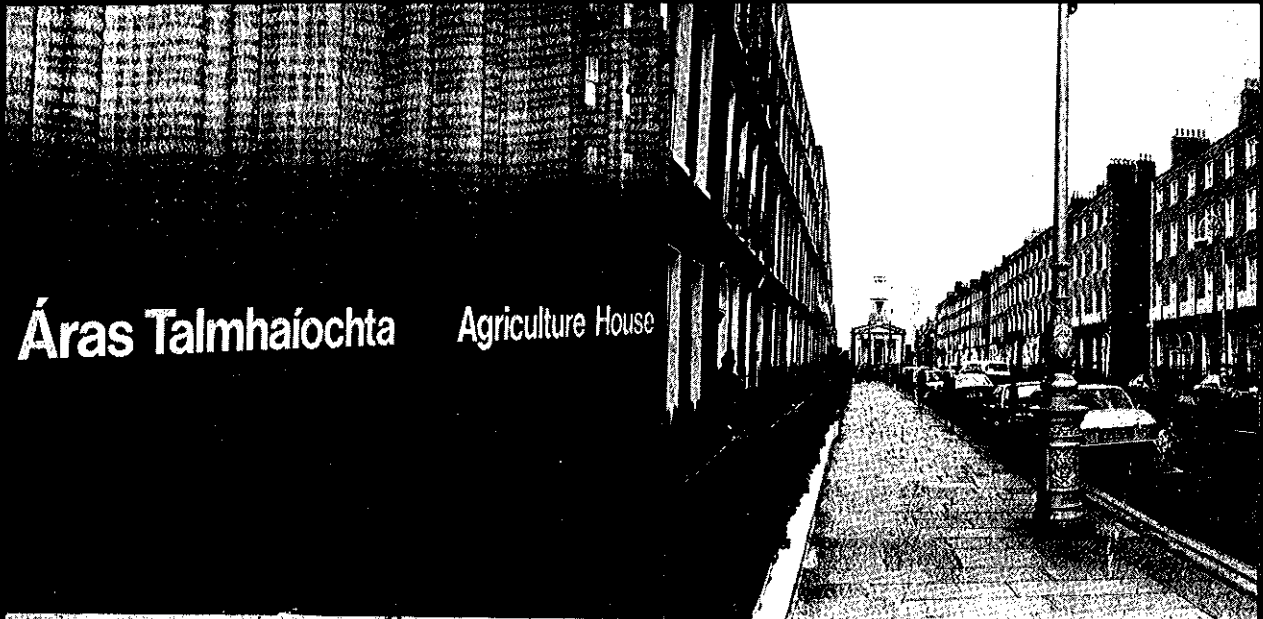


MILIEU '94

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FOREWORD



Duffy & Co.

There are about 470 undergraduates and seventeen post graduates in the Department of Geography this year, the highest on record. There have also been additions to staff in the first stages of plans to bring our staff-student ratios into line with other Third Level institutions and to compensate for the reduced teaching load of Professor Smyth. Kieran Hickey has joined the Department to teach hydrology and biogeography. Kieran is a graduate of University College Cork and is completing his PhD for Coventry University. He is also working with a research team based in Coventry on an EU project concerned with the variability of major floods around the coasts of Europe in the past. Jacinta Prunty has also begun lecturing in urban geography. She has recently finished her PhD in University College Dublin with a dissertation on the geography of poverty in Dublin between 1850 and 1900 and is currently part of an EU research project on urban renewal in Dublin. With their arrival, the Department's scope in teaching and research has been considerably broadened and it will be possible to offer an expanded and more challenging programme to the growing student body.

All of them we know are interested in more challenges and there may be changes coming to facilitate this adventurous spirit! For example, modularisation of courses is inevitable and it is likely that in the long run there will be common courses for everyone, with no distinction between honours and general courses. It is possible to look forward to a time when all will take the equivalent of an honours course, with graduates obtaining pass or honours degrees based on their academic performance. 1993-94 saw the institution of the new MA in Geographical Analysis, with twelve takers. A one-year taught course, consisting of four specialist courses from which candidates choose one, together with a methodology course, a weekly seminar and a thesis. The course is designed to provide students with a post-graduate qualification with emphasis on applied and practical fields in geography which is intended to improve their career chances. Applicants must have a minimum of a second class honours, grade two in Geography or a cognate discipline.

This year the Department of Geography is pleased to welcome eight visiting students from Scandinavia and Spain, who, as part of a larger group, are adding a new academic and social dimension to life in Maynooth. It is hoped that they enjoy their Irish experience and that the natives benefit from contact with their Euro-neighbours! There are growing opportunities for studying in various European universities; with the channel tunnel now in operation we should all cash in on our novelty position as the only islanders left in Europe. If you are interested in reducing your personal peripherality talk to Proinsias Breathnach or any of the staff about Erasmus opportunities abroad.

Finally, the Department is proud to unveil its latest acquisition in historical cartography - John Rocque's map of the Manor of Maynooth in 1757! Available for inspection in the entrance lobby of Rhetoric House, it shows the landscape of the Maynooth area before the Royal Canal or the Sligo railway were built. See can you spot the future line of the Maynooth by-pass! John Rocque was the most famous cartographer and surveyor of the 18th century. He came over to Ireland in 1754 to survey and map Dublin: part of his map still features on the £10 note. The Duke of Leinster in Carton engaged him to map his Kildare estates and this map of Maynooth is the result. It possibly originally hung in Carton or the estate office at Stoyte. It was quite badly damaged by water staining and has been restored by the Geography Department with grant assistance from the National Heritage Council and the Maynooth Scholastic Trust as a contribution to the College's Bicentenary.

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EDITORIAL

Yes, folks it's *Milieu '94* - arrived at last! Phew! Every editor wants something unique with a soupconne of erudite diversity in their magazine, "their baby"! The labour of love (especially Johns) has gone into editing, proof reading and all that goes with a job which means nothing if there's no punters to buy and read this absorbing production. Toil and tears above and beyond the call of duty have been executed by madam President, Grace Hamilton, her aide de camp, Laura Gallagher and the rest of the Geography Society who have contributed in unique ways!

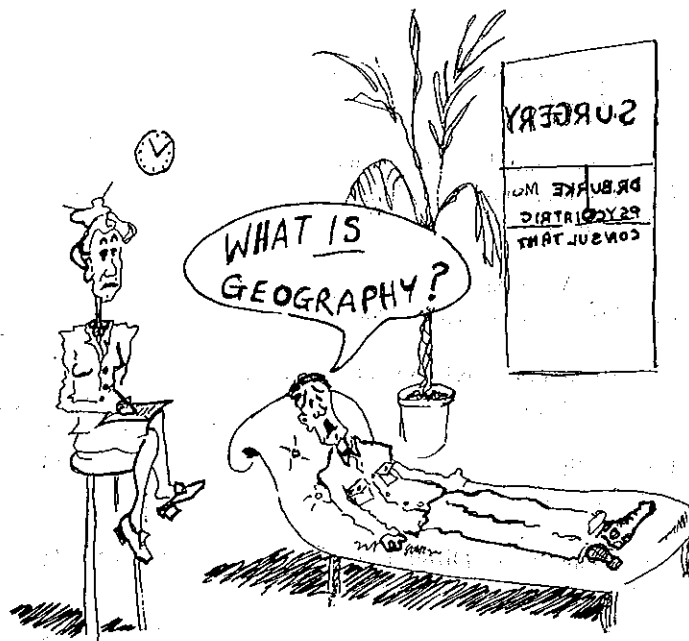
Milieu is a representation of the state of geography, and the students in the college every year. Essentially it is a publication "for the study and by the students", however it aspires to greater heights.

This issue covers a wide sphere of geographical studies including physical, cultural, political and urban geography as well as illuminating fieldtrip memories! Due to the very high standard and number of contributions, and limited space we have had to exclude some articles. However, we would like to thank everyone who contributed even though they were held hostage coming out of lectures at "penpoint"!* Thanks must be extended to "Dr. Duffy & Co." and all our advertisers and sponsors. A special word of thanks to Padraig Burgess of Lafayette Photography for his assistance with cover photographs and prints.

We think that this years issue lives up to the high standards set in recent years and we hope that you enjoy reading it as much as we have, compiling it. And that's a wrap!!!

Devika Ghosh B.A.
Shane O'Neill B.A.
John Weadick B.A.
Editors

* As last year, bibliographies have been omitted and can be obtained from the authors involved.



The day before the Finals ...

The Geographical Society of Ireland

Cumann Tireolaiochta na hEireann

The Geographical Society of Ireland was founded in 1934 with the object of promoting an interest in Geography. Its membership is drawn from teachers in schools, colleges and universities; people working in the public service and research; and all others who find geography interesting and stimulating. The Society seeks to provide information and promote discussion about a wide range of topics of geographical interest both within Ireland and abroad.

Meetings

During the winter months the Society holds a series of lectures and seminars, principally in Dublin. A small Regional Programme of events is also organised, usually in Cork, Limerick and occasionally Galway and Belfast. The Society also organises a one day conference, the proceedings of which are published as a special publication.

Field Trips

Day field trips comprise a distinct feature of the Society's programme and provides first hand experience of areas of geographical interest in Ireland.

Publications

The Society's principal publications are the internationally known Journals, *Irish Geography* and *Geonews*. Members receive both of these free of charge and may also obtain some journals published by other societies at special concessionary rates.

Library

The Society's Library is housed in the Department of Geography, Trinity College and holds many geographical journals and books covering all branches of the subject, including all materials reviewed in *Irish Geography*. Members may borrow books and periodicals from the library. The Geography Department Librarian at Trinity College also acts as Honorary Librarian to the Society and may be contacted at 01 - 772941 ext. 1454.

Membership

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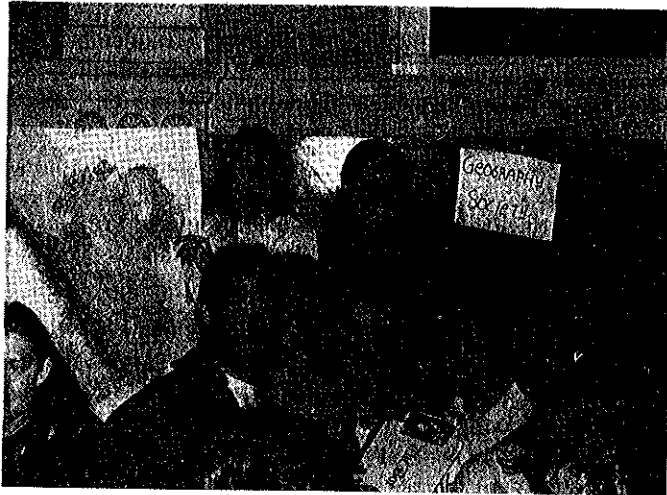
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AUDITOR'S NOTE



Geography Society, Fairs Day '94

Welcome to *Milieu* '94. The Geography Society executive this year is an all female crew, proof positive that 'sisters are doing it for themselves'. This year's events have swung in male favour but this imbalance is soon to be rectified by Prof. Victoria Mwaka, hopefully visiting Maynooth in early March. Reminiscent of Joyce's "Dubliners", (no, this is not a plug for my own home county), it's better to blow out than to fade away!

Our calendar of events began with the, by now notorious, lecture by Prionnsias Breathnach on geography fieldtrips. By now most of us know what to expect: This is no ordinary checklist of fieldtrip essentials . . . plastic macs, wellies, picnic lunch etc. For those new to geography, however, the surprise (or shock) was tangible. It is comforting to see that the enthusiasm of at least one first year lives on (refer to article "First year Fieldtrip: Into the Abyss").

We have had two evening lectures so far, in November Prof. Des Gillmor visited from TCD to speak on farm diversification in rural Ireland. This lecture was well attended and Prof. Gillmor made it easy to follow and informative. The geography Dept. had a return visit from Dr. Lovemore Zinyama. After much arm twisting (threats, ultimatums etc) Dr. Zinyama graciously agreed to lend himself to the Geog. Soc. for a talk on tourism and development in the Third World. We are extremely grateful for his co-operation at such short notice. The talk was very interesting, no signs of a rush job at all! Unfortunately, the audience was small, perhaps Geog. Soc. supporters were recovering from their efforts the previous night.

The event in question was our table quiz. An incredible 28 tables participated in the new SU bar. **WE ACCEPT NONE OF THE ALLEGATIONS THAT THE QUESTIONS WERE TOO HARD** (directed towards a certain new member of the Geog. Dept., recently back from England who was sadly bringing up the rear, but who shall remain nameless). Some overly competitive participants nearly assaulted the correcting team but otherwise the night ran smoothly, except that is for one minor hic-up: We hadn't thought of a PA system! Even the booming voice of PB, our MC, couldn't have made it over this

lot. Panic ran through my bones, I looked around to find someone, anyone to blame (yes, I'm admitting I do this sometimes) but relief was at hand; found in the back of John Quilter's red, two seater van . . . an amp and microphone that is. We are eternally grateful.

By publication of *Milieu*, we will have had our inaugural lecture, not in the true sense of the word, from Dr. Greg O'Hare, travelling from Derby to speak to us. Next, as I've already referred to, we hope to join with the Anthropology Society and the Sociology Society in presenting Dr. Mwaka.

