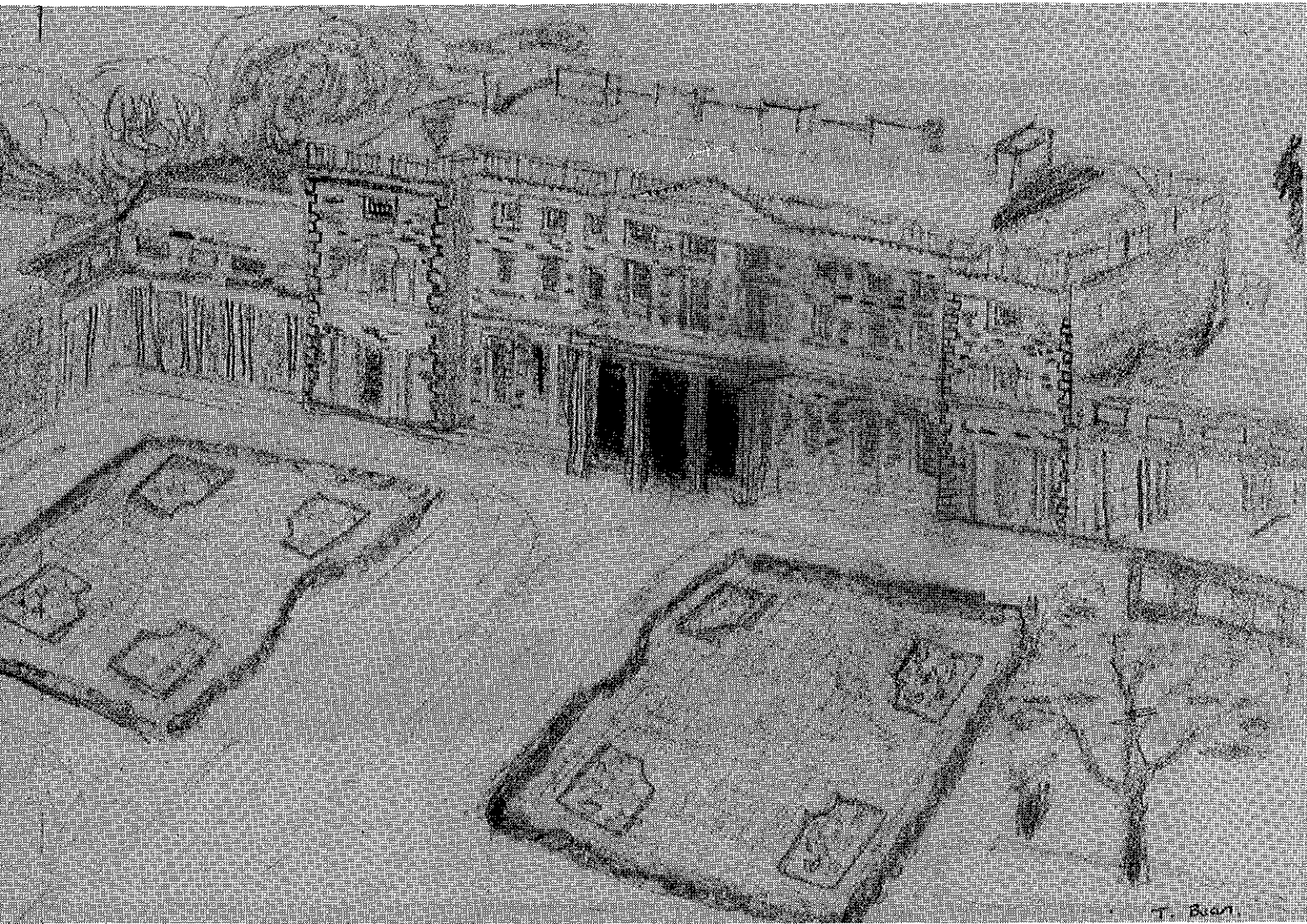


MILIEU '83



Maynooth

Geography

Going Forward

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Cover: Thomas Bean (Celbridge)

Photographs: Mary Hennessy, 3rd Arts

John Geary, 3rd Arts

EDITORIAL

Geographical inquiry into the broad themes of man's relationship with the land, and the processes of change through time is reflected in the eclectic nature of the discipline and the variety of research interests pursued by the practitioners. The hallmark of the discipline in its inter-disciplinary nature which facilitates fruitful and free-ranging research and both attracts and creates professionals in the fields of Economic, Historical, Rural, Urban, Medical studies. The many sub-disciplines within this realm we call Geography coupled with its inter-disciplinary tendencies convince many that ours is a splintering profession.

Despite this apparent anarchy there is a basic and very central unity within the Geographic discipline. This unity is based on man's relationship with his environment. Each of the sub-branches are united by the central core, and each of them contain a "wholeness" in their varying interpretation. It is unjust to accuse Geographers of being beachcombers wallowing in the shallows of other disciplines. It is re-assuring to point to the vast amount of work done by geographers many of whom are to the forefront of the research frontier. Their papers are accepted by other specialised mother disciplines on making a worthy contribution to the pursuit in hand. The solidity of the discipline is reflected in many of its journals; Irish Geography, Transactions of the Institute of British Geographers and the Annals of the Association of American Sociologists to mention but three, all are the epitome of solid respectable scholarship. Historians, Geologists, Planners, Climatologists are just some who fruitfully read these journals which also cater for the various specialised sub-disciplines within Geography.

The wide variety of themes presented in this edition of "Milieu" gives an indication of the Geographers' breath of training. This training gives increased awareness to the processes and circumstances which moulded the society in which the student is a part. It reveals to him also the various levels of causation and thus increases his awareness and understanding of the prevailing economic, social and political forces as he enters the market place. This move towards fuller societal awareness fulfills the humanistic role Geography has set itself, of aiding mass understanding of the breath and depth of his experience.

I wish to thank Mick Melvin of the 'Kalros' Office, for his help in getting the "Milieu" to print, also Jay Shanahan for his unremitting industry in seeking out advertisements, to John Ahern last year's weary president of the Geography Society for his constant interest and help, and to Rita Kearney the new President and overseer. Finally "Milieu" would not have been possible without its able contributors, and the interest of you, one of the many avid readers.

Dypmna McLoughlin

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FORWARD

The appearance of yet another edition of Milieu is to be welcomed as continuing evidence of the vitality characteristic of the community of student geographers in Maynooth. In its range of articles, and its selection of authors representing the spectrum from First Arts to third year post-graduate, the present edition is a worthy link in an impressive chain of publications. It is especially gratifying to witness such a continuing display of student enthusiasm at a time when economic recession and dwindling job opportunities are bound to have a negative affect on student morale.

During the current year the undergraduate programme has been reorganised to include extended practical sessions for second year students and this aspect of academic training will be enhanced by the development of a specialised laboratory, scheduled to be constructed during the summer of 1983.

This growing use of laboratory practicals, coupled with the long standing Maynooth tradition of participation in field trips, emphasises the distinctiveness of Geography within the Arts tradition. It also exposes students to a range of teaching designed to encourage the development of literacy, numeracy and graphicacy. In the long run the future employment of geographers at all levels may well depend upon their ability to apply these skills in problem solving situations. The distinctiveness of the geographer's training is ultimately the discipline's greatest asset.

W.J. Smyth

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CARTON — LESSONS IN A LANDSCAPE

Dr. P.J. Duffy

Every student in Maynooth knows where Carton is — it reposes behind the walls along the Dublin road, with the signs 'Carton is closed' and 'Trespassers will be prosecuted' prominently displayed. For those daring enough to risk prosecution, a visit to Carton is a peer at the landscape and material context of life for a minority class in the leisurely eighteenth and nineteenth centuries. There is the splendid House with its gilded Saloon, Dining Room and Drawing Room. There are lavish stables and carriage houses more spacious than the little houses of the artisans and workers on the estate who lived in the lanes of Maynooth. The large and interesting Kitchen with its gigantic ovens and spit, the Meat House for hanging the household beef, the Dairy, the Kitchen Garden and all the Demesne houses for gamekeeper, stewards, gatekeepers, etc. all are reflections in the landscape of the ordered oppression (for some) and comfort (for a few) of life in a Great House over a century ago. In 1779, a visitor to Carton wrote,

"The house is crowded, a thousand comes and goes. We breakfast between ten and eleven, though it is called half-past nine. We have an immense table — chocolate, honey, hot bread, cold bread, brown bread, white bread, green bread, and all coloured breads and cakes. After breakfast, Mr. Scott, the Duke's chaplain, reads a few short prayers, and we then go as we like; a back-room for reading, a billiard room, a print room, a drawing room. . . We dine at half-past four or five. . . (there are) French hors playing at breakfast and dinner. There are all sorts of amusements. The gentlemen are out hunting and shooting all the mornings."¹

In a sense there is nothing extraordinary in the suggestion that carton is a local landscape that reflects the conditions of life two centuries ago. All landscapes represent the crucibles in which life was carried on at various times in the past. However few people think of landscapes in this sense, because most landscapes have been modified to a greater or lesser extent over the years so that their more outmoded characteristics can be accommodated to modern conditions. With Carton, it takes little leap of the imagination to see the

eighteenth century landscape: it has been fortuitously frozen as it was, so that today it comprises an excellent example of a landlord's private demesne in a part of Ireland where the impact of the landlord was substantial.

But the beauty and value of Carton is extended significantly when it is considered in its local context. The village of Maynooth, mangled and distorted though it has been with unsightly signs and slurry tanks, and unfitting public conveniences, is still recognisably a 'landlord village', saved by its lime trees and its medieval castle. Maynooth contains some fine buildings and street facades such as the Leinster Arms (underneath the neon signs), Buckleys and Coonan's Houses, Mill Street and Parson Street. Underneath the gaudy signs, Maynooth is a good example of this class of village, the Duke's village. In Carton today there are some meticulously executed maps of the Duke of Leinster's Manor of Maynooth in 1821, in which the village is shown neatly laid out at the end of the long avenue to Carton.

The Royal Canal running in a loop to the south of the village symbolises the power and influence of the Duke, (one of the foremost peers and landowners in Ireland with 67,000 acres) in shaping the very landscape of the people. The canal was diverted from its original line, via the expensive rye aqueduct, to pass through the Duke's town.

Some people might react to all this with a strongly ideological riposte, suggesting that this landscape represents our colonial past. We've got rid of landlords, so let's forget them. Blow it up, like Nelson's Pillar? But to understand the past, it is helpful to be able to see its material legacy. That's what museums are about. Folk parks/museums are an even more interesting development.

It is possible to see in Carton, and Maynooth, a lived-in landscape that, with imaginative protection might become an historical showpiece, exhibiting for the region and the tourist a variety of features of the social and economic history of eighteenth and nineteenth century Ireland: the House, yards, estate houses, boat houses, lakes, walks, lodges, perimeter wall, vistas, trees, avenues, village of Maynooth, all representing the achievement of a powerful landowner in pre-famine Ireland, an achievement that was matched and re-

peated in many other parts of Ireland. Imaginative and sensitive planning by the Museum and State could turn this area into a valuable resource for future generations of students. The happy location of a university in Maynooth with history, anthropology and geography departments might provide a useful research focus to link up with a museum presence in Carton.

There is an additional dimension to the value of Carton, and this is its amenity potential. For those among us who have little regard for heritage and history, and who are only interested in the here and now (and presumably the future), consider the value of Carton's 1200 acres as a public amenity, an open space, a "green lung" on the margins of the Dublin metropolis. The big problem with Great Houses and Demesnes built in the eighteenth century is that they are socially and economically out of date. In its heyday, Carton employed 47 indoor staff and even more external staff — gardeners, ploughmen, cowmen, blacksmiths, carpenters, etc. etc. most of whom lived in Maynooth. With this disappearance of the exploitative system which maintained this workforce, clearly a place like Carton is unviable. And this is the universal problem with Great Houses in the twentieth century: how do they pay property taxes, maintenance costs, etc. without the cheap work force and the landed estates and rents that kept them going in the old days? Many of them open their doors to the public, establish zoos, safari parks, and other innovations to generate some revenue. In the case of Carton the establishment of a park seems an eminently suitable idea. Carton has all the prerequisites for a park: lakes, woods, walks, views and gardens. It is a ready-made park.

The present owners of Carton, however, see things differently. Presumably because they are businessmen they look on Carton as an investment and a source of profit. Although they suggest that they wish to make the unproductive parts of the demesne productive (by building houses in the woods) and so generate income to maintain the House, one assumes that the maintenance of the House for posterity is not Powerscreen's major concern.

In view of the possibility of a potential rip-off by speculators along the lines of Castletown in Celbridge, the Academic Staff Association launched a campaign to object to Powerscreen's plans for Carton. The A.S.A. published

their own Plan for Carton which proposed the implementation of a plan along the lines of the visionary ideas already outlined in this article, i.e. the establishment of a regional park in the grounds of Carton!! A demographic analysis of population in this region indicates that there is a huge and expanding community in the Dublin area with relatively little in the way of amenities such as parks and open spaces. In addition, Dublin is the chief entry point for tourists to Ireland, who usually travel through Kildare to tourist havens in the West of Ireland. The West is the tourist region of Ireland: it presumably is the "other half" that Bord Failte says we haven't seen yet. The West is viewed as the authentic repository of Irish tradition and

history. It must be true, however, that Ireland's past is made up of more than rural poverty, cabins, isolated communities, mountain boreens, and wild scenery. It also consists of rich rolling farmland, landlord legacies of great houses and castles, demesnes and parkland trees (such as in Meath and Kildare).

Consequently the A.S.A. plan also proposes the establishment of a regional folk park in Carton to reflect the long history and tradition of settlement in this East Leinster region, and the use of the House and the fifty acres of buildings in the demesne as an out-branch of the National Museum. Folk parks are an important tourist attraction, and a valuable educational resource for the home population. The involvement of the Museum and the State (through the Office of Public Works) would account for a considerable proportion of the money needed to implement the A.S.A. plan.

The A.S.A. plan has mushroomed substantially and in recent weeks (early April) a Carton Committee has been established to extend the campaign into the local and national consciousness. Within the College, while the A.S.A. plan received a guarded welcome from the College Executive Council, it provoked no reaction from the Students Union. Solidarity and support from the Student Union would have been most welcome, and would impress Kildare County Council and the media.

