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BOOK REVIEWS

PHILIPPINE GEOGRAPHICAL SOCIETY NEWS

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Table of Contents

	PAGE
EDITORIAL	
Will Cyberspace "Annihilate" Geographic Space?	1
ARTICLES	
Considerations About Fluvio-Karst Driving Processes Regarding Calbiga Karst Example (Samar Island – Philippines) <i>Philippe Audra</i>	3
The Historical Justification for Adopting Decentralization and Federalism as Effective Strategies in Alleviating Poverty in Developing Countries <i>Meliton B. Juanico</i>	21
Changing Spaces Inside Filipino Homes <i>Mariño Deocariza,</i>	45
Regional Science in the Development of South Korea <i>Candido P. Filio</i>	57
BOOK REVIEWS	
The Orphans of Pinatubo: The Ayta Struggle for Existence <i>J.C. Gaillard</i>	63
Generating Energies in Mt. Apo: Cultural Politics in a Contested Environment <i>Evangeline O. Katigbak</i>	65
PHILIPPINE GEOGRAPHICAL SOCIETY NEWS	69

Editorial

Will Cyberspace “Annihilate” Geographic Space?

Many say that with the pervasive and dominant impact in today's life of cyberspace as the new communication space created by information technology or what Alvin Toffler calls the “Third Wave,” there is the tendency to “annihilate” geographic space or, in more realistic terms, to push this space irreversibly into increasing insignificance and irrelevance in the lives of human beings. By inference, the utter pervasiveness of the use of cyberspace in human communication would further render the geographic discipline even less important than what it already is in the development of the different fields of social science. It may be recalled that geography started to decline towards the turn of the 20th century when it experienced difficulty in containing its broad disciplinary content. Geography became the victim of the specialization movement that swept the scientific world in the midst of knowledge explosion. And so we see in many countries today geography suffering from a loss of prestige like some other holistic disciplines. The low image appears true in the Philippines, the United States and many other countries. We hear of some schools in certain areas of the world phasing out their geography departments on account of poor enrollment levels.

However, it is our view that geographic space will never be “annihilated” by cyberspace. Our contention is that as people increasingly communicate through cyberspace using both the auditory and visual senses, what is paradoxically created is a yearning for face-to-face contact of “warm bodies” using the other senses of touch, smell and even taste. The feeling of the incompleteness of the electronic communication process could be explained by the fact that man, through evolutionary genetic adaptation, has developed to be a social animal who likes close or body contact in information exchange and other cultural activities. Stated another way, people feel that their communication is more complete and satisfying if they meet at close range over particular geographic spaces, especially after having communicated for so long in a rather unnatural manner via the Internet, telephone or other means of detached and impersonal electronic information exchanges.

This yearning to meet people in person at certain places, to visit certain parts of the earth's surface or to peruse books on geography appears to be experiencing a resurgent mode. Ironically, the reason lies in the proliferation and power of the electronic media itself. For instance, we have witnessed the phenomenal popularity of the National Geographic Magazine, Discovery and Animal Planet cable TV channels on account of their power to elicit the sense of wonder and fascination among viewers for the seemingly endless variety of landscapes and cultures around the world. Through the Internet they can further gather instantaneous information from the websites of these places and communities. Media forms like these and the advent of the popular tools of Geographic Information System

(GIS) and Remote Sensing (RS) have once again increased awareness and interest in the geographic discipline. GIS integrates attributes or textual data with geographic or spatial information from various sources into a computer-based system. Such information sources are usually those gathered through remote sensing which involves collection of data using sensing devices like radar, multi-spectral scanners and radiometers. The popularity of GIS lies in its versatile abilities that make it suitable to a wide range of public and private enterprises for explaining events, predicting outcomes and planning strategies. And what helps instill geography in the minds of people is the fact that GIS itself uses the very word "geographic" to signify its basic identity.

It may be claimed that the academe has been the recipient beneficiary of the above forms of information technology, particularly GIS. And the geographic discipline has particularly been benefited by the spread and pervasive use of GIS in the sense that it has helped in increasing enrollments in geography departments or encouraged universities to open new departments of geography. GIS is perceived as a practical tool that enhances employment opportunities after graduation. There could, of course, be other causes like the growing importance of physical framework planning in socioeconomic development, the rise of the tourist industry, the advent of globalization that has made places independent, or the trend to favor interdisciplinary research. But we have the feeling that in a globalized economy that is fueled by informational commodities, the significant influence of GIS cannot be discounted. In the Philippines, for instance, the Geography Department of the University of the Philippines has benefited from the increased consciousness of the geographic discipline as promoted by the teaching and use of GIS in terms of unusually increased enrollments in the introductory geography courses like *Places and Landscapes in a Changing World* and in terms of increased demand to offer new GIS-related subjects like *Map and Air Photo Interpretation*, *Digital Cartography*, *GIS Application in the Social Sciences*, and *Spatial Analysis*.

Indeed, the confluence of the above influences may well augur the resurgence of geography today as a major and prestigious holistic discipline that can significantly help in solving the world's ills or reorient the myopic vision of nations to a world view that as early as the 17th century was already prophetically espoused by the poet John Donne when he said that "No man is an island...". Cyberspace cannot supplant nor can it "annihilate" geographic space. Places and geography will always matter to man who is a land lubber and a social animal. Cyberspace can only be an adjunct to physical space. And at no juncture in history are these words of Prof. Richard Morrill truer than now when he said that, "It is only geography which realizes that the fact of space is not just an awkward inconvenience in our theories but a basic organizing principle of existence."

Meliton B. Juanico

CONSIDERATIONS ABOUT FLUVIO-KARST DRIVING PROCESSES REGARDING CALBIGA KARST EXAMPLE (SAMAR ISLAND - PHILIPPINES)

PHILIPPE AUDRA*

Introduction

Calbiga karst area was explored by French and Italian cavers around the Calbiga spring area [ROSSI & *al.* 1987]. The upstream part of the catchment, where sinkholes are located, was only recently explored by French expeditions in 2000 and 2002 [SOUNIER 2002; AUDRA & *al.* 2003]. In 2002, during a three-week trip some observations of karst morphology were carried out. This study presents the main characteristics of the karst area and its evolution.

The Philippine islands harbor numerous middle-altitude karst areas with mainly horizontal cave systems. The largest is Saint Paul's cave located in Palawan Island, a 20km linear underground river, connected to the sea. In general, karst mountains are scattered as

*Maître de Conférences, University of Nice Sophia-Antipolis, France

small units in most of the islands. The Samar Island harbors the largest karst massif in the country. It is located in the Calbiga hinterland where the Can-Yawa system opens (Figure 1).

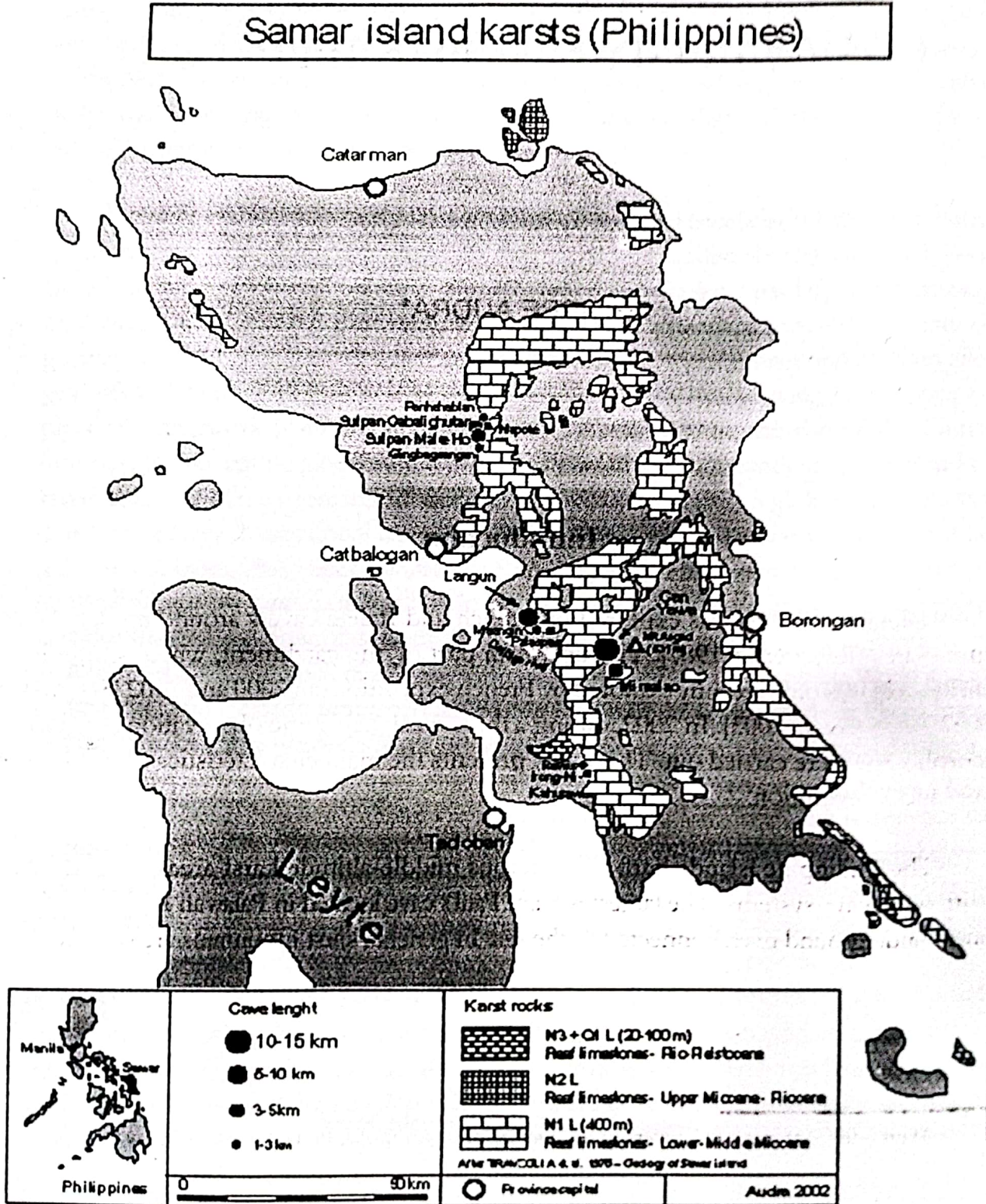


Figure 1. Location and geological setting of Calbiga karst

Low But Difficult Access Mountains, the Last Rain Forests

Samar constitutes one of the 7000 islands of the Philippine archipelago. It stretches between 10° and 12° N over about 200 km, for a mean width of about 80 km and it covers 13,400 km². The landscape is not very high (850 m at Mount Capotoan), displaying mainly middle-altitude mountains and hills. However, the landscape is intensively dissected, giving a strong impression of compartmented and contrasted relief. The lack of a plain enhances this perception.

Central Highlands form an axial NW-SE oriented range bearing the highest summits, from which diverge deep-entrenched valleys. A limestone belt of plateau reaching 400m altitude at the maximum encompasses them. Their altitude is moderate, however, they act as a boundary because of the karst landscape displaying steep conic hills and deep depressions, with a difference in height of about 200 m. Strongly corroded limestone and high forest density make the zone difficult to access. There are no permanent settlements. Only some transversal E-W dry valleys, used as hunting tracks, allow relationships between villages located on both parts of the massif. Deep entrenched plateaus, hills and volcanic mountains are found on the rest of the island.

More than 1.5 million people are living on the island. The density reaches 120 inhabitants / km². However, people are clustered along the seaside and the rare transverse roads. Most of them owe their living to traditional agriculture or fishing. But an increasing segment presently work in factory, industry, trade or service. Tourism is not well-developed, with only a few small diving resorts. Such a population density contributes dramatically to reduce the original rain forest. Only the remote Central Highlands located far from the seaside and the repulsive karst plateau are still spared for the moment. But logging tracks already enter deep into the forest and karst areas close to the villages or roads have already been cleared from their original vegetation. Afterwards, dense and unpassable bush develops.

A Volcanic Island Arc Belonging to the Pacific "Ring of Fire"

The archipelagic landscape and geological structure owe their present configuration to the motion of the Pacific and Philippine plates. The Pacific is sinking in subduction under the Philippine Plate, inducing both earthquakes and volcanism, like Pinatubo close to Manila. The strongest earthquake recorded in Samar (1925) reached an intensity of VIII. These motions induce fractures, like the Philippine fault, a 1200-km long NE-SW strike-slip fault that crosses Leyte Island, in the vicinity of the western part of Samar.

Several fractures linked to this main one are still active. Finally, the subduction process gave origin to the Philippine Trench (-10 500 m), one of the deepest in the world, which is located along the eastern coast.

Changes of tectonic stress through time gave origin to the present geological structure of Samar [TRAVEGLIA & *al.* 1978]. An alkaline volcanic arc was built from Cretaceous to Palaeocene. The intensity of tectonic stress gave rise to some metamorphism. From Paleocene onwards, the tectonic stress slowed down and erosion took over in forming the landscape. Within the framework of a hot and wet climate allowing deep weathering of alkaline rocks, the volcanic range was progressively lowered, finally forming a planation surface that cut the old basement.

From Lower Miocene and during Middle Miocene a gradual subsidence occurred. Plains were submerged by marine transgression, giving rise to shallow epicontinental basins, with reef limestone deposits developed in unconformity over the levelled basement. This sedimentary load maintained subsidence and shallow marine conditions. Finally, a 350m-thick layer constituted the "Loquilocon" limestones. In Upper Miocene, the tectonic trend changed and uplifting occurred, and which is still active at the present time. The uplifting, reaching 500m, occurred as an upwarping of the central axis, mainly combined with a NE tilting. Continental conditions that give rise to erosion then occurred. The erosion concerns mainly the Central Highlands axis, where sedimentary covers are stripped off and the basement is entrenched. This explains the present geological setting: the limestone cover appears as a horseshoe ridge encompassing the basement rock outcropping in Central and Southern Samar. Limestone outcrops do not exceed 15 km in width, limited most of the time to a few kilometres wide stripe (Figure 1). Younger layers outcrop along the coast, such as the Catbalogan molasses, a mixture of sandstone rock and clay sediments, whose age lies between Upper Miocene and Lower Pliocene.

In the Calbiga area, this thick formation, presently dissected into a hilly landscape, outcrops along the limestone massif but never covers it at any other time. This means that the limestone has been continuously weathered by karst solution since Upper Miocene emersion. Moreover, other limestone deposits occur as thin stripes along the shoreline from Upper Miocene to Pliocene and from Upper Pliocene to Pleistocene. These porous and soft limestones do not harbor any major karst systems but show evidence of karst solution activity, as shown by sinkholes, springs, dolines and a cone landscape.

General Conditions of Karst Organization

The conditions described here correspond to Calbiga karst where the Can-Yawa system opens, but they can also be roughly applied to the other karsts of Samar Island. It is a typical fluvio-karst. Numerous sinkholes are fed by an allogene recharge originating from impervious upstream areas. A unique outlet gives origin to the Calbiga River. The dynamics of the three components of the system (impervious recharge, cave system and base level) depends on their permanent evolving relationships, tectonic uplifting being the main input driving the evolution.

Tunnel-Caves and Fluvial Valleys

Rivers originating from the axial crest flow over the volcanic basement towards the west. The discharge can reach several m^3/s for the largest, depending on the catchment area size. High water discharge during the rainy season is probably considerable.

