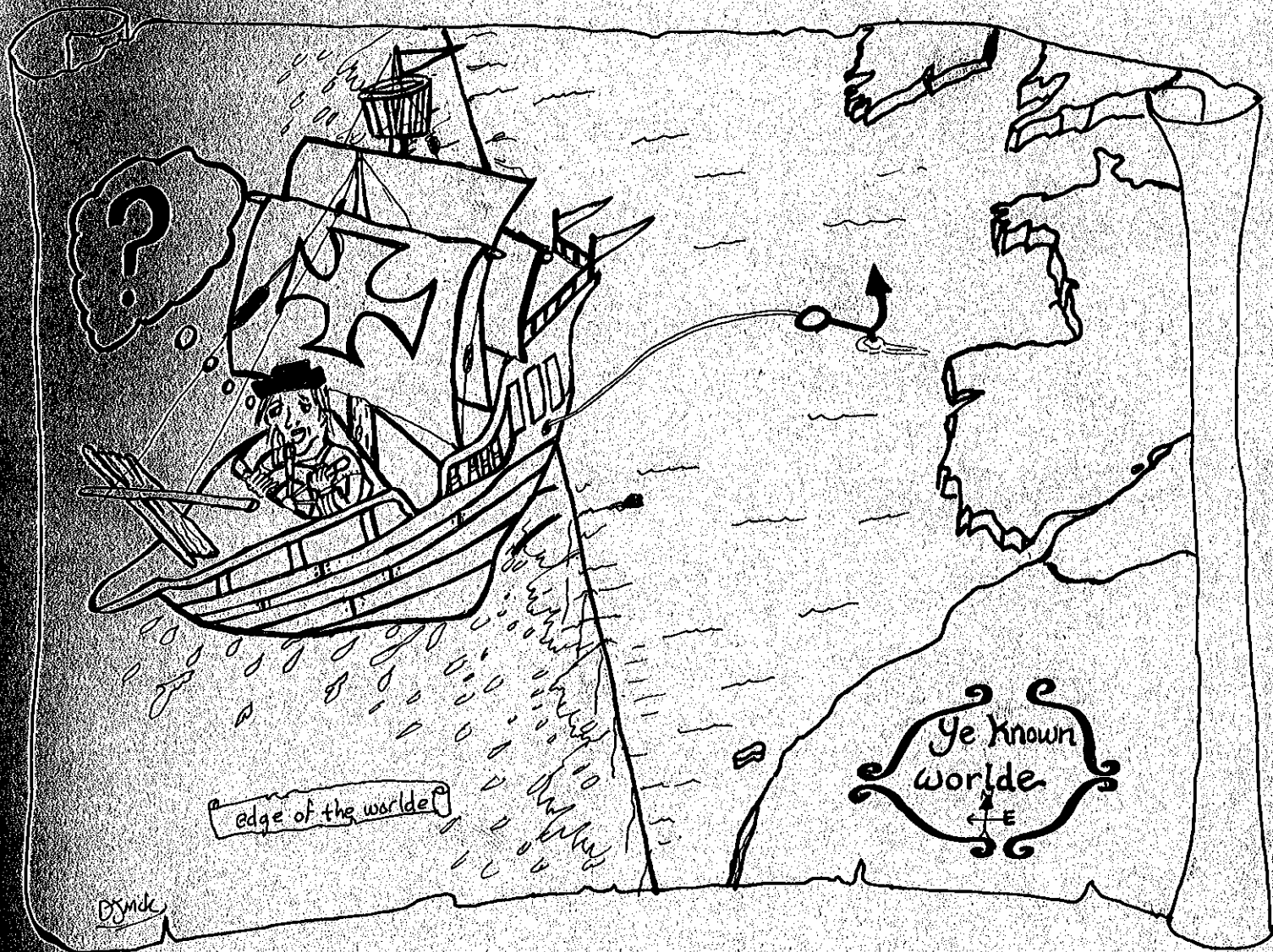


Milieu 1993



....and it was at this point that Columbus wished he had gone to his nine o'clock geography lectures.

