6). Thus in his opinion, politicians do not have the exclusive right of finding solutions as political decisions equally concern the academicians.

On the question of geographers facing a critical situation, like a true champion of the freedom of expression and solidarity within the geographical profession, Hartshorne proclaimed that in so far as

we geographers are able to contribute to the problems of American foreign policy, we find ourselves . . . exposed to the danger of attack from political demagogues who find in any divergence of opinion from their own a sign of disloyalty to the state. We cannot foresee where the blind lightning of ignorance will strike, but must recognize that such attack on any one of us is attack on the freedom and integrity of all our profession (Hartshorne, 1950:103).

This bold assertion is not related to some imaginary situation but was a timely response to the concrete facts which Hartshorne has observed in "the front pages of almost any American newspaper for any date during the month of March, 1950" (Hartshorne, 1950:103).

CONCLUSION

On the basis of the above discussion, it can be concluded that Mitchell and Draper have taken a narrow view of ethics in geography and to a large extent reduced it to research processes and consultancy only. On the contrary, it should be taken as a broad term encompassing the ethics of geography both as a discipline and a profession. The restricted approach culminated in ignoring the contributions of a number of geographers and hence their historical review of the work done in the field of geography is incomplete. It is true that unlike other social scientists the issue of ethics received scanty attention from the geographers even though a number of scholars raised issues which might be considered topically as ethical in nature.

A close perusal of the views of Hartshorne reveals that he has contributed much to the field of disciplinary ethics. He was the first scholar to raise the question of mores of methodological discussion and to set certain general rules. There were instances of the criticism of other writers being taken as personal attack, thus creating bickerings in the academic field. He therefore emphasized that criticism applies to the writings and not to their authors. This principle guided him in critically evaluating the works of a number of geographers without any subjective feeling towards their authors. Although Hartshorne as a critic faithfully followed these rules, they were frequently violated by others when they criticized him during the conceptual revolution in geography. In the field of political geography, too, Hartshorne has explicitly expressed his views regarding freedom of expression and has pleaded for professional solidarity against attacks from political demagogues. Unlike Mitchell and Draper, Hartshorne's ethical issues were based on concrete evidence provided by published literature, oral discussions and political incidents and his answers were very clear, objective and insightful. Mitchell and Draper, by ignoring altogether the contribution of Hartshorne to this field, have made their own position ethically questionable.

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NEWS SECTION

NEW UNIT ADDED TO BUREAU OF SOILS AND WATER MANAGEMENT

A new unit, the Rain Stimulation Coordinating and Monitoring Unit or RASCOMU has been added to the Bureau of Soils and Water Management (BSWM) of the Department of Agriculture. The creation of the unit followed the issuance by President Corazon C. Aquino on January 30, 1987 of Executive Order 116 which changed the name of the Bureau of Soils to the present one and added to its functions the conduct of rainmaking activities to offset the effects of prolonged drought in agricultural areas and watersheds.

The RASCOMU started rain stimulation and related activities in October, 1987. Its activities complementary to rain stimulation include the gathering of weather and crop data and the subsequent tying up of these to the analysis/evaluation of weather outlook or rainfall situation for eventually coming out with mechanisms for short-term agricultural planning, disaster forecasting, water and crop resource management program, cloud seeding activities, weather modification researches and other related areas of concern. To carry out these activities effectively, RASCOMU has standing cooperative agreements with water resource management agencies of the government, particularly the Philippine Air Force and the Philippine Atmospheric, Geophysical and Astronomical Services Administration.

For its first year (1987-88) of operation, RASCOMU was able to accomplish substantial work in cloud seeding over watershed areas in Metro Manila, Central Luzon, Iloilo and Cebu. Water impoundment in these areas were observed to increase, proving that despite a limited budget, a small staff and inadequate equipment, much can be done through careful and dedicated work. Under the direction of Casimiro R. Mora as Project Coordinator, the RASCOMU has so far three airplanes for cloud seeding, 29 staff personnel and a 1989 budget of P12.9 million. It also acquired recently the building (and one vehicle) used by the Philippine Air Force Rain Stimulators for housing its research staff and its cloud tracking device and chemicals.

The RASCOMU promises to be an important unit of the BSWM for the agricultural development program of the government. Already, requests for cloud seeding throughout the country have been received by the unit but these could not be accommodated due to lack of aircraft. Even then, the unit recently improved its capability by employing 12 Agricultural Development Specialists, each of whom will be assigned to

one region with the major functions of coordinating with agencies and organizations in the region with regard to their water needs as well gathering climatological and crop data for a more efficient rain stimulation service. They were initiated into RASCOMU activities during a seminar-workshop held at Paraoir, La Union on October 6-9, 1988. The affair also coincided with the first year anniversary of the unit.