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THE CULTURAL LANDSCAPE AS A MEDIUM IN INTERPRETING AND UNDERSTANDING MAN'S RELATIONSHIP WITH THE LAND

Jim Boyd, 1st Arts

A Cultural Landscape is any landscape which has been touched by man. The history of man can be seen visually in the landscape, even after he has left it or his particular civilisation has passed away, the indelible imprints of his culture can be seen on it. This however, does not mean that landscape is only a static reflection of a culture, akin to a photograph — rather it is a constantly changing part of the environment where past and present can be seen side by side as E. Estyn Evans puts it 'all time foreshortened into a living present' (1). The impact of many different successive civilisations can be uncovered on many landscapes. As one cultural group passes, another emerges, and all leave visible signs in the environment. There is a basic need in man to leave 'himself' in the world, to leave a mark on his environment after he is gone — to give himself immortality. This urge is witnessed in acts, as varied as the building of the Eiffel tower to the scrawled graffiti of an inner city wall. A contemporary Irish poet, Mairtin O'Direan, describes it,

Thóg an fear seo teach

Is an fear úd

Clái no fál

A mhair ina dhiaidh

Is a choinnigh a chuimhne buan
(2)

There is an interdependence between man and the land and this relationship is the primary focus of cultural geographers.

The question of the utility of cultural landscape is brought into sharp focus by a prominent anthropologist Franz Boas, who says in his work, *Race, Language and Culture* that, 'the material for the reconstruction of culture is ever so much more fragmentary because the largest and most important aspects of culture leave no trace in the soil; language, social organisation, religion — in short, everything that is not material — vanishes with the life of each generation'.

In an effort to disprove this viewpoint. I will look at some of

the different aspects of the cultural landscape. Landscape reflects man's way of living from earliest times. Throughout Ireland there are examples from all ages — modern bungalows, nineteenth century thatched cottages, eighteenth century Georgian houses, Norman castles and beehive-huts used by monks 1400 years ago. From pre-Christian times we have still with us the remains of duns and crannogs. These dwellings also go a long way in telling us of what types of society there existed at the time of their use. We know that the builders of the Georgian mansions were rich and secure, thus having time for art and elegance. Compared with the poorer tenements around them they speak volumes for social organisation, and the stratification of society at that time. Norman castles were utilitarian in function — buildings with walls fourteen feet in diameter are not there for art's sake, but for defensive purposes — so also were the round towers built by monks during the Viking invasions. Earlier monastic settlements e.g. Skellig Island, show a secure yet austere society.

Agricultural landscape also reflect past societies and their methods. An example of this difference in method is clearly illustrated on the border of the provinces of Quebec in Canada and Maryland in the United States. The field pattern in Quebec is of long, strip fields while those in Maryland were more rectangular — reflecting differences in tradition and past policies. (3) An example of ancient agriculture being carried on by tradition for many centuries can be seen in the discovery of 'lazy beds' by Dr. Coffey of U.C.D. underneath a bog in north-west Ireland, which are very like those still used in many parts of western Ireland (4). The point is put succinctly by Jordan and Rowantree who say, 'Although this agricultural landscape changes constantly, it also remains in many respects a window to the

past' (5).

Perhaps the most striking aspect of the Cultural Landscape in Ireland is religious landscape. Throughout the country there are many churches, grave-yards, way-side shrines, Celtic crosses etc., which are tangible testimony to a deep faith — despite what Franz Boas may say the religion of the country has left an impressive imprint on the landscape. Associated with religious landscape is folk landscape. This is particularly associated with rural societies. Even in the last quarter of the twentieth century, one can still see stones, where water can lie, which reportedly can cure warts, death cairns (every passer-by drops a stone at a spot where somebody was killed and gradually a heap is built up) and cursing stones (the last resort of the helpless and oppressed), an example of which can be seen at Blacklion, Co. Fermanagh.

Boas seems to suggest that only the artifacts of a culture e.g. houses, fields etc., can be on the cultural landscape, but a closer look at this landscape can reveal also the mentifacts i.e. the attitudes and beliefs of a community. We can judge physical conditions of a particular place and time by the location of dwelling places. We can see the inertia or change of land division patterns — we can gauge sequent occupance i.e. how many layers of civilisations have developed in the same area one after another. We can assess the relative development of communities and the difference in mechanisation etc., of different regions at the same time. Another most interesting and informative pointer to the relationship between man and the cultural landscape are toponyms.

Toponyms, or less technically place-names, are an integral part of the landscape. They are connected to language, physical features, religion, customs, and ethnic origins. Ireland is particularly rich in this sphere — many

towns have names associated with physical feature — Ath meaning ford, cnoc meaning hill etc. (Examples — Athy, Athlone, Croke). The ancient past is also widely represented with duns and raths being prominent e.g. Dundalk, Dunboyne, Rathangan, Ratoath). Religious sites and saint's names e.g. Kilcock, Kildare (cill meaning church), Tagadhoe (Teach Tua — the house of Tua — an old saint who lived there). One can also see differences in culture — within the area of the ancient pale there are many places with the word town in them e.g. Newtown, Johnstown etc., while outside the pale district there are an abundance of 'Ballys', Bally being the anglicisation of 'Baile' meaning town e.g. Ballykelly, Ballyhaunis, Ballinasloe etc. Social history is covered as well as political — Ballygorta and Ballyporeen harping back to famine times.

A major world problem today which has built up over the last two centuries with the advent of new technology is the rapid destruction of the landscape. It is already accepted that there is virtually no 'natural landscape' left — some areas of the poles, high mountains and some deserts. Pollution, mining, destruction of forests for commercial reasons etc. — all contribute to the problem. This shows a certain baseness in man's relationship to the land. Land is abused while being used — little consideration is taken of long term effects if this is to the detriment of short-term profits. The destruction of the landscape comes from all sectors, from private individuals to state companies. It also traverses all societies and countries.

Some geographers e.g. Carl Sauer claimed that the Judaeo-Christian ethic of the western world of man having dominion over the land was the deep-rooted origin of this one-sided relationship. It stemmed from God saying to humans, 'Have many children, so that your descendants will live all over the earth and bring it under their control'. (Genesis 1:28)

This theory would seem to be unfounded however. According to Yi Fu Tuan (6) even in Taoist and Buddhist societies where harmony of man and environment are stressed the process of destruction for material gain occurs just the same. It would seem religion has very little to do with it and the reasons are to be found in greed for wealth and power.

In dealing with interpreting man's development by studying the cultural landscape there are some difficulties however. We cannot study the existence of one particular group as cultural dissemination occurs inevitably, since different communities come into contact with one another. Thus, we cannot get an accurate picture of one genre de vie (7), one full picture of a cultural landscape untouched by others. However, we can see the basis of many societies by looking at their landscape. For to find a rich genre de vie it is important to look at isolated cultures. In this kind of non-mobile society, tradition is handed down from generation to generation, and it is possible to find age-old customs in architecture, agriculture, etc., in the present-day landscape.

We have now seen that how people distribute themselves across the earth's surface is expressed visibly in the cultural landscape. We do not only see the artifacts that these people leave behind by looking at the many veneers on the cultural landscape, but we can also learn about their sociofacts and mentifacts — their attitudes, beliefs, inter-community relationships. Edward Taylor (8) defined culture as — 'that complex whole which includes knowledge, belief, art, morals, law, customs, and any other capabilities and habits acquired by man as a member of society'.

This culture can be seen on the landscape — the marks of man's use of the land do not fade away when he is gone, therefore the cultural landscape is the basic means of interpreting and understanding man's relationship with

the land.

Notes

- (1) . . . Dr. W. J. Smyth
- (2) . . . Martin O'Direan, from his poem, 'Stoite'
- (3) . . . from *The Human Mosaic* by Jordan & Rowantree
- (4) . . . Dr. W. J. Smyth
- (5) . . . As No. 3
- (6) . . . American cultural geographer — Dr. W. J. Smyth
- (7) . . . As No. 6
- (8) . . . As No. 3

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MAN, A PHILISTINE IN THE IRISH LANDSCAPE

Eithne Bean, 3rd Arts

Firstly, an explanation of the word Philistine is necessary. In this case, the word Philistine may be taken to mean someone who misuses or abuses the environment.

Perhaps the economic sectors to receive most criticism for changing the landscape are the primary and secondary ones. Mining, especially open-cast mining, inflicts serious scars on the landscape, leaving large depressions or slag heaps as reminders of its existence long after economic benefit ceases. Agriculture is fast becoming an area of concern due to the use of new methods. Because of the increased demands and the need to be competitive, the use of pesticides and animal medicine has escalated. Pollution of air by weed killers, and of water due to animal waste and detergents used to clean farm equipment now causes serious problems.

Heavy industries have for long been a major area of concern regarding their effect on the landscape. Although there has been a change in the specific type of effect of industries, from that of large chimneys belching smoke into the air, to the more recent problems of the disposal of very dangerous waste, they still bring about many changes in the landscape. Due to greater realisation of the harmful effects of such industries, stricter laws have been enforced, but it should be asked if even these laws are strong enough to prevent serious damage.

This is by no means a simple argument to solve. There will always be demands for jobs, services, and the type of goods which necessitate these industries (including agriculture and mining). It may be possible though, by enforcing strict regulations to reduce harmful effects. Certain harmful waste products could be processed and/or recycled to reduce their effect on air, water, or surrounding vegetation. This, of course would demand a change in present attitudes, as the need not to destroy our landscape must be

realised, or no positive action will follow.

While agriculture and industries are perhaps the most noticeable agents of change in landscapes, it must be remembered that changes not related to either occur. Such changes probably are not thought of as serious, compared with problems of pollution, and because of this, are often overlooked. As the population of an area increases and demands for services rise, it will be necessary to add new features to the existing local landscapes, and replace them with plastic universal ones. Both urban and rural landscapes are being transformed. Areas in the hinterlands of Dublin have experienced rapid changes, due to Dublin's growth. Populations of small towns have risen dramatically in short spaces of time. These towns which had remained almost unchanged for decades, suddenly underwent vast transformations.

Maynooth, a developing town in North Kildare, situated fifteen miles west of Dublin, on the main Dublin-Galway road has been chosen as a case-study to examine some recent changes.

Over the last ten to fifteen years, the greatest change has been the increase in population due mainly to Dublin's expansion, and the opening of St. Patrick's College as a university to non-residential students. The landscape immediately around Maynooth changed from that of a rural one to an exurban one. Building and extension of housing estates took place to the south and south-west, while schools and hostels have been built mainly to the North West. Because of the influx of people the town experiences its share of the usual problems of heavy traffic and high noise levels, which accompany increased business.

But the main concern here lies with changes in the landscape in the town itself rather than the surrounding areas.

Maynooth, which is a landlord town, was demolished and rebuilt

between the years 1750 and 1837 to conform to the wishes of the first Duke of Leinster (Mary Cullen et al. *Maynooth, a short historical guide*, Maynooth, 1979). The main street was widened, straightened, and lined with lime-trees, a continuation of Carton Avenue. The houses on the main street are for the most part uniform in height. Smaller streets are arranged perpendicular to the main street which leads to a regular street pattern.

It would be hoped that Local Authorities would act to preserve this character during periods of growth and consequential change; unfortunately the local authorities are responsible for many factors due to which Maynooth now resembles the unplanned cluttered settlement which predated it.

Lax planning laws have allowed buildings which clash with surrounding pre-existing ones to be constructed.

One such example is the public toilet built in the Square, approximately five years ago. It was built in 'modern style' of concrete slabs and bricks, spread over as much area as possible. It is now an obstruction to traffic and an eyesore, a more compact building of less outrageous style would have served the desired function without the above mentioned side-effects. Lax laws were also evident in the granting of planning permission for what is now a bank — a single storey building where formerly a two-storey one stood. Since that building was passed however, a garage-owner who wished to add showrooms to his premises was compelled to build a two-storey building in keeping with the other buildings which surround it, although the upper part may not be used for residential purposes. Perhaps this is an example of the much needed stricter planning laws which will be more common in future, and which must apply not only to private builders but also to public authorities.

Some other faults by local authorities include the placing of electricity poles in the middle of the footpaths, while bus stops and traffic signs are at the road edge and the erection of yellow litter bins beside these poles, leaving the footpaths unrepaired afterwards. Also some very large road signs have been erected in several parts of the town. These have not replaced existing signs and simply add to the collection of articles which congest the streets. Cables of all nature and colours clutter the skyline, no attempt has been made to either merge these necessary additions with what originally existed or to hide them from the public-eye.

Criticism is not confined to local authorities. The introduction of plastic signs may have attracted more custom, but added little in aesthetic value to the town. Because of such signs, steel vandal-proof blinds and grids, the shop-fronts resemble any shop in any large town either in Ireland or Britain. One striking paradox is seen where the name of a shop is written in Irish in large red letters on such a plastic sign.

Alterations to housefronts in Leinster Cottages (behind Main St.) offer an example of how improvements can be made which are compatible with the adjoining houses and one of the complete opposite. By enlarging the windows but retaining their curved shape at the top and small panes one owner added to the appearance of his house without causing a noticeable difference between it and the other houses in the terrace. Other owners, however by changing the shape, size, and position of doors and windows succeeded only in presenting models of 'how it ought not to be done'.

Dumping and burning of oil and rubber-based waste near the Rye river has for many years concerned local residents. The area, although cleared and planted with shrubs on several occasions again resembles a dump. Two particular events which occurred within the past five years will have serious implications for the future. One is the clearing

of large areas of woodland in Carton Estate which destroyed many years of planning and work; the other was the filling-in of what was formerly a drowned quarry and its conversion into a scrap-yard. The site served as an important area for wild life (fish, birds and small animals), and as a recreational area for children. An attempt to encourage the new owner to plant trees to hide the present mess failed.

In recent years the number of lime-trees on the main street has fallen. This is due to some being cut down because of their dangerous condition — some being hit by cars and lorries, and one which was mysteriously felled during the night. A petition has recently been made to the county council to have mature trees planted to replace those which have been cut down.

From this discussion, it might seem that most of Maynooth has been destroyed, and that no attempt has been made to preserve anything of its past. To give this impression would be misleading, and unjust to those who have restored rather than deformed part of the town.