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FOREWORD

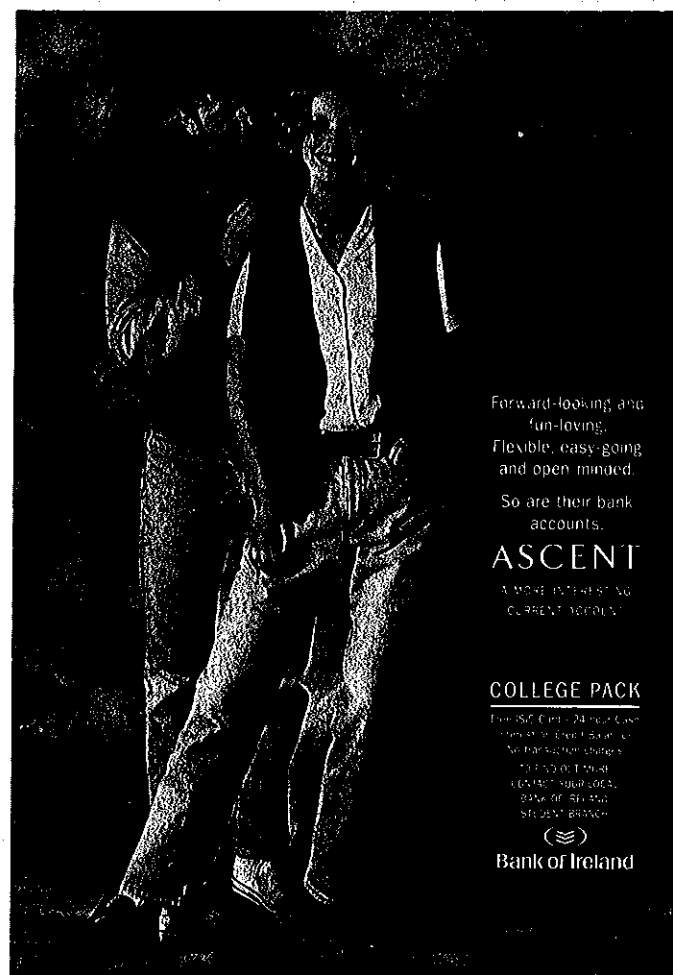
In a university student community, where there is a continuing turnover in personnel, it is important to keep traditions alive and to be aware of being part of an ongoing process of development. Most students take the Geography Society and its work throughout the year more or less for granted. The Committee of the Society, in spite of periods of despondency when attendance at its functions is low, is continuing trojan work begun twenty one years ago when it was established in the 1971-72 session. Three years later *Milieu* was launched, with the first number being published in 1975. So the Society is to be congratulated on its twenty first year and on producing the eighteenth issue of *Milieu*. There are one or two numbers missing from the National Library's set, so these are clearly collectors' items at this stage!

The foreword to the first issue was written by W.J. Smyth, now Professor of Geography in University College Cork. He talked of the significance of the title *Milieu*, reflecting as he said "the fullness and diversity of the geographic tradition". In that first issue there were articles on growth centres and regional development, on the geography of poverty, on neo-colonialism, on marriage distances in Enniscorthy, on the two-nations theory and the Irish border, on agricultural innovation diffusion in Monaghan, on Steinbeck and American geography, the poet as social geographer, and on sex in geography ("one of my favourite topics" according to author D.G. Pringle). The authors of these distinguished papers have gone on to make names for themselves in various fields - in Shannon Development, in Adult Education in college here, several as energetic and innovative teachers, another as a researcher in UCC, another as a planner and one as a priest. It obviously pays to write for *Milieu*!

As well as looking back, these Forewords have often been used as platforms to look forward! Certainly the rich tradition that is reflected in this journal's title has continued up to the present. Since the publication of the first issue, the Department has significantly strengthened its physical interests, in both climatology and the earth sciences. It is hoped that the programmes offered to students in future will be tailored more to suit changing demands. Because of the growing numbers of undergraduates it will be necessary to alter some of the well established ways of managing reading and research courses, giving students more opportunities to undertake set-piece research projects, moving the emphasis on original research to the postgraduate stage. This year there are ten postgraduates in the Department, and it is hoped that there will be more opportunities for funded research in the future, especially in relation to social and economic development as European structural funds come on stream.

So congratulations to the Geography Society, and Geography students continue to support and be proud of the tradition to which you belong!

PJD



THE GEOGRAPHICAL SOCIETY OF IRELAND

Cumann Tíreolaíochta na hÉireann

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 journal *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 act as Honorary Librarian to the Society and may be contacted at 01 - 772941 ext. 1454.

Membership

Current annual subscription (Student Rate) £10.00
All enquiries and/or subscriptions to Dennis Pringle or John Sweeney.

EDITORIAL

Once again that time of year has arrived. The sun is shining, the birds are singing and a new 'Milieu' is available and begging to be read. John-Joe, Helen and Kathleen have done trojan work over the past few months pursuing articles and finding sponsors to ensure that Milieu 1993 would be one to remember, an aim which has clearly been achieved.

This year's Milieu is one of the largest yet, with articles on a wide selection of themes, ranging from 'The Graded Stream Concept' to 'Geography and Gender' to 'The Jewish Landscape of Dublin' to mention but a few (look, don't be awkward, just examine the table of contents if you want a complete list!). As ever, humorous contributions are dispersed (note the subtle use of spatial geographical terminology!) throughout the magazine on topics such as 'Confessions of a Fieldwork Addict' by Shelagh Waddington of overhead projector fame. Longest article award goes to Dennis 'Hopalong' Pringle. His mammoth contribution is on the subject of Aids which should interest all those budding Medical Geographers out there (well, there is one or two of you ... isn't there?!).

This year also sees the return of old favourites, such as wordsearch and trivia, along with the debut of the 'Milieu Crossword' ... hours of fun for all the family (and no, that is not intended as a sarcastic statement, how could you even suggest such a thing?!).

On a serious note, we wish to thank all those who forwarded articles, whether published or unpublished and apologise to the latter group whose contributions had to be omitted as they duplicated themes, or proved difficult to convert from good essays to publishable articles. Thanks again to all concerned.