Having spent a summer as a counsellor on an American summer camp, I would like to share some American psychology with you. I refer to 'laser-beaming' . . . i.e., the practice of pointing out the helpful contributions of individuals in the hope that this will encourage repeat performances (if there's one thing I've learnt from the Geog. Soc. it's politics!) Firstly, thanks to the SU, especially Ronan and Dennis who could have said, more than once, "oh, no, not you again!" but who remained upstanding models of self control. Thanks to the Geography Department, in particular Prionnsias Breathnach for his enthusiastic participation and Jim Walsh for his guidance as our liaison person. Thanks to the editorial team who sweated blood and guts over this little baby. Thanks especially to Shane & Kevin for the cover photos. Finally, a special thanks to all of you who support the Geog. Soc., especially to Maynooth businesses for their sponsorship of *Milieu*.

All that's left to be said is that the Geography Society needs new members from 1st and 2nd year to carry on the tradition. Despite my earlier feminist overtones, remember . . .

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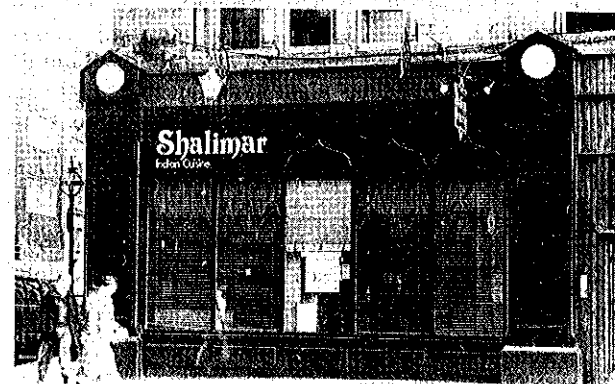
**Helen Minnagh, Grainne McConnell,
Carol Halligan, Arlene Flood, Derek McCormack,
Emer McCarthy, Tom Corbett.**

**With special thanks to Celine and Mairéad
for help with proof reading.**

CHOP SUEY OR CHICKEN TIKKA? LOCATIONAL PATTERNS OF CHINESE AND INDIAN RESTAURANTS IN THE DUBLIN AREA

by

Devika Ghosh B.A.



Devika's Diner

The internationalization of Dublin as a cultural capital has become increasingly evident over the last number of years. Ireland is a region of Europe which is only now beginning to gain recognition among ethnic groups as an attractive place to settle, bring up a family, or open up a business. The most evident groups who have made a niche for themselves in Irish society are the Chinese and the Indian communities.

The Chinese business community have been called Ireland's thriving minority. Latest additions to the wave of the Chinese success story have been the acquisition of Don Bluth Studios and Atlantic Magnetics. The success of the Chinese in business is attributed to their continual hard work ethos, close family networks, and long hours. The Chinese food trade has begun to expand rapidly throughout the country. The Dublin area in particular has benefited from the business skills of the Chinese. The community involved in the catering business are now more inclined to be interested in other areas. According to Howard Bau of the Chamber of Commerce: "We have more than 100 members representing different business ventures, and there is no doubt that the nature of our business will diversify over time, I see members outside of the restaurant trade and this is a good development."

The main Chinese interest in Dublin is of course the catering trade. They are a very close knit community and socialise a great deal together. The main area which is the heartland of the restaurant trade is Hong Kong. The main areas where immigrants came from are on the mainland in Canton. Malaysia and Singapore have not produced many. Areas like Macau are difficult to determine because they are under the control of other

countries. The view of the Chinese in Ireland has been affected by the presence of the Triads. The incidence of the Triads came to light a number of years ago where gang violence left 2 dead and several maimed. They are an integral part of Chinese urban culture. Their presence causes problems when the Chinese are looking for residency and a floating illegal Chinese population lives in fear of detection. The presence of Triads causes a huge debate among the Chinese community in Dublin. Many feel that the establishment of a "CHINATOWN" in Dublin is essential to the community and would bring great tourist potential to the capital. Others believe that this would probably concentrate the threat of violence into one area. This is highly unfortunate, as well respected community businesses will suffer as a result. At the moment however this side of Chinese life has generally ceased and differences among the community are settled amicably.

The information regarding the Indian community in Ireland is sparse. The community is generally made up of visiting students, doctors and those involved in business. Of the Indians involved in the restaurant trade who I managed to interview, the majority came from the Punjab region of North India. Their main reason for coming to Ireland was to work. Dublin was seen to have great potential for Indian business as the market wasn't flooded. The workers in the trade came to Ireland specifically to get money, they also felt that politically Ireland, especially Dublin was a less violent area racially than other cities in Europe. In comparison with the Indians, I found the Chinese a very close knit unit. As I surveyed their restaurants, I found they served as a meeting place, they are always full of Chinese people. The Indian restaurants on the other hand had a clientele of Irish business people.

Regarding the locational patterns of the restaurants of the two communities, a distinct geography is observed. In the city centre, the main Chinese restaurants are found on Dame Street where they are located in close proximity. This pattern turns to South Great Georges Street, the area around Dame Street was said to be developing into a "CHINATOWN", but for reasons already described this would be unwelcome. The Indians tend to locate in areas such as South King Street and South William Street also Lincoln Place within access of places like Leinster House and Trinity College. Over the rest of the city; Rathmines, Ranelagh, and Rathfarnham stand out as hives of activity. These areas consist of a large student population. On the north side; Raheny and Clontarf and some areas of Howth and Sutton are very popular. Ethnically, the Chinese seem to locate all over the Dublin area, but the Indians have a distinct geography by locating in the Central Business District. Exceptions to this are in areas of higher socio-economic status such as Dun Laoghaire, Dalkey and Deansgrange. Recently, I have been informed that a number of Indian Restaurants have brought business to the Portmarnock and Malahide areas.

It is clear to see, therefore, that the ethnic communities seek to secure different populations. It remains to be seen if anyone else will look deeper into the patterns effecting the communities in Irish life. From a starting point of little formation, finding a distinct geography to the patterns of ethnic business was an added bonus to a study which gave me great insight into two ethnic communities trying to find their niche in Irish business life.

THE APPLICATION OF HUMAN ECOLOGY IN URBAN POLITICAL GEOGRAPHY

by

Ronan O'Connor 2nd Arts



Urban Diversity in Dublin Today

The Chicago school of human thought that employed biological concepts to the understanding of the city. "The term ecology now appears in geographical literature to mean analysis of real data as in 'ecological correlation' or 'factorial ecology', so that the biological origins have all but been forgotten". (Taylor, 1985). This is quite true but the political implications of human ecology remain in current geography and without an ecological explanation, these may cause some confusion as to the nature of modern urban studies.

From the Chicago school of human ecology came probably the most famous spatial structure in urban geography. That is Burgess' zonal model of the city. Although Burgess may be the schools favourite son, its father and driving force was Robert Park, a member of the Sociology Department in the University of Chicago. Park wrote a paper entitled "The City", suggestions for the investigations of human behaviour in the urban environment. This raised the idea of the city as a laboratory for the study of human behaviour. Park described the city "not as a geographical phenomenon merely, but as a kind of social organism." (Reissman, 1964).

This ecological theory definitely had a hidden political dimension, and Park attempted to get to the heart of this. His ideas evolved in a period when the theory of Darwinian evolution was still being crudely applied to the study of society. These Darwinian premises used biological concepts to justify social inequalities. Notions of the survival of the fittest predominated. Malthus used these notions to condone this call for the abolition of charity and welfare so that the forces of free competition could play their role and decrease the population by those who were not fit enough to survive. A rather crude application of Darwinism indeed. In those Darwinian days the poorest areas of the city, the slums were explained by the genetic inferiority of their inhabitants. "Chicago empirical studies showed that the same areas remained slums, in Burgess's zone of transition as different ethnic and racial immigrant groups passed through them." (Faris, 1967).

These results would appear to show that slums are problems of area and not the individuals that lived there at any one point in time. A change of focus from individuals to area was needed;

a change from genetics to ecology. Ecology, the relationship between organisms and their environments, evolved out of Darwinian biology. Inter-relationships between organisms and their environment form an 'ecology'. Distinctive patterns of equilibrium were produced in a purposeless manner by the laws of nature." (Taylor, 1985). What Park did was to translate these concepts, normally devoted to the study of plants and animals, to the organization of a city where human patterns could be similarly interpreted.

An environment must be bounded, to define an ecological unit in which equilibrium can be reached, e.g. a salt marsh. In human ecology the only practical environment is the city, so it could be said that all human ecology is urban ecology. In the city "natural" processes occur in the competition for scarce resources in the same way in which they occur in a plant or animal ecology.

Adaptation of animals and plants is a natural process in its own way, for example a cactus plant has reduced its leaf surface area to the minimum in the form of needles rather than leaves in order to minimise the level of 'transpiration' (water loss). This is a natural process to adapt to the requirements of a particular environment.

Adaptation and specialisation in human ecology can be compared to his. The natural processes which occur are divisions of labour and different occupations. People using their own particular talents to find and adapt to their own particular niches to make a living. Also in Burgess's model we see specialisation and adaptive natural processes. Burgess's Central Business District is dominated by the land use intensive, highly dynamic services sector and other sectors locate elsewhere, in areas that are more efficient for the nature of their businesses. This is just the same as the ordering of mosses, grasses and scrubs in relation to trees in a plant ecotype.

A very important aspect of human ecology (urban ecology) that is unparalleled in animal/plant ecology is culture. The cultural components of a city add a dimension to human ecology that cannot in any way be related to other ecologies. It has been said that "the competition on Park describes is not ecological, it is merely a particular expression of Laissez-faire capitalism." (Castells, 1977). Laissez-faire capitalism is a political ideology with its roots in Darwinian thinking. A policy of non-interventionism on the part of the state, so that the free forces of competition may play out their role and Darwinian fitness may prevail.

Politics itself has no concrete parallel in other ecology, it is a distinctly human ecological phenomenon. It may therefore be said to that politics is a cultural rather than a natural element of life.

In non-human ecology, if a dominant class does at all exist, it is based on physical factors, such as strength. There are no dominant and subservient classes, but there are prey and predator relationships. Dominance does not shift in non human ecology, as it is sustained through physical traits whereas in human ecology dominance is sustained through ideological or authoritarian methods. Concepts such as hegemony, the constant justification of the status-quo, play large parts in human ecology. The difference is that in human ecology it is quite possible for the subservient classes to overthrow the dominant class, through organization. The organization of peoples to overthrow oppressive regimes and dominant ideologies that restrict them is a cultural aspect of human ecology which is not witnessed in others.

Therefore we may conclude that Parks's method of comparing human and non-human ecology is a very valid viewpoint in explaining the natural processes of human behaviour but so much more is related to the culture which does not exist in non-human ecology.

FIELDTRIP '94 - INTO THE ABYSS'

by

Tom Corbett 1st Arts

Dawn, Saturday, January 23rd, as 105 weary eyed college students rise to begin their descent on the gates of St. Patrick's College. The event the long awaited, much talked about, "at last it's come" first year field trip. For days, enthusiastic geography students talked about nothing else. Excitement was fever pitch. If for no other reason, this would be an opportunity to meet the lecturers in an informal way. Many wondered if they were really human! Well folks, there is no need for me to tell you that . . . (pause) they are. Messrs Sweeney and Walsh (P.B.) were the chosen two. J.S. was the first to arrive (truly this man possesses leadership qualities) while F.W. was spotted leisurely up the main street, brief-case in hand with just minutes to spare before our 09.15 a.m. departure. Why the brief-case Fran?

Once aboard the coaches, we were ready for the mystery tour. No prizes for guessing who was leading the physical and industrial groups. The writer plucked for the physical field-trip and speaking in hindsight there are absolutely no regrets (no offence Fran!) Before departing from the college, J.S. gave us a talk on the structure and history of Maynooth town and soon we were on our way. Once onto the open road, the sweet tones of our leader could be heard floating from the front of the bus to the rear. Notebooks and pens at the ready, we wrote furiously to keep up with this informative commentary on urbanization as we travelled the roads through Leixlip, Ronanstown, and Clondalkin. Many gave up in despair preferring to put their feet up and enjoy the ride.

The morning was clear and dry but nonetheless windy, blowing a breeze only felt when it is brass monkeys! This became more evident when having a long, pleasant drive up the narrow winding roads of the Dublin mountains we found ourselves on a summit where a magnificent view (if it can be called that) of Dublin's Poolbeg generating station and housing hinterland could be seen. The bus ground to a halt where everybody needed a break not least the driver. A cry heralded "Everybody off!" and we had no option but to follow suit. Standing in the freezing wind, J.S. gave an interesting talk on the rock formation of the Howth area, while individuals jumped up and down and sideways to stay warm. The majority including myself tried to keep a brave face whilst allowing the knowledge to enter our dead brains. After a scramble to the coach, we were off again bravely into the vast abyss, i.e. across the mountains into Co. Wicklow. An inspirational place where we absorbed greater knowledge regarding deforestation, wet soils and blanket bogs. Our pursuit took us at high altitude embraced by a diversity of unusual cloud formations. I debated with my colleague on such climatological conundrums as precipitation and the history of mist. Despite a recent lecture on same, more recommended reading is necessary.