One worthwhile project was the replacement of doors and windows in the Bandhall — formerly a church, and later a school, by ones of similar design. This involved extra costs as the windows had to be manufactured according to size, shape and design. Also some businesses have not opted for large plastic signs, but have instead made use of the talents of local painters to attract custom. One public house on Main Street deserves credit for this approach. Some other businesses have also made use of hand-painted or small signs, in preference to large plastic or neon ones.

Restoration of two houses, one derelict on Main Street, which will become a public library, and another at Mill Street has begun. It is hoped that when completed, they will merge satisfactorily with surrounding features.

The Board of Public Works has for many years kept the Geraldine Castle, at the Westend of the town,

and its grounds, in very good condition. This is important as Maynooth attracts many visitors during the Summer.

While restoring existing buildings is important, there will always be the need for new ones. The style in which they are built will reflect the trends and fashions of the day. It would be impractical to suggest that modern style building should not be constructed but it is fair to expect that in the planning of new buildings the existing landscape is taken into consideration. The schools and hostels built to the North-West and West of the town demonstrate how with proper use of landscaping modern buildings can be quite pleasing to the eye.

When examining the problems of pollution or devastation of the landscape, it is easy to single out industries towards which the finger of blame points, but many changes in industry and agriculture which are responsible for pollution etc., are due to pressures exerted due to increased demands. If we demand services such as electricity, transport, consumer goods, and jobs, we must ask if we are prepared to pay for them by polluting and destroying our landscapes.

While we strive to preserve our castle and round-towers, we destroy at the same time large parts of the landscape which is necessary to link those reminders of the past with the future. A change in present attitudes towards the landscape and the environment must come about; for too long it has been seen as something to be conquered by man. If we continue to destroy as we are doing, we will have little to offer the generations who follow us.

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CANCER — A MEDICAL GEOGRAPHICAL PERSPECTIVE

International mortality trends indicate that since the beginning of this century the increase which has been accompanied by a marked geographical differentiation in terms of the type and incidence of cancer which occurs.

These special variations have provided a primary focus for research in medical Geography. Much of this medical-geographical enquiry has been concerned with the examination of the environmental component of the man-disease relationship, the importance of which may be illustrated as follows.

At a global scale, marked differences exist between countries in terms of the incidence and distribution of cancer by specific body site. Stomach cancer is a classic example in this respect. In Japan it accounts for the greatest proportion of cancer deaths while in the United States its incidence rate is five times lower. (Eisenbud, 1978). In contrast, Japanese women have lower death rates from breast cancer than women in the United States, Canada or England. (Whelan, 1978). This marked differentiation may seem to suggest that it is genetic rather than environmental factors which play a primary role. However, a substantial amount of evidence has been accumulated which points to the importance of environmental factors.

One of the initial indicators in this respect emerged from an examination of mortality trends among migrant populations. These studies point to the fact that in time migrant mortality trends tend to correspond with those of the host area and not the area of origin. For example, studies of Japanese who migrated to Hawaii and California show that within two generations migrants had similar incident rates to those of the resident caucasian population, colonic and breast cancer became more frequent while stomach cancer rates decreased (Burkett, 1971). A similar example may be cited with reference to the differences which occur between the black population of Africa and the United States. In Africa, liver cancer accounts for the greatest proportion of cancer deaths but in the United States its incidence rate is much lower. These differences suggest that the black race did not have some genetic predisposition to this particular form of cancer, as had once been supposed, but rather that they were exposed to some environmental

factor in Africa which did not exist to the same extent in the United States (Eisenbud, 1978).

Even among resident populations, the importance of the environmental component may also be seen. Many studies have illustrated that considerable geographical variations occur in cancers of the same pathogenic type even among populations of the same genetic ancestry. (Howe, 1970; Pringle, 1982).

This environmental hypothesis is further substantiated when changes in the incidence of particular cancers is examined over time. For example, up until the 1930s lung cancer among North American males was rare. Today incidence rates exhibit a fifteen-fold increase. In contrast, stomach cancer and cancer of the uterus have experienced a dramatic decline — stomach cancer having been very frequent at the beginning of the century (Muir, 1981). The direction and speed of these changes have been too rapid to be genetic.

Perhaps the most dramatic illustration of the environmental role in cancer aetiology may be seen when the influence of large scale exposure to various carcinogens is examined. Several such exposures have been well documented by the media among which is included the impact of radiation exposure which followed the bombings of Hiroshima and Nagasaki.

The importance of the environmental component as indicated in these individual studies has been further substantiated by the findings of the World Health Organisation's Prevention of Cancer report (1964) which states that most common cancers are due to environmental factors and are thus potentially preventable. Within much of medical geographical research the definition of environment frequently used is that presented by the medical geographer Melvyn Howe (1970) viz "the totality of external influences, natural and man-made, which impinge on man and affect his well being." However, given that cancer is multifactorial in aetiology, studies of this kind must be selective in terms of the factors included for research.

The W.H.O. definition of health as "a state of physical, mental and social wellbeing and not merely the absence of disease" serves not only to illustrate the importance of socio-environmental factors but also points to their deserved

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priority as a focus for research.

Many studies have observed a considerable disparity in the incidence rates of disease among the various socio-economic groupings (Preston 1974, Eisenbud 1978). Cancer is no exception in this respect. Eisenbud (1978) reports that in studies of cancer of the colon and socio-economic status an inverse relationship has been observed (Sanders, et al, 1981) between the two factors. Other studies indicate that cervical cancer is also associated with low family income. However, it is children of the higher socio-economic groups who exhibit the highest risks of developing childhood cancer (Sanders, et al, 1981).

However, while many studies point to the socio-economic differentials in disease incidence, the question still remains as to what aspects of man's socio-economic environment relate to these observed differences. In general, occupation is taken as an indicator of membership of a particular socio-economic group and in this respect the association between occupation and cancer has long been probed. One of the earliest associations date back to 1776 when Percival Pott observed that cancer of the scrotum was usually associated with a history of chimney sweeping. In the 1920s the linkage between bone cancer and luminous dial painters was noted. One of the best documented occupational associations is that of lung cancer and asbestos workers.

In conjunction with studies of occupational associations relating to the worker per se, many studies have been conducted to examine the influence of occupation on the cancer mortality characteristics of workers wives and children. Sanders et al (1981) study of childhood malignancies and parental occupation, for example, revealed largely negative findings with the exception of confirming the established association between Wilms tumour and hydro-carbon related industries. This area is one which requires a great deal more research.

Occupation is but one of many factors which relate to the socio-economic environment. Other factors include area of residence, type and age of residence, amenity provision, and household size, to name but a few.

These factors in turn provide the focus for the study of cancer within Dublin County and Boroughs which I

am presently undertaking. This case study is concerned with the spatial patterns of mortality arising from this particular cause of death which, in the Irish Republic, constitutes the second greatest cause of death. Preliminary results indicate that even at such a micro scale marked differences exist between the best and worst areas within the County Borough. The patterns which emerge in relation to the areas of highest cancer mortality seem to correspond to the areas in which the highest percentage of the lower socio-economic groupings are located. This pattern appears more pronounced for males than females. It is hoped that further examination of these patterns in terms of the socio-economic factors mentioned earlier will contribute to the understanding of the spatial inequalities which occur.

Concerned primarily with the understanding of the spatial aspects of human health problems, research in medical geography has focussed to a large extent on cartographic and statistical techniques. Data for such studies has generally been derived from a variety of sources among which are included annually published vital statistics reports and census material, original death certificates and individual case records. Conclusions forthcoming from such studies are often subject to different interpretations because they are presented in terms of hypothesised associations between particular factors and the disease category in question. However, despite such limitations this epidemiological approach provides the only feasible means to date whereby laboratory devised theories may receive human application. The medical geographer's continued research in this area may not only be useful in terms of further probing the environmental component of the man-disease relationship but in so doing he/she may point to avenues requiring further scientific research especially in relation to a disease with marked environmental associations as cancer.

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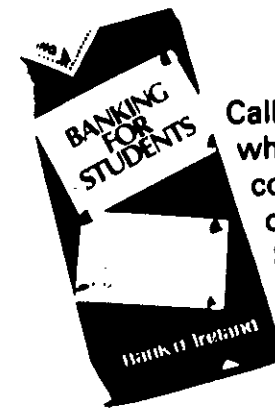
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QUESTIONNAIRES, COMPUTERS AND DEVELOPMENT

(An ex-post-facto rationalisation of the experiences encountered in the 1982 and 1983 Easter fieldtrips)

To many people, that term 'NBST' Project evokes images of druggery and foot-slogging, as they remember days spent administering questionnaires in the wilds of West Connemara and North Leitrim. The question 'What do you think of the IDA, Udaras, Gaeltarra, Comharchumann Cois Fharráige, Manórháilton Development Association, local services . . .?' must be for those experienced NBST field trippers a re-occurring nightmare.

Conversely, to those at the other end of the questionnaire, the 'NBST Project' connotes a tirade of seemingly endless questions, always asking your opinion — even if you haven't got one! — about weird organisations, many of which you have never heard of. 'Ask Johnny down the road there, he knows more about these things than I do'.

The sentiment common to both groups, and many more sceptics besides, is what's the point? This brief article seeks to answer that question and to outline the rationale behind the NBST Project on Rural Development. Further, it is intended to illustrate how geography in Maynooth is widening its research frontiers and increasingly delving into the minefield that is policy research. This Project, therefore, further embodies the growing 'search for relevance' that influences geographical studies (editorial, *Milieu* '82).

In recent years, development policy has undergone a major paradigm shift, as both practitioners and theorists have come to re-evaluate the dominant assumptions and methods (Friedman and Weaver, 1979). This re-appraisal has come about due to two interrelated, areas of dissatisfaction. The first source of questioning emanates from the obvious failure of conventional approaches to rectify problems of regional and social inequality. Polarized development has not resulted in a 'trickle down' or equalisation of economic opportunity in the peripheral, underdeveloped areas. In fact, the opposite has occurred, with a process of cumulative causation (Myrdal 1957) and dependency (Frank 1967) widening the gap between rich and poor. Resources, including human, material and capital resources, have 'trickled up' the economic system to the metropolitan core. This process, while dramatically evident in the 3rd World, is also at work in the Irish situation. Since entry to the EEC, the

regional disparity in standards of living between Donegal and Hamburg has increased. Socially, many groups have been marginalised and left behind in the ever spiraling cycle of economic growth — we have, at the latest count, one million poor (Kennedy, 1981). In agriculture, enormously the larger farmer, has left in its wake a marginalized minority of smaller and older farmers. Their mode of adjustment to large-scale, capital-intensive commercial agriculture is a

'downward spinning process of low-resources, low inputs, low demands, low returns and a work-force deteriorating beyond the point of achieving agricultural development or demographic decline! (NESC 41, 37).

It would seem, therefore, that leaving the development of disadvantaged areas to the dictates of crude market forces — the tendency of the orthodox approach — reinforces rather than alleviates disparities.

The second cause of dissatisfaction concerns more the aims and goals of 'development' than the actual mechanisms of development. Traditionally, the emphasis has been on economic indices of development, e.g. GNP, car ownership, size of house and number of T.V.S. Higher levels of material consumption was assumed to be what everyone wanted. However, such a definition has been questioned by Seers (1917) and Goulet (1978, 1979) in particular. The 'quality of life' — that nebulous concept — is an increasingly popular term in the task of analysing recent changes. To the social aspect of this concept e.g. crime rates, drug addiction and pollution, one can add, in the Gaeltacht context, a cultural dimension. The disillusionment with cultural homogenization of 'massification' has encouraged people to reappraise the distinctiveness of their own way of life. Language would seem to be a focal point in this new search for authenticity. Consequently, the new experts are the actual people who are the targets of development. This recognition of the need to counter the alienation of people from processes which affect their lives is evident also in planning, religion, education and industry. This position is aptly summarized by Stollm and Taylor (1981):

"The values a society holds, which

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themselves change over time, are the ultimate standard by which development or lack of it will be judged. It is perhaps obvious but worth restating than an outside view of a society's 'development' may be very different from an assessment made by that society itself." (p.53).

These two trends have resulted in the widespread alienation of a multitude of people from the development process. On one hand the marginalization of vulnerable segments of the population due to polarized growth and on the other hand to lack of local control over the goals of development, have caused profound rethinking in the dominant approach. Meanwhile however, at the grass roots, local groups were beginning to articulate their own dissatisfaction through protests and campaigns. The 'Save the West' and 'Cearta Siabhalta' campaigns are examples from the Irish context. But of more fundamental importance was the creation of the community co-operative movement which provided an alternative vehicle for development, yet significantly, was also under local control. Fr. McDyer's experiment in Donegal was a beacon for the new approach, which gradually took root in the Gaeltacht fringe of the West of Ireland.

This was the formative milieu within which Proinnias Breathnach, Colm Regan and Paddy Duffy of the Geography Dept. conceived their original idea for a study of Rural Development. Both Proinnias and Colm had visited Glencolmille, along with 45 students and a bus driver (Christy Allen) at Easter, 1981, in order to more fully comprehend the community

co-operative approach at a practical level. Based on their observations (Breathnach and Regan 1982) it was felt that the whole movement warranted more analysis and investigation. Furthermore, it was already clear that certain changes in the structures of all-ready existing agencies were necessary before the potential of the community co-operative could be realized. Consequently an application to the National Board for Science and Technology (NBSI) was prepared in early 1981, which was accepted and funded to the tune of £30,000 to be spread over three years. Five areas were selected, Slieve League, West Connemara, West Kerry, North Leitrim and

Clifden-Roundstone for the purposes of the research project.