Other omissions which you will notice are the bibliographies, normally at the end of each article; due to sheer lack of space these were left out, but they are available on request from the relevant authors.

Better wrap it up here then, we have strict orders to keep the Editorial short, as publication is charged by the page and nobody really cares what the editor has to say (SOB! SOB!). Enjoy the magazine and if you find any editorial errors, IGNORE THEM!

Ivan Devilly B.A.
Colm McNeilis B.A.

AUDITOR'S NOTE

On behalf of the Geography Society, allow me to welcome you this year's edition of 'Milieu'. This past year has been an active or perhaps more appropriately a hyper-active one for the Geog Soc.

Our activities began with a second-hand book sale for geography students, which was quite a success. Our next venture was Fran Walsh's annual lecture on 'The Geography Field Trip' which was entitled '1992 - Voyages of Discovery'. This involved a slide show in which many people were shown in their various slumbering, scholarly and inebriated states. Fran has been rumoured as a hot favourite for an Oscar nomination (Best Editor) as well as the central figure in a legal battle for custody of the negatives.

Our next talk was given by Prof. J.H. Johnson, a prominent geographer from England who gave an interesting and informative talk on migration. Following that, Dr. Tanya Bowers-Boyen presented a lecture entitled 'Rain-making in the African Bush'. This was an interesting talk, articulately and clearly explained for such a technical subject, and even I understood quite a lot of what

was being said. I had been expecting something involving dancing around a totem while shaking a branch and chanting some incoherent mantra, and someone was seen doing something similar to this outside Rhetoric House after the cheese and wine reception which followed the talk.

Our next presentation was given by Dr. Mickey Lauria, who spoke on local Politics in Urban Planning in the American city. The value of this talk lay in revealing to us some of the basics of planning in America and specifically in New Orleans; and it illustrated how these fundamental differences expressed themselves geographically. However, as enraptured as everyone was by Dr. Lauria, the show was stolen by another of the Lauria family - 8 month old Ricky, who had every tender heart in the geography lab dribbling all over him. Dr. Lauria, I might add, expressed relief that they reserved this for his son and not for him. The next venture of the Geography Society was a new departure - an unofficial field-trip. It sounds definitely clandestine, and proved to be a very enjoyable weekend. It involved a number of geography students going to the Tiglin Outdoor Adventure Centre in Co. Wicklow, where we partook of various adventure sports; orienteering, rockclimbing, hillwalking, mountain-biking, screaming, hysteria, wanting our mothers ...

After this, we returned to the traditional format of guest lectures once more, presenting Richard Douthwaite, renegade economist and author of the book 'The Growth Illusion'. Richard gave a talk entitled 'Structural Funds: a cul-de-sac for Ireland'. The talk was very incisive as regards the economic theory behind the structural funds, even though the subject matter was quite complex. A well attended talk which was thoroughly enjoyed by all.

The table-quiz. What can we say? Another departure for the society which was a resounding success. Where did they all come from? How did we fit them all in the Union? Where did we get all the chairs? Thank you God. The quiz master for the night was none other than that sultan of swing, Fran Walsh, whose contribution to many of the Geog Soc's events and presentations is legendary. It was a very enjoyable night, with plenty of spot prizes, and some of the most hilarious incorrect answers imaginable - all aided and abetted no doubt by the £1.20-a-pint available in large supply.

Our next presentation was a talk given by the Assistant County Planner in Meath County Council - Niall Cussen. Niall is a past pupil of Maynooth where he obtained his primary degree in Geography. The more astute Geography students who attended the talk may have discerned this by his use of the word 'Higgeldy-Piggeldy'. Sound familiar? Definitely a background in historical geography there. Niall's talk was of great interest to those Geography Students interested in Planning as a possible career, and to anyone who has an interest in the surrounding landscape and how it is moulded by our governing institutions. At the time of Publication of Milieu our latest speaker was Jeanne Meldon who is the author of the An Taisce report regarding Structural Funds and the Environment, a book which has been commented on by many students for its depth of examination of a very complex subject and the clarity of expression with which it is written. Jeanne's talk, which is based on the subject matter of the book was very informative and thought provoking.

By the time that most of you get to read Milieu we will hopefully have broken new ground in the form of Video Showings which we are intending to arrange in the near future. There is something of a time-warp aspect to this statement as it will probably be in the past tense by the time you read this. However, if we haven't arranged this by the time you read Milieu I would not advise anybody to approach us as we will more than likely have progressed from the suicidal to homicidal stage of exam and theses pressure. It would be advisable to give all third years a wide berth at this time.

Well, that about sums up the extent of the Geog Soc's activities for this year. I would remind you all that this year's AGM will be held on the 27th of April. It is at these meetings that the coming year's Geog Soc is press-ganged, ahem, I mean of course 'selected' for positions in the Society for the next academic year. We had a good response to our invitation to interested 1st and 2nd years to sit in on the Society's weekly meetings, to learn something of the organisation behind our activities. We have benefited from their input, and hope that we have in some way helped to build the foundations for a strong society in the coming years.