At the limestone contact, two possibilities occur (Figure 2):

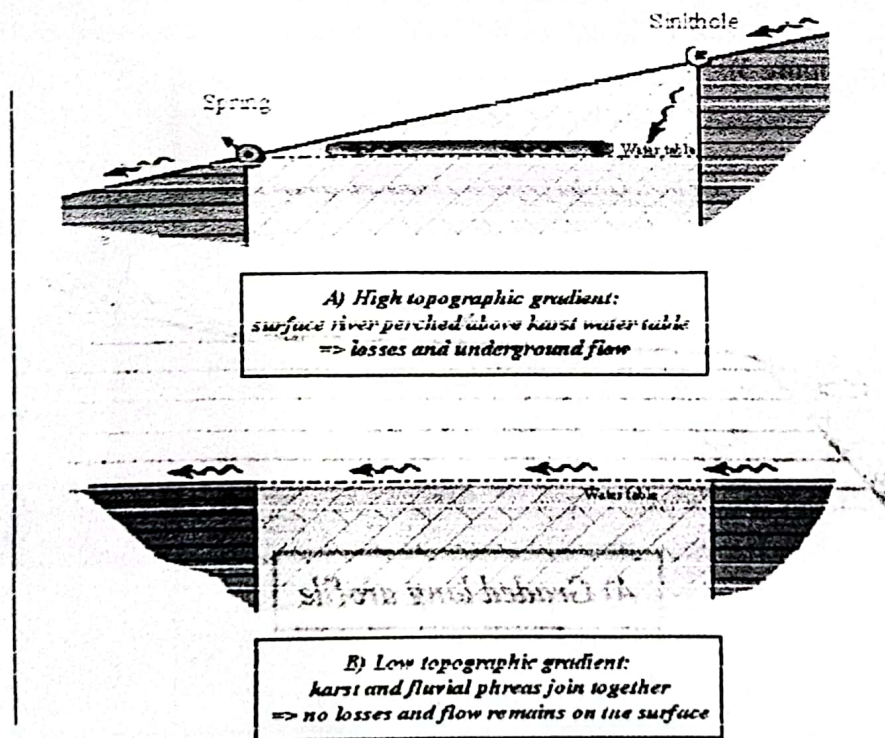


Figure 2. The influence of hydraulic gradient: fluvial evolution versus underground bypass

1. A sinkhole appears as soon as hydraulic gradient is present, corresponding to a difference in height, even if slight, between the karst water table and a river perched above it. An underground bypass settles as a tunnel-cave.

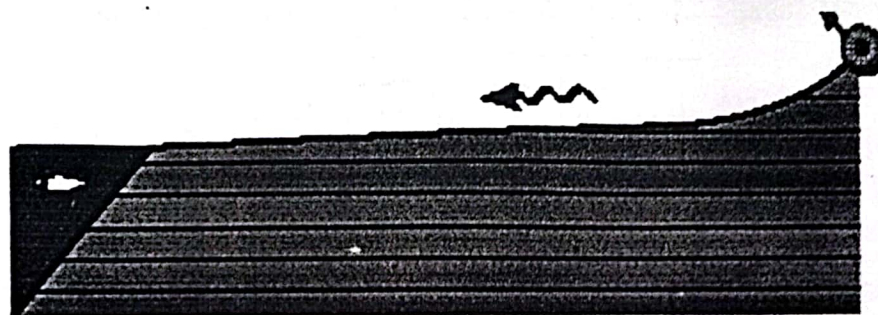
2. When hydraulic gradient is very low, the karst water table is confounded to fluvial water table. Underground "piracy" does not occur and water flows at the surface. In this case, a fluvial valley develops and crosses the karst as a canyon. If the river discharge is important, surface flow can be maintained even with some moderate losses during low water volume.

Tectonic and Sea Level Changes Drive Cave System Setting and Evolution

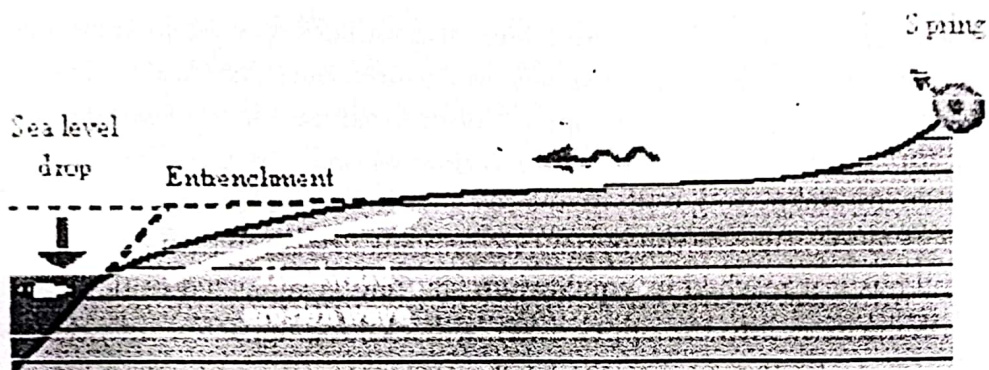
The dynamics of the two above-mentioned states is permanently changing, according to tectonic activity and sea level changes. Several possibilities can occur.

Rapid uplifting followed by a quiescence period. Rivers are uplifted altogether with the continent. River slope is strong close to the sea. Here it enhances erosion and the rivers entrench their beds as long as the slope exceeds its equilibrium value. The length profile reaches its equilibrium first close to the sea level. But the slope rupture moves headwards, so that erosion progressively regularizes the length profile from the river mouth up to the spring. It finally reaches a new graded profile according to the new sea level (Figure 3).

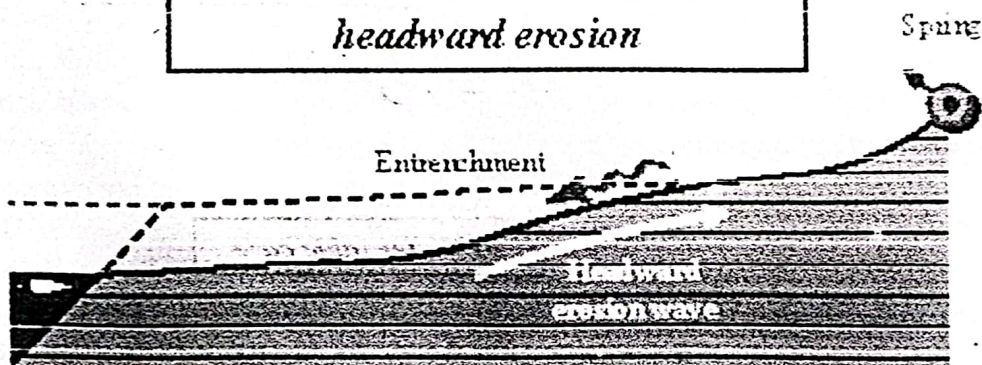
Figure 3. Graded profile and headwards erosion wave



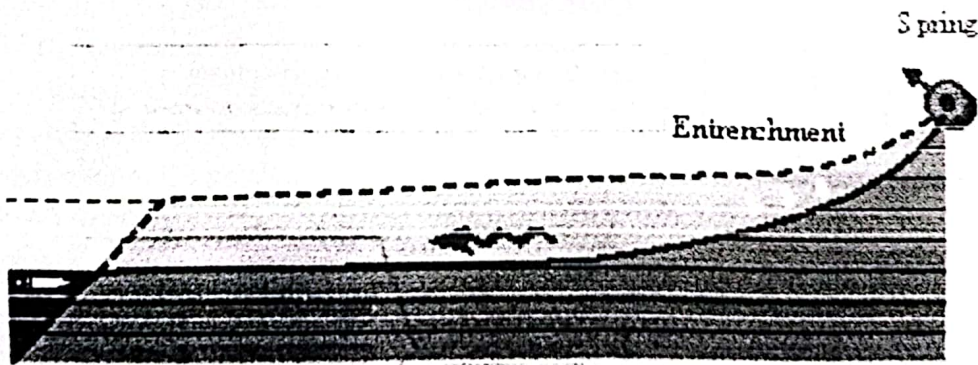
A) Graded long profile



*B) Sea level drop
=> downstream entrenchment and
headward erosion*



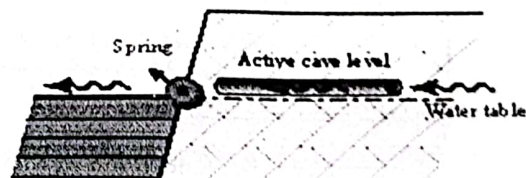
*B) Standing sea level but
erosion still moves headward*



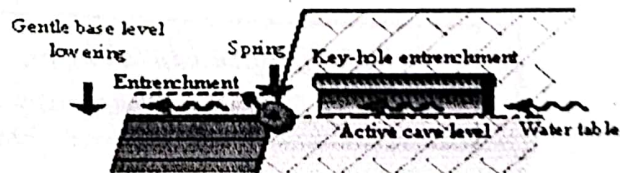
*D) Erosion reaches upstream part
=> new graded long profile*

The consecutive lowering of the spring level also induces changes in karst system structure (Figure 4). If base level drops slowly and continuously, the karst main drain entrenches and forms an underground canyon. With rapid base level lowering, a new main drain appears at a lower level, with the old one becoming dry and perched. But during the transitional period, both drains can act simultaneously. During low water the lower one acts alone whereas the upper one remains dry. At this time, the lowest new drain has still not reached its equilibrium size and is subjected to flooding during high water. Water rises into the upper drain by backflooding, active only during short high water periods. Following that, the karst water table lowers headwards in the same manner as the outside.

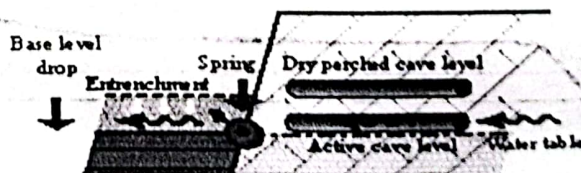
Figure 4. The influence of base level lowering speed over karst structures: entrenchment versus horizontal levels



A) Water table cave



B) Gentle base level lowering => Original tube entrenches as a key-hole



C) Abrupt base level drop => a new active lower level develops, old level becomes dry and perched

At the upstream part, the sinkhole becomes perched above the water table. It also adapts by lowering, allowing the headwards erosion wave to move up to the uppermost parts of the catchment area. The whole fluvial system feeding the sinkhole embanks, inducing an increase in slope and consecutively enhancing slope erosion. Following this process, the whole topography of the impervious catchment area lowers gradually, with all the eroded materials being washed away across the underground system.

Finally, each uplifting step induces a change in both fluvial and karst drainage, corresponding inside to a new cave lower level and outside to a generalised embanking, both downstream and upstream of the karst massif.

Other evolution possibilities according to base level changes. Base level changes occurring during the Quaternary (glacio-eustatism) induce changes in the karst structure similar to the ones described above. These types of changes probably have less influence because of their shorter duration and the succession of base level lowering (marine regression) and rising (transgressions), which is contrary to tectonic changes that only correspond to uplifting-inducing base level lowering (at least in this area during this period). In any case, both phenomena (tectonic and marine changes) are combined and induce base level changes. They correspond to abrupt drops (uplifting, eventually combined to a marine regression), stable periods (tectonic and eustatic quiescence or opposite phenomena cancelling their mutual effects) and sometimes slight base level rising (transgression without any tectonic motion).

Spatial Plus Temporal Lags

The changes in the system described above are also affected by inertia that induces a temporal lag between causes and effects (Figure 5). A base level change is immediately reflected in the downstream part, which is close to the sea level. However, the headwards wave propagation needs a long time to reach the uppermost parts of the system. A headwards erosion waves can thus occur somewhere in the system (discrete presence of rapids or waterfalls along a graded profile), whereas its genetic cause (e.g., sea level lowering) could have disappeared. A second headwards wave can appear while the first one continues its headwards progression.

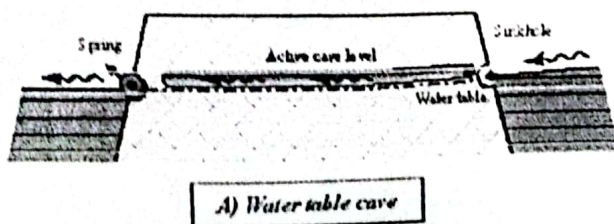
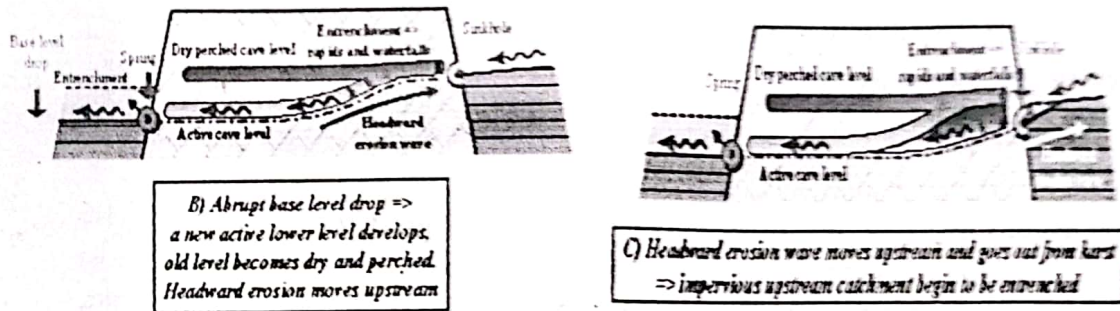


Figure 5. The influence of headwards erosion in karst over the impervious upstream catchment area



Such a time lag indicates that a presently active feature (e.g., cave active level, river waterfall...) could owe its origin to an ancient cause which has since disappeared. Such features are considered as "inherited" even if their evolution is still active.

The corollary of this time lag is a spatial lag: features originating from causes different in age can finally converge. For example (Figure 6), a marine regression induces a valley entrenchment that propagates headwards, indicated by an abrupt step along the length profile (rapids, waterfall) that shares two low gradient areas. When the sea recovers its former level, the downstream part of the river is flooded as a *ria* (drowned river canyons formed by a rise in sea level). Sediments are trapped at this place by flow speed that decreases and progressively fills the *ria*. So, the length profile is regularized in the downstream part whereas the headwards wave induced by the former regression still continues its propagation. Each type of feature has a present existence, as is visible to the current present-time

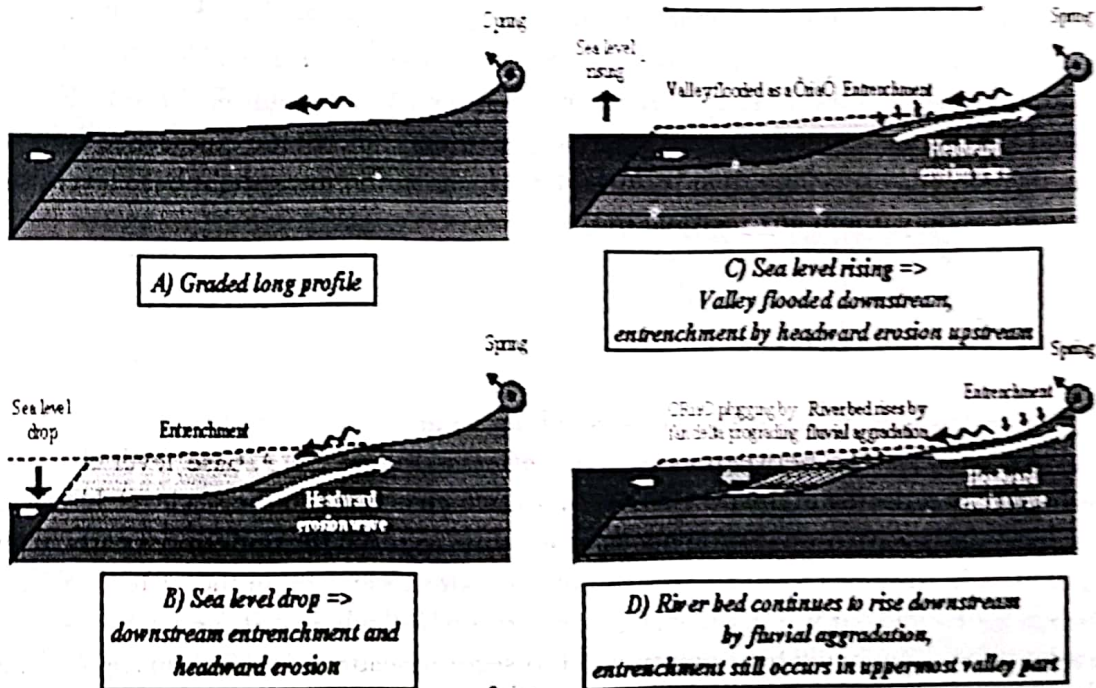


Figure 6. The time lag in fluvial dynamic shows the neighboring of features different in age, origin and dynamic

observer, but their respective origin could not be contemporaneous. One can discern the complexity of the system, where features different in age (in fact, different in their genetic origin) situate near each other, having sometimes having opposite dynamics.