As we descended the peaks, there was a noticeable change in the weather from a dull and dark sky to a brighter clearer one. Eamon, our faithful driver manipulated the narrow roads with their sharp bends with meticulous care and ease. Had he made this journey before, I asked myself, like last year maybe? A stop

at Athdown at the foot of the mountains enabled us to get our clothes torn as we clambered over barbed wire into the wilderness of a no mans land. It reminded me of the 'Sound of Music' but instead of Julie Andrews running there were 53 mad students making tally-ho type assault downwards at sporadic intervals in an attempt to keep up with our leader who was by now a mere blot on the landscape. It was tricky work climbing into deep vales and out again, but it was good craic all the same.

Once past Blessington and Naas, a decline witnessed in the effusion with which students had been filling their field trip notebook. We were ravenous and needed to be let loose on an eatery somewhere, anywhere. This was to be Newbridge where some of us stuffed ourselves as much as we could on our student budgets. Raring to go again, we set off across the Curragh, through Kildare town until we came upon Allenwood where we met an old power station and its large water tower. Alas now closed, Mr. Sweeney gave a worthwhile few words regarding its progress and demise over the last forty years.

. . . Our next and final stop was at 'Peatland World' located in the Bog of Allen near Rathangan. This for me was the best stop of the day as it made light of everything we'd heard and seen heretofore. The centre is a museum of sorts which endeavours to explain the rise of the peat industry in Ireland from the 1950s to the present day. It does this effectively by utilizing detailed scaled models and photographs of briquette factories and peat fuelled stations.

From there, we set off home after tea and biscuits, singing merrily as we made our way. J.S. made his last sermon brief and the notebooks were tucked away safely for the night.

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ENVIRONMENTAL APPLICATIONS OF REMOTE SENSING

by
Kathleen Bourke B.A.

Whitton has defined remote sensing as "the scientific collection of mass data (information) relating to objects without being in physical contact with them. The term is usually restricted to methods that record electromagnetic radiation which is reflected or radiated from objects, but excludes magnetic and gravity surveys in which forcefields are recorded. The data is recorded by electronic scanning devices carried in aircraft and satellites, with the sensors operating at considerable altitudes above the earth's surface (multispectral scanners, radar, radiometers, thermal linescanners, aerial photography)."

Remote Sensing has developed from military intelligence (for distinguishing camouflage from natural surfaces and also for night time surveillance) but due to economic and scientific pressures many remote sensing techniques have been forced into the public domain. Military intelligence now relies on civilian satellites, for example LANDSAT and SPOT for their information. Anyone who has an interest in measuring, studying and managing earth resources has an interest in remote sensing for example archaeologists, biologists, engineers, foresters, geographers, geologists, land planners, meteorologists, oceanographers, range managers, soil scientists and water resource managers. The repetitive nature of the remote sensing process i.e. a repeat cycle every 16/18 days is very important for continual monitoring of the earth's surface. The use of different scales of image have excellent implications for observing the environment. An indispensable part of the every day use of the remote sensing process is the weather satellite METEOSAT which is used in the tracking of weather systems throughout the world.

MAPPING

Soil mapping, although certainly not one of the more important applications of remote sensing, is in itself very useful. It allows for the understanding of soil suitability for different land activities which are necessary to prevent environmental deterioration associated with misuses of land. An example of this is crops grown in areas that can facilitate their growth and not damage or drain the soils of their nutrients irrevocably.

Sea ice mapping is another important aspect with which remote sensing can be environmentally applied. With an increase in shipping traffic and the possible threat of carrying environmentally damaging goods (if there were an accident) a knowledge of ice sea movements and thus maps are a necessary requirement. Remote sensing is the only practical way in which mapping on a regional and a repetitive basis can be carried on. Forests can be monitored using remote sensing. It can be used to interpret tree species, timber assessment of disease and insect infestation, but more importantly the amount of forest cover. Forests (trees) are claimed to help prevent the Greenhouse effect by the process in which trees absorb carbon dioxide and release oxygen. Carbon dioxide is one of the main contributing factors to the Greenhouse effect which causes global warming.

MONITORING

Rangelands because of the diversity and intensity of pressures upon them and their expanse and remoteness need remote sensing to monitor them and in particular their vegetation, soils and animals which are all part of their environment.

Remote sensing can be applied so as to monitor the industrial pollution discharged from factories. The ability of remote sensing in the use of thermal linescanners to track heat is useful in the commercial cultivation of shellfish so appropriate locations can be easily identified using remote sensing.

Remote sensing can monitor areas under threat from natural hazards and in some cases it can provide a measure of early warning for them, for example, it can continually monitor cloud cover, atmospheric moisture and season by season changes in natural vegetation as a means of giving early warning about drought. It is used in military intelligence to monitor the intentions of potential opponents and as a means of knowing what is going on. It can monitor narcotic plants such as opium and marijuana.

DETECTION

Remote sensing can detect water pollution. The natural water pollutants are leaching from soils and decaying vegetation. Remote sensing has helped in the enforcement of anti-pollution laws as it can detect the source of pollution. It can be brought to the attention of the authorities and the remote sensing images can be used as evidence. Although it should be noted that it cannot identify the type of pollutant only the point where the discharge meets the body of water.

Surface and sub-surface features of interest to archaeologists have been detected using aerial photo interpretation. Tonal anomalies are used to detect sub-surface features such as the ancient city of Spina on the Po River Delta in Italy which was found in 1956 by aerial photography. It was a city of canals and waterways and toned linear features were observed. In northern France more than 1,000 villas were detected through the foundation material which was found in the soil.

Remote Sensing can also help with transport problems because it covers large areas of the earth's surface. For example the site of a port requires information about access to deep water, chances of rapid silting, and protection from storms. All this information is needed in much detail and because of repeated monitoring of the same area remote sensing can help with this.

A very important environmental application of remote sensing is the role it plays in environmental assessment. This can be achieved by the comparison of older, with more up to date, photographs and any changes that they might indicate. The sort of things that can be assessed are the construction and operation of highways, railroads, pipelines, airports, industrial sites, power plants and the transmission lines, sanitary landfill and hazardous waste disposals.

The topic is so wide that it is not possible to cover all the environmental applications of remote sensing. It has a very important environmental application through helping with mapping, monitoring and detection of the earth's resources. Although its environmental application is not its only objective it is however a crucial one to help in the protection of our environment.

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THE GEOGRAPHY OF POLITICAL CONFLICT IN SUDAN - AN OVERVIEW

by
Tom Corbett, 1st year

INTRODUCTION

Tensions in the Sudan can be traced back to 1821 when the Egyptians conquered the country. It's history is one of military rule, civil wars, and political strife which have torn this post-colonial country apart leading to almost incessant conflict between north and south. Sudan today is under a totalitarian military dictatorship. Drought and famine on a horrific scale are a consequence of the most recent internal rebellion.

GEOGRAPHY OF THE SUDAN

The Republic of the Sudan is the largest country in Africa comprising an area of 2,500,000 sq. km. It's population stood at 25,859,000 in 1991 (1991 World Bank est). With its capital at Khartoum; the Sudan is bordered by the Red Sea in the east along with nine other countries which include Egypt to the north, Eritrea and Ethiopia to the east and Kenya, Uganda and Zaire to the south. The Central African Republic and Chad have borders to the west and Libya borders to the north west. Regarding its climate, temperatures vary with altitude and latitude but an annual average for the whole of the country is about 21 degrees celsius (70°F). Only the Red Sea border experiences cooler maritime weather. The north can have practically no rain, while the south experiences falls up to 60mm per annum along the Ugandan border (Fordham, 1974).

Sudan's population is erratically distributed with 75% of the people living in the north. These consist of Arab and Nubian tribes whose ways of life are dissimilar. They are sunni muslim in contrast with those found in the south; the Nilotic and Bantu peoples who are either Christian or animist.

The official language of the Sudan is Arabic spoken by 51%, most notably in the north but there is a mixture of tribal dialects common in the south where English is widely understood.

THE ROAD TO CONFLICT

From 1819 until 1899, Egypt was the sole ruler of Sudan. This changed when the British sent an expeditionary force in 1898 to conquer the country. They sought a strategic vantage point on the Nile River to keep out the French who were in dispute with them having been ousted from Egypt which was now under British control. Sudan was also seen as a valuable ivory source, a precious commodity on the home market. Access to slaves was also part of the British thinking as they could be used for menial service. The Battle of Omdurman gave the British victory over the Sudanese leading to a new British Egyptian pact giving Britain a controlling share in the administration of Sudan. This would lead to the North being administered from Khartoum through Arabic, while the South would be ruled separately from Juba through English. This division had an impact on the creation of political instability in the country for two reasons:

- The Mahdi and his successor 'Khalifa', a self-proclaimed military leader were responsible for the nurturing of a religious component which has emerged as a powerful political ideal to the present day.
- The division of the country into two separate administrations effectively stamped the seal of segregation on the two communities.

For the next 55 years, Sudan enjoyed prosperity and gained independence as a parliamentary republic. The British left behind a short lived civilian government which didn't address three crucial problems:

- The need to assimilate the peoples of the north and south. There had been little contact between them during British-Egyptian rule.
- Strained relations with Egypt existed due to a dispute over the use of the Nile waters. As Agriculture in the north was dependent on the flooding of the Nile, it was paramount that the two countries existed peacefully.
- A suitable form of government was essential to bring north and south together if political instability was to be avoided.

THE FIRST CIVIL WAR

In 1958, General Ibrahim Abboud seized power and implemented early radical reforms focusing attention on the south, Southern opposition parties were banned, assemblies prohibited and newspapers suspended. Arabic was promoted as the national language and the spread of Islam was enforced. In 1962, Christian missionaries were expelled and southern politicians exiled. This resulted in the oppressed together with the support of the tribes forming a resistance movement called the 'Anyanya' or 'Snake Venom'. They believed that violent pressure against the northern Sudanese would make Abboud reconsider his policies toward the south, the seeds of the first civil war were being sown.

General Jaafar Nimeri deposed Abboud in 1969 in a new coup. Nimeri wanted an end to the war in the south which had continued unabated. He met with the southern leaders in 1972 and granted almost complete autonomy to the three provinces of Bahr al Ghazal, Equatoria and the upper Nile with the regional assembly sitting in Juba.

THE SECOND CIVIL WAR

In 1983, a second civil war broke out which continues to the present day. Economic, climatic, military and religious factors brought it about. The economy began to decline under Nimeri. Industry which once flourished such as sugar and cotton had collapsed, debts were mounting and hardship was spreading. A poor rainy season that year and a disastrous one in 1984 meant that eventually drought and famine began to affect the whole country. The government remained inactive. Dissidents were fighting. Civil war was looming. Nimeri began to impose factions to those in the south regarding the Koran non muslim people. Southerners rebelled forming the Sudan People's Liberation Movement (S.P.L.M.) fighting vehemently for an independent south.

Nimeri was deposed in April 1985 by Sadiq al-Mahdi who spent the next six years attempting to get all sides to agree on a

common solution. These efforts were hampered by the S.P.L.M. There were on/off ceasefires and several near breakthroughs, but it took only the slightest incident by either party to thwart efforts at agreement. At this time amongst all the political wrangling 250,000 people died, 3 million starved and thousands fled as refugees (Brogan, 1992 : 114).

CONCLUSION

Sudan has existed in an area of brutal repression unseen previously under prior regimes. One example of this describes how on Christmas Day 1992, hundreds and according to some sources thousands of the Nuba who refused to join the government militia were callously shot (Survival 1992). All international relief efforts have been halted because of the dangers in the south. In conclusion, the war is the result of ethnic and ideological diversity between the peoples of the north and south which fostered during colonial times. It is aided and supported by an Islamic regime bent on fundamentalism. From this, two communities divided in religion, language, and culture the consequences of which have resulted in the majority suffering misery, hunger, displacement and death. Sudan had an inflow of refugees from famine stricken Somalia and Ethiopia.

Peace talks between the S.P.L.M. and the government in April 1993 to bring the war to an end were unknown at the time this article was written. It is desired that a peaceful resolution be reached to end one of Africa's most shocking episodes of the post imperialist era.



M.A. QUALIFIER - A BREED APART

by
Shay Geuvara

The MA Qualifiers have always been a very select group, a small but important organ in the student body of Maynooth. However due to the quiet phenomenal growth in numbers (100s of 5s) over the last twelve months the MA Qualifiers rank as a significant contributory group today.

Interesting postgraduate courses in Geography has increased immeasurably since the introduction of the Mode II Masters degree in Geographical analysis which many see (especially students) as having advantages over the Mode I MA (by thesis). Firstly there is the basic requirements for each course. A 2:1 is needed if one is to be eligible for Mode I whereas a 2:2 will suffice for a place in Mode II depending on demand.

Also those of us who prefer exams to theses i.e. cramming instead of continual, assessment see Mode II as the more attractive option. Then there is the important consideration of time. Mode II is a one year courses whereas Mode I is a two year course.

MA Quals tend to think of themselves as a very special group and some are under the impression that Qual. is short for Quality. This minority tends to have a character trait which manifests itself as an inflated sense of self-importance showing itself in the way they refer to the Qualifying course as the MA mode 1/2.

Basically the MA Qualifying course involves covering the Third Arts Honours course in addition to presenting a detailed and comprehensive proposal for the thesis to be undertaken in the MA the following year.