All that remains is to say a few words of thanks to the Geography Department for their continual help and support; to our hardworking editors who had the unenviable task of deciding which articles to include; to our contributors, published and unpublished, who have set a very high standard of material; to the post-grads who have supplied us with endless quantities of tea and bickies as we cry on their shoulders about the burden of the world on ours; to the members of the Committee for their input during the year; to our guest lecturers; to the advertisers who have supported this magazine; and last but not least to you, the students who have attended our various events and presentations, even if it was just for the SHNAKEBITE!

Geography Society 1993

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Secretary: Regina O'Connor-Hannon

Treasurer: Michael O'Kane

PRO: Mary Lynch

Committee Members
Kathleen Bourke, Helen Cunningham, Devika Ghosh,
Stephen O'Brien, Marie Theresa O'Connor-Hannon,
Shane O'Neill

Special thanks to Paula Kelly for her assistance
in editing and proof reading.

WORDSEARCH

F	D	M	U	T	A	S	D	N	A	L	P	Y	B	C	I
O	O	R	I	S	I	L	N	G	S	K	L	R	U	H	O
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A	B	K	I	I	A	L	K	A	D	E	L	T	A	R	R
T	N	J	K	L	S	I	A	T	I	U	O	K	L	B	I
H	I	C	A	R	G	M	R	C	W	A	R	S	I	K	S
E	B	H	U	I	K	E	N	B	V	F	D	C	S	R	P
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A	V	B	J	O	I	Y	F	O	R	C	E	G	T	H	Y
N	S	X	R	C	F	O	R	C	E	Q	U	I	I	P	L
G	N	T	U	I	A	W	O	A	E	H	U	J	O	D	F
J	K	M	N	H	G	Y	T	R	F	R	D	E	N	W	E
L	I	N	E	E	M	E	N	P	W	A	U	I	E	C	Y
H	G	V	B	N	M	K	L	O	I	U	Y	T	R	G	H
G	X	A	L	F	O	A	K	M	J	H	G	O	F	R	E
G	B	H	U	J	K	L	E	T	R	E	F	F	G	C	C
M	C	O	R	I	O	L	I	N	A	S	X	W	Z	P	Y
M	V	C	X	D	F	G	S	J	I	L	P	O	I	P	J
S	G	R	D	F	E	S	E	L	C	L	V	H	N	J	I
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- CARRYING CAPACITY

BUNGALISATION

BRANDT REPORT

LINEAMENTS

WEATHERING
- CORIOLIS FORCE

COLONIALISM

FORDISM

SPATIAL

DELTA
- WAR

FLAX

MARX

CAP
- LANDSAT

ANABATIC

MALTHUS

ALPS

AID FOR THE RAINFOREST
by Philomena Clare, 3rd Arts

O forest! They cut out your verdant heart.
The grasses, the Brazil nut trees,
the wild beasts already scent the
smell of prison. This we say:
people yearn to be free, so
Who then will be the masters of our history?

(From the Fate of the Forest 1989 pg. 161)

In the year 1800 Rainforests covered about 1500 million hectares; an area the size of Europe, but today only 900 million hectares remain. Rainforests are areas of high humidity and rainfall which play a crucial role in the geography and climate of the world. The remaining Tropical Forests are located in three distinct regions.

1. South and Central America 45%
(Amazon and Orinoco basins)
2. Asia Australia and Oceania 19%
3. Africa 36% (Zaire Basin)

Empirical data has estimated that an area which is equivalent in size to the Phoenix Park is deforested every 20 minutes (ENFO), at this rate virtually all undisturbed virgin forests may vanish early in the next century and with them irreplaceable sources of medicines and much of the world's wildlife.

There are without doubt a plethora of local regional and international forces responsible for this destruction of tropical forests. Such abuses include the clearing of land for cattle rearing, plantation settlement and the commercial production and felling of hardwoods. Linked directly to these abuses are the physical expressions of the forest. Though evidently lush in kind, its vegetation is governed by an apparent paradox; the soil can be anything but fertile. Plants thrive on the nutrients from rotting vegetation which is decomposed by bacteria and fungi. Symbiotically the nutrients are quickly absorbed by the root network. The stripping of the land therefore creates both micro and macro knock-on effects which include wind erosion and alteration of global climate.

"Human interference reduces the biodiversity of rain forests by causing simplifications in structure and by loss of species" (Whitmore 1990). Cleared land, in a nutshell, spells calamity such as witnessed in a video "Banking on Disaster" where a share cropper cleared a stretch of land on which only stunted crops grew.

"This cycle of destruction of rain forests and the use of the land to produce export commodities involves international bank loans to support industrial development and leads to the continuation of a socio-economic system that concentrates land holdings and thus power in the hands of but a few"

(The Ecologist Periodical)

It is a known fact that large tracts of tropical rainforests throughout Central America and the Amazon are being replaced by ranch lands to produce beef, much of which is consumed by U.S. citizens. The tragic senselessness of converting rainforest into pastureland is evident on several levels. The number of animals per unit of land is merely one per head during the initial year which subsequently decreases to six hectares per head within the following five to ten years. This sad yield presents little benefit to the indigenous Indians and Seringueros because as the Ecologist aptly puts it "the American cat consumes more

beef in a year than the average Central American" (vol. 17 no. 4/ 5 1987). It is obvious therefore that it is not economically viable to rob the rainforest of life for whatever reason even under that mask which has so often been called "progress". (National Geographic Jan. 1983).