CHINA THE VENUE OF 1990 CONFERENCE OF IGU'S COMMISSION ON INDUSTRIAL CHANGE

The Commission on Industrial Change of the International Geographical Union (IGU) will hold its 1990 Residential Conference near Beijing, People's Republic of China from August 8 to 11, 1990 immediately prior to the IGU Regional Meeting in Beijing itself. The theme of the conference is "International, inter-regional and inter-enterprise cooperation and industrial change." Interested parties are requested to write to:

G.J.R. Linge
Department of Human Geography, RSPacS
The Australian National University
GPO Box 4, Canberra, Australia 2600

The Commission publishes every two months the *Bulletin* which contains news on its activities as well as news on the work of other entities that are particularly related to industrial change. The publication is being sent to about 1,300 people in more than 50 countries worldwide. Anyone interested in receiving free copies of the publication should write to the above address.

PHILIPPINE GEOGRAPHICAL SOCIETY NEWS

In the meetings of the Executive Board of the Philippine Geographical Society held during the last Tuesday of September and October, 1989, President Domingo C. Salita informed the members that the Society was already officially registered with the Securities and Exchange Commission as a non-stock and non-profit non-government organization that is eligible to receive funds for its planned activities.

The first projects of the Society that will be applied for funding are: the two-day seminar-workshop for primary and secondary school teachers of social studies to be held in the summer of 1990; and the improvement of the *Philippine Geographical Journal* in terms of the quality of the cover and paper used and in the number of articles and other items that can be accommodated per issue.

In the discussion on future research projects of the Society, Dr. Telesforo W. Luna, Jr. and Dr. Teodoro M. Santos stressed the need

to focus on certain areas of research where the Society has an adequate pool of expertise and where geography can best contribute to national development. These research areas include the Law of the Sea, the Exclusive Economic Zone, land reform, land use, and natural resource utilization and conservation. Dr. Santos was requested to prepare a package of research proposals for possible funding from proper institutions.

With regard to the participation of the Society in the UNESCO-funded social science encyclopedia project of the Philippine Social Science Council, Dr. Luna informed the Board that the topic outline for the geography section of the encyclopedia will focus on the development thrust of each Philippine region while covering its physical geographic environment, its socioeconomic features, and the interrelationships between these two aspects of Philippine space.

In the process of revitalizing the Society, the Board elected Col. Paterno R. Santos and Dr. Luna as Chairman and Co-Chairman, respectively, of the Committee on Membership. In anticipation of the funds that the Society expects to handle for its proposed projects, the Board also elected Dr. Santos as Auditor.

PHILIPPINE NATIONAL SCIENCE SOCIETY TO HOLD SEMINAR-WORKSHOP ON PHILIPPINE ECOSYSTEM

The Philippine National Science Society (formerly the National Research Council of the Philippines) of the Department of Science and Technology will hold a regional seminar-workshop on December 1-2, 1989 at the University of the Philippines at Los Baños, Laguna. Following the theme "Towards a Productive and Stable Ecosystem," the three areas to be focused on by the activity are coastal zone, upland areas and Laguna de Bay.

The seminar workshop, which will be participated in by well-known Philippine and foreign scientists and researchers, has the following objectives: (1) To identify and understand the key problems and issues affecting the ecosystem; (2) To determine what can be done about these problems and issues to ensure sustainable growth and development; and (3) To develop action plans and delineate responsibilities among institutions, both public and private. Those interested in participating are requested to write to:

Philippine National Science Society
(formerly National Research Council of the Philippines)
Bicutan, Taguig, Metro Manila

PSSC TO CONFER TITLE OF NATIONAL SOCIAL SCIENTIST

In its meeting held on August 26, 1989, the Governing Council of the Philippine Social Science Council (PSSC) unanimously resolved that PSSC select and confer the title of "National Social Scientist" starting with the annual meeting in February, 1990.

The decision to confer the title arose from the need to recognize the outstanding performance and dedication of many members of the different associations affiliated with the PSSC in advancing the frontiers of social science. The PSSC, a non-stock and non-profit corporation with a 20-year existence, is the acknowledged spokesman and umbrella organization of 14 national social science organizations in the Philippines. The following are the guidelines for nominating candidates and selecting awardees:

1. Each of the regular member associations and associate member associations shall nominate one (1) candidate on or before 31 October of each year with his bio-data following the criteria mentioned under item 2.