In the past the MA qualifier has often been a unique species in geography. Despite the severe handicap of not having one or more MA Qualifiers around these glorious pioneers managed to struggle through. Names such as Ms. Ann (Inter Library Loan) Kehoc and Mr. Kevin (An Griofach) Griffin spring to mind. It is a constant source of amazement how today with so many more Qualifiers around the quality has sank so low. Despite the lack of intellectual prowess, mercurial wit, fierce determination, and dedicated dedication this years batch manage to have a good time and get some study done, thanks to some ancient texts from 1991 and a partial knowledge of the subject matter covered in most of the courses. In addition some have essays and theses on which very little amending is needed, in fact very little of anything is needed. Turning up for 9 o'clock lectures is still recommended as there are lots of very interesting and welcoming third years to meet, and they happen to look their best at that time of the day!!!!

Unfortunately it is deemed as unnecessary for Qualifiers to partake in fieldtrips which could be viewed as a disadvantage to the course. Everybody knows what goes on on these fieldtrips yet I can't help but think that Qualifiers would be ideally suited to lead a fieldtrip. What with all the spare time on their hands, and their unique perspectives on things geographical, I don't know why anyone has never suggested it before now. Probably because no-one has thought of it, or maybe because they were afraid to mention it to the Department. We all know how much the Department enjoy their fieldtrips, and how jealously they guard their time away with their beloved students.

Despite all the malicious rumours surrounding the MA qualifying course there can be no doubt that it has a unique place in Academia. Those detractors who go around in cloaks with daggers making outrageous claims like "those MA Qualifiers never do anything" and "they don't even have another subject never mind two theses to do before Easter", are just envious of our popularity, our devil-may-care attitude to life and our apparent air of irresponsibility. The latter being a mere deception which we were informed by K.G. would lull everyone into a false sense of security, OOOOPS I've let it out, nobody was supposed to know about us taking over firstly the country and then who knows?? I mean there must be Qualifiers in every University in the galaxy.

Well, I myself personally don't see any problem. Let's hope there will be an even bigger group of Qualifiers next year to brighten up the college, to keep the third years on their toes, and to keep the kettle boiling in the Post-grad room. The more the merrier!, and if we can get enough of us together to take over the world then so be it. Viva la Revolution!!!!



*Quiz Team Winners
l to r - Paul, Theo, Joe & Damien*



"Wait till I get my hands on Derek" - Kevin

NOT SO SIMPLEX CROSSWORD

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	
12.			13.		14.		15.		16.		17.
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68.	69.	70.	71.		72.				73.		74.
75.		76.	77.	78.			79.	80.	81.	82.	83.

ACROSS

- 1. Grunge capital of the world (7)
- 8. Possibly the coldest place in the midlands (4)
- 19. A demesne outside Maynooth (6)
- 25. What Mr. Lennon might of said when he married this person (3)
- 25. Colourful United States National Park (6)
- 46. Gives pink milk to the Himalayans (3)
- 54. Venue for Jack's Army's second match (7)
- 61. Wine region in South West France (5)
- 76. Where Beavis and Butthead are unplugged (3)
- 68. Island paradise off Indonesia (4)
- 79. Frank or Jim? (5)

DOWN

- 1. Lecturer in Geography and a College V.P. (5)
- 4. Island home of 'Thunderbirds' (5)
- 6. Clinton family's hometown (10)
- 9. Elementary metal present in ferrous sulphate (4)
- 11. Where most staff and students in Maynooth come home to! (5)
- 15. The Inuit have 36 different words for it (4)
- 42. A ham of an Italian city! (5)
- 45. New North Dublin administrative county district (6)
- 51. Little Joey's mother might keep him in this (5)
- 53. Cut out the bad bits (4)
- 68. What you'll get at the end of your time in Maynooth (and it's not drunk)! (2)

Photocopy the correct solution and submit it to the Geography Post-Grad Room by March 15th for a chance to win a bottle of booze

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Crossword compiled by the Darkman (M. O'D)

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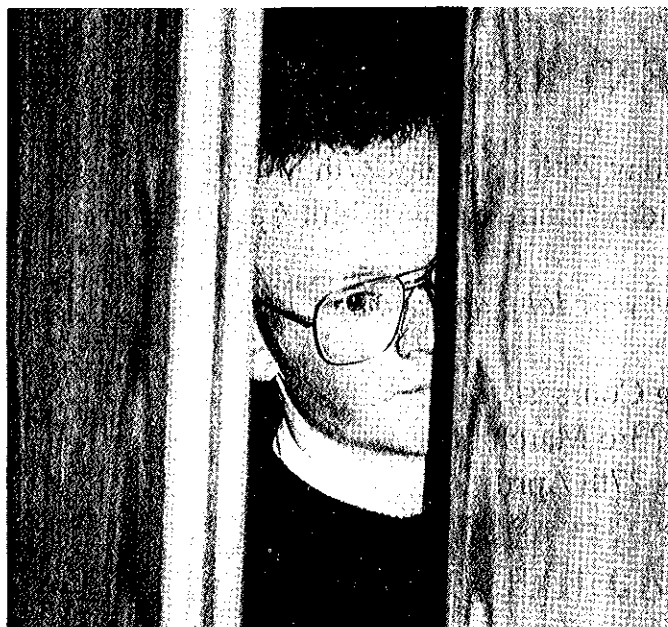
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IRELANDS PEATLANDS - CONSERVATION OR PRESERVATION

by
Seamus Lafferty, 3rd Arts



"Seamus"!

INTRODUCTION

Peatlands originally covered 17% of the land area of Ireland which, excluding Finland, is proportionately more "bog" than any other European country, (Enfo, 1990). Traditionally these peatlands have been viewed as an economic burden and a hindrance to development, suitable for nothing other than cheap fuel and rough grazing. For centuries the cutting of "turf" has been an intricate part of life in rural Ireland. It became more important as a domestic source of fuel after the forests were cleared in the seventeenth century (Van Eck, 1984). It was not however, until 1946 when Bord na Mona was established that the exploitation of Irish bogs became a major concern to "conservationists". Especially since the early 1980s the dilemma of exploitation or preservation has been a topic of much debate. This article attempts to outline the reasons for this debate and ultimately demonstrate how a compromise solution must be found sooner rather than later.

IRELAND'S PEAT RESOURCES

Peat develops in waterlogged areas where the continuous presence of water prevents the complete decay of dead vegetation. This dead vegetation accumulates in layers to form peat (Cross, 1989). Three basic types of peat are found in Ireland. The raised bogs of the midlands which formed in former lake basins, the blanket bogs which cover extensive areas of lowland in the west and mountainous areas in all parts of the country and fens which could be thought of as fore-runners of raised bogs and are found throughout the country (Enfo, 1990). The high rainfall and poor drainage of most of Ireland give ideal conditions for bog formation and survival.

TURF CUTTING

For centuries people have utilised peat as a source of domestic fuel. As already mentioned Bord na Mona was set up in 1946 and began harvesting peat on a commercial basis. Bord na Mona now ranks second in the world, after Russia, in terms of peat production (Van Eck, 1984). Peat has captured a sizeable share of the domestic solid fuel market and accounting for one quarter of national electricity production it obviously has an enormous impact on the national economy (Kearns, 1978).

The private sector has always been involved in turf cutting but it has increased in volume significantly since the Turf Development Act of 1981 which provided grants to private developers. It is difficult to estimate the extent of private sector exploitation but Bellamy (1986) draws attention to the fact that the Turf Development Act alone led to 4,800 ha. being developed in 1982.

AGRICULTURE

A very positive aspect of Bord na Mona's exploitation of bogs is the amount of land (cutaway bog) which has the potential to come on line for agricultural production in the future (Bellamy, 1986). Bord na Mona has been involved in researching the best use to which to put cutaway since as early as 1955 (Breathnach, 1987). Bogs have always been regarded as very poor for agricultural purposes except for rough grazing. Since accession to the EC, however, there are increasing incentives to farm 'marginal' lands due to incentives for 'disadvantaged' areas. Approximately one third of Ireland's marginal land is peatland (Van Eck, 1984).

Virgin raised bogs are of no agricultural value but cutover raised bogs can be used for agricultural purposes. The method of extraction of the peat has important repercussions for the viability of farming on cutaway bog however. If sod peat production is used then an average of three feet of peat remains while if milled peat production is used only eighteen inches remains. It is obviously more economical for Bord na Mona to use the milled peat method but this limits the level of utilisation afterwards (Kearns, 1978).

Tillage crops have largely failed on milled peat bogs but good grass for grazing has been produced (Drennan et al, 1984). Up until the mid 1980s this was seen as a favourable option due to EC membership and high prices for beef. This option has become less attractive in recent times with increasing surpluses in the EC (Breathnach, 1987). Cutover bog, on the other hand, with 5-6ft of peat remaining, has been shown to be very useful for growing barley, potatoes, carrots and cabbage. Also nursery plants have shown up to 60% more growth than on ordinary soils. Some experiments, with these have achieved profit values thirty times that of peat production (Kearns, 1978). It seems fair to conclude that agriculture could have a diverse and profitable future in the exploitation of boglands.

FORESTRY

With a mere 5% of the land area in Ireland devoted to Forestry there are ambitious government plans to plant 10,000 ha. per annum. This is encouraged by the fact that the EC is a net importer of timber products (Mire, 1990). From about 1950 onwards new technology such as ploughs and fertilisers permitted the success of tree growth on peatlands with the result that more than half of state-owned forest is now on peatland (O'Carroll, 1992). Forest cover achieved without using agriculturally viable land can bring an economic resource to areas of rural Ireland with low employment. Bord na Mona research

on planting cutaway has given very favourable results, making timber production on cutaway bogs a serious option for the future (Gallagher and Gillespie, 1984).

CONSERVATION

After centuries of exploitation, principally for fuel and as we have seen, especially since the establishment of Bord na Mona, Ireland's bogs are now in severe danger of being obliterated. Most countries in Europe have already exhausted all their peatlands and are now attempting to re-establish them by artificial means and at great expense (Enfo, 1990). Ireland is thus fortunate to have some of the best remaining examples of boglands in their natural state to be found anywhere in the world. That this is so has been realised by the European Parliament who in 1983 passed a resolution calling for a programme to ensure conservation of the best examples of Irish bogs (Cole, 1984).

Primarily as a result of turf cutting but also due to afforestation and reclamation for agriculture, all types of boglands in Ireland have been modified to some extent. Fens have suffered particularly badly as they are the most productive for agricultural use but also the raised bogs of the midlands have been largely destroyed due to the activities of Bord na Mona. In 1990, over 90% of Ireland's raised bogs and 35% of its blanket bogs were modified. A survey conducted by the Wildlife Service has concluded that only 3.8% of the original raised bog is worth conserving while only 10% of the original blanket bog is worthy of conservation. Most of this destruction has been caused by overgrazing and extensive burning (Enfo, 1990). As these figures demonstrate, the issue of 'peatland conservation' is one which must be addressed urgently if a representative sample of bog types is to be conserved.

REASONS FOR CONSERVATION

While peatlands have traditionally been regarded as wastelands, in their natural state they are very valuable resources. Peatlands represent a unique ecosystem containing a flora and fauna which it is argued could be of great value to mankind in his quest for cures for diseases such as cancer (Bellamy, 1986). Many birds such as the Greenland White Fronted Goose, over winter on Irish bogs and the more the bogs are removed, the closer these birds come to extinction (Enfo, 1990). Not only are bogs the key to an understanding of history due to their preservative qualities but they are also diverse habitats for educational purposes (Cross, 1989). A major attribute of Irish boglands is their landscape and cultural aspects, making them a valuable tourist attraction.

EXTENT OF CONSERVATION AT PRESENT

The peatland sites which have been conserved are protected either due to being part of a National Park or National Native Reserve (Enfo, 1990). In 1990 there were 7 raised bog sites, 19 blanket bog sites and 4 fens protected. In 1987, the government set a target for conservation of 10,000 ha. of raised bog and 4,000 ha. of blanket bog. The above mentioned protected sites account for only 12% of the raised bog target and 40% of the blanket bog target. Less than 10% of the IPCC recommendations for fen conservation have been achieved (Enfo, 1990). Conservation got a boost in 1990, when Bord na Mona agreed not to develop any more raised bog of conservation importance and is presently in the process of transferring 2,500 ha. to the wildlife source (Lang and Hickey, 1991).

FUTURE OF IRISH PEATLANDS

Given Ireland's poor record in the past, it is difficult to be very optimistic about the future of Irish peatlands. Kearns (1978) points out the fact that use of bogland solely for fuel is not practical and suggests "a gradual evolution" towards conversion to agricultural use. It seems likely that forestry will also be a major component in the future of boglands, be it in the form of 'biomass' or more conventional forestry. That boglands and more especially cutaway boglands must continue to be exploited is irrefutable but the need for conservation is equally so. The conservation importance of Irish bogs is demonstrated by the existence of a Dutch organisation for the preservation of Irish bogs. The Dutch regret their total exploitation of bogs and now actively campaign for the preservation of ours (Irish Peatland News, 1991).

The announcement of conservation targets by government and significant increases in public awareness due to campaigns by the IPCC and An Taisce give some hope to the conservation movement. This paves the way for the government to follow a "well-planned acquisition programme" and thus save the most important peatlands (Doyle, 1992).