In recent years numerous solutions have been devised to aid, solve or ameliorate the problems pertaining to rainforests; however these solutions are without doubt not quick or easy answers to forest abuse. Many critics on the subject of aid for the rainforests believe that the Developed Nations should pay the Third World for the expense of developing its rainforests. Ira Rubinoff director of the Smithsonian Tropical Research Institute of Panama would be an advocate of such a school of thought. He devised the notion of taxing the rich nations which consequently would act as custodians of the rainforests. However, towards the end of his article in (International Wildlife: 1988) there is a tone of resignation as he realises the impracticality of such a plan as Governments would be reluctant to impose any additional tax. He is however adamant that no other plan has a chance of saving the world's Tropical Forests.

Alternatives include a Debt-For-Nature-Swap which some countries, for example Bolivia are undertaking. They were first proposed by the World Wildlife Federation (WWF) in 1984 and embody the notion of protecting acreages of forest in exchange for lowering their debt payments.

"In August 1989 W.W.F. signed a US\$2.27 m debt-for-nature-swap with the Central Bank of Zambia. W.W.F. purchased the debt at approximately US\$470,000 the proceeds from the redemption of debt in local currency will help to conserve and manage two of Africa's most important wetlands"

Tropical Forests WWF 1990

Additional writers are advocates of Conservation schemes which ensure that if forests are to survive they must be set aside as protected reserves. It has been estimated that at least 20% must be conserved if the forests are to survive but sadly trends fail to mirror this fundamental statistic. For example in 1986 only 2% of all rainforests were in conservation schemes. ENFO briefing sheet 26 gives the prime example of a conservation scheme in West Africa in 1982 where the Government set aside a protective reserve and buffer zone in the Korup Rainforest. This came about because of a tri-partite agreement between the Cameroon Govt., the Worldwide Fund for Nature and the Overseas Development Administration (U.K.). This forest itself is economically viable with gums, resins and fruits being collected but imperatively on a renewable basis. This pilot scheme hopefully will inspire alternative Governments to undertake similar schemes thereby ceasing the rape of tropical rainforests.

In atonement with this conservation scheme is the notion of sustainable development. "It (sustainable development) seeks to conserve tropical rainforests both to supply the timber trade and to maintain the genetic diversity and ecological balance in the tropics" (Dudley, 1985).

The underlying factor of such a scheme is the existing possibility to manage forests for multiple uses thereby satisfying the dichotomous conservation and the logging arguments. It is widely known that low volume selective cutting would alter the forest the least, but essentially it is paramount that laws be imposed to minimise the damage caused by parasitic hunters, farmers or minor product gatherers. Mirroring this the International Tropical Timber Agreement (ITAA) was conceived in 1983 and is the most significant international institution for sustainable management of the tropical forests. It has sought to establish "a viable system of international consultation and co-operation between producer and consumer countries of tropical timber (Tropical Forest Policy, paper no. 3)

It is generally known that the Amazon rainforest is one of the important regulatory mechanisms of climate and only now is this importance being realised. Forest cutting and burning release CO₂ into the atmosphere causing it to heat and contribute to the so called "greenhouse effect". In addition scientists have recently discovered that smoke from slash and burn agriculture is causing acid rain in the continents remaining forests. The solution to such a dilemma is to leave the forests to the indigenous peoples, for as the Ecologist 1982 quotes "it's theirs".

There are promising signs that the destruction of the rain forests may not continue at its present precipitous rate. Many innovative projects show signs of absolute determinism e.g. The Kuna Indians in Panama spearheaded a venture to turn 5000 acres of virgin forest on their reserve into a biological research park and in Australia individuals have resorted to human blockades in attempts to halt logging on their traditional lands. (ENFO, Action Video Pack: no. 87). From a National to Local viewpoint individuals are becoming more aware of the fact that uncut forests are of greater worth than the "pieces of lumber that can be carved out of the forest" (International Wildlife Mar/Apr 1990).

The main task to combat the exponential encroachment upon the Tropical Rainforests is to educate ourselves and in turn those around us. Public awareness about the plight of the forests and the mobilisation of both human and financial resources towards this plight is imperative if halting or slowing this depletion is to occur. The efforts so far suggested have provided some hope in what once seemed to be a grim future for rain forests. However, though perhaps winning the "battle", the "war" may be won or lost in the 1990s.