Before continuing with an outline of the methods that were used to provide a profile of both the experiences and expectations that people had of the development process (particularly the use of questionnaires), a short comment of the community co-operatives is in order in view of aforementioned criticisms of prevailing development theory. The community co-operative provides, in ideal form, an alternative vehicle for development other than a dependency on state agencies and the market. It is a channel which by tapping local energies and commitment, can give peripheral and underdeveloped areas a stronger position in the market. Thus, at the level of exchange, a countervailing power is given to the small-scale producer vis-a-vis the larger, commercial producer. However, since these co-operatives are also community based — unlike the dairy co-operatives — many activities are undertaken which fulfill social and cultural needs. These include water services, promotion of local culture and building of community halls. Since the 'community' controls the co-operative, it can dictate, within certain financial boundaries, the goals and criteria of development. Alienation is therefore replaced by participation in both the material benefits and the selection of the aims of development. While most of the information on local development was obtained through statistics, reports and interviews with key individuals, it was considered of vital importance that the public be consulted as to their perceptions and opinions. Unfortunately, the only way this is possible is by using questionnaires and actually going out and asking people for their views. The range of the questions to be asked was formulated so that information was elicited both on their aspirations and values and on the view at ground level of the main agencies promoting development. As noted already, what a bureaucrat imagines is desired and achieved from the process of development and what local individuals actually desire and achieve can be radically different. In essence, what is sought is the grass roots view of the system and up the system.

In May, 1983, the NBST Project was half completed. Preliminary findings from the West Connemara and West Kerry (done with the help of Carysfort students) questionnaire surveys were analysed. The main finding was the higher public identification with the community co-operative as a vehicle of development. The diversity of benefits associated with the co-operative, includ-

ing economic and socio-cultural gains, is in stark contrast with the narrow job/grant function of Udaras na Gaeltachta. Whilst this may be so, the community co-operatives face certain internal and external difficulties. These would appear to be crucial in determining the future role and contribution of this alternative approach. Throughout, we have begged the question of what is the 'community' and whether or not for social and political reasons such a term is realistic. The co-operative structure also faces a crisis in deciding whether it should dissolve into a number of constituent parts e.g. farmers, fishermen, workers or remain a unified organism. Meanwhile, external difficulties in relation to exchange relations and the international division of labour remain imponderables demanding national and international political action. The community co-operatives is not an island.

To conclude, the NBST Project is right in the midst of a new approach to development in this country. Within a few years, the Geography Dept. has not alone surveyed the various community development experiments in the West of Ireland, it is not actively contributing to the elaboration of 'the way forward'. The experience of students during the 1982 and 1983 fieldtrips — questionnaires and report-back sessions — is not an irrelevance. Rather, it has contributed to the debate on contemporary issues of development. To that extent, the intrepid NBST field tripper is a practitioner in the field of community development, operating along with the discipline of geography, at the real-world interface of development studies. At a time of re-appraisal of the role of universities, of increasing financial cutbacks and of a contraction of the teaching career option, these new trends represent an alternative 'raison d'être' for 3rd level education and its graduates. A further step will hopefully lead to the provision of the corps of community development personnel e.g. community organizers, co-op. managers so badly needed if this experiment is to survive. In the long term, this would argue well for the setting up of a Centre of Rural and Regional Studies in Maynooth.

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HOUSING DEPARTMENT BLUES

. . . (A Song for Size 10 Boots)
(accompanied by bottle bashing
and dustbin rapping)

*There was an old woman, she lived
in a shoe,
The Housing Department just
didn't know what to do.
Ten kids by the fire, two more to
follow,
The woman was caught in a beg,
steal or borrow — situation.
She cried out for help, lamented
her lot . . .
The Housing Authorities said
'You deserve what you got'.
'You had time to play bingo, time
to drink beer,
Now don't come bringing your
problems in here — dear.
You're a good for nothing, except
having more babies,
it's your kind of people who bring
in the rabies.
We'll put you on our list, and find
you a sociologist —
who'll solve all your problems
from beginning to end.
So get off our backs,
and go to the boozier.
It's us the middle-class who's
always the loser'.*

(R. Kearney, 2nd Arts)

THE IMPACT OF THE MULTINATIONAL CORPORATION ON THE ECONOMY OF THE PHILIPPINES

Rita Kearney

The dominance of the Multinational Corporation in global economics is the result of an evolution of the capitalist mode of production into a complete holistic entity known as the corporation. The Rationale adopted by global enterprises is the synthesis of economic considerations towards the end of profit maximisation. All factors are oriented towards the profitability of the mother firm in the country of origin. The multinational corporation expresses itself by spatial diversification on a global scale, and orientates itself to specific locations. The preference of multinational corporations for locations in South America, Africa and South East Asia has its origins in colonial expansion of former years whereby certain European powers gained access to much desired resource bases. Industrialisation in European centres had a two-fold effect; depletion of indigenous primary resources and creation of a (desired) need for a greater variety of resources to meet new demands. The expanding spice-trade to the Far-East is illustrative of this latter consequence. The emergence of plantation economy heralded a new departure in global economics, for not only did it signal the desire for greater and more varied produce, but also signified the global, rather than regional approach of accessibility to resources. Increased wealth in Europe and North America lead to monopoly capitalism. The emerging ability of the few in controlling the process of production lead to their supremacy.

One of the major foci of monopolistic economic ideology was the Far East or rather South East Asia as this area was already divined as a major locus of food production for Western markets. The original European occupants (the Spanish) had usurped indigenous land holdings in order to produce cash crops for the home market. The next occupants, the Americans, perpetuated the trend, and thus the stage was set for Multinational Corporations.

One aspect of their orientation is the field of agribusiness. This is "a good supply system in which the corporation owns or controls production, processing and marketing of food". It is associated with industrialisation — a process whereby the production of a good is controlled from the plantation stage to its final emergence as a consumer product. It is obvious that those areas which

had exhibited great wealth of natural resources would be the target of monopolistic economies. The focus of this essay is the Philippines. This archipelago of 7,000 islands is rich in physical resources. Rich soils and a large variety of genetic plant species, combined with a suitable climate make its potential (and actual) productivity high. The existence of a large labour pool, placed at the disposal of those exploiting the resources, employed at minimum wage levels is also conducive to investment. Potential investors are not faced with militancy — such as trade unionism, national wage agreements — as may occur in established heartlands. The Philippines are the object of both industrial and agricultural interests. They have experienced economic, political and societal upheaval as a result of the impingement of a capitalist economy onto what was formerly a subsistence economy.

The transformation of the Filipino landscape was commensurate with the emergence of a local elite bourgeoisie which was composed of indigenous and landowners of mixed-blood (Spanish colonisation having an impact upon the demographic profile of the islands). Class differentiation emerged with the main economic criterion being possession of that primary resource-land. The perpetuation of differentiation necessitated the continued and increased possession of land as a prerequisite to economic expansion. Thus there emerged in the 1960s a semi-totalitarian state under the auspices of one president Ferdinand Marcos (1965). This state, while ostensibly democratic was in effect a dictatorship which propagated elitism and suppression of the majority purely for the sake of economic well-being.

The aims of the multinational corporation and of this state are therefore concomitant. Both deem capital accumulated as their primary concern. The Marcos government was drawn to the multinational corporation as a means whereby its desires could be achieved. Likewise the multinational corporation was drawn to the accommodating circumstances as created. Governmental policy then indicates the degree to which both factors can interest and fulfill their common aim. The five-year Philippine Development Plan (1978-82) sums up the interest of the political elite group. While it recognises that private initiative is to be recognised as the engine of national progress, it

nevertheless allows that public enterprise is useful in accelerating development. Numerous state institutions (The National Grains Authority, the Philippine Sugar Commission and the Philippine Coconut Authority) have developed. These institutions effectively dominate production in their respective fields. While it may appear that they should be effective machines whereby agricultural production (efficiency) should be optimised, there exists evidence to the contrary. The National Trading Corporation (NASUTRA) a subsidiary of the Philippine Sugar Commission (Philsycom) appears to be practising a system of maintenance of the status quo.

During the sugar slump in 1974 in which neither planters or millers received fair prices for their produce, the National Federation of Sugar cane planters remained silent. This group represented the interests of the big planters.

The Rice, Coconut and Sugar industries are entirely under the control of the Ruling New Society Democratic party. To a large extent, the reproduction of the society's class organisation is dependent upon an alliance with foreign enterprise. The Philippine administration provides the necessary infrastructure for potential multinational investment. It also encourages multinational investment in plantation agriculture — the National Development Company being the major link. Local elite groups cooperate with MNC's since their interests are similar. The NDC actively seeks out MNC partners to the detriment of aspiring indigenous companies. For example, NASUTRA markets about 50% of all sugar for export through long term contracts with MNCs as long as price is above the cost of production. Obviously this policy does not maximise the surplus generated in the industry. It is merely a policy which ensures maintenance of the status quo, and runs contrary to the stated prerogative in the five year Development Plan.

The Marcos government pursues policies which prove attractive to multinational investment. Numerous incentives in the form of presidential decrees are the carrot by which foreign investment enters. Investment Incentives Act (1967). The Export Incentive Act (1970), P.D. No. 218 (1973) by which MNC Regional Headquarters are

exempt from Philippine income tax, 3% contractor's tax etc. Four free trade zones (Bagnio, Bataan, Mactan, Phirider) have been established. The Stage also offers unlimited profit repatriation, imposes no import quotas and offers cheap loans.

The numerous incentives offered to foreign investors combined with the particular political disposition offer an attractive prospect to any potential investor. The existence of a regime which is at once powerful (military dictatorship) and amenable has allowed the region to become a target for multinational interests. The American interest being undoubtedly the most significant, although it is true that other interests, notably the Japanese are important.

The food processing industry is dominated by giant American-owned corporations. Indeed, the recognition of South East Asia as a major source of vegetable and animal oils and fats, fruit and vegetable (including pineapple and bananas) has caused the influx of such firms as; — San Miguel Corporation, Filipro gnc., Pepsi Cola, Carnation Phil., Standard (phils) Friit Corp. The Philippine Packing Corporation which is a subsidiary of the Del Monte group is now the chief producer of bananas for that group. Coconut oil is processed through the Philippine Refining Company which is a subsidiary of Unilever.

Not only are the major multinational food processing companies involved in the Philippines but global

the Philippines but global lending and banking institutions have located subsidiaries in the vicinity. Banque Nationale de Paris and Chase Manhattan to name but two.

The economy of the Philippines is dominated by concerns which are interested in profit maximisation. These parties mostly foreign though some are aided by native concerns dominate the entire economic sphere and maintain a stranglehold on elements. While state intervention is an important consideration, the power of the MNC is unquestionable. State institutions act as a template on which MNCs can impose their economic directives without fear of opposition. An example of the power of the MNCs is the industrial complementation scheme which is backed by lending institutions. These schemes involve the partial processing of a product for export. The schemes may act on a global scale and can reduce the cost of production of the final consumer product. Were the original non-processed

produce to be transported to the home country huge costs would result. The procedure of transfer pricing as practised by MNCs allows an MNC to carry out different stages in the processing (agricultural or manufactured) according to the degree of taxation imposed in a certain country. A stage which may be expensive and therefore incur high taxes can be diverted to a region where taxation levels are minimal.

The practice of risk-shifting adopted by all MNCs ensures their financial safety. Basically, every corporation ensures for itself alternative suppliers or develops synthetic substitutes (e.g. plastic for rubber) for cash crops. In a situation where producing countries formed cartels, nationalised or demanded higher prices, the MNC simply withdraws with full knowledge that its supply will not be interrupted. Risk-shifting also involves apparent return of land by MNCs to their original owners. These producers, however, are forced into a situation where they must produce top quality produce in order to receive adequate remuneration, inferior produce are rejected. Therefore, although the MNC does not maintain autonomy in name it does in fact. The practise of risk-shifting has enormous repercussions upon the Third World and the Philippines in particular, as it implies confrontation between economies. The producer in this instance is reduced to the status of serf who must satisfy his lord. (A feudalistic situation?)

The stage of agriculture in the Philippines reflects the overall prerogatives of profit motivated companies. The implementation of policies which assist the development of efficient multinational structures in the manufacturing sector is paralleled in the food-processing industry. The "modernisation" of agriculture and its consequent rationalisation into an efficient industry is gaining momentum in the Third World. Co-ordination of governmental policies and those of the MNC is one indication. The information capability of the MNC ensures it complete, continuous and accurate knowledge of current trends in economic and political spheres. An MNC will support political regimes which it feels are conducive to its economic ends, by fueling their economies. In the case of the Philippine administration, the MNCs ensure financial backing to maintain the status quo. The Marcos army for example uses a vast armament of American origin in its suppression of revolutionary

elements.

Modernisation is also seen in the aftermath of the green revolution. In the Philippine case, despite the vast genetic pool which was once available to native farmers, the range of seed species has been "rationalised" to include now only a few high-yielding varieties. The variety of rices has been diminished. Multinational Corporations pay scant regard to ecological balance in their quest for maximum profits. Their agricultural policies are often short-term and short-sighted. The degradation of the soil, depletion of its nutrients is comparable to the fate suffered by mineral resource areas at the hands of extractive industries. The reckless use of pesticides and herbicides jeopardises the ecological balance by destroying vital links in food chains.

The range of factors cited above gives credence to the belief that agriculture is being assimilated into a process like that of industrialisation. This was a natural process in many regions of industrialisation in Western Europe. However there is an essential difference between the development in Western Europe and that of the 3rd World countries. It is vital for MNCs that the countries where they derive their raw materials remain predominantly agricultural. This insures the dependence of the indigenous population upon the MNC. They are in essence robbed of their material resources and thus cannot achieve economic independence. The policies of the Filipino government have assisted MNCs, in this respect. Half a million peasants have been forced off their land without proper compensation. Their removal from their barrier into 'secure hamlets' is ostensibly a security measure to protect them from 'contamination by guerilla groups which are anti-government. In fact, their land is given to large MN concerns.

Native small farmers are ineffectual in the Philippines. The ever-increasing dominance of the MNC in agricultural production has led to the creation of landless farmers whose position is all the more desperate when they discover they cannot get "urban employment" because of the pressures already existing in industrial centres. Some become wage labourers on their own land now controlled by a foreign affiliate. Those farmers who do hold on are too small to be significant and find that market outlets for their produce are restricted.

Not only do MNCs alter the economic base of an agricultural community; they have also affected the

annihilation of socio-cultural attributes. The displacement of farming communities as a result of modernisation in the agricultural sector has led to the breakdown of that society. Mention has already been made of the system of "hamletting" in which the government indulges. By challenging established community systems in this way, the government is upsetting the traditional environment. The creation of poverty and deprivation within the society is the direct result of economic policies adopted by both the government and the MNCs. Combined with the physical degradation of agricultural resources, a situation has evolved which borders on civil war. Opposition to the ruling dictatorship has emerged in the form of three political wings; - The National Democratic Front, The New People's Party, and the Moro National Liberation Front. In order to dispel such opposition the government has resorted to increased military strength (using American made armaments), military tribunals etc. Trade unionism is completely banned for fear of retaliation from undesirable quarters.