CONCLUSION

A proper balance must be reached between the often conflicting interests of exploitation and conservation. Hopefully Ireland will learn from the mistakes of its European neighbours and act responsibly to save what Bellamy (1986) describes as one of the "wonders of the world" so that the wild beauty of Ireland's peatlands will be preserved for the enjoyment of generations to come.

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AN ASSESSMENT OF THE CONTRIBUTION OF LOGICAL POSITIVISM TO THE DISCIPLINE OF GEOGRAPHY

by
Paul Gallagher, 3rd Arts

Logical Positivism is the name given to a set of philosophical ideas put forward in Vienna at the beginning of the century, on the subject of the philosophy of science. Later logical positivism was absorbed into logical empiricism where the basic principle stated that if some hypothesis is not empirically verifiable then it can be considered meaningless. In order to fully comprehend the significance of the logical positivist contribution it is necessary to have some idea of the aim of geographical enquiry. M.R. Hill identifies this as a will to gain a conceptual understanding of man's organisation of space.

The Quantitative Revolution describes the entry of logical positivism into the realm of theoretical geography, being drawn into geographical methodology in the 1960s. As geography was considered a science, positivists believed it belonged to the unity of the sciences and enshrined in this idea of the unity of sciences was the concept that they shared amongst other things, a common methodology using mathematics as the unifying language. Ackerman in 1958 remarked that in the need for and value of complex statistical methods based on logical development, geography does not differ from other social sciences.

The difference between one science and another is the subject matter studied. Previously geographical matter had been expressed in the maps which are the geographers trademark. However, a new generation of geographers were turning to quantitative means, mathematics, models and hypothesis testing to solve geographical problems. Its acceptance in the halls of geography departments was not a simple matter, and thus the violent phrase "revolution" is applied to this upheaval. It's critics within the discipline described its usefulness in the following terms "it will be time enough to incorporate it in the subject when it has discovered or expressed something which cannot be expressed in plain English" (S.W. Woodridge in An Outline of Geomorphology, 1959). The new epistemology was also criticised because it did not take account of the component of subjectivity involved when studying human geography. People were reduced to objects and this reification led to the reduction of everything to the category of object, and the universe being nothing more than the sum of the objects within it.

Logical positivism also assumes scientists (geographers) are free from ideological biases and prejudices and that the methodology used had an inherent objectivity. The logical positivist tradition therefore assumed that the conclusions and results would also be free from bias with the same inherent objectivity. One can immediately see the conflict. The process of choosing the area of study is itself subjective. Also it is not hard to see the difficulty in explaining human behaviour and then quantifying it in a scientific manner as the logical positivist tradition requires. For example how does one quantify a sense of place or of community?

Despite the criticisms, the quantitative revolution has been subsumed into theoretical geography. The critics have pointed to the excesses and extremes that logical positivism's scientific approach has swung the epistemological pendulum of geography. However because a principle is abused this does not detract from its validity. We can see in Hagerstrand's quantitative methods that the positivists approach has a great deal of merit. He championed the cause of quantitative research and his models for innovation adoption diffusion i.e. the neighbourhood and hierarchical models in agricultural geography, are still being used today, 30 years later.

I conclude then that logical positivism's contribution to geography has been a significant one. Without it the subject might have quickly become outdated and lapsed into a mode of an ancient skill, in the light of the 20th century trend toward vocational, scientific and specialised education. Logical Positivism in the guise of the Quantitative Revolution brought a new dimension to geographical enquiry and gave the discipline a new awareness of the need for a comprehensive methodology solidly based in science.

RECENT TECTONIC ACTIVITY IN SOUTHERN CALIFORNIA AND WHY IRELAND SHOULD NOT BE COMPLACENT

by
Kieran R. Hickey

An earthquake measuring 6.6 on the Richter scale, struck at 4.01 a.m. (local time) in southern California on Tuesday morning January 18, 1994. The epicentre occurred near Northridge a northern suburb of Los Angeles, 61 people died, 9,000 people were injured, 50,000 were made homeless and damage estimated at between \$15 billion and \$30 billion occurred. From January 18 when the earthquake struck to January 30 a total of between 3,000 and 3,100 aftershocks have been recorded in the area, some with magnitudes as high as 5.0 on the Richter scale (Anon 1994). This is neither the first, nor will it be the last earthquake to seriously affect Southern California.

Every year the earth experiences many hundreds of thousands of earthquakes. Fortunately only one or two are large enough or close enough to major centres of population, to cause loss of life. Earthquakes are "a shock or series of shocks due to a sudden movement of crustal rocks generated at a point" (Whittow 1984, p161-162). These usually occur along faults on the edges of crustal plates. The latest southern Californian earthquake is an offshoot of the San Andreas Fault, which is a lateral fault where two plates are sliding in opposite directions to each other (Figure 1). As in this case, the fault surfaces do not slip easily by each other and at times a frictional lock develops. This is where the two plates stop moving or the rate of movement declines. There is a constant build-up of energy in the lock, causing deformation of the rock bodies. Eventually the pressure is too much to bear and the frictional lock breaks. The stored energy is released in the form of an earthquake (Ollier, 1981).

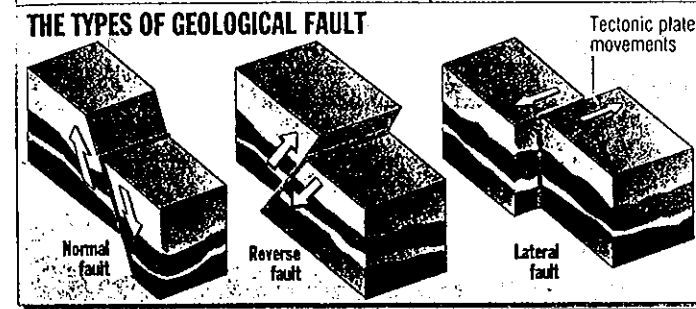


Figure 1: The types of Geological Faults (after Hodgkinson 1994)

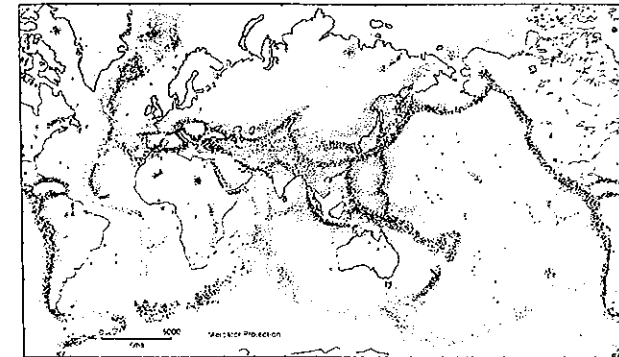


Figure 2: The distribution of earthquakes (after Ollier 1981)

Some parts of the world are more earthquake-prone than others, with most of the seismic activity taking place at the margins of the tectonic plates, especially around the margins of the Pacific plates (Figure 2). 80% of all earthquakes occur in the Circum-Pacific Belt, another 15% in the Mediterranean - Asiatic Belt and 5% in the rest of the world (Ollier, 1981).

The area of Southern California has a long history of major earthquakes, because of its association with the San Andreas Fault, in this century.

On the 18th of April 1906 San Francisco was hit by an earthquake measuring 8.6 on the Richter scale. As a result of both the earthquake and the resulting firestorm that swept the central city area over 700 people died, thousands were injured, 250,000 people were homeless and eight square miles of the city was razed to the ground including the destruction of 28,000 buildings (Ellis 1984).

On the 10th of March 1933 at Long Beach in Southern California an earthquake killed 117 people.

On the 9th of February 1971 an earthquake of 6.5 on the Richter scale hit the San Fernando Valley in Los Angeles killing 64 people. Property damage was estimated at \$1 billion.

On the 23rd and 24th of November 1987, two earthquakes measuring 6.0 and 6.3 centred 100 miles east of San Diego,

California left dozens of people injured. The damage ran into millions of dollars.

On the 17th of October 1989 an earthquake measuring 6.9 shook the entire San Francisco Bay area although the earthquake was centred near Santa Cruz. 67 people were killed and over 600 people were injured.

On the 22nd of April 1992 a 6.3 earthquake rocked southern California shaking high-rise buildings in central Los Angeles and causing minor damage over a wide area. On the 18th of January 1994 an earthquake measuring 6.6 hit the Los Angeles area killing 61 and injuring 9,000 people (Anon b, 1994).

Ireland and Britain are very fortunate as regards their position in relation to the main earthquake zones. Although situated close to the margin of the Eurasian Plate, Ireland and Britain are sufficiently far away from the actual plate boundaries to be affected by frequent major earthquakes. However a considerable number of earth tremors have been recorded in Ireland and Britain in historical times especially Scotland which has a number of active fault lines. This shows that Ireland and Britain should never be complacent about one of the earth's most powerful forces. The list below of Irish and British earthquakes is by no means complete.

811 A.D. St. Andrews area, Scotland 1,400 people believed killed and widespread damage (Hodgkinson, 1994).

1801 St. Andrews area, Scotland earthquake (Hodgkinson, 1994).

1816 St. Andrews area, Scotland earthquake (Hodgkinson, 1994).

1841 St. Andrews area, Scotland earthquake (Hodgkinson, 1994).

1890 St. Andrews area, Scotland earthquake (Hodgkinson, 1994).

1901 July 10; Scotland and Northern England, earthquake caused some minor damage (Anon c, 1901, Nevill, 1963).

1940 North Wales, earthquake, 1 related death (Radford, 1992).

1951 January 11, south-east Leinster, Ireland earthquake (Nevill, 1963).

1979 December 26, St. Andrews area, Scotland earthquake (Hodgkinson, 1994).

1984 July 19, Dublin, Ireland and north Wales 5.0 earthquake (McWilliams, 1994).

1990 April, Welsh borders, 5.1 earthquake causing minor damage (Radford, 1992).

1991 March, Peterborough, England, earthquake (Radford, 1992).

1992 February 17, Peterborough, England, 3.3 earthquake (Radford, 1992).

1994 February 11 Bangor, north Wales earthquake (Myers, 1994).

1994 February 15 Norfolk, Swaffham earthquake rattled ornaments and alarmed residents, 4 on Richter scale, followed by a strong aftershock (Myers, 1994).

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THE FRENCH FIELDTRIP: THE ALTERNATIVE VIEW

Compiled by 'The Back of the Bus'



Gay Paris

Conversations on the bus to Rosslare ranged from debates on which boat we'd get to various renditions of several explicit songs. From an early stage the group was subdivided. The top of the bus was, as the chant goes, the 'Academics', the midriff held several different factions and the bottom held the largest group of all (if only we'd known beforehand that there was a microphone up front).

First stop was Rosslare harbour where Sonya nearly went for a dip in the sea, not that she knew much about it. We boarded the St. Killian II singing songs (but never completed or in tune) as our geography fieldtrip began.

The discovery on the trip to France was 'Mark and his magic spoons', while the French Rugby Union must be thanked for providing the entertainment. They saw cometh the hour cometh the man and when the disco opened we witnessed the return of John Travolta, alias 'the Prof'. As Le Harve approached the duty free shop was suddenly raided by numerous members of the group.

Upon docking we were introduced to France's version of Tom Cruise, Mel Gibson or whoever, i.e. David, our bus driver. Sonya, deciding that her French was quite up to scratch, volunteered her services as our interpreter. We were not sure if she was translating everything word for word or was something lost in translation?

Next on to gay Paris and an encounter with the French version of Faulty Towers. The liberal minded manager caused a few eyebrows to raise when he suggested that the male members of our entourage snuggle up in a number of delux king-size beds! This threat to their manhood was soon resolved with the aid of hastily arranged campbeds. Following this "international incident" the Irish invasion of Paris commenced. The masterminds and leaders of this campaign were Mark and Theresa, who dazzled us with their command of the language and their attempts to shake us off their tails. Our visit to the Eiffel Tower was followed by a moonlight jaunt on a carousel. It's funny how some got the hang of riding it quicker than others.

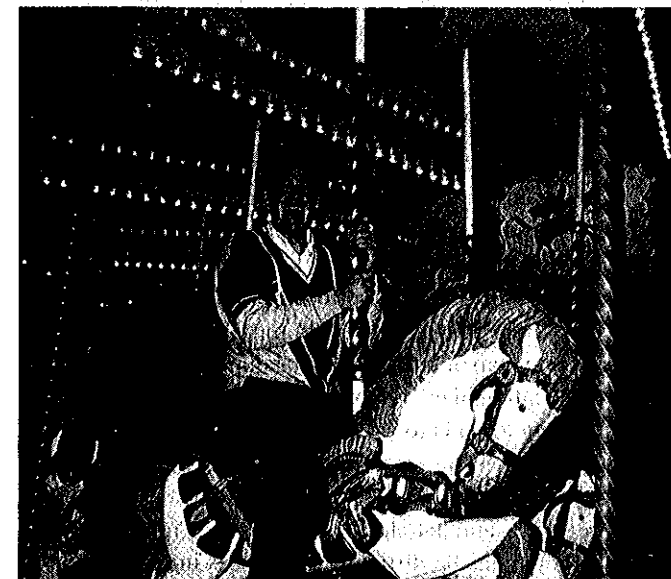
The early hours came to a climax with a France vs Ireland song contest la Marseillaise vs Ole Ole Ole Ole . . . in the Metro Station. Several bemused onlookers contributed to the drinking fund which was now in Dire Straits after the raid on the duty free. The next morning provided us with an opportunity to see Paris by day and to sample French life. Paul, Susan and Nicola managed to get stuck up in the Eiffel Tower. Luckily, Susan and Nicola escaped, who wants to be stuck up there with a Donegal man when they could be down with all those French hunks on the ground?