2. The Executive Board shall select not more than two (2) awardees from the nominees every year using the following criteria in addition to what the Board may include:

a. Education — The nominee must have a graduate degree in the discipline that he represents. His other educational attainments will also be considered.

b. Teaching experience — His teaching experience in public and private colleges and universities will be counted.

c. Research publications — At least three (3) research publications of the nominee will be presented for examination.

d. Service to PSSC and other scientific organizations — The service of the nominee to PSSC and other scientific institutions will also be considered.

e. Practice of his profession or of any other social science discipline either singly or in company with others or in the service of public or private organizations and the community not included in the above four criteria.

3. The Executive Board shall determine the percentages to be allotted to each criteria. Unless changed, the above criteria shall have equal weight. The selection of the National Social Scientist as decided by the Executive Board shall be final.

4. Any social scientist who was previously given an outstanding award by the PSSC shall not qualify for nomination but shall be automatically considered a National Social Scientist.

5. The National Social Scientist shall be given a Certificate or Plaque or any other suitable award as may be decided by the Board in consultation with the Executive Director.

*HONOLULU, HAWAII TO HOST XVII PACIFIC
SCIENCE CONGRESS*

Three scientific institutions in Honolulu, Hawaii — the University of Hawaii, the East-West Center and the Bishop Museum — will sponsor the XVII Pacific Science Congress from May 27 to June 2, 1991. The five major symposia on general themes include:

1. Global environmental change
2. Biological diversity
3. Science and culture
4. Population, society and health
5. Emerging technologies and development

Sub-themes and sub-symposia are being finalized by the Congress Secretariat. A first circular will be prepared in summer 1989 and will be mailed soon afterwards to participants. Those interested in receiving information about the Honolulu Congress are requested to write to:

Dr. Nancy Lewis
Secretary General
HUII Pacific Science Congress Secretariat
2424 Maile Way, Fourth Floor
Honolulu, Hawaii 96822, USA



THE PHILIPPINE GEOGRAPHICAL SOCIETY

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Information for Contributors

The *Philippine Geographical Journal* was instituted in 1953 to serve: as an outlet for scholarly articles ranging from geographical/spatial to socioeconomic topics particularly on the Philippines and other Third World countries; as a medium for the expression of professional opinions; and as a journal for reports on activities of the Philippine Geographical Society and other items of relevance to the geographic discipline. Its volumes usually contain academic articles and, occasionally, editorials, addresses, book reviews, reports, Society and geographical news, advertisements of interest to the geographic profession and certain special items. All manuscripts submitted for publication should conform to the following requirements:

Format and length. Manuscripts should be typewritten, double-spaced and use only one side of an 8½ x 11-inch bond paper. Computer printouts are accepted, provided they are legible. Because of rising mailing costs, rejected manuscripts will not be returned. Scholarly articles should range in length from 2,000 to 5,000 words while reviews, reports, news and special items should be less than 2,000 words. The editors reserve the right to stylistically edit articles and to reduce the length of reports, news and special items that they consider to be unnecessarily long or of little interest to readers.

Authors' affiliations and interests. Authors should supply, through a footnote on the first page of the article manuscript, information on their current employment (position/rank, institution/organization, address), educational attainment (degree, discipline, institution), and research interests and experience. If a manuscript has been presented as a paper in a conference, workshop or symposium, the particulars of the occasion should be footnoted, too.

Abstract. On the first page of the article manuscript between the author's name and the text, an abstract with a length ranging from 75 to 150 words should be included. It should summarize salient points and should include key words.

References and footnotes. All works cited in the text in parenthesis (author, year, page) should be listed at the end of the article in alphabetical order, last name first, following the bibliographic format used in recent issues of the Journal. Comments and explanations on textual content should be placed as footnotes, indicated consecutively throughout the manuscript by numerical superscripts, and may include literature citations.

Illustrations and tables. Illustrations, which should be kept to a minimum, should be of professional quality and drawn in black ink on white paper or on thick tracing paper. They should not be more than two times nor smaller than the size of the manuscript paper. The style of the lettering should be either in Leroy or Century type. Figure numbers and captions should be indicated in pencil at the bottom of the paper way below the drawing or its borderline. As with other aspects of style, the format of the tables should follow that indicated in recent issues of the Journal.

Other guidelines and information. An article manuscript will be accepted on the understanding that it has not been submitted elsewhere and will not be until a decision has been rendered by the Journal. The Journal's decision will be made known within one month after receipt of the manuscript. Each author will receive five copies of the Journal. All materials submitted for publication should be addressed to:

The Editor
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