One also has to mention additional elements of the system, such as climate changes or man's impact. While acting over the vegetation cover, they switch the erosion dynamic of the catchment area, giving a very complex system which is extremely hard to understand.

"Piracies"

Karst structure is able to change not solely vertically, with successive horizontal cave levels according to base level lowering, but also sideways. For example, one can consider two distinct parallel drains (Figure 7). One is obviously more directly connected to the spring by a shorter path. It first reacts to base level lowering by entrenching with the other drain remaining perched. The first one becomes thus able to capture the flow of the second one. This capture occurs gradually until a complete piracy becomes effective. Consecutively, the pirate drain enhances its potential, which is attributable to this new amount of water. Then it is able to produce new piracies that prejudice its neighbors. Following such a process, a ramiform structure appears, converging downstream to a single outlet. As regards the captured drain, it remains active upstream of the capture point and entrenchment goes on. But the captured drain becomes perched downstream, first being active only during high water and finally becoming completely abandoned

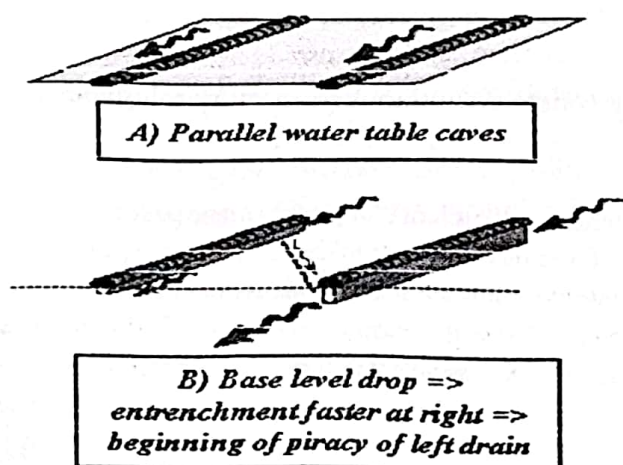
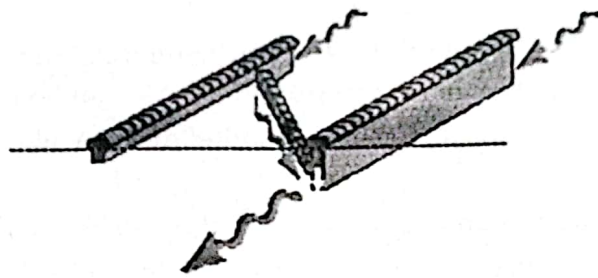


Figure 7. The dynamic of an underground piracy induced by base level lowering



*C) Continuation of piracy benefiting to right drain
=> left drain remains dry and perched*

and dry. These piracies are easy to identify in the cave systems by the presence of a perched fossil gallery located in the downwards direction of an active one and also by a capture turn, showing at this place the change in flow direction.

Outside, the fluvial network reacts in the same manner. When a river is able to embark faster, because of a very strong discharge or a very steep slope, its tributaries will also follow a similar dynamic and entrench. In the uppermost parts of the catchment, the first-order tributaries will move headwards, progressively invading the neighboring catchments. Finally, a neighboring river will pour into the conquering one. Afterwards, a capture turn remains, altogether with a perched dry valley located downstream of the capture point. Nevertheless, this dry valley cannot be preserved through time, being progressively dissected by the neighboring active valleys. The last remnant of a dry valley is a saddle lowering a regular crest line and showing the old flowpath of the captured river. If a dry valley path finally tends to disappear, the capture turn remains through time because the river conserves its trail while embanking.

Karst evolution reconstruction thus requires morphologic analysis regarding the following:

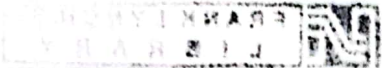
1. In the underground: present and past drainage paths capture areas, with each one being defined by orientation, altitude, size corresponding to discharge and thus to catchment dimension and specific sediments;
2. On the surface: reconstruction of successive fluvial networks, using paleovalleys, captures successive catchment characteristics.

The different stages of the whole system evolution (including impervious uppermost catchment, karst in intermediate position and impervious piedmont linked to the sea level) being known, one has to deal with the origin of each stage and each break between stages. One has to take into consideration the driving processes of the landscape dynamic. They are sorted according to decreasing influence, tectonic activity, sea level changes (eustatism), climate changes and man's impact. Of course, human impact only acts over the present karst dynamic, but its influence can now obviously surpass other processes. Logging induces soil erosion that enhances solid load transport, with sinkholes being plugged by huge log heaps, increased cave flooding and clay deposits in the epiphreatic zone and in fluvial high water beds, thus enhancing plugging river bed rising and frequency of inundation. We do not have enough data to appreciate the present changes regarding past conditions, but this fact is evident.

About our research, we have realized the first part dealing with system evolution reconstruction, with some unknown parts of course since the karst systems are far from being entirely surveyed. Moreover, hypotheses are being built while making correlations between successive morphologic remains, these testimonies becoming more and more elusive in proportion to the age of the considered phases. Regarding quantification of the role of driving processes of their respective rhythms, particularly tectonic, the study has allowed us to elaborate some hypotheses that further work will investigate.

Fieldwork data collected during the Can-Yawa 2000 expedition are under analysis, with only the main facts regarding paleogeographic evolution being presented here. Other objectives will be further developed, namely:

1. Present hydrologic dynamic: hydrologic balance, settling of catchment area boundaries, discharge assessment of the Calbiga spring tributaries.
2. Study of the old fluvial sediments trapped into the perched caves, compared with the present fluvial sediments.
3. Interpretation of the paleomagnetic data of underground sediments.
4. Rhythms and modalities of cave level evolution and karst piracy.



The Main Evolution Phases of the Calbiga Karst System

Karst development has been occurring since limestone emergence in Upper Miocene, corresponding to a dozen million years. The main phases have been demonstrated with the supporting evidence, showing an evolution depending on conditions of changes through time (Figure 8). However, chronological data about the length of these phases are presently not available.

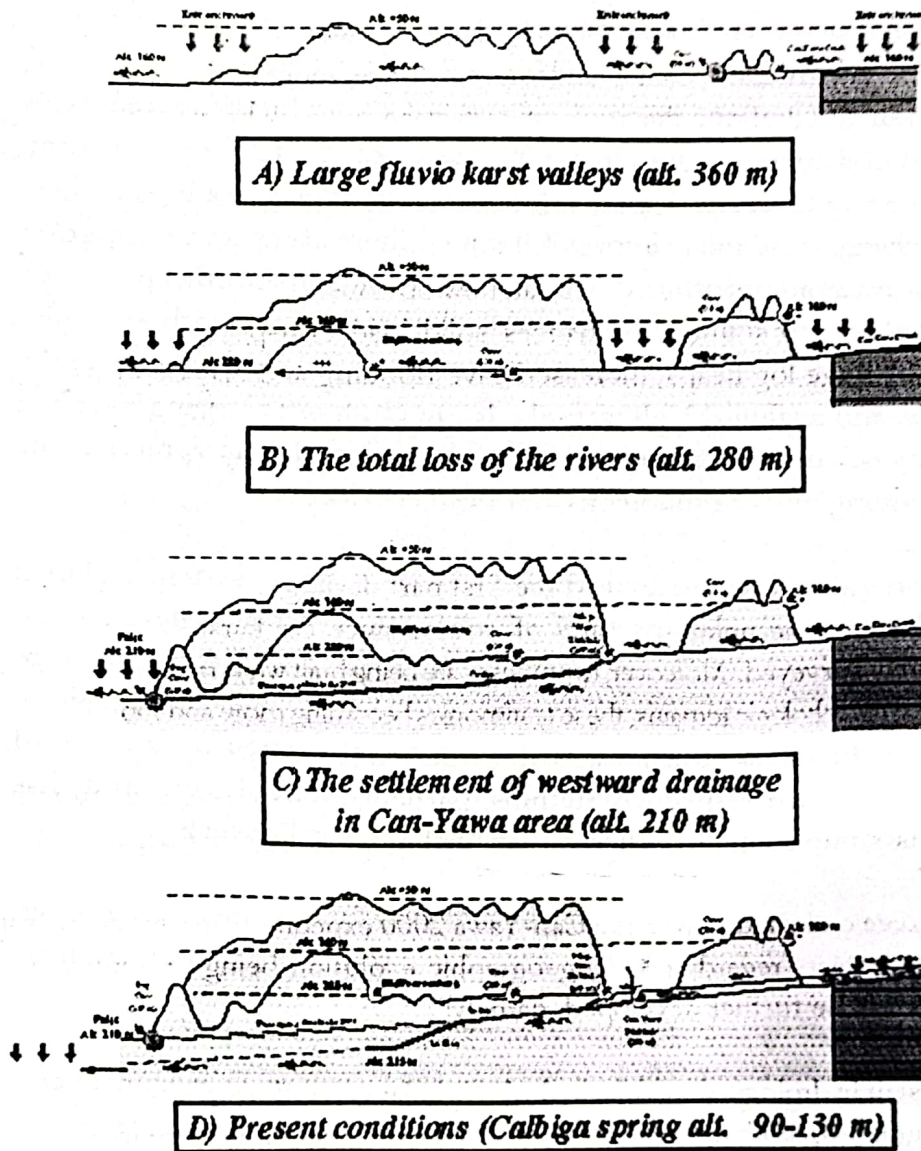


Figure 8. The successive evolution phases of Calbiga karst according to base level lowering

Piedmont Initial Phase

Following the beginning of axial upwarping, limestone is only slightly raised and forms a low-altitude piedmont. Rivers originating from the Central Highlands, deposit fluvial sediments that veneer the limestones. This old topography is presently represented by a surface virtually corresponding to the karst cone summits which are perched at altitude of about 400 to 500m.

Large Fluvio-Karst Valleys

Base level lowers about 100m, inducing a corresponding valley embankment. Large valleys entrenched into limestone cross the massif westward of the "Elf" trail paleovalley of the Mactingal located in the northern part. Their bed level is located at the present 360m altitude, corresponding to the highest thalweg thresholds. Deep gorges harboring active rivers occurred in the downstream part, whereas the upstream part was at least partly bypassed by underground cuts. Some milestones of this phase are found in the middle of the karst cones around the present Can-Yawa valley. These caves are presently perched at 380m altitude and contain deep-weathered sediments (red clays, pure iron oxide crusts and nodules). Caves are cut by the subsequent depression development, but it is often possible to identify the former paths of some caves while following fluvial deposits (clay, pebbles) and calcite fragments that veneer the slopes. Even an 8m-high stalagmite has been found in the rainforest, located at more than 100m from the cave relic! Finally, all these old cave remnants have a S-N orientation, perpendicular to the present E-W Can-Yawa River. They clearly show that the Can-Yawa River axis did not exist at the time and that the drainage was northward to the "Elf" valley.

Otherwise, as compared to other parts of the world, the occurrence of these diffused cave sediments combined with red clays trapped in altitude depressions show that the *terra rossa* has an allogene origin and does not owe its origin to limestone solution, which is pure!

The Total Loss of the Rivers

Following a new 80m base level lowering, rivers are completely lost into sinkholes. In the upstream part, the still active valley entrenches down to the present 280m altitude. The downstream part becomes dry and stops its evolution. A reverse slope separates it from the upstream part, which evolves as a blind valley. The two main valleys of the area ("Elf" trail and paleo-Mactingal) are flanked sharply by reversed slopes. Large cave systems corresponding to the sinking phase of the main river are still to be discovered.

The Settlement of Westward Drainage in the Can-Yawa Area

A final 100m base level lowering turns aside the former northward flow for the benefit of the Can-Yawa system which gradually appears, firstly, through the formation of the Northern tributary originating from the "Bastos and Tequilla", then through the "Mog-Ur" sinkholes, the last one still being active. Secondly, the present Can-Yawa inlet appears, benefiting from the piracy of the uppermost part of the catchment and clearly turns its flow westwards. The underground river flows through the "Once upon a time to the West" gallery and pours out at 210m altitude into large poljes linked to the regional base level. This 210-220m-altitude level develops widely in the western fringe of the plateau.

Finally, the Can-Yawa underground river is once more turned northward by successive piracies: "Rotten Feet" river, "No Future" gallery and finally "*La Chue*" (the "Water Gap") where the present Can-Yawa river flows. This ultimate northwards piracy implies the presence of a deep conquering drain located under the dry valleys (Elf and Palco-Mactingal) that probably corresponds to the Calbiga spring main drain (mean annual discharge: 15 m³/s). The lowest point reached at the extremity of the Can-Yawa system is located at 190m altitude. The Calbiga vauculian spring at a distance of 5 km from this point locates at between 90m [ROSSI & al. 1987] and 130m altitude [Topographic 1/50 000 map, *Calbiga*]. The mean hydraulic gradient is thus somewhere between 20 and 12 ‰. Possibilities for more discoveries are still open.

It is thus possible to identify 4 main karst drainage phases, which are shared by 3 main breakthroughs corresponding to equivalent tectonic rising and to a total uplifting of about 300 m. Moreover, a detailed study reveals that each phase puts together a succession of transitory states and reorganisations by piracies that are induced by gradient increasing



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THE HISTORICAL JUSTIFICATION FOR ADOPTING DECENTRALIZATION AND FEDERALISM AS EFFECTIVE STRATEGIES IN ALLEVIATING POVERTY IN DEVELOPING COUNTRIES

MELITON B. JUANICO*

Introduction

This paper aims to show how decentralization and federalism can significantly alleviate poverty and associated development ills particularly in Third World countries and the Philippines. It will describe the historical background of decentralization which will also serve as the justification for embracing the strategy along with federalism. It will discuss how the center-down paradigm in development as theoretically underpinned by the economic growth model has led to the integration of the different spatial and sectoral levels of developing and colonized countries with their central governments and private capitalist entities through the agency of the growth center regional model. It will show that the disintegration process constitutes actually a leakage of capital, labor, entrepreneurial skills and technology from the local or rural areas towards the national government, primate city and large urban centers—a state of affairs that can only lead to poverty, inequality, unemployment, dependence, dualism and spatial lopsidedness. Finally, it will discuss the features of decentralization and federalism and their capability in significantly minimizing poverty and its related ills, with the discussion tending to favor federalism as the more effective strategy to counteract leakage and to subsequently effect the spatiosectoral trickling down process.

* Associate Professor, Department of Geography, College of Social Sciences and Philosophy, University of the Philippines, Diliman, Quezon City.

The Need for New International and Intra-National Economic Relationships

In recent years, the whole field of development has been in much disarray, both in theoretical and practical terms. The "conventional wisdom" of the 1960s which was guided by neoclassical economics has been discredited in the Third World, having been ineffective, if not counterproductive, in alleviating the lot of the world's poor. The alternative palliative "redistribution with growth" (RwG) approach has not been of much help either, for although there has been some "success stories" during its implementation in the 1970s, these turned out to be less successful in human terms.

Thus, as early as the late 1960s, the developing countries of Latin America, Asia and Africa posed serious challenges to the developed world, with North-South confrontation replacing East-West confrontation. Third World countries demanded fairness in international relations from the First World. Faced with increasing inequality in their economic relations with the affluent "North" countries, the poor "South" countries called for structural changes in international economic transactions and stressed the need for cooperation among themselves. The United Nations (especially through the UNCTAD) provided the developing world a forum for airing their demand for a "New International Economic Order" that will reduce international disparities in living levels (Dag Hammarskjold Foundation, 1975).