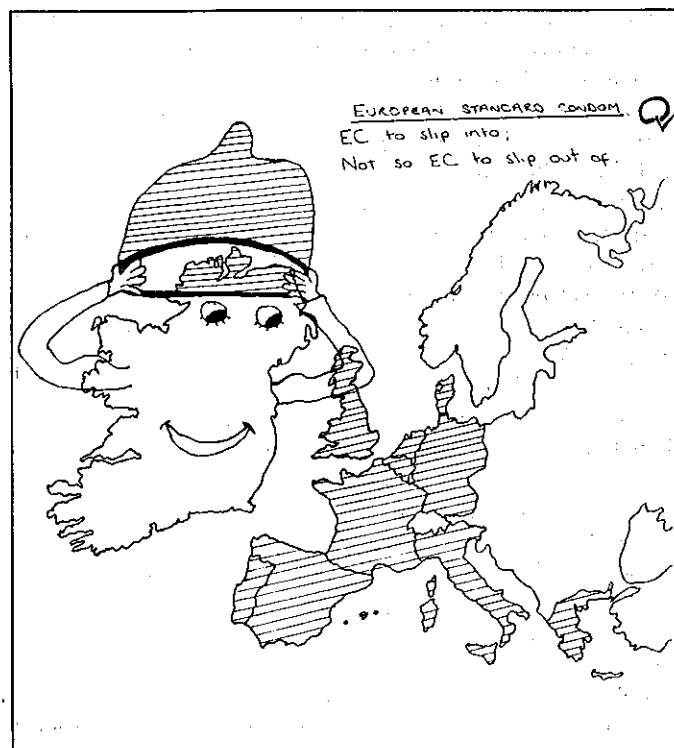
"Teach them what we have taught our children
that the earth is their mother"

Chief Seattle

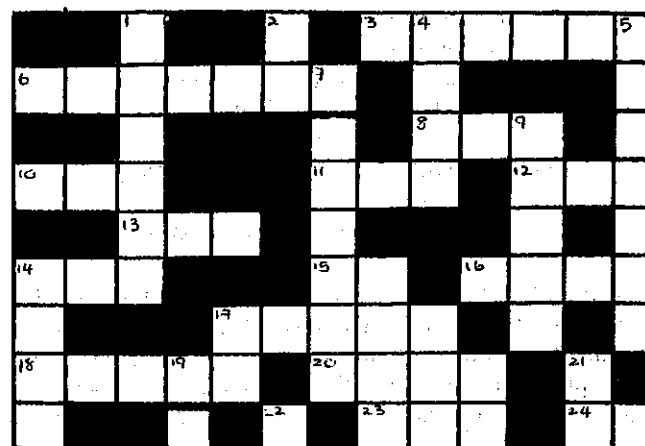
and let us not forget that,

"what befalls the earth
befalls the people of the earth"

(Environmental Society notice board: April 1990 and Oct. 1992)



CROSSWORD



ACROSS

3. Demesne in Maynooth (6)
6. Geography lecturer in Maynooth or crisps (7)
8. Shorter Third World Countries (3)
10. Adam and Eve's leaf clothing (3)
11. Rough time of arrival (3)
12. Dry - - -, disease in wood (3)
13. Cork River (3)
14. Golf Equipment (3)
15. "Please call home" (2)
16. Natural Satellite (4)
17. Place for Derby (5)
18. Coastal erosion barrier (4)
20. Integral part of forest (4)
22. Malcolm's surname (1)
23. Three part (3)
24. Opposite to Nfl (2)

DOWN

1. Fishing town in Kerry (6)
2. Element (Metal) (2)
4. Maximum hall in Maynooth (4)
5. Roman sea god (7)
7. Highest mountain (maybe!) (7)
9. Town in County Limerick (5)
14. Roman cloak (4)
19. Not off (2)
21. Stephen King book (2)

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GEOGRAPHY AND GENDER THE ROLE OF WOMEN IN THE ECONOMY

by Vanessa Peacock, 3rd Arts

Geography is underdeveloped in comparison to some other social sciences in its recognition of the importance of gender. The Women and Geography Study Group state that women are "hidden from geography" (1984; 20). They believe that little emphasis is placed on gender in geography and that very little effort is made by today's geographers to examine and understand the role of women in the economy as a whole and thus their role in society. As Bossen states (Plattner, 1990; 350)

"Although many economists, anthropologists, and development experts may continue to ignore gender differences, the customary exclusion of women from economic analysis is increasingly hard to justify".

This must surely apply to geography also.

A belief exists that the worldwide theme of geography is female subordination. Gender is, by definition, a socially created phenomenon and not as many believe a biologically determined issue. Upon examination of many societies, few - if any - have created a definition for gender that constitutes male subordination. Although the forms of subordination differ greatly from society to society, women's work generally tends to be defined as one of less value than men's. Women also tend to have less access to social, economic and political power than men do.

Therefore gender, although a topic not frequently discussed from a geographical viewpoint is nonetheless important to the discipline, so that a true analysis of human phenomena can be established which would aid one's understanding of society. The focus of this essay will thus be the role of women in the economy.

WOMEN AND THE ECONOMY

Worldwide, the pattern is for men to spend their adult years being economically active in the labour force. Women, in contrast, may spend their adult lives as "economically inactive homemakers" (Women, 1987; 43), or they may be as economically active as men but invisible statistically. Momsen and Townsend (1987; 43) state that, according to official figures, the tendency in the First World and Second World is for approximately 1/3 of the paid labour force to be female.

Having said this, various reports show that the numbers of women in the paid labour force have increased steadily since the 1800's and from the end of World War II, this climb has been fairly rapid. Much of the growth over the last two centuries has been attributed by many writers to being the result of the many innovations and technological changes in society. The Industrial Revolution, for example, (along with advances in education), was influential in the decline in fertility.