From Paris we travelled to Dinan. The next day we were divided into groups and dropped off in various parts of Brittany to administer questionnaires on social geography. Fears that the language barrier would hamper our efforts to provide a stimulating report were soon put to rest when the first person we met had a thick Birmingham accent. The fact that the area happened to be a haven for British immigrants also aided Franco-Irish negotiations. After a full day of wandering we successfully managed to find the bus but then we had to scan the countryside looking for Dermot & Co. who had gone walkabout. The general consensus was that Dermot was to blame for this mix-up.

The next few days were spent travelling around Brittany, examining rock types, cultures, and landscape. How someone could get so excited about igneous or sedimentary rock is beyond me. Our pleasures came from simple things like picking up English speaking radio on our walkmans or discovering edible food, i.e. chip shops. Our nights revolved around "le Pub". One of the other exercises involved coastal surveys. The Prof and Paul both seemed well informed on this issue, as they informed us that they had 'checked out' the beaches the day before (oh yeah?).

Our trip came to an end and the only time remaining was for a quick dash to the hypermarche to boost depleting stocks. Goodbyes were exchanged between the sorrowful female population and David. By now Sonya had perfected the French goodbye!

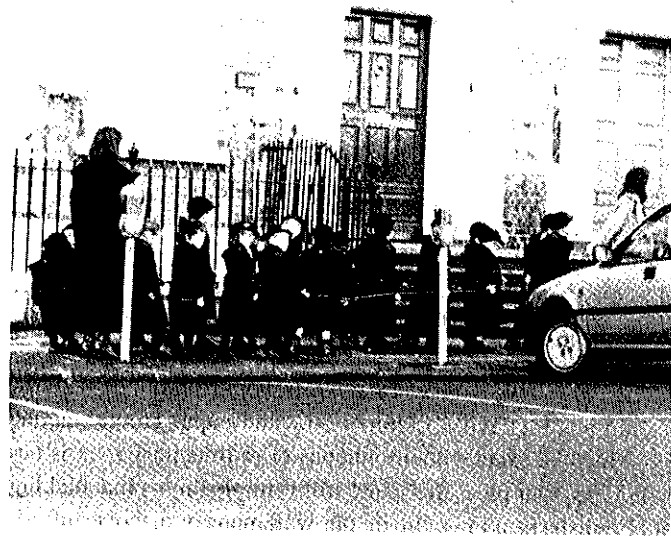
France '93 will be remembered fondly by the participants for the craic, the booze, for the friendships made and of course for the geographical enlightenment!



The Charge of the "Light" Brigade!

THE EXPERIENCES OF A RURAL CENSUS ENUMERATOR

by
Susan Lynch, B.Sc.



"Kids on Lead"

There can be very few Geography students who have not been advised at some time by a lecturer or tutor to consult the Central Statistics Office SAPS (Small Area Population Statistics) and even fewer who have never opened the Census Atlases of Population and Agriculture, but have you ever wondered exactly how these figures are collected? Having worked as both a Census enumerator and Labour Force Interviewer in Rural areas perhaps I can enlighten you!

First of all, the information is collected by enumerators who work in one or more DED's (District Electoral Divisions) depending on their population. In rural areas the geographic area and road mileage covered can be considerable. The typical enumerator is either a middle aged female or a retired male since an essential requirement is to have sole use of a car and to possess a telephone. Another essential skill is to be a good map reader. Enumerators are asked to sign the Official Secrets Act before commencing work as the information collected is confidential and all Census forms must be kept in a locked box while in the enumerator's house.

So, after a short training period the enumerator sets off in his/her car with the blank forms in the official black satchel, the large scale map of the area and the duplicate record book in which the location of every house in the area must be recorded. The first thing to do is to establish the boundaries of the area. Since the DED's were established before 1926 their boundaries are often small rivers, the tops of mountains or lake shores. It is therefore essential, to locate the last house in your area and this can sometimes be difficult. As houses in rural areas seldom have names it is useful to give a brief description of each house so that you can find it again e.g. plastic gnomes in garden, concrete eagle on gatepost, or failing all else, house with

blue door. The position of each house must be marked on the large scale map provided. This is where the map reading is useful! The maps are the 6 inches to 1 mile O.S. maps dating back to the early 1900's so that features shown on them such as buildings may no longer exist, railway lines are no longer there or have been moved (sometimes the signal box has become a Guest House helpfully named "The Signal Box" but that is the exception rather than the rule) and roads which look, like major highways turn out to be narrow lanes that eventually end in a pile of rocks so that one must turn one's car in a very confined space. Another hazard is dogs. When I say dogs I mean DOGS! There is nothing quite like driving up to an isolated farmhouse and trying to get up the courage to deliver the Census form when the car is surrounded by six yapping, growling farm dogs and there is no sign whatsoever of their owner. At one house, having driven a mile down a canal tow path, I was met by a fully grown Wolfhound, luckily he was friendly but I was afraid he would eat the form before the owner received it!

The Census enumerator must find every house in the area, this means driving up every road, lane and breen and walking up tracks to inaccessible houses. It requires determination to visit each house when, having driven up a mountain road for 4 miles without a sign of human habitation and finding the road is crumbling away to such an extent that you are afraid of the car falling over the edge, you are told by a passing farmer on a tractor that there is another house a further 6 miles up the road.

Having found all the houses including occupied mobile homes and itinerants' caravans, Census Day finally arrives. You must now go back to all those inaccessible houses and face the fierce dogs again to collect the forms. This entails finding the houses again so that marking the map accurately in the first place is important. It also requires a certain amount of tact as one will find those who are unwilling to fill in the forms or took exception to some of the questions. There are the elderly, those with poor eyesight, hearing or literacy problems who will require help in filling in the forms. In addition there are those who object to being enumerated. A German friend of mine who has lived in Ireland for 15 years told me he had never yet been enumerated as he told his wife inform the enumerator that he wasn't at home on Census Day. There is, however a legal requirement for each householder to complete the form so that the final resort is the threat to return with the local Garda. This usually has the desired effect on those who are still refusing to fill it in after several visits. Thankfully there are very few of these people in any area.

Finally the forms are collected and sent to the CSO for processing and it is all over for another five years.

The Small Area Population Statistics are a rich source of Socio-Economic and Demographic information about the area in which you are interested. They are an invaluable aid for Surveys and Case studies. The Census Atlases make excellent presents for anyone interested in their local areas.

I should also mention the staff of the Population and Agriculture Sections of the CSO Head Office. They are always extremely helpful to anyone doing any sort of research and will take the time to explain the best approach for doing a local survey.

So, the next time you open your Census atlas or use a SAPS print out, spare a thought for the enumerator who may have had to walk miles up a mountain track or turn their car in the middle of a bog to get the figures for you!

AGRICULTURE AND THE ENVIRONMENT, OPPORTUNITIES & THREATS

by
Edel Heneghan 3rd Arts

Agriculture has played a dominant role in global economic development. The main purpose of farming is to satisfy man's need for food. Nowadays, because of new improvements in science and technology, agricultural practices have changed dramatically. "For better or for worse?" one may ask. It is obvious that agriculture has had a major impact on the environment in both a positive and negative way. Throughout this article, I will attempt to point out where these positive and negative affects occur.

If we are to increase the level of food production, we must not interfere with the natural environment. In the report, *Food, Climate and Man* (Biswass, 1974) Dr. K. Tolba (U.N. Environmentalist) pointed out that agricultural development and the supply of food, depends on the careful management of our natural resources. In Ireland today, few of our environments remain in their natural state. For example, many farmers reclaim land for agricultural use by cutting down hedgerows and trees to increase the size of their farms, therefore altering the natural environment. There is no doubt that science and technology have benefited the agricultural sector. It has helped to improve the quality and quantity of various crops. Improvements in mechanisation on the other hand, have had some negative affects on the environment, for example, the threatened extinction of the corn crake. The corn crake builds its nest on the ground. Due to the increase of machinery, many of these nests and potential sites for future nests have been destroyed. This is just one example where the natural habitat has been severely affected due to the modernisation of agricultural practices.

Water is vital for survival and development. Like many other industries agriculture requires a regular supply of water. Two and a half centuries ago Benjamin Franklin said: "When the well runs dry, we know the worth of water". Today, those same wells are in danger of running dry and along with the rest of the world, we face a critical shortage of clean "fresh water". According to reports in *National Geographic* (November, 1993) if one could put all the earth's water into a gallon jug, the available fresh water would equal a tablespoon full. In other words about 97% of the planet's water is sea water, another 2% is locked away in ice-caps and glaciers and the remaining 1% is the actual amount of fresh water available. It is this 1% of fresh water which is needed for agricultural use. For several thousands of years man has practised irrigation to help increase crop production. Irrigation can however create ecological and environmental problems. One of the main problems of irrigated land is the problem of salinisation. It has turned millions of hectares of productive land into saline barren deserts, through the absence of proper drainage systems. Groundwater resources are especially in great danger due to water being extracted for irrigation. Examples can be found in Saudi Arabia, Israel, Texas, and USA.

Another conflict within the agricultural environment arises from the use of pesticides. Pesticides are deliberately designed to poison insects, and are therefore spread all over the crops which are eventually consumed by humans. As a result, it was discovered that between 400,000 and 2 million people were poisoned annually. (Green or Bust, 1990). Apart from being a threat to human life, pesticides are also killing animals and birds.

In Britain for example, toxic effects of pesticides (which are used to protect timbers in houses from wood boring beetles) have seriously affected the bat population. Modern farming techniques use large quantities of chemical fertilizers. As we know fertilizers are vital for increasing food production. It is quite obvious that fertilizers have benefited the agricultural sector. It is the excessive use that causes much concern, as it is seen as an environmental threat. Unfortunately many small farmers do not realise the impact that their misuse can have on the environment.

Generally, agricultural management imposes threats to the environment. Overgrazing by sheep and goats for example, in the West of Ireland creates major problems as it exposes the thin layer of soil which can then be eroded by wind or washed away by rain. The carrying capacity of the land cannot tolerate this, therefore agriculture is once again threatening the environment. "The Dust Bowl" (1930s) in the USA is just another example of where man exploits the natural environment. There is no doubt that environmentalists are making their voices heard. Take for example here in Ireland the CAP Reform of 1992, farmers were encouraged to place less reliance on chemicals. The "Integrated Pest Management" was set up, and this involves a combination of making use of natural insect predators, crop rotation and only a minimal use of chemicals to keep pests away. The monitoring of the use of pesticides is also used. Throughout this article, I have attempted to point out the impact which Agriculture has on the environment; as I have concluded it has both positive and negative affects and awareness of the negative has increased in recent times. In order to reap the benefits from modern agriculture, we must not continue to tamper with the natural environment and its inhabitants. We must work with nature . . . not against it.

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GOING TO AMERICA

by
Carol Halligan & Arlene Flood

For all those going to America this summer on the J1 Programme may we firstly congratulate you on a very wise choice. Having spent last summer in the States ourselves we can guarantee that you will have an excellent working holiday. We hope that our advice will be of some benefit to you.

Before you go, if at all possible, try to ensure a job as it is comforting to know you have something definite to go to. In some cases accommodation is provided with employment but be prepared to abide by certain rules and regulations - they may take you by surprise!! If you are under 21 and planning some good Irish sessions bring some appropriate ID or you may actually remember your holiday!!

On arrival be sure to attend the orientation, it can be boring but beneficial. Socialise with fellow students and gather contact addresses if you intend travelling. As regards where to go we highly recommend Cape Cod as jobs are plentiful and so is the 'craic'.

When you reach your chosen destination apply for your social security number straight away as many employers will not employ you without one. When job hunting be confident and persistent. Once settled into a job be sure to pay relevant taxes regardless of what others say.

Remember you are there to enjoy yourself and see as much as you can - make good use of your days off - and do not be apprehensive about mixing with Americans, they are friendly, obliging, fun loving people! Send us a postcard and be sure to come back!



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FORESTRY AND THE ENVIRONMENT IN IRELAND

by
Michael Quinn, B.A.

With the growing awareness of environmental resources on a national level, the State and indeed private investors are more involved than ever before in programmes of afforestation. Yet there is increasing evidence that afforestation is not all good; that in some circumstances it can involve environmental damage. The policy of afforestation on both state and private land must be one of careful planning and should include knowledge of the local environment.

For centuries the people of Ireland have regarded the forests of Ireland as a nuisance for agricultural development and this inherent view has survived to the present century. At the creation of the new State in 1922 there was only approximately 100,000 ha. of forest, with about 92,000 ha. on private land. Since this, the State has pursued a policy of afforestation so that now approximately 7% of Ireland is forested. The Forestry Act of 1988 established the forestry board Coillte Teoranta. The planning target is 25,000 ha. per annum, of which 15,000 is to be planted by the private sector. This leads to the practical question of where this afforestation should take place and how it impacts on the local environment.