In time, however, the developed nations perceived the damaging effects to their own interests of a bruising North-South confrontation. They slowly began to look for ways to achieve harmony by bargaining the more predictable business conditions, the more stable access to petroleum and raw materials, and the more effective global institutions, which the realities of fragile interdependence made imperative. At the 6th Special Session of the UN General Assembly in May, 1974, a resolution on the New International Order containing global redistributive principles was adopted by "consensus but not without strong objections from a number of industrialized nations." Thus, the world today is in earnest search of "Another Development" at the global scale that will put North-South relations on a new basis characterized by fairness and equity (Cleveland, 1978:5).

At the *regional scale* within countries, there is also a need to define "Another Regional Development" that should recast the interaction between advanced and depressed regions within countries on a new basis, with the aim of formulating a self-sustaining strategy that will reduce uneven development among spatial units within countries. The prescription assumes that the system of unequal relations operating at an international level has a counterpart in a subnational system of unequal relations between productive sectors

and regions and that the latter system can only be understood within the purview of national external relationships which have allowed a *pervasive penetration of Third World economic activity and the subsequent leakage of its surplus*. The new type of regional development is proposed as an alternative to the presently practiced, *center-down*, free-market strategy that has created externally dependent development as well as *centralization of power in state and private capitalist organizations in Third World states*. The externally orchestrated functional integration of national structures under the center-down paradigm has been observed to result in *regional disintegration and/or leakages characterized particularly by the transfer of economic surplus from rural to urban areas and from the informal to the formal sector*. These disintegrative processes have in turn produced the conditions of internal poverty, dependence, spatial dualism, inequality, unemployment and low productivity that are as pervasive and persistent as ever in the developing world (Figure 1) (Stohr, 1981:215; Logan and Missen, 1981:195).

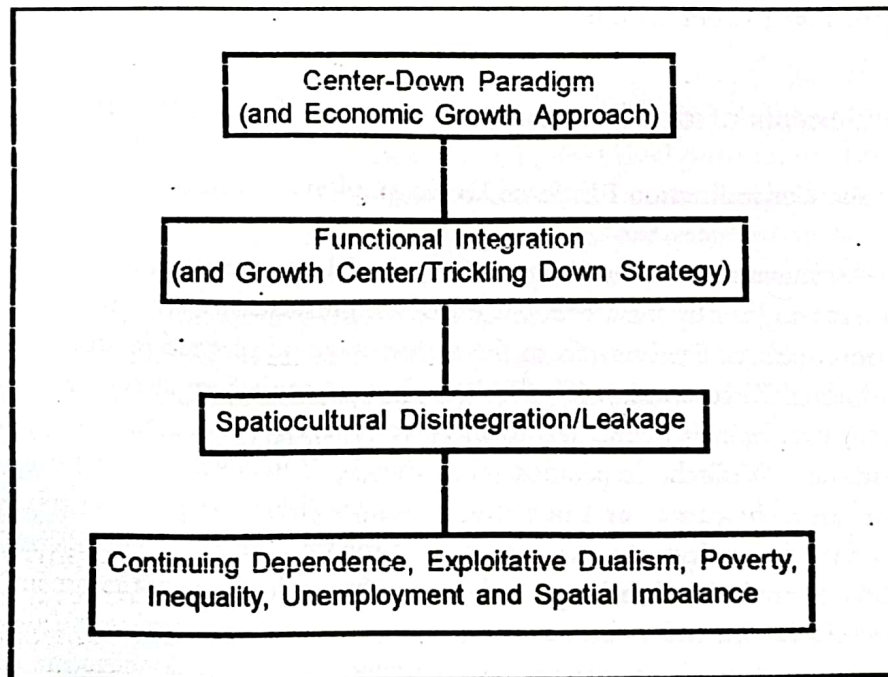


Figure 1. The Center-Down Paradigm and its Concomitant Effects

Fuchen Lo and Kamal Salih (1981:147) emphatically point out the need to understand and solve the leakage or disintegration problem in a spatial context. They observe that the dependency process of Asian countries, for instance, has led to a functional disintegration of their regional structures and subsequently to increasing rural-urban disparities. They pose this problem:

...how can net rural-urban transfers of resources be channeled to favour the growth and development of rural areas? More narrowly, how can the agricultural surplus be retained in the rural areas, preventing it from flowing excessively to the urban areas to be reinvested for its own development? In this way, alternative employment opportunities can be created, enhancing local purchasing power, increasing the possibilities for rural industrialization and hence inducing the proper role for lower-order centers.

The Genesis of the Conventional Center-Down Paradigm

Establishing the Centralization Platform During Colonial Periods

Classic colonialism was a time of large-scale territorial conquest launched originally by European powers and later by the United States for the purpose of developing sources of raw materials and markets. Evolving from the earlier stage of plantation slavery during the earlier Industrial Revolution (1450-1750), industrial capitalism also came into the picture, with profits being amassed from plunder, slavery, the Asiatic trade and the New World markets. With the acquisition of money by European trading houses also came the acquisition of power and political legitimacy (Blaut, 1970). The subsequent development of the pre-industrial areas was actually aimed at aiding the industrialization of the advanced "metropolis" and their national elites. When valuable investments had been established over the conquered territories, the imperative arose for protecting the raw material sources and markets, resulting in the operationalization and institutionalization of new economic motives that were disadvantageous to the colonized territories. * Centralized economic structures were instituted in the colonies, characterized by an oligopolistic set-up of few controlling firms and the specialized production of only a few commodities for feeding the mechanized industries of the colonial powers. Economic transactions, as with

*The supposedly civilizing mission of Europe was in reality a myth conjured to soothe the consciences of the colonizers, not the wounds of the colonized. The selfish motive was always behind the professed aim of "developing" colonies from backwardness and underdevelopment. In truth, too, underdevelopment was never the original state of the colonies but was only a product of historical forces (Griffin, 1985:30-31).

population bulk, came to be centered in the primate city which served as the chief port, national capital, cultural and economic center, and the focus of national consciousness and feeling (Juanico, 1985:25).

Thus, all over the colonized world was established an integrated international market through the institution of free trade which resulted in the growth of primary products for export at the expense of the industrialization of the colonies and of non-cash crops that could have benefited local consumers. Instead of the claim that free trade allowed the principle of comparative advantage to operate, what really happened was that free trade produced unemployment, a reduction in the supply of food grains, and only minimal gains for the majority of the population. Amiya Bagchi sums up these dislocations in the phrase "export-led exploitation" (Bagchi, 1982:119). ** Through free trade, then, the Third World was incorporated into an international economic and political hegemony dominated initially by Europe and later by America.

As indicative above, the colonial powers, in the aim of maintaining their dominance over the local population and/or against rival powers, instituted *highly centralized administrative structures*. They found out that the control and exploitation of the colonies appeared to be facilitated best by a *hierarchical and centralized administrative system orchestrated from the primate city*. Even the infrastructural and settlement network was so constructed (i.e., in a dendritic pattern) as to insure the hold of the government on the countryside and the easy flow of raw materials to the main port city and ultimately outside to the colonizing countries (Figure 2). The control is done through policies that also mirror and protect the interests of the local ruling elite who, despite their internal factionalisms, try not to undermine their shared control of the state. *The centralized governance during the colonial periods started to raise decision-making levels and increase social and economic disparities*. The ensuing economic erosion through *rural-urban leakages* of resources resulted in the peasantry's loss of its organizational and territorial basis for production. In the introduction of the capitalist mode of production, land was transformed into an exchange commodity, landlessness started to appear, and credit became necessary

**Griffin (1985:33-37) has also pointed out that, in addition to the integration of the colonies into the international market, the colonial relationship was also characterized by coercion, monopsony and various systems of labor control that were designed to reduce the earnings of the local people, ensure a sufficient supply of labor to foreign-controlled enterprises and ensure both occupational and spatial immobility. Also, a third characteristic of the colonial economic order was that the direct investment by the colonizers in domestic plantations, mine and public utilities resulted in the transfer of the colonies' economic surplus abroad where it was utilized to increase the consumption of the affluent classes and raise the general level of investment abroad.

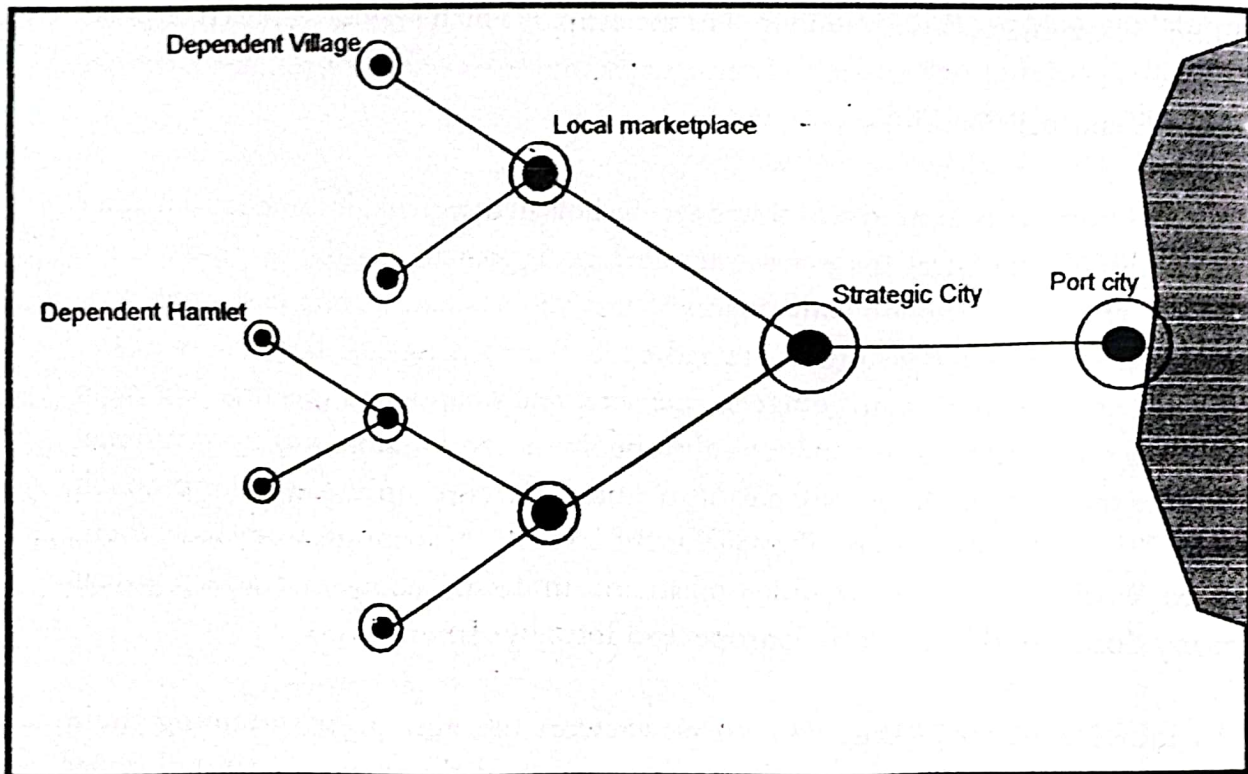


Figure 2. The Dendritic Market System

even for subsistence farming. Hired labor and wage work replaced cooperative/communal production and labor exchanges. Local systems of governance atrophied as power was shifted from the rural/local to the urban/national level. At the same time, access to large-scale markets, capital and employment became differentiated (Douglas, 1981:186-188).

Post-Colonial Persistence of Centralized Decision-Making Structures

The post-colonial period following World War II has seen the emergence of a new generation of leaders in newly independent countries who were educated under the aegis of free trade and who encouraged richer countries to provide capitalization and technical aid as well as grant trade preferences to poor states. The Western-educated local elite class who had access to the economic resources of their own country and who shared the same academic training as the leaders of the industrialized countries, thus became the perpetrators of a covert-type of colonialism—neocolonialism—that in essence is still characterized by unobtrusive economic control, exploitation and imposition of a satellite status among erstwhile colonized nations. Neocolonialism, or what has also come to be called “autocolonialism” as the local elite class became the new colonizers, introduced monopoly capitalism, orientation to “metropolis” or mother countries, and warped indigenous development through external pressures (e.g., foreign aid with strings attached).

It can be said then that *even after decolonization, centralized decision-making structures have remained to foment a deleterious integration of the lower administrative levels by the national government.* The national government policies formulated have been geared towards enhancing national integration based on the assumption that once an adequately high level of such integration is attained, regional disparities would even out, following an *automatic equilibrium* and a *"trickling-down" or spreading of developmental impulses* over the national landscape.

Spatiocultural Disintegration as an Outcome of Integrative Center-Down Policies

In their desire to compete in open worldwide markets for goods and production factors, Third World countries have emphasized "the need for rapid and effective centralized decision-making at the national level." The objective of increased politico-economic integration at the national level was thereby linked to such other objectives as maximized resource mobilization and improved income distribution. Through the integrative control resource planning mechanism called *national planning, the transfer of surplus from one sector or region to another was easily facilitated.* This was expected to maximize aggregate growth (Stohr and Taylor, 1981:468). Once this has transpired, the belief is that distribution would automatically follow. But even if quantitative interregional disparities in per capita product or per capita income will be reduced, there still remains what Stohr calls "the qualitative and structural disintegration of regional socioeconomic systems... with negative consequences for the long-term overall development and also for the long-term economic growth potential of these regions" (Stohr, 1981:222)

One aspect of the disintegrative process is the dissolution of the traditional economic activities and their accompanying integrated institutional components as they come in contact with the modern sector. Few traditional activities were able to benefit from the transformational process towards modernization. Individual traditional activities disappeared while modern activities surfaced in other sectors and in other regions (Penouil, 1981 314-316).

Just as there is polarization of non-agricultural production in the large urban centers of the Third World, there is also *rapid spatial concentration of political power in such large centers.* In South Asia's lowland areas, for instance, the penetration of colonial rule had the tendency to diminish the autonomy of the local power systems; on the other hand, the expansion of cash-crop agriculture reduced, if not destroyed, the relative economic autonomy of rural subsistence systems. Thus, the

spatial concentration of power in a centralized bureaucratic system of governance as well as the integration of the periphery into the national and global economic exchange system may be said to constitute the most powerful agents of disintegrative change in Southeast Asia (Scott and Kerkvliet, 1977:244). There is also disintegration resulting from the concentration of power in the core areas that has to do not only with *urban bias* but also with *class bias*. In both rural and urban areas, integrative state policies have tended to benefit the upper strata of the population as a result of this class or sectoral bias. On the other hand, neither the "informal" rural workers nor the informal urban laborers have enjoyed increases in real income during past decades. Due to space-class biases, cheap labor has become superfluous in the rural areas, and which labor tends to move to the city where they cannot also be accommodated by the formal sector. Only the rural and urban elites have remained economically and politically powerful. And they have the tendency to oppose moves towards a reversal of the space-class biases in the form of such strategies as self-reliance, land reform, cooperativization, subregional territorial organization, indigenous industrialization and other forms of progressive rural-oriented policies (Douglass, 1981:187-190).

Lastly, a type of internal disintegration as conceptualized by Sunkel (1970, 1973) occurs upon penetration by multinational companies (MNCs) of the peripheral economy, resulting in the incorporation of many national entrepreneurs into the new enterprises as well as the marginalization of others. Some professionals and employees become part of the technical staff of the MNCs, forming a social class identified with the transnational system and reaping its material benefits. The rest of the work force, a larger class, is marginalized, either forming a not-so-cheap labor reserve for the MNCs and the whole formal sector or remain in the countryside to constitute the landless rural proletariat.