Although there has been an increase in the amount of women engaged in employment, McDowell argues (1991; 409) that the majority of women working in the tertiary sector are in part-time employment and thus the opening up of opportunities for women in this sector is highly exaggerated, statistically. McDowell continues saying that the restructuring associated with the post-Fordist era in the 1970's and the 1980s has merely led to a dividing out of jobs between larger numbers of women rather than improving the employment opportunities for the existing women labourers. A feature greatly ignored by many is the lack of benefits associated with part-time work such as severely restricted benefits, sick pay and poor holiday entitlements.

The real integration of women into the economic sphere of society has often been impeded leading to frequent struggles for

equality. These struggles of women's earnings, equal opportunities and women's rights at work were driven so hard that they are now well worn and have led to the further problem of being almost clichés.

WOMEN IN THE IRISH ELECTRONICS INDUSTRY

In a 1987 study by James Wickham and Peter Murray they examined one of the most publicised areas of Irish Industry at that time - the electronics industry. Their interest in that area stemmed from the fact that within this sector employment and output grew very rapidly at the time of the study to establish electronics as one of Ireland's leading high-tech industries. However, the paradoxical situation of the electronics industry itself also provided interest, that is electronics are considered to be a high-tech industry and therefore a highly skilled industry - yet the largest percentage of its workers are women who are usually deemed unskilled to begin with.

Wickham and Murray state that "the world of technology is a male world . . . which forms masculinity". This exists to the degree that "occupational segregation" appears to be a predominant feature. For example, electronics factories have a clear occupational division with regards to gender - the female workers occupy the assembly line whereas the male workers occupy the positions of engineers, technicians and managers. Strategies to increase the employment of women in the male dominated sectors have had little success for a variety of reasons, such as, the reluctance on the part of women to put their job before their family and domestic chores; and, the low technological qualifications of women because of their unwillingness to choose (or the non-availability of) male - dominated subjects at school and university.

Due to the relationship between skill and gender in the electronics industry, and the assumption that the percentage of skilled worker employment will rise, a large scale decrease in the employment of women is expected within the industry. This is greatly due to changes that will occur in the occupational structure of the industry through:

- (1) further automation
- (2) the redesign of the product to require less assembly workers
- (3) the introduction of additional functions that require skilled workers

Although there is an increasing amount of women occupying jobs in the more professional and skilled side of employment, these few jobs will never be enough to counter-balance the losses in other areas traditionally occupied by women, such as the assembly line. The result of all the changes due in the electronics industry will undoubtedly result in more losses in employment for women workers.

OUTSIDE THE ELECTRONICS INDUSTRY

Outside the electronics industry the story is not very different for women. In a report by the sub-committee of the Irish Conference of Professional and Service Associations (ICPSA) they examined other areas of employment likely to play a role in occupying women workers.

They concluded as follows (Smith, 1982;3)

- (1) Discriminations with regard to on-the-job practice exist, contrary to policies declared by employers
- (2) Adequate maternity leave arrangements were lacking in many firms.
- (3) In the area of promotion, discrimination against women clearly existed.
- (4) In the area of pension schemes, women were discriminated against, as were their dependents.

Thus the question arises as to the extent to which equality has been achieved. There are those who argue that women have already obtained equality in many aspects of life - especially in the workplace. This may be so on paper perhaps, but in many instances it has not been achieved in practice.

THE ECONOMIC SECTOR IN OTHER SOCIETIES

The low participation of women in the economic sphere is not solely related to capitalist societies. In many developing societies the sexual division of labour remains strongly influenced by choices involving work location and the need of children, just as in capitalist societies.

In an article by Bossen (Plattner, 1990; 318) she presents us with a number of factors relating to the sexual division of labour, one such factor being the Locational Model. This model examines the compatibility of labour with childcare; for example, in hunting and gathering societies consideration of distance, danger, and task duration, means that men can be expected to concentrate on those tasks that would be too strenuous or risky to accomplish with a child in tow. Thus it is clear that the sexual division of labour remains strongly influenced by choices involving work location and the needs of children.

However one could argue that there are exceptions to the locational model. Amongst a Zaire tribe known as the Mbuti, the romantic image of man the courageous hunter is quashed by the fact that hunting activities are often performed by both women and children. Since most meat from hunting by both sexes comes from small animals and birds, it would be rare that either would find themselves in any great danger.

The fact does remain that it is the male figure who is seen as the breadwinner of the family structure regardless of how important the female role is. This occurs in the majority of modern day societies and each gender is rewarded thus.

CONCLUSION

Upon examination of capitalist societies, one could deduce that as society has developed there appears to be a widening gap between male and female economic positions. Cases are rare, where women have surpassed men with regards to their economic standing in society. One could in fact argue that society has not rewarded women proportionally to the level of growth in economic terms. As Mintz states (1971; 247):

"Urbanisation has enhanced the position of at least some female traders; but opportunities have not increased in proportion to those available for males".

There are many reasons for this situation but to conclude, the following factors are worth noting.