Michael Bulfin (1991), in "The Right Trees in the Right Place" (Ed's Mollan & Maloney), examines this issue and comes up with the following observations: Firstly, the wet mineral lowlands "offer one of the best prospects for the location of new plantations" (Bulfin, 1991 : 104). It seems likely that much of the 237,000 ha. of midland cut bog, already cut by Bord na Mona, will be afforested in the future. He views the lowland marginal soils and the lower mountain slopes of the south and east of the country as offering "a prime target for owner planting" (Bulfin, 1991 : 105). In relation, however, to blanket bogs, Bulfin stresses the environmental sensitivity of these landscapes which are the least productive of currently planted soils.

Private sector involvement in afforestation has increased since the EC offered substantial grants for such programmes. Small farmers and other investors now see afforestation as economically worthwhile; a view which sometimes conflicts with consideration for the local environment. The EC policy has created "an artificial economic climate for afforestation in areas of great conservation importance which in general, have no natural suitability for industrial timber production" (Hickie, D. 1990 : 27). There is a need for government intervention to control the location and impact of afforestation.

The effects of forestry on both the physical and cultural environment can now be considered. Hickie is critical of conifer forestry plantations in certain environments, stating that they often cause more harm to the environment than the perceived good. The main fault lies in the treatment of forest plantations as an agricultural crop. It is this perception in the mind of the investors that is causing the destruction of valuable natural habitats that invariably cannot be sustained under afforestation, or be reintroduced after the plantation has been felled. This argument holds particular relevance for the peatland bogs. Fortunately, it seems that the overwhelming evidence of environmental damage in these areas, has forced Coillte Teoranta to reduce its acquisition of blanket bogs for forestry. Afforestation has pollution implications, most commonly in the form of stream water acidification. The potential for this occurring in

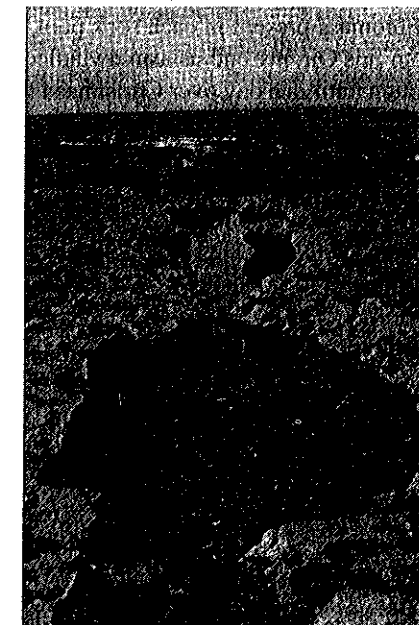
Ireland is minimized, however, due to "the relatively unpolluted air characteristic of this country." (Miller in Mollen & Maloney : 71).

The relationship between forestry and the cultural environment rests largely on the recreational practices of society. As the Irish population increases, particularly on the eastern coast, areas of forestry become important for their cultural and recreational significance. The scope for further afforestation is already limited in this region and this, combined with an increasing demand for recreational facilities, may lead to a change from clear cutting systems to some sort of shelter wood management regime (Feehan, 1991). As the demand for nature increases in the highly urbanised eastern seaboard, developers may soon view afforestation, not as an agricultural crop but as a long term tourist and recreational attraction.

Forestry is a valuable economic resource and Ireland has the potential to become a substantial net exporter. The demands for wood within the EC are continually increasing (Carbonnier in Mollen & Maloney) and Ireland is favourable placed to meet the need. These economic rewards can be realised without further environmental damage if policy makers learn from past mistakes.

LITMUS BLUES

by
Grace Hamilton



Shore front on Iniseer

Maybe I'm strange, or maybe this is a suppressed desire of every third year student, but I loved collecting the data for my thesis. Last summer, on the understanding that the thesis 'had to be done before third year commenced'. I pulled yet again on the purse strings of my long suffering financiers, my folks, and headed off on the train to Galway, on to Rossaveal, then a 9 seater (Hi-ace-on-wheels job) plane and off I went island hopping. Who needs Greece?

Now, this might not appeal to most but my chosen topic of study was, wait for it, the geomorphological characteristics of Inis Oir. I wasn't alone, I don't want anybody conjuring up a David Bellamy type, lone ranger lunie female in their heads. In fact I had wrangled along numerous unwilling volunteers, to hold the tape or the compass or to take the pics. Some were

more gullible than others and one in particular, to whom the final product shall be dedicated, was gullible enough to receive severe sunburn on most parts of the body. One boot marked one corner of my test site, the other another, a t-shirt another and socks the final corner; many of which will make their final appearance in the photos, oops! sorry Paul, "plates" of my thesis.

Ruairi, the local publican, pulls a good pint of the black stuff! Star gazing at 3 a.m., when even poor Ruairi had enough, was a common enough occurrence. Limestone pavements were not the only spatially analysed features of Inis Oir that month; although one star looks much like another after too much Guinness. The purse strings fray thin and all my excuses dry up so the time for real work begins.

I had my O.S. 6" map and chose, all very scientifically of course, my five sample sites. I measured the clints, grikes and bearings of the joints. Having thought for an all exciting month that I'd come up with earth shattering (literally) evidence that Inis Oir had turned on its axis by 7 degrees in 100 years. I was deflated to be informed by Paul (ever patient) Gibson, that magnetic north and true north are 7 degrees apart, and with that went my first class honour!

Next I was to be seen, surreptitiously, lurking along the shore with a bakers tray, (stolen, I might add). This was when the rumours ran riot: who was this lunatic? The tray, or grid, served as a measurement of the surface area of rock pools, and I counted the squares entirely covering the pool to establish a result: I'm sure you're with me on this one. Out came the litmus paper to support the hypothesis that limestone solution is influenced by the amount of biomass present in each rock pool. Of course, once home from Inis Oir, my enthusiasm dwindled and the litmus was forgotten until one day over Christmas I uncovered it only to discover, Oh . . . horror of horrors, the vivid variety of colour from last August was now one undistinguished mess.

So if you are looking around College for a glimpse of the Bellamy type female, don't bother, I'll be back on Inis Oir with the pH(d) probe taking matters slightly more seriously this time. (Though I must pop in to say hello to Ruairi . . .)

UNDERSTANDING THE DIFFERENCE

By
Denise Meagher

"If I go now to Northland,
In the tracks of the north's sons,
I shall get the moon to gleam
And the golden sun to rise"

The Kalevala

I had mixed feelings as my train for Helsinki, Finland, pulled out of St. Petersburg. I was leaving behind me a world I was only beginning to understand, and travelling to another that simply fascinated me. The Sibelius was a luxurious train, and I suspected most of the passengers were Finns in St. Petersburg on business. My thoughts returned to Kaarle, a history student from Finland I had met at college during the year. His culture intrigued me. Finland, I discovered, was the fifth largest country in Europe. It's five million inhabitants are just a

blip on the map, highly influential, but outnumbered by several thousand to one, by trees.

Geographically, the country's location between Sweden and Russia is of crucial importance in understanding Finnish identity and self-image. The Finns were part and parcel of Sweden for seven centuries (1200 - 1800, but there was never a Swedish "conquest" of Finland. Instead, a race had developed between Sweden and Russia, in those days known as Novgorod, to fill the power vacuum in the land of the Finns. Sweden won the race, and it did so without resorting to conquest or dynastic union or treaty.

Sweden formally ceded Finland to Russia by Treaty on September 17th 1809. Along with Finland went the Aland Islands, halfway across the Gulf of Bothnia, between Sweden and Finland, which had long been an administrative part of the Finnish half of the kingdom. Finland became a separate state whose head Tsar, Grand Duke, was an absolute ruler, Tsar of all the Russians. In 1920, following the Revolution and the beginning of the Communist Regime in the Soviet Union, Finland gained recognition as an independent Republic.

NATIONAL PSYCHE

The obsessive fear of Russia and ambivalence towards Sweden is understandable, considering their historic relationships. The Winter War against Russia, between 1940 and 1941, made matters worse. Against Stalin's Army, Finland fought against Soviet Russia for three-and-a-half months, under ferocious winter conditions. Under the direction of the great general, Carl Gustaf Emil Mannerheim, Finland came through Independence intact, and a new found confidence almost emerged. Mannerheim became President until 1946.

BORDERS

"For have we not shaped these borders and frontiers to represent that cruellest of all front lines, the one which runs through our own mind." So said Robert Fisk, journalist for the English Independent, at a recent discussion on the former Yugoslavia. Yet, there can be no denying that such "imagined" lines can create so many difficulties. Before leaving Ireland, I had secured a double entry visa from the Russian Embassy in Dublin. Because I would leave Russia en route to Finland, and return again to St. Petersburg for my return trip to Ireland, this visa would cover both entries. I was satisfied that everything was in order and handed over my passport and visa on the Russian/Finnish border, without concern. One hour later a stern-looking Russian official handed my passport back to me. "And my visa", I asked, still unaware of its fate. "No visa", was the reply. Now I began to panic. I explained that my visa was valid until the end of the month and insisted that I needed it to return to Russia. Still the reply, "No visa". At this stage the official had begun to proceed down the train, so I left my seat and marched determinedly towards him, demanding an explanation. I was grateful to a Finnish woman who came to my assistance. She spoke Russian and English, and warned me of the dangers of such a confrontation, (I might have been taken into custody!), and tried to find out what had happened to my visa. It became blatantly obvious that my visa had been mistakenly confiscated at the border, and I would not see it again.

Defeated, I returned to my seat, at this stage now famous as the Irish "ex-visa" passenger on board the Sibelius. I think it was the fact that I was extremely tired after a hectic week in Russia, but I simply could not find the energy to get upset. I resigned myself to the fact that in Helsinki I would have the

difficult task of trying to procure a visa from the Russian Embassy. If the worst came to the worst, I would forfeit my Russian flight and return home from Finland.

NATURE AT ITS BEST

Fears fled when I reach Helsinki. An Irish friend of mine, who is married and living part of each year in Helsinki, Greg Coogan, met me at the station. Greg studied Anthropology at Maynooth, and kindly welcomed me to his Helsinki home.

Literally hundreds of islands dot the Helsinki coastline, and the power of the Baltic is unquestionable. The sea follows you throughout the city, and at no point are you far from the peace of nature, trees and lapping water abounding. This is my first impression of Finland's capital city. A midnight walk along one of the many beautiful beaches, confirmed for me the beauty of the environment, and the truth of Martti Arko's words. A Finnish environmental campaigner, he declared that "we depend on nature and the environment for everything. If we allow our forests and lakes to become polluted, our Finnishness will disappear too. The hearts of the Finnish people lie in the lakes and forests. They are our identity, our capital, and our riches."

SIGHTS AND SOUNDS OF HELSINKI

The next few days were spent exploring the city. Stockmanns, Finland's largest department store, might be considered the central point of orientation. Near its main entrance stands one of the many large statues the city boasts - The Three Smiths Statue - a trio of men with nice pectorals. From here one can walk to the central market, on the South Harbour. Opened Monday through Saturday, the market is an important part of daily routine for Helsinki dwellers. A multitude of island dwellers come with their fish and vegetables and line the Harbour, selling their food. Jewellery, lace and baskets are also available - I wallowed in this habitual experience, curious because of its strangeness rather than its familiarity.

The Senaatintori, or Senate Square, some 7,000 sq. metres in size, is covered with no less than 400,000 grey and red cobblestones of Finnish granite. The Square is a by way now, with Helsinki University occupying the entire western border of the Square. The Council of State lies directly opposite.

The National Museum, the work of the Gessellius-Linogren-Saarinen trio, was built in 1906, and is considered a masterpiece of Finnish architecture. Seurasaaari is one of the city's outdoor museums. A visitors island, it is a really pretty, forested place, an open air museum of wooden buildings from provinces all over Finland. The houses on Seurasaaari date from the 17th to 19th centuries and include farmsteads and a church. Bonfires near here celebrate traditional festivals for Midsummer and Easter, for which local Finnish children dress up as "Easter Witches".

FOOD AND PLENTY

Of course I didn't spend all my time exploring the outdoors. The Finns know how to enjoy themselves indoors, also, so I enjoyed sampling their social life.

How better to begin than with a traditional Finnish meal. Pirho and Timmo, friends of my host, went to great trouble to prepare a superb meal on my second evening in Helsinki. On arrival at their home, the first ritual is to take off your shoes. It is considered ill mannered to wear shoes indoors in Finland. This completed, we all settled down to enjoy a nice aperatif. The Finns like to drink, and a traditional meal is served with many samples of Finnish liquors and wines. The dinner was

superb - salmon served with dill, a northern pine tree which is used in cooking. I was anxious at times during the evening, wondering what the appropriate actions were. One of the greatest challenges in experiencing another culture is the fact that the unconscious habits of your own culture become conscious, as you eagerly try to loose them and follow the traditions of another "world".

With Kaarle, my student friend, I sampled some bars in Helsinki. They appear more like the European cafe than Irish pubs, with groups sitting around tables, chatting and drinking beer. I regularly felt myself being stared at by people. This was probably one of the aspects of Finland that most surprised me. They are obviously not used to numbers of Irish tourists, especially not in late September. I looked obviously different in contrast to the majority of blond haired, blue eyed individuals I socialised with. Rather than being the observer, as I usually am, I became the observed.