Leakage as a Major Concomitant Process In Regional Disintegration

As implied in the preceding discussion of disintegration, a major dynamic but deleterious process that results from and penetrates physico-cultural disintegration/dualism in developing countries is the *leakage process*. The process ensues with the penetration, breakdown and weakening of local traditional sociocultural structures. As Lo and Salih say, "*these rural-urban distortions have been explained in the more "classical" sense in terms of linkage and leakage*" (italics mine) (1981:146). In fact, when Stohr and Taylor talk of "urban-rural disintegration" and of "disintegration of complementary resources at the regional scale," they practically equate disintegration with leakages of agricultural surplus as well as natural resources, population and savings/profits (Stohr and Taylor, 1981:468-469).

Stohr also equates the leakage process with the *functional fragmentation* of the regional structures of Third World countries and to increasing rural-urban disparities when he makes the following observation:

... factor transfers, along with withdrawal of natural resources and unequal terms of trade, actually weaken rather than strengthen the comparative development potential of less developed areas. They also reduce the respective communities' capacity to mobilize their own capital, technology, and organizational skills, thereby making them increasingly dependent on more developed areas (Stohr, 1981:44).

Missen and Logan emphasize rural-urban and informal-formal sector leakages as one of the most intractable problems in the developing world. They aver that,

... the system for unequal relationships, which operates at the international scale has a *counterpart in unequal internal relations between productive groups and regions* and that the transfer of an economic surplus from rural areas to towns and *from informal sector to the formal* (italics mine) is one of the most intransigent development problems (Logan and Missen, 1981:196).

Conventional Regional Development Policies and Growth Center/ Trickling Down Regional Development Strategies

Third World development planners in time noted that the national level does not appear to be the optimum planning level for promoting development, and that this centralization approach only led to substantial underutilization of resources in certain national peripheries and consequently to socioeconomic stagnation in such areas. And so developing countries embarked on formulating what are called conventional regional development policies which they have also incorporated in their comprehensive national development plans.

Types of Conventional Regional Development Policies

Conventional regional policies in the Third World are usually aimed at influencing the spatial distribution of development over the national territory. In the market or mixed economies, this aim is mainly carried out by applying either (1) incentive or (2) restrictive policies over different types or regions. Incentivating policies try to speed up

development either in (a) underdeveloped regions where infusion or developmental impulses to the population is sufficient, or in (b) undeveloped regions where too few developmental impulses are given for the development of natural resources (Stohr, 1981:216-217). With regard to restrictive regional policies, certain developing countries use these to accelerate the development of highly advanced areas which are overutilizing their resources or are siphoning off considerable resources from other regions. The targets of such policies are some primate city areas, metropolitan areas or other regions that receive disproportionate amounts of either national or global development impulses (Stohr 1981:217). Brazil and Nigeria have implemented policies like these as they moved, for instance, their capitals to centrally located Brasilia and Abuja, respectively. In the Philippines, a Memorandum Circular was issued on December 16, 1973 by then President Ferdinand Marcos stipulating a ban within a 50-kilometer radius from Manila City Hall on the siting of new industrial plants, but this has not been effective as several exemptions have been allowed (Moran, n.d.:385).

The Influence of "Trickling Down" Regional Development Models

The second group of related concepts that have influenced conventional regional development policies are the regional income inequality models that emphasized the disequilibrating dual process of "trickling down" and "polarization" in regional development. These theories are also related to the development of growth center concepts, which many developing countries have converted into a regional development strategy. The core theory behind these models, as provide mainly by Hirschman (1958), Myrdal (1957) and Perroux (1950), posits the basic assumption that development can only begin in a relatively few dynamic sectors and geographic centers from where it is expected to trickle down to the other sectors and geographical locations of a country. The process is theorized to start from a high global or national level, i. e., from world or national demand or from world or national innovation centers, and then flow down and out to national and sub-regional units.

It must be mentioned at the outset that it is the idea particularly of Perroux, Myrdal and Hirschman of the "natural" formation of growth centers over the economic landscape that influences regional policy makers since the First Development Decade (1960s) towards the promotion of the large growth center strategy. Although it appears that they have not either strongly or explicitly recommended the promotion or development of growth centers, the idea has caught the fancy of regional development planners, especially since the authors pointed the way towards reversing the backwash/

polarization process, i.e., towards attaining the spread/trickling down objective. Actually, credit must be given to these writers for pointing out the view that current regional distribution exhibits an imbalanced nature.

Both Myrdal and Hirschman explained the growth of a few leading regional centers in terms of what Myrdal calls "backwash," or what Hirschman calls "polarization." Hirschman's term has become more popular and in this concept of polarization, both writers point out that the rapid growth of what Perroux calls "propulsive industries" induces the concentration of other economic units into the growth pole as they try to reap the benefits of agglomeration economies (i.e., both internal and external economies of scale). This economic utilization will ultimately lead to spatial polarization as resources flow to an economic activity concentrated in a limited number of regional centers. The mechanism by which regional inequalities are amplified is explained by a process that Myrdal calls "circular and cumulative causation", wherein initial development makes a spatial entity attractive for additional development. It is observed that the polarization process is usually stronger than its counterpart—the trickling down process—especially in situations where a complex of leading industries and a highly developed infrastructural and utility base are present (Myrdal, 1957:26,31; Hirschman, 1958).*

Hirschman's trickling down effects (or Myrdal's spread effects) occur in contrast to the polarization/backwash process and has become particularly attractive to regional planners influenced by the center-down paradigm. The trickling down concept states that in time the dynamic propulsive characteristics of the growth pole radiate down and out from the center into the surrounding areas. According to Myrdal, if the stimulus of demand for, say, primary products in neighboring low-growth regions is strong enough to overcome backwash effects, new centers of self-sustained growth may develop through the process of cumulative causation. The centrifugal spread effects, however, are strongest in highly developed economies where such effects are easily facilitated by well-developed transportation, communication and educational facilities, in addition to the presence of a more dynamic blending of "ideas and values" that promote centrifugal economic expansion (Myrdal, 1957:26,31). Following the evolutionary assumption of neoclassical economics, certain

*Polarization effects, which may be also called unfavorable effects, include: the flow from the periphery seeking higher wages, the flow of capital seeking higher returns in the center; putting out of business hinterland industries through flooding of their markets by core goods and services; provision of poorer health and educational services in the stagnating as compared with the expanding areas; and psychological effects like the inculcation of apathy and resignation in the surrounding regions and the rejection of urban values conducive to economic development (Alden and Morgan, 1974:66; Chorley and Haggett, 1967:259).

limitations on polarization may set in. The leading industry Perroux speaks of may decline. The costs brought about by diseconomies of scale may start to outweigh the benefits afforded by agglomeration. Some diseconomies include rising costs of government services, rising factor prices like wages and space rentals, and environmental costs due to congestion, pollution and longer travel to work. When these processes transpire, then the trickling down process may be said to start, too (Glasson, 1974:151). *

Failure of the Growth Center Strategy

It has been pointed out by Logan that in developing countries urban-industrial centers have supposedly a non-generative and exploitative character only in the initial stages of national development and at some mature stage the spread or trickling down process will eventually ensue, with the leakage problem significantly reduced (Logan, 1972:238-240). It is said that this will have to await until the country shall have reached Rostow's "take-off" stage of development (1960). However, this leads to the temporal question of when the trickling-down process will occur. Planners can only hope for it to occur soon enough amidst pressing food, health, nutrition, education and other basic need problems.

Witnessing the high incidence of poverty, unemployment and inequality in their rural areas which usually contain the majority of the population, many developing nations have started to shun the "economic" growth development paradigm and adopted "redistribution with growth" which has a strong emphasis on satisfying basic needs and reducing poverty, unemployment and inequality in the hinterlands. To operationalize this paradigm, they have embarked on rural development programs that would somehow deal with urgent problems, following the "development from below" paradigm. Focusing on agriculture, they have used such models as the technocratic/transformational, reformist and radical approaches. Most Third World countries (including the Philippines) which belong to the capitalistic-democratic system have followed the first approach, using such strategies as integrated rural development, balanced agricultural-industrial development, agriculture first and integrated area development (IAID). Although welcomed as strategies directed towards the reduction of poverty, unemployment and inequality in the rural areas, as regional strategies they are still premised either unconsciously or intentionally on the operation of the trickling

*The trickling down or favorable effects involves primarily the transfer of investment activities to the hinterland through, for instance, the purchase of rural raw materials, the seeking of recreational outlets for the urban population, or the purchase of peripheral processed products.

down process from the large urban centers. With the exception of the IAD, these strategies have neglected the spatial dimension of rural development. Even then, lacking a new territorial framework for launching their sectoral plans, all of them have to operate under the trickling down strategy. So, for example, policy-making and implementation procedures are still decentralized. The failure of the growth center strategy and its theorized ensuing spread process is evident in the fact that until now rural or local areas have remained chronically poor due to unabated polarization and spatio-cultural disintegration.

Rural Growth Center Strategy

In reaction to the failure of the growth center strategy and influenced by the "redistribution with growth" paradigm, certain regional planners have come up with regional/rural development strategies that focus on the development of territorially oriented strategies that involve the development of *small rural growth and/or service centers* as points for injecting development impulses *directly* to the hinterlands of Third World countries and in the process deliberately effect the trickling down or spread phenomenon. Here in these rural centers away from the cities, the full exploitation and utilization of natural resource endowments can be better effected. These centers should also serve as magnet to lessen massive rural-urban flows of labor and capital resources and thus help minimize the subsequent socioeconomic and physical disintegration that arise in both rural and urban areas. Notable among the writers who first articulated the rural center approach are E.A.J. Johnson (1975) with his rural market towns, Rondinelli (1985) with his "Urban Functions in Rural Development (UFRD)" strategy and Misra (1983) with his "rurban" centers and settlements complexes. Recent and more elaborate articulations of the operationalization of the rural center strategy have been done by the UN's Economic and Social Commission for Asia and the Pacific (ESCAP) (1979) and the Asian Institute of Technology (Kammeier and Swan, 1984) of Thailand. Presently, among the few countries which have started implementing, either on a pilot or phased basis, what amounts to a rural center strategy are India, Kenya, Korea, Cuba, Tanzania, Bangladesh, Pakistan, Sri Lanka, Mexico, Thailand, Malaysia, Indonesia and Bolivia. Already, there are encouraging initial reports of the positive effects of their experiments.

It must be mentioned that the rural center strategy as the centerpiece of a promising alternative physical framework plan cannot stand alone. It has to be backed up by appropriate sub-strategies like *decentralization or empowerment, resource entitlement and policies* that promote self-reliance following the "development from below" paradigm. It is not enough to develop rural centers without providing them protection

through *empowerment and entitlement* from the bleeding effects of the national government and the large urban centers amidst a condition of free-flowing goods and services of a borderless internal market economy. A complementary strategy that has escaped emphasis among "bottom up" approach writers is the idea of a more interventionist *selective closure strategy* that is designed to minimize the massive leakage of labor, capital and commodities from rural areas to the parasitic large urban centers and primate city. A variant of the rural center strategy, it is particularly espoused by Friedmann and Weaver (1979) in their concept *agropolitan* ("cities in the field") centers where restrictive political strategies are to be applied, i.e., where only desirable developmental impulses will be allowed to enter and undesirable ones will be prevented from doing so.

Decentralization and Federalism as Means to Effect Trickle Down and Achieve Poverty Alleviation

Considering that the traditional trickle down approach is conjectural and has not really transpired to lift the poor out of their poverty in developing countries, there is a need to institute decentralization and federalism as development strategies that would accompany the rural center approach or the approach that Devanadera (2002:2) says localizes poverty. She says that the poor are focused at the local level and they are members of the local community over whom the local government units govern and who until now have not been benefited by the trickle down approach. Decentralization as embodied in the Local Government Code of 1991, has empowered the local government to address poverty – a concern that has been given a face and a name with the use of management tools provided under the Minimum Basic Needs (MBN) strategy under the Social Reform Agenda (SRA) of the present Arroyo administration.

The Role of Decentralization

The question then is how do decentralization and federalism effect the trickling down process or prevent the leakage of developmental impulses from the local areas and in the process help alleviate rural poverty, inequality and unemployment? The strategy of decentralization may be discussed first as it is often a preliminary step before federalism. Decentralization as a global trend is not actually a new concept. The term gained attention in the 1950s and 1960s when British and French colonizers prepared their colonies for independence by developing responsibilities for certain programs to local authorities. In the 1980s, decentralization figured prominently in the development agenda together with the global focus on governance and human-centered approaches to socio-economic development (Work, 2002:4). Decentralization, according to de Guzman, "refers to the systematic and rational dispersal of power, authority, and responsibility from the

center to the periphery, from the top to the lower levels, or from the national to the local governments" (1998). There is, however, a particular type of decentralization that is most effective in effecting change and this is devolution,* i.e., "*political decentralization* and involves the transfer of power, responsibility, and resources for the performance of certain functions from the national to the local governments" (UNTAP, 1961:64). It aims to achieve the following to grant greater autonomy to local government units; make them self-reliant; allows them to improve their technical and administrative capabilities; expedites the delivery of public services; strengthens people's participation in the affairs of the government; and promotes employment and economic activities (de Guzman and Reforma, 1998:23-24). Devolutionary decentralization then involves empowerment of the people, short of giving them total autonomy.

In the Philippines, the Local Government Code or R.A. No. 7160, aims to effect devolution to the local areas on such aspects as: (1) basic services or functions and personnel; (2) appointment of personnel and regulatory powers; (3) taxing powers and shares in nationally imposed taxes; and (4) people participation in local governance (Legaspi, 2001:11). Of the devolved powers that bear directly on poverty alleviation, those on basic services and taxation may be mentioned. The services/functions that have been transferred by the central government to the local government (LGUs) units and which are designed to improve the quality of life of the rural people are those on , agriculture, health, social services, public works and highways, and environment management protection. The aspect of taxation has an even more direct bearing on poverty alleviation as it prevents the leakage of capital from the rural areas and is a forceful means to effect the spatial and sectoral trickling down of capital to such leakage-prone areas. According to Bendavid-Val, the major leakages in the spending stream from rural areas occur in the form of taxes, purchases of imports and savings (1983:5). In the Local Government Code, the capital drain from the local areas is offset by the increased tax rates and revised sharing schemes. There is the real property tax which makes up 10 to 20 percent of the total income of an LGU. The Internal Revenue Allotment (IRA) of LGUs has been increased from 20 to 40 percent. The LGUs also get a share of 40 percent from the gross collection from mining, taxes, regulations, forestry charges, and other taxes and fees derived from the utilization and development of the national wealth within their territorial jurisdiction (Legaspi, 2001: 14-15).

*Usually, there are four approaches through which the decentralization of the bureaucracy can be identified, and these are: (1) devolution, (2) deconcentration, (3) privatization and (4) use of non-government organizations (NGOs) and other channels for service delivery. Deconcentration refers to "the delegation of authority and responsibility by the central offices to the regional, district, and other field offices of national offices" (UNTAP, 1962:88). Privatization refers to "the transfer of responsibility for certain governmental function to the private sector (de Guzman, 1988:210)

As mentioned earlier, in order for the rural growth center strategy to be effective, there should be empowerment and entitlement of the local areas. In the Philippines, these two requirements have been put in place through the Local Government Code (LGC) (R.A. 7160) and the Comprehensive Agrarian Reform Law (R.A.6657). Thus, aside from being empowered by the LGC, the vulnerable rural poor have been entitled by the CARL through the distribution of land to farmer-cultivators, tenants and farm workers.

Assessment of Decentralization in the Philippines

Locally, decentralization has been in operation for a decade now and yet its significant provisions have not been fully implemented by LGUs. With regard to devolved services and functions, agricultural services and programs are the most commonly implemented but the most important service of health cannot be fully implemented particularly by lower-class municipalities. An issue that has been bothering the implementation of front-line services at the local level is the continued dominance of large-scale programs of national government agencies. Although the LGUs help in the implementation of these programs, they have actually little say in the process. An example of this is the DENR still exercising supervision, control and review over the implementation of services regarding environmental protection in local areas. On the aspect of taxation and fiscal matters, it has been observed that although the annual income of LGUs have significantly increased, the cost of devolved services have correspondingly increased, such that a number of local governments have incurred deficits in their financial operations. However, the inability to maintain sound fiscal operations stems partly from the lack of initiative and know-know of LGUs in fund sourcing. They have hardly ventured into public-private partnership, bond flotation and inter-local cooperation-initiatives that are made more difficult by the private sector's view of LGU projects as high-risk investments (Legaspi, 2001:21,26-28).