MNCs dominate the economy of the Philippines; their policies are rational and always geared towards the ultimate well-being of the mother-firm. Their interest in Philippine agriculture illustrate this for none of the companies which control agricultural production are allowed to make a significant profit. They must maintain a reasonable profit which will eventually accrue to the mother-firm. MN concern is that of profit-maximisation on a central rather than regional basis. This process of vertical integration rebounds on the economies of those regions wherein the MN establishes its affiliate. The coordination of governmental policies and those of the giant MN is the result. The effect being the distribution of wealth among the few rather than the many. It is ironic that, despite their high productivity of cash (food) crops in the Philippines the natives themselves do not receive an adequate intake of calories in their daily diet!

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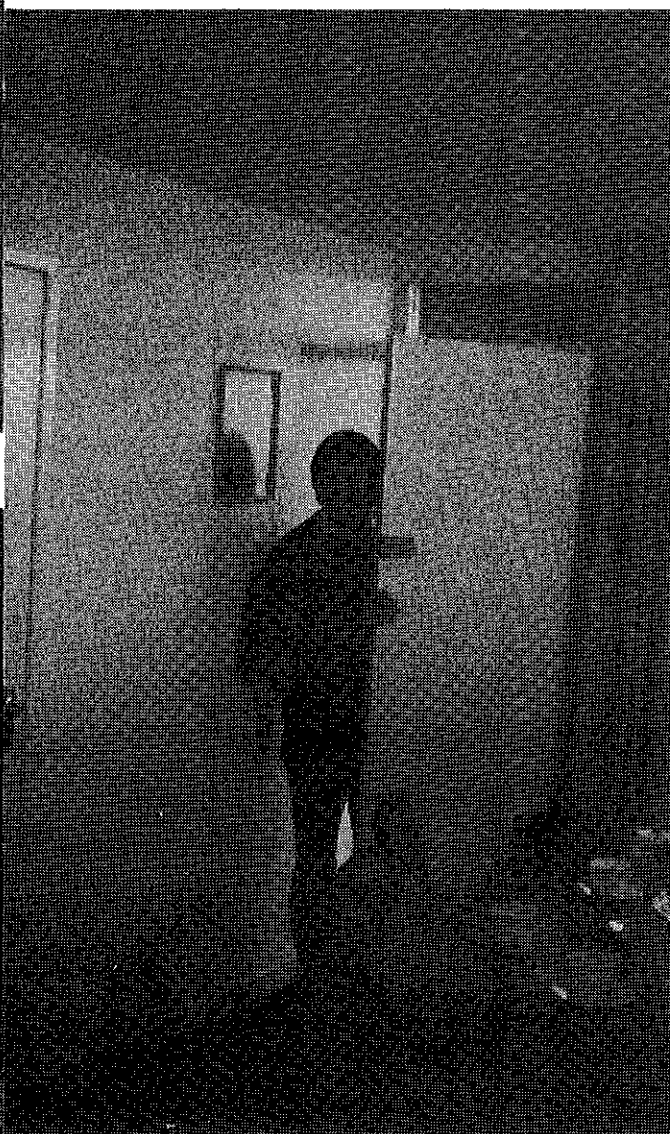
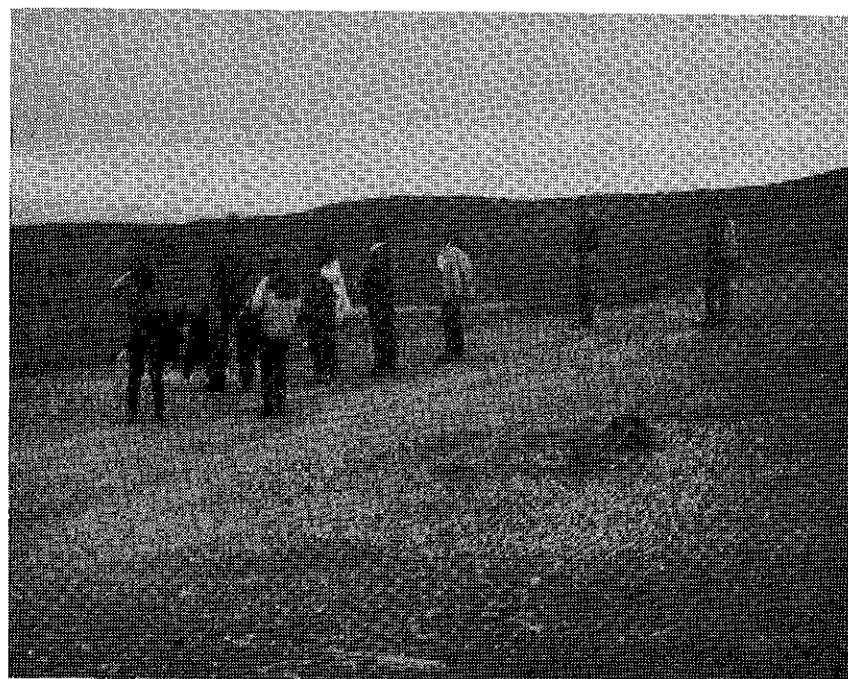
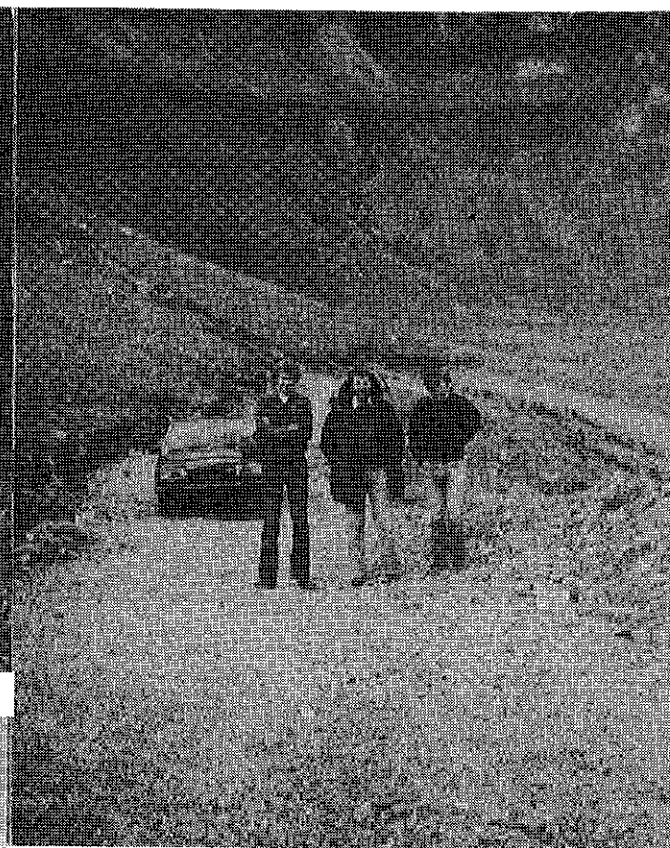
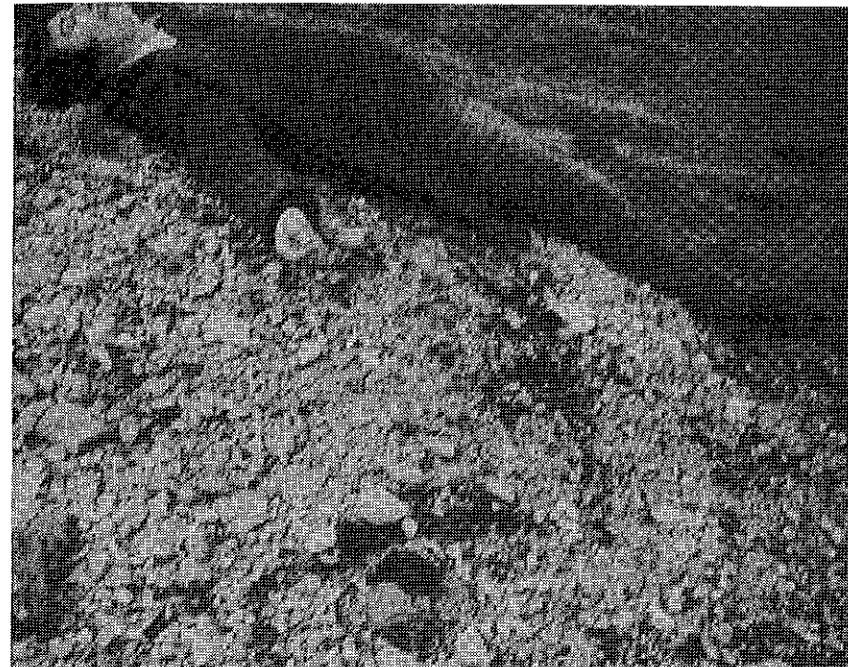
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FIELD-TRIP MEMORIES

THE DAY WE WENT TO BANGOR

Jay Shanahan

I

We left on Friday morning and we numbered 52,
It was a super weekend, God almighty how it flew.
We stood outside the Arts block on a dry and sunny day
The bus arrived, we all got on, and soon we were away.

II

The last few friends they saw us off, Paddy Duffy he did weep (he wasn't going).
John Sweeney waved goodbye, Denis Pringle was asleep,
Pronnsias Breathnach stood upon the steps, envious and in anger,
There wasn't room on Barton's Bus for him to go to Bangor.

III

We planned one stop along the route to get one bite of grub.
But Maggie Burns had other plans, we stopped outside a pub.
It wasn't for the drink nor to see an Orange Hall,
Bladder held out until Navan, then she answered Nature's call.

IV

Just under two hours later, we had to stop the bus.
This time to let off Sonja, Fran, Anne, Joe and Gus.
This company alighted in the hail and in the rain,
John whispered "Denis, Blast it, Bladder wants to go again".

V

We saw the Folk Museum on Friday afternoon,
And as we drove to Bangor, Declan Collins tried to moon,
But luckily we stopped him and said "Declan, stop and see
What might happen to us were you caught by the R.U.C".

VI

That night we all went shopping for presents, booze and grub,
John went to the disco, and left Denis in the pub.
We danced amid some weirdos with peculiar styles of hair,
Some blue, some gold, some green, some bald, some purple, blonde and fair.

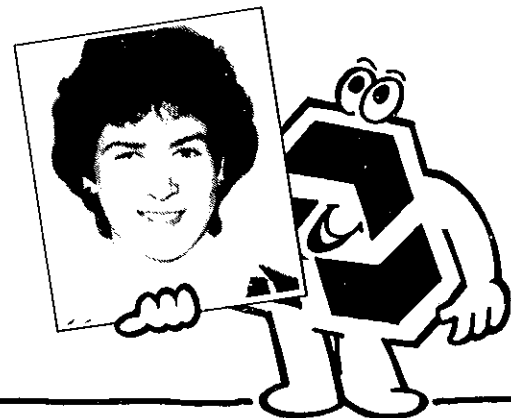
VII

The Saturday agenda was upsetting for our stomachs
We drove through drumlin country, a land of hills and hummocks.
We toured the Ards Peninsula and Peadar drove on gaily
We searched for ancient legacies — and found a mott and bailey.

VIII

Denis spoke of childhood memories and the stories that he told,
Made us weep in sorrow, to think he'd grown so old.
And later on that evening, John Sweeney had a coke,
I had a Carlsberg lager, Denis told a dirty joke.

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IX

The best was yet to follow, the Party all were high,
Jerome came in half-naked, on Peadar's head there was a tie.
John went to bed, being on in years, but Denis strode in haste,
Into the hotel lounge with just a towel around his waist.

X

We sang Jamaican music as Jim played on guitar,
While Denis moved his body and swayed around the floor.
He raised his leg and waved his arm, oh what a daring venture,
And so he grinned in sheer delight and then spat out his dentures.

XI

Joe Greenan sang the "Music Man" the locals all were game,
They imitated bomber planes "Dambusters" was the name.
And when we went to bed no one knew who had won the fight,
For "Dumpty, Dumpty, Dumpty, Dum" prevailed throughout the night.

XII

In the early hours of Sunday, we got the Master Key,
We stole into Dr. Pringle's room to attempt a mutiny.
His room was neat and tidy, so with seaweed we did soil it,
And then we swiped his shaving foam and stuffed it in the toilet.

XIII

We drove along by Stormont, thro' Shankill and the Falls,
Thro' Grosvenor Rod and Ormeau Road, and on past Orange Halls,
In Belfast city centre we heard that old refrain,
The Palmerstown Toddlers cried aloud "We want to go again".

XIV

A special thanks to Peadar who drove from start to end,
And so to John and Denis whom we all drove round the bend.
May the field trips long continue to be as good for both of you
As Bangor in November for the "Club of 52".

GEOGRAPHY SOCIETY REPORT

Jay Shanahan

By the law of averages the Geography Society should be now be a defunct organization. The seeds of disaster were sown at the A.G.M. in May, 1982, when an eminent Columban theologian, who shall remain nameless, proposed in typically nepotistic manner that a fellow Columban, one John Ahearn, be proposed as auditor for the year 1982/83. A muffled utterance from the floor was communicated, and with that, the Corkman with that prophetic beard was appointed to lead the Geography Society through the year. But if this was a travesty of justice (because Jim Walsh was ejected from the theatre shortly before), worse was to follow. Jay Shanahan was appointed P.R.O. The cringing face of Dr. Breathnach, the

moans of despair from Professor Smith, the weeping of Dr. Sweeney, the gnashing of teeth of Dr. Duffy, the indifference of Dr. Pringle, and the coronary suffered by Bishop Newman in Limerick (who was for so long a bastion of the Geographical Movement within the college) all left us with one conclusion. It would be a bad year. Post-Graduates swore they would not attend another function. Most of them kept to their oath. Even the ex-auditor, Gerard Toal felt it necessary to follow in the footsteps of his ancestors — he emigrated. But despair was blended with hope. The Sally O'Brien of the Society, Mary Harte was swiftly proposed as Secretary. Deirdre Heaneys charm in the field of financial negotiation earned her the post of Treasurer. Barbara Murray, Majella Kavanagh and Rita Kearney tipped the balance towards optimism and promise. The Department

were euphoric. Dr. Breathnach smiled, Professor Smith stopped moaning, Dr. Sweeney bought a packet of hankies, Dr. Duffy stopped shaking, Dr. Pringle remained indifferent. Bishop Newman made a rapid recovery. There was hope!