ALBERT EDELFELT

In this apparent contradiction lay the answer to my interest in the Finns. On my last day in Finland I visited The Atheneum, the site of Finland's National Gallery of Art. The museum's collection of Finnish paintings, sculpture, drawings and graphic art covers the years 1750 to 1960, and includes well-known works by such Finns as Akseli Gallen Kallela and Albert Edelfelt. The latter's work particularly touched me.

As I stared at the faces of the Finns in his paintings, I felt like an intruder stealing what Finns value most - privacy. If the eyes in Edelfelt's portraits said anything to me, it was that my eagerness to understand was a threat, my curiosity an invasion.

In order to come to terms with people from another culture, you must first come to terms with yourself. My interest in Finland arose when I met someone who was completely different to myself - quiet, distant, a person of few words. In order to understand the Finnish personality, the quiet introversion that seems to manifest itself in most Finns, I had to ask myself questions about the Irish. With a tendency towards extroversion, I might be considered to portray the stereotypical energy of the Irish. In Ireland, a Finnish personality is a mystery. In Finland, as I discovered, my Irish personality was also mysterious. I was questioned, with interest, but also with suspicion. At the Atheneum Museum I found the answer to my dilemma. Our mutual cultural attraction lay in our outward difference, the force that brought us together yet finally kept us apart.

HOMEWARD BOUND

I was granted a transit visa on September 29th in Helsinki. I had spoken to the Russian Consulate and he had agreed that a "mistake" had occurred at the border. I could return to St. Petersburg to get my flight back to Dublin. I travelled by coach, wanting to take in every last detail of a landscape more beautiful than words, but there again I've always adored Autumn, and this is the time to see Finland at its best. Somewhere between Finland and Russia, I watched the sun set and cast its wondrous red lights over lakes and tree. It seemed like a dream, but somewhere in my heart I knew its meaning.

"Fare well now upon your way
Upon your journey sweetly
End your curve beautifully
Come at evening into Joy!"

The Kalevala

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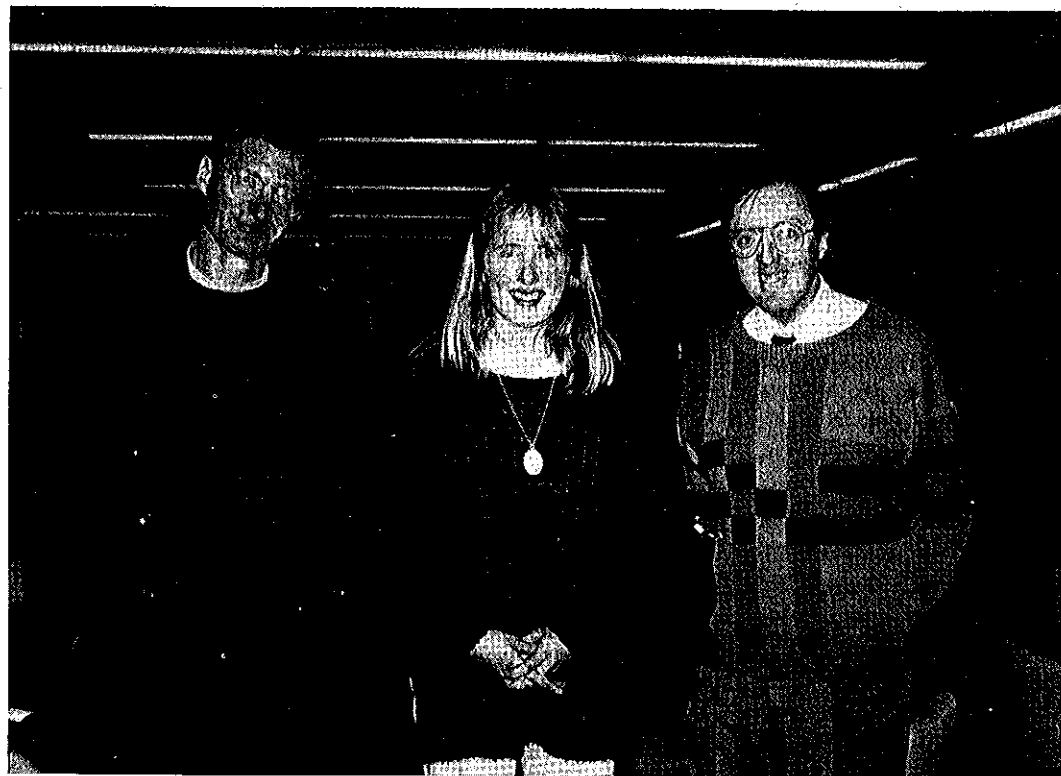
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EC Legislation and the Environment

by
Susan Doherty, 3rd Arts

"Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past. Moreover, a new ecological awareness is beginning to emerge which, rather than being downplayed, ought to be encouraged to develop into concrete programmes and initiatives: (Stark, 153).

The development of "concrete programmes and initiatives" has advanced at quite some speed if one considers that the European Community's environmental protection policy has only recently celebrated its twenty-first year of establishment. However, despite the various programmes and initiatives followed, environmental danger is still a reality. Along side the most recent European policy - the Fifth Environmental Action Programme - came a report on the State of the Environment. As well as high-lighting the positive effects of the Environmental Action Programmes, the report included some less aspiring trends - such as "a 13% increase in municipal waste over the last five years, despite increased recycling of paper, glass, plastics". (Towards Sustainability).

When mentioning any legislation that has been implemented over the past few decades, one can not possibly ignore the series of Environment Action Programmes. The first programme in the series was adopted in 1973, a year after the community's environmental protection policy was launched and was amended in 1977, 1983, 1987 and 1992. Such programmes have resulted in a massive amount of legislation sanctioned, ranging from waste management to standardisation of products. However the programmes tend to go farther than just legislation, for the aim of the Third Environmental Action Programme (1982 - 1986) was one of prevention or "anticipating environmental problems through prior environmental impact assessment" (Cutera, 102).

The EIA was adopted by the European Community in 1985, its aim to predict impacts of proposed development on the environment and to play a role in the planning process. Progress has clearly been made - for example in regards to atmospheric pollution, with reduction in sulphur dioxide emissions and the near total elimination of CFC's and in the case of Ireland, a significant lessening of the Dublin "smog" problem of the 1980s, with the establishment of "smoke-less coal zones". However, it seems from the Table below, that Ireland is behind in regards sanctioning legislation in comparison to other European community members:

TABLE 1

Legislation Enacted 1906 - 1985

Country	Number of Acts
Ireland	37
United Kingdom	238
France	333

(Derived from Cutera)

With the public interest ever growing in environmental issues, and politicians trying to accommodate these issues, there should be an increase in legislation over the next few years. This should definitely be the case with the Fifth Environment Action Programme, which now shall be discussed. "Action by the Community relating to the environment shall have the following objectives:

- to preserve, protect and improve the quality of the environment;
- to contribute towards protecting human health;
- to ensure a prudent and rational utilization of natural resources" (Karamer, 4.01)

The above is a section from Article 130r of the Single European Act clearly showing the Community's regard and concern toward the environment, as can be viewed in relation to the Fifth Action Programme, the "polluter-pays-principle" and the aforementioned E.I.A., all of which shall now be examined. The aim of the Fifth Environment Action Programme can be gathered from this title "Towards Sustainability" for just as Articles 130r, 103s and 130t - its target is the attainment of sustainable economic and social development in regards to the environment. Nevertheless, the Community is not naive enough to believe that the Fifth Programme will achieve sustainable development but it believes that "the programme should mark a significant step on the way towards it" (Towards Sustainability). As well as the concept of sustainable development, the Programme will continue with leading ecological issues, such as the ozone layer, air quality and soil degradation. The other major objective of the Programme is the establishment of an environmental interplay, between the leading economic areas - such as industry agriculture and tourism, and the principle actors - government, business and the public, through primarily greater use of legislation.

The Community is aware of the fact that there has been an amount of problems associated with the implementation of the programmes - such as a lack of coherent policy, and inadequate management both at community and local levels. In addressing these problems, the Community have developed three dialogue groups, the Consultative forum - for interchangement of information between the principle actors - the implementation network - to help apply the various initiatives to countries, and

the environment policy review group - for "mutual understanding and exchange of views on environmental policies and measures" (Towards Sustainability, Chapter 9). A fundamental element of the programme is the concept of shared responsibility, impact of this new environmental programme since it has only just been implicated. However, one can observe other impacts of policies especially the above mentioned EIA. Table 1 had which includes the "Polluter Pays Principle" which as it suggests, refers to the fact that the polluter is compelled to pay for any pollution that occurs. The other aspect, of legislation that is significant for this article is that of the establishment of the EIA - Environmental Impact Assessment (1985). Its aims include the protection of the environment and quality of life, averting environmental detriment at its origin and attempting to make the laws of the various states concordant in order to prevent competition and in so doing stabilize the common market. More simply under the EIA every large potential development requires an EIS - Environmental Impact Statement - accessing the impact (negative or positive) of the planned development upon the environment.

With reference to Ireland, one cannot, logically assess the clearly indicated that in regards to enacted environmental legislation, Ireland is not at the forefront of Europe, for Ireland seems to lag behind her fellow members in surveys on environmental awareness. However, the 1989 General Election saw seven Green Party candidates been returned, and Ireland's Presidency of the European Community seems to have greatly boosted her internationally. The aforementioned Dublin smog problem of the 1980s, had been substantially eradicated due to the EC directive on air pollution (deadline of compliance been April 1993). The question which has been put by many an Irish environmentalist, is whether or not the government would have been as quick to respond to such problems if the pressure of adherence did not exist. However, one cannot ignore the fact that during her term as President of the EC (1990), Ireland pushed forward a plan for environmental protection, both on the European and National levels. Indeed the Department of The Environment produced a pamphlet entitled *An Environment Action Programme* which outline the policies to be persuaded and stated "The government are using the occasion of the Presidency to parallel our efforts at community level with a new comprehensive national environmental programme" (An Environment Action Programme, 1). It is no small achievement that during the Irish Presidency both the European Environment Agency - which was urged by the Irish Minister for Environment - and the Fifth Action Plan were established.

In regard to the implication of European legislation to Ireland, we shall now turn briefly to look at the impact of the EIA in Ireland. One of the primary functions of the EIA is to carry out environmental impact statements of EIS. However the EIS can omit some significant seasonal ecological changes due to the fact that many of these projects are conducted over a short time scale. Access by the public to such statements, which can be extremely lengthy in details, can lead to confusion due to the technical language of the EISs. Jeanne Meldon points out that problems can arise with respect to areas of planning control exemption. Notwithstanding the EIS in Ireland has a positive side to it for it had increased the knowledge of environmental issues amongst all sides of the community - whether it

be the public in general or developers - and the EIA has helped to prevent potential destructive environmental projects from been implemented.

Whereas EC legislation respecting the environment had been beneficial to Ireland, other EC legislation had not, such as the structural funds and the Common Agricultural Policy. Within the former policy, there has been a lack of "adequate environmental monitoring (Meldon, 4), which must be dealt with by reform of the Structural Funds. The reforms of the later have been more than welcomed, for the policy was found to be lacking in an environmental dimension. The recent policy of set-aside in regards to agriculture has favoured the landscape of Ireland, and it is suggested that such policies along with the EIA, will whittle down the exempt planning statue of agriculture in Ireland. There seems to be a growing necessity for the elimination of this exempt nature of agriculture in the planning process, for it means that much of the Irish landscape is beyond the control of planners. Many modern agricultural practises such as slurry spraying and the removal of hedgerows, have well documented negative effects upon the environment. Since there has been little development in regards to the eradication of the exempt side of agriculture at the national level, it seems that the EC should "step in" and deal with this problem, which it seems is not just confined to Ireland.

The directives applied to planning in Ireland tend to be unsuitable to the Irish context, for the same policies are applied on a countrywide level regardless of different landscapes, or pressures for change in certain areas of the country. Even though this is more of a planning defect, such defects can still effect the environment, and hence should be legislated for by the EC. Changes in the landscape, such as ribbon development and bungalowisation, could have an adverse effect on one of Ireland's leading industry - Tourism. Many people are attracted to Ireland by our "clean" environment. As Frank McDonald wrote "People will not come to Ireland, nor will they eat our food, if we lose the clean image. Nor will they come here to see our suburbs strung out along every country road . . . There is no consensus here on the need for rules and regulations of any kind about almost anything . . . Rabid individualism rules the day." (McDonald, 109).

In conclusion, through this essay we have traced the evolution of EC environmental legislation, more legislation is required for environmental protection, especially in the area of the Irish landscape, now one of Ireland's precious resources. The problem facing the European Community as a whole is the fact that environment hazards - such as pollution - transcends the boundary lines of the member states. Hence, by a process of trial and error - in some cases - the aim of the EC must be a well organised, and effective common environmental policy for Europe, both at a community and local level. As the Fifth Environmental Action Programme said:

"The Environment is dependent on our collective actions, tomorrow's environment depends on how we act today."



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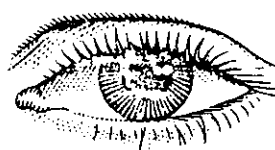
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