It appears that the intervening variable in accelerating development in rural areas has to do with the values of both leaders and constituents. There is a need for political will or commitment among local chief executives to adopt more creative approaches in socioeconomic development. Among the people, there is a need to imbibe the traits of self-reliance, industriousness, self-discipline and deferred gratification, among others, that one observes in both the Protestant and Neo-Confucian ethics as practiced by Western Europeans and East Asians, respectively.

Decentralization in Other Countries

There are many political and economic reasons why governments adopt decentralization policies and there are numerous forms and degrees that decentralization can take. As Robert Ebel (1998) says:

The western world sees decentralization as an alternative to provide public services in a more cost-effective way. Developing countries are pursuing decentralization reforms to counter economic inefficiencies, macroeconomic instability, and ineffective governance. Post-communist transition countries are embracing decentralization as a natural step in the shift to market economies and democracy. Latin America is decentralizing as a result of political pressure to democratize. African states view decentralization as a path to national unity.

Work has made certain observations with regard to the relationship between decentralization and certain characteristics of countries. *One finding is that high-income countries are relatively more decentralized compared to low-income countries.* Also, countries with greater populations and area are more decentralized, since with the increase in country size and population sub-national governments are expected to play a larger role in service delivery. As reported in Government Finance Statistics, between 1980 and 1998, the average share of sub-national expenditures in 1997, 52 countries had some degree of fiscal decentralization. Work has also observed that decentralization has complemented the growth of democracies worldwide, with 80 percent of developing countries, which are mostly democracies, experimenting with some form of decentralization (2002:8-9). One conclusion that may be made out of the above findings is that there appears to be a correlation between decentralization and countries with high per capita income. However, there is a need for more proof in order to establish clearly the causative influence of decentralization in the socioeconomic development of nations.

The Virtue of Federalism

Federalism has been touted as even a more effective system in alleviating poverty among developing nations. According to Pimentel, who is the foremost exponent of federalism in the Philippines, a federal system of government "is a system that institutionalizes the participation of local populations and communities to pursue development according to their particular competencies, culture and natural resources operationalized

through its own charter or constitution." The system observes the bottom-up or decentralized planning approach and one of its underlying principles is *subsidiarity*, where regions are given autonomy to allow them to run their affairs, manage their budgets and determine their development without having to wait for a central authority to act on their needs. Another principle is *sustainability* which can lead to poverty alleviation by allowing the responsible use of resources available locally while encouraging the regions to manage their own resource pool towards ensuring that the needs of future generations are served (2002:1).

Unlike in a unitary system where revenues are remitted to the national government, in a federal system the regions take care of tariff, taxation and revenue. They retain a large proportion (up to 80%) of all collected revenues and remit to the national government the smaller part, in the process enjoying more fiscal autonomy. Also, unlike in a unitary system where basic governance falls under the jurisdiction of the national government, in a federal system regional governments take care of basic governance that would include peace and order, public works, social welfare, health, education, land and water use planning, agrarian reform, environment and rural development (Pimentel, 2002:1).

For the Philippines, the rationale for federalism according to Pimentel is, first to speed up the economic development of the entire nation and secondly, to lay down the basis for a just and lasting peace in Mindanao. He observes that countries which have adopted the federal system of government seem to have more leeway to modernize and develop. In the case of the Moro unrest in Mindanao, the creation of the Bangsamoro Federal State would be a means of dissipating the causes of Moro rebellions that have remained intractable under the present unitary system of governance (2005:5). Abueva has also pointed out, among others, that federalism will accomplish the following: increase citizen's capacity and willingness to solve their problems of poverty, unemployment, injustice, inadequate social services and infrastructure, and low productivity; spur inter-state competition and foster self-reliance; and promote a strong national identity on the basis of economic, cultural and environmental diversity (2002:5).

According to Work (2002:2), in a federal system, different independent state governments make public sector decisions and provide more opportunities than a decentralized unitary system for citizen participation at sub-national levels. A federal system lends itself easily to deconcentration since the administrative and political structures are already in place. In addition, the central government does not control member-state officials in a federation, whereas sub-national governments in decentralized unitary states can only operate within the legislative powers assigned to them by the center. Thus, the workability of decentralization depends on the goodwill of the unitary central government, instead of relying on fundamental constitutional divisions of power as guaranteed in a federal state.

Devanadera also points out that while under the Philippines' current decentralized set-up, local government units have ample flexibility for creativity to make governance more responsible, the unitary structure has provided choke points to stop, divert and even deny the resources needed to implement poverty reduction programs. The diversity of cultures and languages and the archipelagic nature of the country are contributory hindering factors to localize the implementation of poverty reduction programs. To her, federalism may yet be the strategic institutional and structural reform the country needs to bring out about genuine self-reliance and economic dynamism within clusters of local government units called federal states (2002:3). A finding by Robert Ebel supports the above observation when he says that the average sub-national share of expenditures is 38 percent for federal countries and 22 percent for unitary ones (Work, 2002:10).

But to the author, particularly in relation to the premises he discussed early in the paper, the most important role of federalism in alleviating poverty in the rural areas of developing countries has to do with the significant minimization of the leakages of capital, labor, technology, entrepreneurship and resources from local areas. Stated otherwise, the federal structure of governance will drastically reduce the polarization or backwash process occurring in unitary countries where developmental impulses are continuously siphoned off by the national government, primate city and large urban centers. In unitary countries which adhere to free enterprise capitalism, the leakage or polarization/backwash process occurs unabated as there are no mechanisms for controlling the flow of developmental impulses to the hinterlands. In capitalistic federal countries, the deleterious leakage of capital goods and services to the national government and major urban centers would be significantly minimized as each state has the authority and means to regulate such flows as a country would using such trade instruments as tariffs, embargoes, and fee impositions. The federal system can practice protectionism for the welfare of the component state and can practice the *selective closure strategy*, i.e., allowing only the beneficial influences to enter the autonomous state and preventing the entry of deleterious elements into it. Thus, the component state economy in a capitalist federated structure does not act like an unplugged kitchen sink for it can either plug or unplug its entrances and exits despite operating in an open, free market economy. In a capitalist unitary structure, the component regions and urban centers act like unplugged kitchen sinks where investments introduced easily suffer leakages to higher administrative levels and parasitic places which can exert strong economic pulls and these would include the national government, the primate city, the advanced regions and large urban centers. Disadvantaged in terms of the leakages of capital, labor, entrepreneurship and technology would be the rural centers, the local governments and the lagging regions – in the process perpetrating the condition of chronic poverty in them.

Conclusion

This paper has gone at length to provide the historical, theoretical and global background of centralized governance particularly in developing countries as a way of justifying the need to adopt decentralization and federalism as ways of effectively alleviating Third World poverty and other ills of underdevelopment. It has demonstrated the need for new international and intra-national economic relationships amidst a center down, free market strategy that has led to a centralization and functional integration of power in state and private capitalist organizations as well as primate cities and large urban centers in developing countries, particularly the colonized ones. The center-down paradigm has, in turn, created spatiosectoral disintegration and/or leakage in the otherwise smoothly functioning institutional structures of Third World countries that ultimately led to continuing poverty, unemployment, dependence, exploitative dualism, and spatial imbalance. It may be mentioned that, in the genesis of the center-down paradigm, during pre-colonial periods there was prosperity, social cohesion, mutual help, non-absolute governance, communalism and autarky in traditional societies. Later, it has been shown that colonization established the centralization platform that integrated the hinterlands of colonized countries into the national and international markets amidst import substitution and export-led industrialization policies. The siphoning or leakage process in the local/rural areas that accompanied disintegration was seminally explained by the growth center models of Myrdal and Hirschman who particularly stressed the role of political intervention in significantly minimizing backwash or polarization from local government units. Otherwise, the occurrence of the trickling down or growth center strategy will remain unsuccessful and conjectural amidst high incidence of poverty in the Third World. Thus, the rural growth center is recommended whereby developmental impulses would be infused directly to the small rural centers. However, in a free market economy where factors of production flow freely within countries, selective closure strategies have to be instituted in order to protect the local areas against unregulated leakages of developmental impulses. One way of doing this is through empowerment and entitlement that are made possible by decentralization and agrarian reform, respectively. But again, decentralization in unitary capitalistic countries, where there are no constitutional guarantees for the functioning of the local government units, can subject these units to arbitrary decisions of the central government. The federal structure is recommended as seemingly the better alternative since the autonomous constituent states have their own constitutionally empowered governments that can regulate the flow of resources in their local units particularly in the present unfettered market under the aegis of globalization.



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CHANGING SPACES INSIDE FILIPINO HOMES

MARIÑO DEOCARIZA*

Background of the Study

It is observed that the Filipino household is experiencing several changes. Filipino family values, beliefs, attitudes, roles and relationships are evolving alongside changes in the social environment of the country. The United Nations University defines the household as the hinge of social transformation and the meeting ground of the micro and the macro social processes (Castillo, 1988). This means that, the household is the receiver of change stimuli coming from at least two directions – the individual and the society. Castillo (1988), in a study of the changing Filipino household structure, identified 11 major patterns of change in the Filipino family over the last 20 years. These changes include: (1) declining household size, (2) increasing nuclearization of the household, (3) growing desire for fewer children, (4) continued preference for sons, (5) rise in the number of single parenthood, (6) female-headed households, (7) delayed marriage and teen pregnancies, (8) household members living longer and growing older, (9) longer life, longer marriage and longer life care, (10) declining fertility, industrialization and increasing affluence, and (11) family size and family welfare. As the content changes, the container will eventually change thus the changes in the Filipino household structure will resound to other aspects of household existence, particularly on the spatial and material elements inside the house.

* Faculty Member, Department of Geography, College of Social Sciences and Philosophy, University of the Philippines, Diliman, Quezon City, Philippines.

Research Objectives

The purpose of this research is three-fold. First, the research will determine the different kinds of spaces inside Filipino homes. Household spaces include not only the concrete physical spaces our senses can detect, but also the abstract spaces that we create in our heads. Identifying these spaces early will clarify the range and focus of the study.

Second, the study will identify the quantitative and qualitative changes on the Filipino domestic spaces over the last 20 years. The paper will focus on three types of changes, namely: (1) the physical and material changes in the household spaces, (2) the changing uses and functions of these spaces, and (3) the occupants' changing perception of domestic spaces.

Lastly, the study will relate the changes in the household spaces with the changes in the Filipino family. What is the effect of the rising number of female-headed families on how Filipino families perceive, organize and use space? Will the increasing nuclearization of Filipino households increase the amount of physical spaces for the family? The study will identify the relationship of the household with the household spaces as the content-container relationship appears to be strong within the Filipino household setting.

Conceptual Framework

Concepts of Space

Space is the extension or unoccupied parts of a place (such as a house) where things exist and move, and which are available to be used for any particular purpose (Oxford Dictionary). Space consists of several levels of manifestations and related determinants and it is only by looking at space through a multi-level analysis can a comprehensive picture of how humans relate to space be attained (Hall, 1966; Wamsey, 1984). There are two general ways of looking at space-- the objective mode and the subjective mode (Sack, 1980; Beck, 1967; Golledge, 1997). The objective mode of spatial analysis refers to the use of neutral and value-free theories and concepts of science in the analysis of space, while the subjective mode uses the conceptual and perceptual

perspectives in the understanding of space (Sack, 1980). Space, however, may simultaneously display objective and subjective manifestations. This is why Sack (1980) proposed to fuse the two concepts and analyze space according to the degree of combination of the objective and the subjective modes. Buttimer (1976) calls this the "weaving" of the objective description of landscapes and behavior with the subjective attitudes and disposition of people.

The purely objective space is the physical space also known as absolute space. Physical spaces are analyzed using geometry, focusing on the overt spatial features such as size, shape, volume, length, etc. The subjective space is the cognitive space which is also known as perceptual space. Cognitive spaces are the spaces we create in our heads. These are the perceptions, beliefs, representations and attitudes we ascribe to household spaces. Moore (1976) further adds:

Cognitive domains are the spaces in which configurations, characteristics, and meanings about the world are held as mental images or cognitive representations. This space need not have the metrics of any recognizable physical space as distance, location and other geometric properties may not be easily specified in cognitive spaces. They may vary according to familiarity of the perceived object, its social or cultural significance and the subjective interpretations of space.

We cannot underestimate the existence and significance of cognitive spaces. In fact, a big portion of our spatial reality is not about the direct knowledge of physical space but mostly about the meanings, abstractions and the conceptions of space that we create in our heads. For example, sacred spaces are adored and highly revered, while spaces associated with ghosts are avoided. Both have restrictive effects on human activity and yet the sanctity and profanity of spaces do not physically manifest but only exist in our minds. In-between the purely subjective and purely objective spaces is a whole array of different kinds of spaces that uses a combination of both physical manifestations and cognitive representations. These "in-between" spaces include the functional spaces, symbolic spaces, private spaces, common spaces, and many others.

Changing Household Spaces

According to Jackson (1969), the organization and re-organization of space is always underway. He adds that:

... spaces are not merely organized in the sense of being arranged into a coherent whole; they are forever being re-organized. Spaces encroach upon one another, absorb one another, expand, contract, multiply, disappear. Reorganizing of the landscape is always underway, sometimes it proceeds at a very fast pace. Reorganization may proceed without overall direction; it is a product of innumerable private decisions and inspired by a variety of motives – economic, esthetic, technological, political.

Although humans arrange and re-arrange spaces inside the home all the time, the decisions to change the household spaces are based on the changing needs, wants, preferences, beliefs, influences and experiences of the family and its individual members. The entry of a baby, for example, impels the household to allocate space for the newborn. As the baby grows and begins to move around, sharp and fragile objects are removed and kept hidden for her safety, and the semi-fixed feature spaces (Hall, 1966) such as furniture, appliances and carpets are re-configured to adjust to this related development. As the child becomes an adult and decides to get married, she leaves the house. Upon leaving, the household spaces will evoke symbolic changes in the household and physical re-arrangement usually follows. Considering the ontogenetic development or life cycle that the individual and the family go through, the house and the household are never really the same. Household spaces are always changing as the occupant progresses through different stages of life.

Scope and Delimitation

The research focuses on the spaces inside Filipino homes and the changes within these spaces over the last 20 years. Although changes on interior spaces affect the exterior portion of the house and vice-versa, the study does not cover the structural and architectural developments of Filipino houses.

The research cannot realistically examine the houses and household spaces all over the Philippines, given the wide expanse of the archipelago plus the fact that there are numerous kinds of housing styles and household arrangements in the Philippines. Covering these varieties in this study would be a monumental task. However, a pattern of housing and household structure is unfolding in many parts of the country. The majority of the household in the country are of the family type which, compared to other kinds of households, is the more permanent kind. In the Philippines, most households consist of persons with close kinship ties, such as a family (NSO, 1990). This is why family and household are often used interchangeably.

In terms of housing, most Filipino houses are developing in the direction of the urban type of houses – the single detached housing unit (87.8%) whose walls and roofings are made of durable materials (54.5%) (Tables 1.1 and 1.2). They are considered urban type because the most obvious changes within the houses in urbanizing areas are those involving a shift from the use of non-durable materials such as cogon, bamboo and wood to the more durable materials such as concrete, gravel and steel. It is very rare to find nipa hut houses in Metro Manila today.

Table 1.1 Type of Housing - Philippines

Type of Housing	1980	%	1990	%	2000	%
Single house	7,822,708	90.8	9,993,515	90.7	13,064,683	87.8
Multiple unit houses	345,866	4.1	639,056	5.8	1,029,801	6.9
Duplex	191,386	2.2	330,546	3.0	527,699	3.5
Others	56,130	2.9	55,091	0.5	268,944	1.8
Total	8,607,187	100	11,018,208	100	14,891,127	100

Source: NSO 1980, 1990, 2000.