Fairs Day was a great success. Such dignitaries as Fr. Ahearn, Louis Bachy, and Kevin Barry joined the society. I don't know why. I don't think they do either. Whether by coercion or free-will, (one is inclined to believe it was due to the former) the society gained 162 members.

The first meeting was — welp it — eh! took place. A misunderstanding occurred and — well we'll go on to the second meeting. On November 11th Des Fennell and Eoghan Harris (of R.T.E) spoke on "The myths of rural Ireland". This meeting was concluded by Ciaran De Barra, Esq., who announced that whoever wanted to go for tea could go, but he was going to continue the discussion — I went for tea.

On November 23rd, Professor R. Cole-Harris lectured on "European Expansion into the North American Wilderness". This was the inaugural lecture. He also gave a seminar the following day on "Methodology in Geography". A reception was held after the first lecture.

The Christmas "Saturnalia" was cancelled as Dr. Duffy was ill and Dr. Pringle's father died shortly before Christmas.

On January 20th, 1983, Dr. William P. Warren gave a lecture on "Stratigraphic Sequences in the Irish Quaternary". Though it was an intense lecture, it was one of the most interesting of the year.

On February 9th Myles Tierney and Frank MacDonald (Property Correspondent with the "Irish Times") exchanged pointed of view on the "Land Rezoning" question.

The final lecture of the year was on "The Many Faces of Greece" and was delivered by his Excellency, the Greek Ambassador, Nikolai Macridis who was attended by his press attache Mr. Nikolas Papodakis. This was in the opinion of many, the best lecture of the year. Mr. Papodakis spoke of Greece's entry into the EEC, of Greek Heritage and Greek hopes for the future.

The more light hearted events of the year included the Geography Disco on February 3rd which was held jointly by the Geography Society, History Society and the One World Group. This proved highly successful.

The only other event of the year was a "This is Your Life" special based on

the life of Dr. Denis Pringle. It was held during Rag Week. (We would like to thank Dr. Breathnach, Dr. Duffy and Dr. Sweeney, without whom that production would not have been possible).

The only remaining function of the year was a slide-show presented by Dr. Breathnach (It is rumoured that he will interview Dr. Duffy and Dr. Sweeney shortly about the 10 years they spent together studying to be Trappist Monks, but this has not been confirmed).

Due to space, I cannot elaborate here on the content of the public lectures, but I have no doubt that the Secretary has compiled a lengthy detailed account of what was discussed. Finally I would like to say a special word of thanks to all those who helped the Geography Society survive during the last year, particularly Barbara and Rita who did so much to organise the refreshments after the lectures. A special word of thanks must also go to Dr. Breathnach for his help in organising the meetings.

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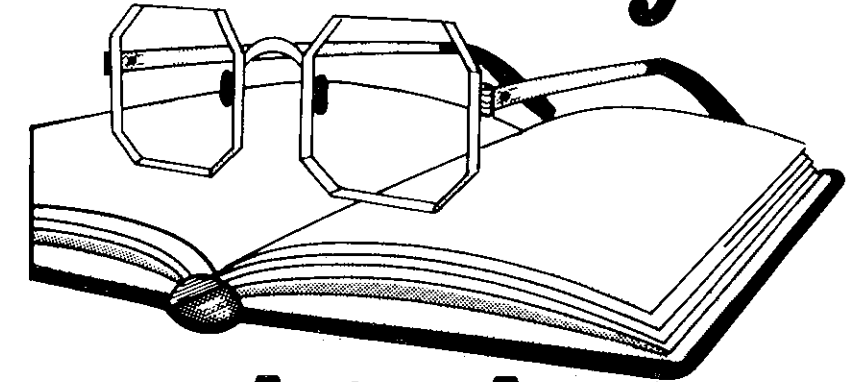
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THE ROLE OF IRISH MIGRATION IN THE DEVELOPMENT OF INDUSTRIAL CAPITALISM IN BRITAIN AND NORTH AMERICA

Bob Kenny, Post-Grad

Migration is one of the most important factors in the study of population dynamics and has been a recurrent feature throughout history. Reasons for migration vary through time and space, but generally people(s) migrate in search of a better life if their original home area has become inhospitable due to war, famine, persecution for beliefs or general lack of economic opportunity. If people see that another area offers better prospects they may well decide to go there. However, migration is not always permanent, it is quite often temporary with the migrant retaining links with the home area and hoping to return at some stage in the future. In the present day, much migration on a national scale is permanent — due to improvements in communications it is easier to return periodically to the old area so that contact need not be totally broken. On the international scale much migration is of a temporary nature, especially that of poor unskilled workers into the advanced capitalist core areas such as the U.S.A. and much of Western Europe. In the post-war period these areas have experienced economic expansion such that they don't have enough indigenous workers to fill all the jobs needed to keep their economies ticking over. In times of expansion in the core areas migrant workers can be attracted in from the peripheral areas where there is vast unemployment, and in times of recession they can be sent back to their home countries. This saves the core countries the cost of their upkeep if unemployed and as such they are a vital lubricant in the Western Capitalist system.

However, not all migration which has served the interests of capital has been of this nature. To illustrate this statement, a study of migration from Ireland will be helpful. Everyone is aware of Ireland's long history of emigration and most date it to the time of The Great Famine of the 1840s.

This ignores two other important movements from Ireland which occurred before that disaster induced diaspora. The first of these was the movement of the so-called Scotch Irish from Ulster to North America in the eighteenth century, and the second was the movement of seasonal migrants from the western parts of Ireland to Britain in the early part of the nineteenth century. The latter has close associations with the later Famine and post-Famine migration, and this link will be dealt with later.

The Scotch Irish were the descendants of the Scottish Presbyterian settlers who began to come to Ulster in the sixteenth century, but who came in large numbers from the seventeenth century onwards, closely connected with the Plantation efforts of the British government. Why did they leave Ulster for America at a time (i.e. Eighteenth century) when emigration was not a feature of Ireland in general? Being immigrants in Ireland they may have been more prone to emigration but this is not an adequate explanation. The guiding motivation in most cases appears to have been economic — they had come to Ireland in the hope of economic betterment, and as this eluded many of them it appeared that America, the land of opportunity, was the ideal place to go to. As Presbyterians they were, like the Catholics, discriminated against by the government, thus religious reasons provided a useful badge for emigration. However, the economic motivation is shown by the fact that the emigration occurred in waves, each of which coincided with economic depression in Ireland. For instance emigration reached a high point from 1770-74, at which time Ireland was experiencing agricultural depression and in Ulster many leases were coming up for renewal at higher rates. Thus emigration took place mainly to avert a decline in living standards

and economic reasons became progressively more important as the eighteenth century continued. Outside factors also intervened. Emigration agents such as ship-owners and merchants had a vested interest in getting as many people to go as possible and, along with land promoters, they did their best to excite in people an interest in emigration. Most emigrants aspired to owning their own farm and this was certainly possible in the America of the eighteenth century, which was still a frontier country with plenty of land available.

Why did the Presbyterians emigrate rather than Catholics or Anglicans? The latter group were not discriminated against on religious grounds so they had less reason to emigrate than did the Presbyterians or Catholics. Why did the Catholics stay? This is a difficult question to answer fully but part of the reason may be in the individualism of the Protestant ethic — America still being a frontier country with land as the main source of wealth, people would have had to live in quite remote areas if they were to get land, and this would not have appealed to Catholics who favoured a strong sense of community. Also the Presbyterians were prepared for this sort of life in an alien environment by their experience in Ulster, where they were the unwelcome outsiders, and had to be constantly vigilant against attack by the natives. These factors may have provided the necessary psychological impulse.

Another important factor was that agriculture in Ulster was not as well developed as in the rest of the country, thus it was more difficult to make a living from it. That said the linen industry was well dispersed in cottage-form throughout Ulster, and this meant that Ulster farmers would have the ready capital to enable them to emigrate, buy a plot of land, and survive the first year until the

harvest. Those who couldn't afford the passage could go as indentured servants and eventually hope to own their own farm. This could be ascribed to the deferred satisfaction of the Protestant ethic.

As many as 250,000 people may have emigrated in the period 1718-75. A ready source of shipping was available in the form of the vessels that brought flax seed for the Ulster linen industry from America. Emigrants helped fill ships that would otherwise have been almost empty on the return journey to America. The fares paid no doubt helped the growth of merchant interests in Ulster, and may have made more money available for investment in the linen industry, for which Belfast was to have a worldwide reputation.

It is in its effects on America that this emigration becomes most important. Emigration was largely by family groups, and these were essential to populate the frontier. The frontier life required rugged independent types who would be prepared to put up with hardship and privation in building a better life for themselves. The Ulster Scots fitted this bill, as did the Germans who arrived at around the same time. The frontier had to be tamed and extended if America was to become prosperous. This would give her access to more agricultural land on which surplus could be grown to support later urban industrial populations. She would also get access to more raw materials necessary to build up industry and finally if her frontiers extended, she could support more people, and thus have a larger market for the consumption of manufactured goods. Thus the role of energetic, frugally living people such as the Ulster Scots was vital in paving the way for America's later self-sustaining industrial growth. Their Protestant ethic helped form the moral/intellectual basis of this growth.

Another important contribution of the Ulster Scots was their skill as craftsmen. Many had engaged in domestic industry and skilled

craftsmen were needed if America was to develop industrially. This was seen by Alexander Hamilton in the late eighteenth century, and

although his plans for actively attracting artisans came to nothing the thought was there. The British government saw the dangers of competition if artisans were allowed to emigrate, and a number of laws were passed in the 1790s and 1800s, aimed at curbing their emigration. Thus it becomes obvious that the Ulster Scots played no small part in helping the development of American industrialisation, albeit largely indirectly.

The aforementioned anti-emigration laws significantly reduced the emigration of Ulster Scots in the early part of the nineteenth century. It was easily overshadowed by the development of the next significant movement out of Ireland. Unlike the permanent Ulster Scots' migration, this was temporary and took place from the subsistence agricultural areas of the West of Ireland to commercial agricultural areas of the South East of Ireland, and especially of Britain. This emigration was caused largely by the development of Capitalism itself, as well as aiding that development. It began with the development of Capitalist style commercial agriculture, which through enclosures and land consolidation, rendered many labourers and small farmers superfluous. This process was really speeded up by the collapse of wheat prices following the Napoleonic Wars which meant that arable land was now turned over to more profitable livestock-farming, needing fewer labourers. Many of the newly unemployed/underemployed found a safety valve in seasonal migration to the commercial agricultural areas of Britain, from which large sections of the rural population had already been forced into the new industrial cities by earlier enclosures and land consolidation. These people joined the reserve army of labour for industry, but at harvest time British agricultural areas needed

more labourers. These came from the subsistence areas of Britain itself and from the West of Ireland. In this way Irish migrants were indirectly part of the British reserve army by being available seasonally to help produce the food that kept industrial workers fed. When the harvest was over they could be sent back home to Ireland, there to subsist, with the money earned, on small plots of land until the next harvest. Until 1820 the movement was only a trickle, but with the introduction of the steamship, it became a flood e.g. 6,000 left in 1820, 60,000 left in 1841. Most migrants to Britain came from Galway, Leitrim, and Sligo, while those from Kerry and Cork went to the East of Ireland — the division was not between Ireland and Britain, but between the subsistence and commercial sectors of the same Capitalist economy.

This movement had a number of important consequences. As mentioned above, it kept the British economy ticking over, but it was important for Ireland too. It created a vital informational link with Britain — people were aware of the 'opportunities' there when the Famine forced them to leave Ireland in large numbers, and permanently. Migrants also brought back cash with them which enabled rural Ireland to become capitalised. This provided a ready market for British consumer goods and so further helped that country's economy. The migrants went singly and temporarily so that Britain did not have to bear the costs of keeping families the whole year round after work had run out. It also defused possibilities of unrest in Ireland by guaranteeing large sections of the rural unemployed work for at least part of the year. This meant there was less pressure on the government to help the peripheral regions, which suited the 'Laissez-Faire' philosophy of the period. The whole movement shows in microcosm the balance between the two sections of the Capitalist economy — the existence of a subsistence periphery being essential

to the success of the core.

The final stage in the evolution of Irish emigration resulted from the final collapse of the old agricultural economy, brought on by the failure of the potato crops between 1845 and 1848. This meant that the large numbers of superfluous labourers and small farmers were left without their basic food supply, and with the government's Laissez-Faire attitude providing it with an excuse to take no remedial action, the only options were to get out or starve. This led to a rush to get out of the country, especially from the western areas, and by 1850, about 2 million people had gone to the U.S.A. and Britain. Catholic Irish emigrants had been going to both countries, but in small numbers. The new emigration now led to a mass of property and skill-less people arriving in both, and being immobilised in the ports of entry by their poverty. They crowded into slum dwellings and soon formed ghettos, taking whatever work they could get and thus forming part of the reserve army in both Britain and the U.S.A. In the case of Boston, this sudden influx of a cheap workforce helped that city to industrialise, while in the case of the U.S.A. in general they were extremely important in allowing transport and other infrastructural requirements of industry to be built at cheap rates. The pattern of the previously non-industrialised Boston was repeated in cities along the North Eastern coast of the US, and helped the further development of pre-existing industry in Britain. The Irish were prepared to take the more menial jobs which natives would not take unless they had to. It was also possible to stir up native racist feelings against them and thus help to keep the working class divided — in America they occupied the position now held by the Blacks and Puerto Ricans.