Table 1.2 Housing Types by Construction Materials - Philippines

Materials	1980	%	1990	%	2000	%
Durable materials	619,493	7.2	5,266,703	47.6	6,118,446	54.5
Non-durable materials	6,423,106	74.6	3,448,699	31.3	2,816,272	18.9
Combination	1,564,588	18.2	2,302,805	20.9	3,947,586	26.6
Total	8,607,187	100	11,018,208	100	14,891,127	100

Source: NSO 1980, 1990, 2000.

The study area is the town of Taytay, Rizal, Philippines, a suburban town located just outside the eastern section of Metro Manila. Taytay is situated on Manila's urban fringe where the wave of urbanization process is fairly recent and changes in the houses and inside spaces are subsequently occurring.

The study covers the household spatial changes within the last 20 years. The years 1984-1986 are important benchmarks. These were the years of the re-birth of Philippine democracy after 30 years of Marcos dictatorship. The change of political system has

ushered in several changes in the economic, social and cultural environment of the country.

The houses were selected from among the single-detached houses in Taytay which are made of predominantly durable construction materials. The houses must be originally made and occupied before the year 1986, in order to compare and contrast the different household spaces before and after that momentous year.

To depict the socioeconomic differentiation in Philippine society, the families that were studied came from different income groups, i.e., the lower income family (less than P8,000/month), middle income family (P8,000 to 50,000/month) and upper income family (more than P50,000/month).

Research Methodology

The Ten-Year Philippine Census data provided information on the size, floor area, number of occupants and other characteristics of the houses in the country. The analysis of these data provided comparative information on the changing character of Filipino houses over the last 20 years.

The research involves case studies of single detached houses made of durable materials that were constructed and occupied before 1986. The case houses were examined and photographed and the homeowners and household members were interviewed. To determine the physical changes in the household spaces, the original floor plan was compared with the existing floor layout. If the floor plan was not available, the study relied on memory recall and recollection of homeowners on the changing physical layout of their household spaces.

Participant observation was employed to determine the actual uses and functions of the household spaces. In one to two days, the researcher observed and noted down the activities, movements and behavior of the family on the spaces inside the house.

Interviews with homeowners and selected household members were used to collect subjective information such as perception, beliefs and preferences on the use of domestic spaces. The actual and desired uses were compared with the intended uses to determine the inclination of family members to use space in different ways. Perceptions of personal, private and territorial spaces and the ideal use of household spaces were also covered in the interview.

Preliminary Findings

An exploratory inspection of 15 houses was conducted to validate the design of an amplified research and to analyze the direction the study may take. The preliminary results of the exploration are as follows:

Increasing Floor Space Area

The Filipino household space is getting bigger. According to the 2000 NSO census, the median floor area of Filipino houses increased by 18 percent from 20.5 sq.m. in 1990 to 24.1 sq.m. in 2000. The number of houses with floor areas of 30-119 sqm also increased from 28.3 percent to 30.4 percent, while the number of houses with floor areas of 30 sq.m. or less decreased from 66.4 percent to 59.7 percent (Tables 1.3 and 1.4).

Table 1.3 Median Floor Area and Mean Number of Occupants - Philippines

Year	1990	2000	% change
Median Floor Area	20.5	24.1	18%
Mean No. of Occupant	5.49	5.13	-7%

Source: NSO, 1990, 2000.

Table 1.4 Housing Units by Floor Area - Philippines

Floor area	1990	%	2000	%
>30 sq.m.	7,316,090	66.4	8,895,832	59.7
30-119 sqm	3,118,153	28.3	4,820,066	32.4
120 and >	583,965	5.3	764,379	5.1
Not reported	-	-	410,850	2.8
Total	11,018,208	100	14,891,127	100

Source: NSO, 1990, 2000.

The increase in the average floor space area may be caused by house expansion either by enlarging house spaces, creating new rooms or new floors; or perhaps by the fact that the newly constructed houses are bigger in floor area than houses constructed 10 years ago. Nonetheless, the increase indicates that more and more Filipinos want bigger space for their home.

The need for bigger individual spaces among Filipino family members can also be deduced from the fact that Filipino household size is getting smaller (Castillo 1988). The average number of household occupants decreased by 7 percent from 5.49 persons in 1990 to 5.13 persons in 2000 (NSO 1990, 2000). This means that floor area space per occupant is getting bigger. A related finding by Castillo (1988) is the increasing nuclearization of the Filipino family, as opposed to the traditionally widespread extended family arrangement. These findings may suggest two things: (1) the rising collective demand of the family for bigger household space or (2) the growing demand of individual family members for a bigger share of household space.

Growing Need for Privacy or Increasing Territoriality?

Of the 15 respondents, 8 claim their house floor area increased, either through house extension or creation of new rooms. Seven (7) respondents claim their house remained the same while 2 say their house decreased in floor area. According to the respondents, the primary reason for extending the house is because one or two children are growing up and are becoming adolescents and they need a separate bedroom for privacy. This kind of privacy is the western type of privacy and gained possibly from western influences. Filipinos have a traditional concept of privacy among family members but this does not entail the creation of another room or setting up of partition or walls. Traditional houses are, in fact, made of 1 or 2 rooms where family members sleep together. Although traditional Filipino families sleep together, they need to find a private space when changing clothes or taking a bath, especially for the girls and the adults. Westerners, on the other hand, find it difficult to sleep in groups. A typical American family assigns one bedroom for each household member, except for the parents. Based from initial interviews, this is what the majority of the initial respondents hope to achieve, i.e., one room for every family member.

This may also be related to territorial behavior. Territoriality is the persistent attachment of a person or group of persons to a specific place or space. The home in itself is an expression of territoriality, with household members defending not just the inside spaces from outsiders but also the members defending and asserting their territorial rights from each other. Territorial spaces include the preferred seat at the dining table or preferred side of the sofa, and these spaces are protected from being taken or occupied by other members, and much more by guests. The bedroom is by far the most territorial space inside the house, and the one clearly marked by a physical division. The need for additional bedrooms, therefore, may symbolize increasing territoriality among family members, however this is still inconclusive. Further research is needed to determine the level of territoriality imposed by household members on domestic spaces.

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Unlike the semi-fixed feature spaces the fixed feature spaces such as the bedroom and toilet mostly remained the same in size and location over the years.

Continuing Multi-Functionality of Spaces

The three moveable household spaces (living, dining and kitchen area) are also being utilized in many ways other than their intended uses. This multi-functionality of the space again may find its roots in the traditional orientation of Filipinos in utilizing household spaces. The intended uses of space are often violated because there are no rigid rules to begin with. Respondents claim they sometimes eat at the living room, study at the dining table, entertain guests at the dining area, sleep on the sofa, prepare food at the center table, and many more. Nine respondents have 1 to 2 household members sleeping in the sofa or the living room floor. Three said they are eating at the floor instead of the dining table and 5 mentioned they entertain guests at the dining table. It is also interesting to discover that 11 of the 15 respondents have portable sleeping materials inside their houses. Either they have folding beds, extra mattress or foam, plastic sleeping mats or convertible sofa-bed. Sleeping in any place inside the house is not a major issue to most Filipino families. Although Filipino household spaces have taken a different form in terms of layout and elements, it appears that the multi-functionality and moveability of household spaces remain the same in the minds of Filipinos.

Changing Control of Power Spaces

The master's bedroom and master's comfort room are symbolic spaces of power. They are spaces to be used and occupied by the family authority - the parents. Only 4 respondents have houses with designated master's bedroom, and only 1 respondent has a master's comfort room. Others have parents' room which they do not consider "master's bedroom" because the children frequently use the room. Another example of a power space is the *kabisera* or the head of the table. It is reserved for the breadwinner of the family - specifically the father in patriarchal Philippine society. It is symbolic of his role as the provider of food at the dinner table. Eight of the 15 respondents no longer have a *kabisera*, 5 never had one and only 2 maintain such tradition. Most of them do not know or forgot what a *kabisera* is. The weakening significance of the *kabisera* echoes the weakening role of the father as the sole provider-breadwinner of the family. This is related to the finding of Castillo (1988) regarding the rise in the number of female-headed households. The role of the breadwinner is no longer confined to the father, as working mothers or even the offspring, from eldest to youngest, may take on the role of family breadwinner. This puts pressure on the power structure inside the home, which is clearly manifested in the weakening symbolism of the *kabisera*. A related area that the research should also look into is the shift in the control of the traditionally male and traditionally female dominated spaces. The

control over traditional power spaces is being challenged by the changing roles and growing independence of family members.

Remarks

The exploratory study has revealed a number of trends in the changing spaces inside Filipino homes. However more information is needed to support these findings and more areas should be investigated to pursue the general direction of the study. The research should also answer one important question: Where are these changes leading the Filipino family into? Will the changes improve the livability and desirability of Filipino domestic spaces? Are these changes a prelude to achieving the ideal spatial arrangement inside every Filipino home? Although the bulk of the analysis is centered on unweaving the complexity of household spaces, all these inquiries are really about the human being. Behind all the studies we are doing is the never-ending search to understand the humanity. Understanding humans, in this case, in how they perceive, organize and utilize space will provide a clear framework in creating a better housing and better environment for them. To end this presentation it would be instructive to quote Yi-Fu Tuan (1974) in his book *Topophilia*. He said: "It is only through self-understanding that we can find the solutions to the fundamental human problems we face today".



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REGIONAL SCIENCE IN THE DEVELOPMENT OF SOUTH KOREA

CANDIDO P. FILIO*

In August 1972, there was a two-week international forum in Alpbach, Tirol, Austria, on the theme: "Profitopolis: The Crisis of Urban Society." In this forum, some 300 experts—representing the relevant disciplines—from all over the world saw that the profit motive would be the bane of our cities, and had, therefore, to be tamed if the impending urban crisis were to be averted.

Regional Science

The disciplines represented in the international forum included Urban-ization and Development, Human Settlements, Housing and Architecture, Welfare Economics, Banking and Finance, Communication and Transportation, Infra-structure, Utilities, Facilities, and Amenities, Power and Energy, Demography and Migration, Ecology and Environment, Policy and Planning Sciences, and Regional Science.

Sired by Walter Isard in the early Sixties, Regional Science is an interdis-ciplinary field within the social sciences, which focuses on the locational dimen-sion of human activities in the context of their institutional structures and function, and on the significance of this dimension in the understanding of social behavior and forms. The locational dimension identifies the spatial relations of people to their environment.

*Retired Colonel, Philippine Army; Retired Professor, University of the Philippines, Diliman

Regional Science relies heavily on mathematical models to frame its theories, and draws on the theories and findings of other social sciences, particularly location theory.

The word "regional" implies the systematic approach to space in the sense of human habitat. "Science" expresses the intention to apply rigorous techniques of investigation and to develop theoretical structures and concepts of general applicability. And "Regional Science" is meant to connote a field that transcends the bounds of any one social-science discipline. It is related to regional economics, ecology, theoretical geography, and regionalism in the sense of the political scientist, but differs from these fields in that it takes a general approach to the role of space in social phenomena.

The Case of South Korea

Since South Korea is a very successful practitioner of Regional Science, this Asian country has not experienced the impending urban crisis discussed in Albach in 1972. During the Second Asia-Pacific Regional Science Conference at the University of Tokyo last July 1971, there was a preponderance of South Korean participants. Naturally, their country was the focus of the conference. All participants were even given a copy of Barringer's book *The Urbanization of Taegu*.

The ineffectual President Syngman Rhee was ousted in a bloodless military coup in 1960. After a confused period of military rule, democratic government was restored in 1963 by General Park Chung Hee, who was elected President and returned to power repeatedly, until he was assassinated in 1979.

Upon assuming power in 1963, President Park implemented land reform in one clean sweep. Then, two national programs were immediately set in place: (1) Industrial Development and (2) Urban Development.

A third program *Saemaeul Undong* was also planned with the first two, but its implementation would depend on them—i.e., everything had to be synchronized. A Korean term is used here, because it has no equivalent in conventional development methodology. *Saemaeul Undong* covers rural, agricultural, and community developments—and many other essential components. Schoolchildren even sing in their classes about this third program, so that they are aware of its complementary nature and anticipate eagerly its full implementation.

The following are some of the Regional Science concepts used deliberately by the South Koreans in national development:

High absorptive capacity of industry. While industry—e.g, ship-building, where the South Koreans are already No. 1—requires massive financial capital investments, it has also the capacity to employ massive human re-sources. This capacity is due mainly to powerful forward and backward linkages, as well as meaningful vertical and horizontal integrations.

High agricultural productivity. Raising productivities in agriculture may be achieved through proper training, appropriate technology, and upgrading of capital. Now, to maintain the same level of output, less human resources are required.

Open economic systems. Regional Science assumes open access to markets, and rational flows of products and resources, so that locational advantages are optimized. There are no artificial barriers to mobility.

Rural-urban migration. Because of the foregoing concepts in Regional Science, rural-urban migration takes place. This will proceed until a certain demographic equilibrium is achieved between the agricultural and the industrial areas of the country.

Ratchet effect. Once a human settlement—e.g, a city—has already reached a certain critical mass, it is expected to continue growing without slipping backwards even without further external—e.g, national or foreign—investment. This concept is necessary for an orderly and systematic investment process.

Concentrated decentralization. Dispersal does not achieve anything in Regional Science. National resources are not distributed all over space but are concentrated in selected growth points only.

Zipf's rank-size rule. Through empirical studies of human-settlement hierarchies, it was observed that ranks-sizes of cities had followed certain patterns in Southern Germany, Central China, and Turkey. This tendency is expressed by the following equation:

$$r_n C_n = C_1$$

$$\text{or } C_n = C_1 / r_n$$

where r_n = rank of the nth city,

C_n = size (population) of the nth city,

and C_1 = size of the largest city.

In other words, the second city has one-half the population of the largest city; the third city has one-third the population of the largest city; and so on. This hierarchy of human settlements is considered rational.

In 1971, the South Korean Government had postulated that the ten cities to be developed—based on their actual performances and potentials—would be as follows: (1) Seoul, (2) Pusan, (3) Taegu, (4) Kwangju, (5) Inchon, (6) Taejon, (7) Masan, (8) Mokpo, (9) Suwon, and (10) Ulsan. With a population of 4 million in 1971, Seoul was considered large for the No. 1 city; with 2 million, Pusan was large enough for the No. 2; but with only 0.8 million, Taegu was still small for the third city. Hence, the focus on Taegu. Parenthetically, a Korean student at the U.P. Asian Center told the class that the real reason for focusing on Taegu was the fact that President Park was from that city.

Moreover, using its political will, the South Korean Government assigned the big industrial and business conglomerates called *chaebols* their bases of operations, according to their locational advantages. For instance, Samsung was assigned to Suwon as its base of operation; Hyundai was assigned to Ulsan. Daewoo was assigned to another city.

The Government has also encouraged cities to host important world events—e.g., trade, sports, political, and academic meets. Thus, in 1988, Seoul hosted the Olympics successfully. In Seoul in 1986, during the International Conference on the Strategic Defense Initiative—or “Star Wars”—the capital city was feverishly preparing for the Olympics. The Han River was already clean and well lighted.

In the mid-Nineties, Taejon hosted the World Trade Fair. The exposition itself was not very successful. But in the process of preparation, the city was vastly improved. After hosting successfully the Gold Cup in Soccer Football in 2002, Seoul is again preparing to host the Gold Cup in Golf in 2004. Also in 2002, Pusan hosted the Asian Games.

If the South Koreans are content with developing only ten cities why are the Filipinos developing any number of cities without limit? Answer this question for a million pesos: How many cities are there in the Philippines today? No thanks to Senator Nene Pimentel's crazy Local Government Code! Besides, the country has also Secretary Joey Lina's stupid housing and urban development law. Notwithstanding President Eddie Ramos's casuistry to solve the squatting problem, the Philippines has ended up as a nation of cities sans urbanization!

An aberration in the successful development of South Korea has been provided by the Moonies—and Filipinos are their staunchest allies, as well as victims! Fortunately, they have not made any dent to detract from the outstanding performance of the country. But they are still at it. Alas, our Speaker Jose de Venecia is with the Moonies!

The Moonies are the followers of the Reverend Sun Myung Moon—probably the richest man in South Korea—who leads the so-called world peace and unification movement. Reverend Moon has erroneous and simplistic premises. According to him, wars are caused by racial differences—differences in the color of the skins of people. He, therefore, proposes intermarriages among different nationalities. If this should go on for generations, then all peoples would be racially homogeneous, and there will be no more wars. Peoples everywhere would be united and peaceful.

Between South Korea and the Philippines, there is a certain economic complementarity. Because of the rapid pace of industrialization and urbanization in Korea, there is also rapid rural-urban migration. The Moonies consider this bad because the agricultural areas are being drained of manpower.

On the other hand, because of the incompetence of the Philippine Government leadership, the country suffers from massive unemployment. Hence, the need to work abroad—even for women. Now, South Korean men would be encouraged to stay in the rural agricultural areas if they have good Filipina wives—how about Korean wives? So, the Moonies must recruit girls in the Philippines and indoctrinate them to become good wives for South Korean men. Upon reaching Korea, they are married off to Koreans. How and why they end up as prostitutes in the urban areas in South Korea is not very difficult to figure out.

Last November 1999, there was a conference on world peace and unification at the Westin Plaza Hotel. Ambassador Pacifico Castro was the Co-Chairman. Another prominent Filipino in the conference was General Florencio Magsino, former President of the National Defense College of the Philippines, whose connections with the US Central Intelligence Agency are well known.

The main speaker during the closing session of the Moonies at the Westin Plaza Hotel was Speaker Jose de Venecia. In his speech, he was practically deifying the Reverend Moon. Should Jesus Christ appear on the scene, Joe de Venecia would not recognize Him, since He has no money—unlike Sun Myung Moon.

Gen. Guillermo Pecache, AFP, was a favorite invitee to South Korea by the Moonies. According to Lily-Ann Polo—expert on South Korea at the U.P. Asian Center—Brother Andrew Gonzalez, FSC, used to be invited also to South Korea by the Moonies.

Conclusion

The Philippine experience is indeed very unique! The designers of the Alpbach Forum in 1972 could not have provided for the case in the country. Regional Science is virtually unknown—let alone, applied. Welfare Economics was squeezed out in the baccalaureate curriculum in institutions that have adopted the crazy trimestral system, led by De La Salle University—no thanks to Bro. Andrew Gonzalez, FSC, Erap's Secretary of Education!

In Alpbach, the international participants were particularly concerned that urban governments might not be strong enough to curb the propensities of private business interests from bringing about environmentally unsound developments in the cities. But in the Philippines, governments do not rein in real-estate interests; instead, they become real-estate brokers themselves. Thus, the Quezon Memorial Park in Quezon City has been infiltrated by private businesses; the same thing may be said of Mchan Gardens in Manila.

Finally, what is also unique to the Philippines is the contractor orientation of the bureaucracy. In such a situation, kickbacks have become the transactional norm. Thus, garbage cannot be collected in the Greater Manila Area. Such collection should have been accomplished at the community level. But it has to be done at the Metro Manila Development Authority where contracts—as well as kickbacks—are large.

To conclude, while Philippine government authorities have contributed to make the urban crisis happen, South Koreans have successfully averted it. Ironically, South Koreans even learn the *technique* from Philippine universities. But what about the *will*? They have the political will! President Park Chung Hee instilled in his people the *can-do spirit* from the very start!

Book Reviews

The Orphans of Pinatubo: The Aeta Struggle for Existence.

Manila: Solidaridad Publishing House, 2001, 388pp.

Shimizu Himomu

"The Orphans of Pinatubo: The Aeta Struggle for Existence" came out exactly ten years after the 1991 eruption of Mt. Pinatubo brought to light the plight of this indigenous minority hitched to the slopes of the sacred mountain since ancestral times. The author, anthropologist Hiromu Shimizu, is widely known for his refereed ethnographic study of the Mt. Pinatubo Aetas which was published in the late 1990s and entitled "Pinatubo Aetas: Continuity and Change". Shimizu, who has been wandering on the western slopes of Mt. Pinatubo for more than 20 years, came back to Zambales several times between 1991 and 1998 to document the effects of the eruption on the Aeta minority. Along with Christina Maligat-Lillo, he conducted tens of interviews of Aeta victims, mostly in San Marcelino and Botolan, Zambales, and also in Porac, Pampanga.

This 388-page volume is organized into two sections. The short first part is an anthropological assessment of the consequences of the Mt. Pinatubo eruption for the Aetas of Zambales. The second section is a unique collection of stirring testimonies from Mt. Pinatubo Aeta victims which make up the core of the book. These confessions document all the stages of the long and winding road of Aetas followed from the evacuation at the dawn of the crises to the recovery period back on the flanks of the volcano. Among others, there are several startling accounts on the decision made by certain people to present the evacuees from going back to the mountain and seeking refuge inside caves that were buried by pyroclastic flows. Some textual materials also recount the Aetas' life before the eruption. Further narratives relate the difficulties encountered by the Aetas in the evacuation camps and eventually the resettlement centers set up by the government and a couple of NGOs to reaccommodate them. The last set of accounts share the experience of tribal leaders who helped organized tribal communities, develop an Aeta consciousness and push for the recognition of their rights in the Philippine political context. To preserve the authenticity of the testimonies, all are brought to the reader in original Tagalog language accompanied by an English translation. Moreover, each interview is introduced by some few biographical notes and a picture of the Aeta narrator.

If the title is a little gloomy and alarmist, the book nevertheless clearly demonstrates the ability of the Aetas to adjust to their physical and economic environments reshaped by the eruption of Mt. Pinatubo. Following the eruption and their resettlement in governmental or NGO-driven sites, the Aetas managed to diversify their economic activities to sustain themselves. What is noteworthy is that this volume mostly focused on the Aetas located on the western slopes of Mt. Pinatubo. Communities from the eastern flanks of the volcano in Pampanga and Tarlac have been encountering a different range of experiences following the awakening of the volcano. They were heading toward increasing acculturation and stumbled upon acute land conflicts which were not so evident on the west side.

J.C. Gaillard

Book Reviews

Generating Energies in Mt. Apo: Cultural Politics in a Contested Environment. Quezon City: Ateneo de Manila University Press 2000
Albert E. Alejo, S.J.

The book titled *Generating Energies in Mt. Apo: Cultural Politics in a Contested Environment* discusses the struggles of the Manobos as they fight for cultural regeneration alongside their fight for their long standing claims on their ancestral lands and their advocacy against the so-called "development aggression".

Some Geographic Background

Mt. Apo is the country's highest peak, home to the endangered Philippine Eagle, a national park and a recognized heritage site in Southeast Asia because of its rich biodiversity. It is also home to several thousand indigenous peoples. It is likewise an ecologically and politically sensitive site such that when the Philippine National Oil Company (PNOC) started drilling exploratory wells on the western flank of Mt. Apo in 1987, opposition to the project immediately followed. In 1989, a coalition of several datos from different "tribes" held a solemn ritual called D'yandi which vowed to defend opposition to PNOC's exploratory drills.

In 1991, the Department of Environment and Natural Resource (DENR) that initially declared the project illegal granted PNOC its much-coveted Environmental Compliance Certificate (ECC). Although aware of the considerable ecological and societal problems, the government pushed through with the Mt. Apo Geothermal Project because of the "uncertainties" at that time. With these reasons, the campaigns against the project failed to succeed. However, they were able to force the company to seriously take into account the environmental issues and concerns of the project.

Some Issues

Alejo tackles, on the one hand, "development aggression and, on the other, the cultural regeneration of the Manobo society. He elaborates on the international advocacy against the geothermal project and proceeds to discuss the emergence of a new movement called *"Tuklok to Kalibbarun ni Apo Ayon Umpan"* (Pillars of the Descendants of Ayon Umpan). This is a movement for cultural regeneration that resulted from the failure of both the project and protest to adequately address the collective predicament and sentiment of the most affected communities.

Geothermal energy, according to Alejo, is an indigenous resource and, therefore, "a most promising contribution to the country's energy mix". This PNOC project, therefore, contributes to the generation of power for industrialization and makes the country less vulnerable to the dictates of the outside external markets as well as the world's oil-producing countries. Conflicts and tension then rise when other human resources are sacrificed in the process of tapping one form of power. But this is not a one-way process. Moreover, he adds, "sometimes the very process of suppressing people's participation conditions the transformation of new identities, creating new ways of moving the body and organizing space." "Cultural energies" then emerge as memories are re-lived, visions are revised and new energies are regenerated or old ones are given new orientation. Cultural energies, he argues, are the "reserves of strength, knowledge and imagination" that come out of the suffering and pains that a particular community experiences. Furthermore, Alejo observes that, at certain times, "unexpected creativity arises when subjugated people are thought to have been crushed. New forms of knowledge are released and even new dances and songs come out, making new relations and definitions of the world, which are at least imaginable if not normally feasible." To this, I would tend to agree. Every group of people shows their greatest capacity when their existence is challenged and much more when threatened. It is then that their histories are revisited and reinterpreted. It is also then that they are able to gather their collective strength to protect their community against aggressors. In the process, new bonds of trust and unity develop and new leaders emerge. Cultural energy seems to be what people need to collectively endure pain as well as to begin a protest or even just to sustain their existence. It is "partly shared when their own moral and cultural resources and when external allies have moved to more exciting sites." Alejo claims that if cultural energy is related to power, then it is more like the power to will rather than will to power. The will to power, he contends, is "often associated either with domination (power over) or

resistance (power against). The power to will, on the other hand, is "more of the moral and spiritual and creative resource to become a people with self confidence and self-affirmation."

Alejo further claims that at the heart of the political concern is the way environmental change impacts on the socioeconomic life and the political processes of the poor. This should also be seen in the light of the effects that the local, national and global actions create on the environment. To appreciate the profound impacts of this process, it is well to realize that when we deal with land, we are actually dealing with something more abstract where the daily lives of the people are involved and lived. Land is multidimensional in meaning as well as in the value that we attach to it. It is, as Alejo says, "a political territory, an economic resource and a cultural-even spiritual base." We may, therefore, say that marginalization means more than location transfer. "Those who are being displaced due to environmental changes, like deforestation or the construction of big dams, may feel that their whole way of life is being negated." This is particularly true of the indigenous peoples that dwell on the uplands who show more attachment to their lands. Uprootedness can, therefore, be said to result from mobility and changes in identity. Also, it is important to note that the struggle for a sacred land is not separate from the struggle for economic and political continuation of collective life.

According to Alejo, political movements do not always include in it cultural discourses, thereby making it poor. There are no discussions on the cultural impact or of cultural resources for political movements. Moreover, he says that the "conceptual poverty of political ecology is due to insufficient appreciation of the role of culture in understanding environmental and political change, and that this cultural weakness does not lie so much in the neglect of symbols, myths... as in the facile dismissal of the experience and agency of contextual actors." Cultural analysis takes seriously what ultimately is at stake in a people's struggle, which is not just livelihood but their way of life and their dignity as a people. Moreover, cultural struggle is seen in the "microspaces of daily conversation, in which meanings are created, negotiated and sometimes translated into action."

It is in this context that he discusses the struggle for cultural regeneration of the people. The community initially believed that theirs was an inferior culture that is also threatened by the geothermal project. However, their fight for their lands have produced out of them the drive to regenerate their "diminishing" culture first. This they did by

reliving their ways of life and their memories through dances and music as well as the revival of other traditional practices. They also saw the giving of Christian names to the younger generation as a shame. They have, therefore, arranged for a ritual whereby they baptized them with traditional names. Tracing their genealogy was also seen as a way of reviving their cultural heritage.

Some Personal Notes

Father Albert Alejo Did an astounding work on the Manobos of Mt. Apo. He described well their struggles and bridged the gap between the parties that contended for their own stakes in the site. The methodology that he employed in his research was subjected to a lot of criticisms. His being a priest was also said to have influenced the people in gathering strength and initiating the cultural regeneration movement. While his position may well have influenced the people, this should not diminish their deeds and the accomplishments that they have already gained out of their collective stance. In the end, the work of Alejo shows the effective workings of this indigenous group to stage their fight against oppression and biases from external parties that threaten their own existence as well as their way of life

Evangeline O. Katigbak

PHILIPPINE GEOGRAPHICAL SOCIETY NEWS:

Toward Greater Achievements!

The Philippine Geographical Society is at the dawn of a new era! During their last meetings, members of the PGS Board of Directors have agreed on a series of projects to further promote the discipline in both the Philippine academe and civil society.

The Philippine Geographical Society is first strengthening its network. Contact persons from schools and universities all over the country are progressively integrated in an e-mail list designed to easily diffuse information related to PGS. All the persons willing to be added to the list can contact Arnisson Ortega using the following e-mail address: arnisson@yahoo.com. To promote the organization, the PGS is also working on its website.

Among the information available from the website are the contents of all issues of the Philippine Geographical Journal. Very soon, it will be possible to order back or recent issues or subscribe to the journal directly using the website. Three issues are to be published within the following months. The next two issues will compile papers from the faculty and graduate students of the Department of Geography of the University of the Philippines with the theme focused on "Spatial Analysis Applied to Metro Manila and other parts of the Philippines."

The PGS is also organizing a seminar-workshop on how to teach geography in the Philippine educational system. The participants will gather high-school and college teachers, Department of Education (DepEd) and Commission on Higher Education (CHED) personnel, and other members of the Philippine Geographical Society. This two-day event is to be held in Subic Bay Freeport during the month of March 2004. Details will be available on the website of the PGS very soon.

An educational tour in the Mt. Pinatubo-- affected areas in Tarlac and Pampanga will follow in April. For one day, members of the PGS will have a look at the main lahar channels draining the volcano and visits a resettlement center where thousands of families have been relocated following the lahar onslaughts. The tour will also head to the "martyr town" of Bacolor in Pampanga. Invitations and information will be sent through the e-mail list.

The biggest project of the PGS is, however, the first ever National Conference on Geographical Studies to be held in early November 2004. The theme will be "Following the Path of the Filipino Migrants". This meeting intends to gather geographers but also scholars from other disciplines interested in migration studies. Further information and a call for papers will be made available on the web site of the PGS during the month of March 2004.

For further information regarding the Philippine Geographical Society and its forthcoming activities, you can browse the website of the organization or e-mail to: jcgillard@kssp.upd.edu.ph

Mabuhay po ang Heograpiya sa Pilipinas!

Philippine Geographical Society membership

- ◆ Regular member fee: PhP 500 including a free copy of the PGJ of the year, a tee shirt, access to the regular and special activities of the PGS (seminar-workshops, field trips, etc.), discounts on the annual conference registration fee, and other privileges that may be offered later.
- ◆ Student: PhP150. with the same benefits.
- ◆ New members will also get a set of back issues of the PGJ as welcoming gift

J.C. Gaillard

**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 advertisements of interest to the geographic profession and certain 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 8 ½ x 11 inch-bond paper. Computer printouts are accepted, provided they are legible. More preferably, we welcome the sending of an accompanying diskette or CD copy of the article. Because of rising mailing costs, rejected manuscripts will not be returned. Scholarly articles should range from 2000 to 5000 words while reviews, reports, news and special items should be less than 2000 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.

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Abstract. On the first page of the article manuscript between the author's name and the text, an abstract with a length ranging from 100 to 200 words should be included. It should summarize salient points and include key words.

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Illustrations and tables. Illustrations, which should be kept to a minimum should be of professional quality drawn in black ink on white paper or in 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 Arial type/font. Figure numbers and captions should be indicated in pencil at the bottom of the paper way below the drawing of its borderline. As with other aspects of style, the format of the table 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:

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