In this way, the Irish played an important part in keeping the industrial system going, and in some cases their presence helped initiate it. In the British context,

their movement was just a part of the general trend of movement from the country to the cities, occasioned by a decline of jobs opportunities in the former. Many of the emigrants to Britain later went to America, another trend which was occurring in British migration. It has often been asked how it was that the Irish adapted so easily to urban life, but most of those who went had not been farmers in the generally accepted sense of the word — they had been labourers or small holders with little experience of agriculture. Thus they probably wouldn't have been able to survive even if they could have afforded to buy land in America. Also they were probably sick of rural life as their Irish experience had shown them nothing but misery. A further factor was that with their sense of community, they would not have liked rural life in America due to the isolation it involved. Basically it was a case of a rural proletariat becoming an urban proletariat.

This emigration was to allow the survival of the economic situation in Ireland whereby it remained an agricultural country producing food for the British industrial market with the West surviving as a subsistence area from which Britain could draw workers when needed. It also got rid of the superfluous population and allowed further rationalisation of agriculture. Emigrants' remittances played a highly important role in the survival of the West up into the present century, and provided a market for consumer goods. This helped tune the West into the consumption patterns of an industrial society and forged another link between the core and the periphery. Since independence, the continuation of emigration has reduced pressure on successive governments to pursue policies aimed at creating full employment. The opening up of Ireland to foreign capital in 1958 has gone a long way to reducing the level of emigration, with foreign capital coming to where the workers are, rather than vice-versa. However, this is more to take advantage of

relatively cheap labour and access to European markets than anything else, although some will maintain that corporate executives with Irish roots may feel a special desire to locate a branch plant in the 'old country'.

Thus the role of Irish emigration in the development of industrial capitalism has been considerable. The Ulster Scots indirectly helped pave the way for the development of industry in America by extending the frontier and bringing skills with them. The seasonal migrants helped keep British agriculture, and hence British industry, going, as well as paving the way for later emigration. This Famine and post-Famine emigration was extremely beneficial in providing large reserve armies in both British and American cities. It also allowed Ireland to concentrate on commercial agriculture to feed the industrial workforces of Britain. Emigrants' remittances were essential in keeping alive the subsistence economy of the West of Ireland, and also in providing a market in that periphery for goods produced in the core areas. Ireland was by no means the only country involved in these processes but has definitely been one of the more important, although her position has been overtaken by Southern European and Latin American peripheries.

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SOIL TYPES IN IRELAND — DISCUSSION AS TO WHETHER PARENT MATERIAL IS OF MORE SIGNIFICANCE THAN CLIMATIC PROCESS

Padraig Gallagher

Climate was once regarded as the principal and dominant factor in differentiating soil types. Although climate is still recognised as a major influence on several processes and stages of soil formation it is no longer regarded as the central ground which all pedogenic processes and soil classifications must revolve. It is fair to say however that climate is probably the most ubiquitous of all soil influencing factors for the way it is involved in the various processes of soil formation and destruction. In a search for the predominant influence on soil type it is doubtful that parent material even, constitutes the answer. Climate and parent material do certainly have a major role to play in the differentiation of soil types but it is important not to isolate them from other equally important factors namely vegetation, relief or topography, time and of course the all important impact of man. Seen in this way, soil is a dependent variable in many other independent or partially independent variables. As Cruickshank points out the soil-forming factors are not mutually exclusive and do affect one another as well as the soil product.¹ Thus soil can be regarded as the integral of these environmental processes within a specified time limit.

With this in mind we can return to our treatment of two individual factors of climate and parent material in the Irish context. Variations in the climate of Ireland are not extreme enough to be the sole reason for variations in soil type in the country. Thus other factors come into play and due to occasional interaction and interdependence between these factors it is often difficult to isolate the singularly most important factor in soil formation.

The two main processes at work in soil: weakening and pedogenesis can be considered parallel and interdependent. The rate of change in each is different of course but they have much in common and they both have the same starting point: parent material. The mineral composition of parent materials influences the products of physical and chemical weakening and these have a role to play in pedogenesis. While climate is the major control on these processes we are not short of examples within Ireland where parent material (be they of a bedrock nature or transported) differences account for much of the spatial variation in soils. The mineral composition of the parent rock or trans-

ported deposit is a major control on physical and chemical properties of the soil. In Ireland soils often developed on previously weakened material which have not been transported by ice. In such cases transportation has interrupted the process of weakening and provides a new deposit for soil profile development.

A casual look at any world map of the distribution of soil type will show the whole of Ireland as having brown earth soils. Obviously this is not so. The soils of the mountains are very different from those the lowlands, whilst those of the drumlin belt lets say in Leitrim have little in common with the soils of the Burren. Clearly on a map of world soils it is not possible to show local variations within a zoned belt. As Ireland has a temperate Oceanic climate and a natural vegetation of deciduous woodland so the brown earth is the most likely to be developed. However the portion of Ireland on the extreme western fringe of North-West Europe means that the climate is excessively humid. Podzolisation is therefore a very important process and the soils might just as well be classified as podzol as brown earths. In effect Ireland is a marginal area between those great soil groups. A soil map of Ireland will however reveal six main soil groups which are a) Acid brown earths b) Podzolised Brown Earths c) Gleys d) Shallow brown earths e) Peats and peaty soils f) podzols.

To understand these various soils and why they have developed we have to return to the fundamentals of soil formation. The basic soil type in Ireland is the Brown Earth but locally this has been modified to produce other soil types by the processes of i) Gleying to produce gleysoils ii) Podzolisation — to produce leached soils or podzols iii) Impeded humification — to produce histosols (peats). In an area of true brown earths none of these processes would be operating to any marked extent. Therefore many of Ireland's soils must be in intrazoned or azonal. Climate and parent material play a major role in the above processes.

Gleys are found extensively in rainy areas underlain by an impermeable rock such as shale, or more locally in hollows or on heavy clayey glacial deposits where drainage is poor. Gleys also dominate in some river valleys and around the edges of some lakes such as Lough Neagh and Lough Erne. The soil structure in these areas is generally

closely packed and of a well cemented type which tends to impede or even totally halt the downward movement of water.² Such parent material as is responsible for the formation of such heavy clayey structures is often rich in feldspars and mixes minerals which weaken at differing rates giving rise to various other clay forming materials. Much of lowland Ireland is deeply mantled with such glacial parent material which is frequently clayey in texture due to its derivation from shales and limestones. Texture of this parent material and the lack of relative relief in for example the central drumlin belt contributes to poor land drainage and soil gleying. Although played soils are common and widespread in the central lowlands, they are greatly fragmented and mixed with grey-brown podzols so that it is difficult to map over as any but the largest scale.⁴

Podzols occur in the upland areas of counties Cork, Mayo, Kilkenny, Tyrone and in many other areas. True podzols are restricted to very acidic parent materials such as shales, granites and sandstones and to regions of heavy rainfall. In these areas of podzol soils the influence of parent materials and climate can easily be seen. It is to all intents and purposes impossible to say which of these two factors is the more important as one could not proceed without the other. The acidic parent materials of granite, sandstone and shales give rise to sandy permeable soils which allow the climatically governed processes of leaching and alluviation to take place and influence the soil-profile. Neither climate or parent material on its own would be sufficient enough in its impact to form podzols. This general theme in the differentiation of soil types in Ireland must be kept in mind i.e., that no independent factor is totally responsible for soil-type differentiation rather it is an amalgamation of many inter-dependent factors which is responsible.

There are three types of peat found in Ireland — upland or blanket peat, lowland or basin peat and poor peat. In each case the peat has developed because organic materials (plant remains) have accumulated at a greater rate than humification could occur. They are really soils which have been developing for the past two thousand years or so. The role of climate and parent material here is interesting. Parent material has little or no role to

play in the formation of peat soils as the peat is an organic soil with little or no relation even with underlying bed-rock. The mineral composition of such soils is vastly overshadowed by its organic context. Climate however tends to play a greater role. Peats of various sorts are related to site wetness which can be produced in several ways. It can be caused by ground water in depressions. If the climate is wet enough, this leads ultimately to the formation of raised bogs growing on top of the earlier silt or organic refilling. The main role parent material plays in peat formation is one of impeding drainage (similar to that of the gleying process). The gleys and peat soil are often found in the same areas especially basin peats which often lie between glacial mounds of sands and gravels. Such soils are generally categorized as peaty gley.⁵

Brown earths in Ireland occur in three main types. On the limestone of the lowlands of central and Eastern Ireland and on calcareous glacial drift. Elsewhere a leached (podzolised) brown earth has developed. They vary considerably in quality due to the variations in the glacial drift parent materials from heavy to light and workable. They often have a uniformly brown profile and are neutred or slightly acidic. On more acidic parent materials such as sandstones and granite, acid brown earths are developed. They require regular liming to maintain fertility. Again they are often podzolised to some extent reflecting the pervasive influence of climate. Rendzime soil or shallow brown earths are characteristic of the Burren, parts of east Galway, Roscommon and some of the limestones of Fermanagh. Although they are fertile soils they are usually too shallow, and stony to be of any great value in agricultural terms. As brown earths bear a close relationship with their parent materials they are not necessarily brown in colour. Red marls and red sandstone develop brown earths that are often uniformly red or reddish brown. A gradual decrease of organic matter down the horizon, decay and incorporation being encouraged by the creation of the soil, contributes to its uniform appearance.⁶ Climate is largely responsible for the uniform soil profile of the brown earth soil group but in no way can it be said that climate is the sole reason for the creation of such a soil.

It has been suggested that parent material is the most important environmental factor in soil development, elsewhere the same has been attributed to climate. It has even been hypothesized

in the context of Northern Ireland that the soils here are of an immature state of development and thus strongly reflect the characteristics of their parent materials.⁷ Cruckshank believes his conflict of interpretation derives from confusion between weakenings and pedogenesis.⁸ Because soil parent materials have reached only a youthful or immature stage in weakening in the twenty or thirty thousand years since the Weichsel ice sheets covered two thirds of Ireland it is thought they must closely reflect the mineral composition of their derivative rocks.⁹ Pedogenesis is clearly influenced by weakening, but not exclusively so for as mentioned earlier the development of soil variations is a compound process.

Climate as a soil forming factor in a relatively small area, is expressed mainly through spatial variation of excess annual precipitation and the temperature regulation of weakening and organic decay.¹⁰ Temperature, wind, humidity and other climate elements are important in the measure to which they influence average excess precipitation over the normal means of moisture loss from the soil.

Perhaps I have been guilty in this paper of avoiding the main question:— whether parent materials are of more significance from climate process in differentiating the soil types in Ireland. Many have become caught up in this argument which as a rule is non-practical research etc.) is never seriously productive. Personally, I prefer to avoid the question altogether and treat the two processes as part of a compound process which includes many more equally important factors. Man's impact on the soil and the environment has largely complicated our picture and the lack of what we could call a naturally formed soil, clouds the picture even more. In certain individual cases one factor might be dominant but only in the short-term as processes tend to change and even out with time. It is a grave simplification of soil processes to over-emphasise the impact of one individual factor at the expense of another especially when dealing with such a wide context as soil differentiation in Ireland.

It is probable that soil parent material variations are greater in Ireland than the spatial variations of climate. If this is taken to be true it could be seen to be a basis for the argument that parent material could have a greater influence on soil diversification that climatic but this is debatable.

Finally it remains to be said that the traditional interpretation of climate as

being the most important soil differentiating factor has largely been replaced in the last few decades of pedological thought. It has not been replaced by any individual factor but more emphasis has been placed on the role of the numerous soil forming factors (including parent material and climate) which together operate to produce an almost infinite number of possible soil individuals. Such soil forming factors operate over the two dimensions of time and space.¹¹ Thus the nearly infinite variety of soils that exist over the earth is always changing with time because the soil forming factors also tend to change over time. Thus in Ireland if parent material as a whole is of more importance than the climatic process in differentiating soil types at the present it is liable to change and alteration, and in any case its spatial dominance is limited. There will always be exceptions, large and small making generalisations impossible. In differentiating soil types in Ireland if allowed to treat factors individually, I believe parent materials to have their greatest influence in the development of a youthful soil but with time change occurs. Parent material can never be the sole influence on soil as there are many other processes. With this in mind how can we isolate two individual components of a larger compound process, put them in an artificial context and debate over which has the greatest influence on soil differentiation. We don't even isolate the context to a small area but we attempt to resolve this non-productive conflict with regard to the soils in Ireland. The principal parent materials of Ireland are distributed in extensive and continuous units providing the basis of distinctive soil forming regions but no more. The interval variety of soils in each does not support the concept of parent material as the dominant factor in pedogenesis. Parent material has little to do with the actual development of a profile in soils except in its contribution of minerals.

I avoid totally the question whether parent material is of more significance than climate process. Both are individual factors in a much wider compound process of soil development and differentiation.

NOTES

1. "Soil Geography", J.G. Cruckshank, p. 32.
2. Ibid. p. 37.
3. J.G. "Soil Geography" p. 57.
4. Ibid. p. 247.

5. J.G. Cruckshank, "Soil Geography", p. 246.
6. J.G. Cruckshank, "Soil Geography", p. 117.
7. L. Symons "Land use in N. Ireland", Chapt. by McConaghy & McAllister Soils pp. 93-108.
8. "Irish Geographical Studies" "Soils and Pedog in the North of Ireland" by Cruckshank, p. 90.
9. Ibid. p. 90.
10. Irish Geographical Studies essay by J.G. Cruckshank, p. 93.
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THE DYNAMICS OF GROWTH IN THE IRISH URBAN SYSTEM

1971-81

Padraig McKenna

Until the preliminary reports of the 1980 census became available, it was difficult to ascertain if the disparity in the rate of growth between the smaller and larger towns, and between those close to Dublin and those in the West, had evened out. This difficulty has been treated evidentially by the findings of the '81 census, and in the nature of things, the results re-affirm the trend of very rapid growth of the towns within the Dublin functional area. What one is dealing with in this decade could loosely be described as a process of change and continuity. Change in the sense that before 1971 increase in 'Aggregate Town Area',¹ was confined to Leinster, and since then each area has shown an increase in its 'Aggregate Town Area'. Continuity in the sense that there is a pronounced disparity in the 'Aggregate Town Area' for Leinster as opposed to the other three Provinces. From the 1981 census there are 2.6 towns people in Leinster for every one rural. In Ulster (three counties) there are .2 towns people, in Munster 8 towns people, and in Connaught .3 persons for every one rural.²

With the generalisation of change and continuity, what are the processes and trends at work? With regard to change, the first thing which can be said is that the percentage of total population living in urban areas has increased again. In 1971, 52.2% of the population was in 'Aggregate Town Areas' an increase of 7.7% on the 1966 Figure, and in 1981 this figure had increased to 55.6%. Secondly, a high rate of urban growth has diffused down the urban hierarchy and to the more peripheral regions and smaller centres. Consequently, it is not surprising to find the percentage change in the population of Letterkenny having increased by 44% in the period 1971-81. However, this remark has to be further qualified by saying that there is a marked difference in the percentage change in the population of smaller and larger towns. The percentage change in the population of Navan town in the period 1971-81 was 63% while a more meagre figure of 4% was recorded for Ardee in Co. Louth.

A third point is that there is a difference between the percentage population change recorded from within and from without the legally defined boundaries of many towns. In county Dublin (excluding Dun Laoghaire Borough and the County Borough), there was an increase

of 90% in the "Aggregate Town Area" population, and in the counties adjacent to Dublin with increases of 84%, 69% and 44% for Kildare, Meath and Wicklow. In Munster, counties Cork, Limerick and Waterford (excluding the county borough areas), all showed large increases as did Clare. Growth in town population in these counties is at the exclusion of the County Boroughs where they exist, and in the smaller towns at the exclusion of the 'Urban District'. Therefore increase in 'Aggregate Town Area' is characterised by the rapid growth of suburbs and town 'environs' in the last decade.

On the other hand, what are the trends and processes occurring in the continuity I spoke about earlier. The towns with the greatest growth are mostly in the census areas on the perimeter of Dublin and Cork and in Shannon Town, (cf. Figure 1). While this is so, and while the growth of Cork's environs and Shannon town might suggest a lessening of Dublin's primacy, there is a pronounced disparity in the rate of growth of those towns close to Dublin. The proper focus of this question is to ask which towns are growing fastest, and the trend here seems to be those in the Dublin functional area, e.g., Leixlip and Celbridge. The percentage change in the population for Leixlip is the period 1971-81 was 285.5% as compared with Shannon town which was 117%, or Naas which was 64%, and had in 1981, 961 less people than Leixlip. Within the processes involved in this pattern of change and continuity, it is possible to begin to understand the dynamics of growth in the last decade. The percentage change in the population of each town (including suburbs or environs) with a population of 3,000 or more is given in Table H of the introduction to the 1981 census. Figure one represents this data diagrammatically.

The most obvious feature of this table is that the population of every town increased in the period, 1971-81. Certain features have to be taken into account when this increase is being considered. On study of the growth of these towns in Table H, it will be found that percentage change in the population of these towns is more a function of the extent to which growth took place inside or outside the legal boundary, than of the amount of increase as such, even where this is significant. Take the town

of Newbridge for example. The figure given for its percentage change is 66.3%, though the breakdown of this figure is interesting. The population of the Urban District rose from 5,053 in 1971 to 5,758 in 1981, a percentage change of 14.4%. However, the population of the 'environs' of Newbridge rose from 1,391 in 1971 to 4,936 in 1981, a percentage change of 254.9%. An overall percentage change of 66.3%. The same is repeated for many other towns. In Navan town while the population of the U.D. decreased in the period by 10.4%, a massive growth of 216% in its 'environs' gives an overall figure of 63.1% for percentage change. On the other hand, take a town like Tipperary with apparently very little growth outside the Boundary and the figure for percentage change is much smaller 8.4% in fact.

In Figure one, there are nine towns falling into the 0.10% category. Growth in these towns, like Ardee and Ennis-corthy may be regarded as sluggish, suggesting that what we see happening is perhaps a contraction of household structure in the town. The population increase in these towns is less than the increase in total population (10%), and births are exceeding deaths by a thin margin. There is a noticeable absence of lower order percentage change in the towns in the West, suggesting that these centres are still heavily dependent on the agricultural sector as market towns, and have limited diversification of industry.

The population increase in the 10-20% category is of the same order as the increase in total population for the period (16%), and indicates that these towns are holding their own. It appears from Figure one that this is a more representative grade of change in the system than either one or three. However this grade has a spatial bias as can be seen from figure one. This grade has a diagonally-Eastern preference, running from Monaghan town almost direct to Killarney. Within these confines it is more dispersed than the 20-100% category it is perhaps more representative of Urban growth than any of the other categories for the decade.

It has been assumed that "urbanisation expresses the growth of towns at the expense of the country side."³ While Leitrim and Roscommon showed a marginal decline in their "Aggregate Rural Area", the overall Aggregate Rural Area population increased in the

period by 10%. It is unlikely that the rural-town transfer is as important as it was up to 1971, in constituting a rise in town population. We have to look elsewhere for this.

Inevitably, the growth of many towns can be traced to their roles in the overall urban system. This system is one of dispersed service and administrative centres and the most recent growth continues to emphasise the importance of these functions.

One factor encouraging modern urbanisation in the world is the increasing proportion of the population of the technically advanced countries employed in tertiary occupations. This sector included a wide variety of jobs, many of which are found in urban settlements.

Take the county towns of Monaghan, for example. Given the development that there has been in the service sector, and from 1971 in particular, how has this effected the growth of the town?

In the period 1971-81, there was an increase in the population of 916 people in the U.D., and 46 people in the 'environs', a total of 962 people. One cannot be specific about who constitutes these Figures in the Urban District increase, whether they are young families who have established themselves or the important number of young single people living in flats in the town.

With the increasing participation of Government in National life, it is not unusual to find civil service and local government positions being filled from outside the country. The same is true for the banks. Positions tend to be filled as they arise, and one gets young single people living in flats, as yet not of house owning status. The largest figure for immigration is a result of the number of people who have settled in the new Housing Estate of Rossmore, many of whom have fled from Northern Ireland and many are unemployed.

Because of recent immigration the population of every town contains a higher than average proportion of people of fertile age. Some of these are like those above, who have settled there mainly in County Council housing, or there are those people involved in the service sector like Teachers and Gardai.

Those involved in the tertiary sector also provide centralised goods as well as services. While Government policies treat every town in the state as a growth centre, new industries have not radically altered the balance of the urban system, and the system maintains the service function of Irish towns.

It is difficult to estimate the import-

ance of these services on the growth of individual towns. With rising living standards, greater population density has had a strong influence on the development of the face of some towns and industry has been attracted likewise to more central places. Perhaps towns in the 20-100% category are a better indicator of the overall health of the system. While these towns stretch over the country from Tralee and Letterkenny in the West to Dundalk and Arklow in the East, one is left with an impact of largely eastern concentration (fig 1).

While, in some cases these towns may have been small to begin with, as in the Dublin area or around Cork, the remainder have a strong pedigree. Towns like Galway and Longford, Kildare and Kilkenny are well established towns, in areas of higher population density than many of the towns in the 10-20% category. The County Borough of Dublin, and the other counties Boroughs that I have listed provide an exception to this growth.

While new industries and a changing economic base have not radically altered the balance of the Urban system in general, there are exceptions. Take Navan town, here is an example of a town which has changed in response to changing economic conditions. The Tara Mine project and the demand for ore on the world market have been in part responsible for the growth of this town. Monaghan town had a headstart in 1971 of seven hundred people, yet it finishes up a poor second in 1981, almost five thousand people behind!

In this category (20-100%), growth has been higher than average, though it has also been selective with few mineral resources in the country, there are no towns besides Navan which has had this impetus. Foreign investment tends to follow the leader and hedge its bets in a favourite location. A location where skills are available, such as in the Limerick-Shannon region with the NIHE College providing the manpower. Outside of these major regions the employment contribution of most of the industrial components is small. The local industries which the IDA are providing are small concerns, with an increasing emphasis on native industries, and are aimed at maximising the number of people in rural areas by providing greater non-farm employment opportunities.

What it has done in some cases has been to raise false expectations, as in the recent case of the Field Crest plant in Kilkenny. This shining new plant

built many dreams, metaphorically as well as in reality. Foreign investment has not as a whole done well in this decade, given that it has had optimum locational advantage in most cases, and not a small share of dizziness from being dangled the financial carrot!

At the other end of the scale, the towns with the greatest growth were mostly in the east. The most spectacular example is Leixlip which has gone from a population of 2,414 in 1971, to 9,306 in 1981, an increase of 285.5%. It now has nearly three times as many people as Cavan town (3,240), which has been there since before the Ulster Plantation. Since 1901 the population has increased by 589%. Some of the towns close to Dublin were small to begin with, and the high rate of change must in some cases be interpreted with caution. Nonetheless, an increase from 2,414 to 9,306 is unprecedented and means that this town and others have in fact populations higher than their functions.

Before 1971, the growth towns were Clondalkin and Swords. Now the counties adjacent to Dublin continue to experience substantial increase in populations, reflecting the movement away from the city centre. Increase in the cost of land in the inner city and the contraction in the availability of land nearer the centre has led to this movement. And with the growth in these functional towns there has come about a social diversity in their character. For not only is it true that people are forced to avail of this housing for financial reason, there are those also with a genuine desire to live in 'rural' areas and are financially capable of doing so.

One would expect that with the greatly enlarged population which Leixlip has that it should be able to maintain higher order function. On the contrary, the town of Leixlip is in fact without higher order functions, and can boast of at most two public houses to its credit. Leixlip, and to a lesser extent Maynooth and Celbridge, are dormitory towns for a population which works and shops mainly in the larger city nearby. They are functional suburbs rather than towns, and the lack of high order functions is a reflection of rapidity of development.

In conclusion then, the most dynamic growth in the Urban system in the period has been largely confined to the Dublin Functional area, and to the larger towns, more dispersed and in areas of greater population density. These towns in the 20-100% grade have benefitted from the rising standard of living, and their central nature continue to provide the threshold on which more

higher order functions can operate. This is reflected in the changing face of many towns and the taking over by retail concerns of what were largely residential streets in many towns. However, despite new industrial components, many towns in the three categories associated with service functions still retain their service functions. Either as retail outlets or increasingly as administration areas. So that while the decade has seen the growth of every town in the 3,000 plus bracket the growth has been uneven. Conceived of within a system the growth has not been very systematic, rather has there been change and continuity, with any selected town depending to a large extent on its continuing role in the overall urban system.

FOOTNOTES

1. For purposes of compilation of data for census purposes the country is divided territorially, the main distinction between 'Aggregate town' and "Aggregate Rural" areas. Any cluster of over 1,500 inhabitants is considered to be an urban area while the population residing in all areas outside clusters of 1,500 or more inhabitants are classified as belonging to the aggregate rural areas.

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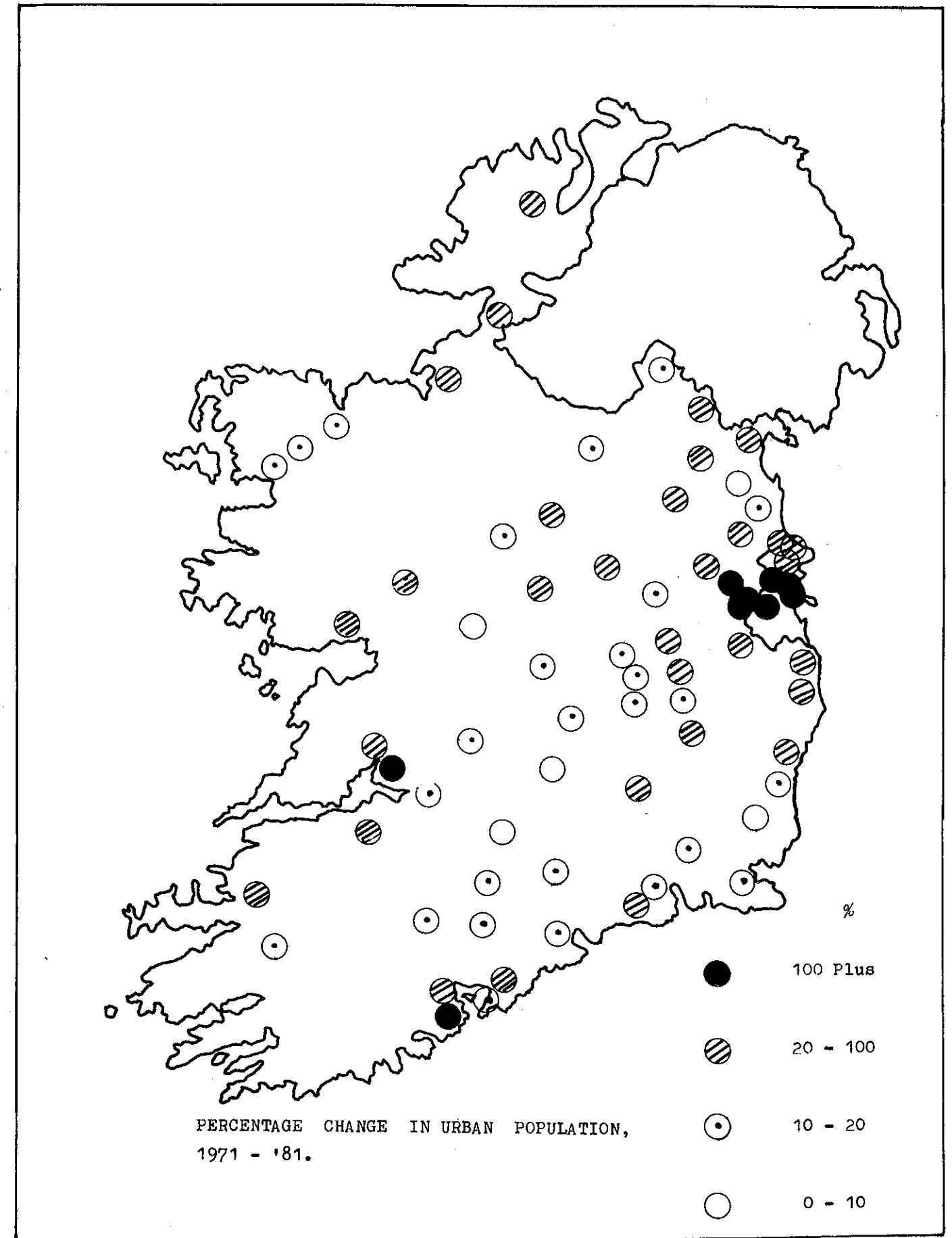


Fig. 1.