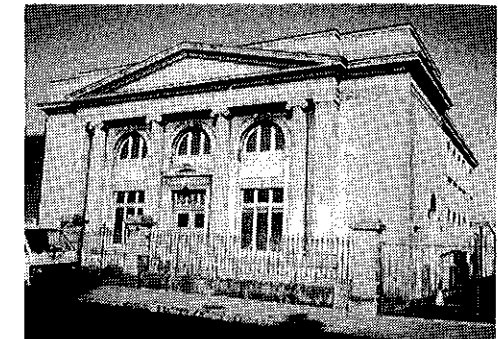
- (1) Culture and attitudes - the dominant males in many cultures still believe that women are an inferior species who don't require recognition in the economy, for example, in India women are required to remain in "purdah" - that is - women are expected to stay out of the public sector and remain in domestic seclusion.
- (2) Childcare - women's access to employment is still constrained by childcare obligations. There is also the belief that children will interfere with a woman's performance. Women experience economic disadvantages from the combination of poor employment opportunities and unequal childcare responsibilities. This issue is highlighted by the fact that as women succeed in the economy with regards to employment and economic independence, they often choose to have fewer children.
- (3) The informal economy - much of the work that women do is not accounted for in economic surveys. This is due to the fact that a great proportion of women's work activities are related to the domestic and informal sector, that is,

employment which includes activities in the home or activities outside the realm of the government. (Plattner, 1990; 292). These activities, which employ many women, somehow escape from being captured in official statistics. Thus, the economic roles of women are diminished and they are placed in the category of economic dependents.

From examination of this essay, one can conclude that a great deal of work is yet to be done before women are viewed as workers entitled to the same rights, opportunities and recognition as men.

THE JEWISH LANDSCAPE OF DUBLIN

by Niamh Marnham, B.A.



The Jewish community of Dublin has existed as it does today, since the latter years of the 19th Century, thanks largely to the influx of Jewry from Eastern Europe. Though, since the 1950's, the population has undergone an unchecked decline.

It has often been said that landscape acts as our unwritten biography; a tool that allows us to reveal the culture, and is a visible record of the past. Landscape has been termed a "surrogate" measure of the impression society has left on the earth, which generates insights into culture, embodying that particular cultures set of values and beliefs.

"Those religions which focus on appeal to the human senses, especially sight and sound, have a maximum impact on the landscape, while those concentrating more on a commandment and faith often leave relatively little imprints" ("The European Culture Area", p. 152). The Jewish landscape fits into the latter category, being far more subdued than for example, the Catholic landscape.

Today in Dublin, there is a residual Jewish landscape, centred around the Leonard's Corner, Clanbrassil St., South Circular Rd. triangle. Prior to the '60's, this was the cultural heart ("Little Jerusalem"), but altered with the process of South-Suburban movement. A prominent Dublin Jew commented: "People make an area distinct, not buildings. Buildings are a manifestation of the people's difference".

There is no apparent spatial logic to the Kosher shops (which sell foods conforming to Jewish dietary law) that remain being located as they are, and seems to be down solely to tradition (Geographical Inertia). The traders that remain do so because along with the South-Suburban movement came increased mobility, which allows easy access to such shops. Increased cultural assimilation, with people not being as bound by orthodoxy, and only eating Kosher foodstuffs on feastdays, coupled with the fact that Kosher products are now widely available in supermarkets since the advent of the vegetarian revolution, has meant the closure of small, Kosher food outlets.

Of the shops that remain, the most notable is "The Beetzel" Bakery, on Lennox St., selling baps and bagels etc., bearing the Rabbinical seal of approval. Erlich's is the last but on remaining Jewish food outlet, located on Clanbrassil St., and

specialises in beef, poultry, passover wine and other accoutrements. Erlich's has a large Star of David on the lower shop front. Suissa's is the only supplier of unleavened bread, indicating a decline in demand, and thus a decline in orthodoxy and population. It's interesting to note that despite the fact that the bulk of the Jewish population have moved to the Terenure, Rathfarnham and Rathgar areas, this shop remains open whilst the landscape around it is one of urban decay.

Traditionally, the sports of golf and cricket have precluded Jewish membership, not on the grounds of Anti-Semitism per se, but more because of class prejudice; part of the legacy of the Anglo-Irish preoccupation with class and wealth. The Dublin Jewish community opened its own golf club in Edmonstown, Rathfarnham, which has only recently become multi-denominational (almost as bad as Fitzwilliam voting against women members).

Little remains of the buildings that used to house Jewish schools and synagogues (of 8 synagogues at one stage in the "Little Jerusalem" area, all but one have closed - that being the one located in the Irish Jewish Museum, Walworth St.). The falling Jewish population, due to emigration and assimilation, has forced such closures. Now parents tend to send their children to multi-denomination schools. 1983 saw the completion of The Stratford College Complex (Zion Rd., Rathgar), home to a kindergarten, primary and secondary schools and the community offices of the Chief Rabbi. We can learn from this that a concerted effort has been made to consolidate the existing community.

The present day Jewish landscape reflects the rift that occurred between East European in-migrants, who began arriving in the 1890's, and the residual sephardic (from Spain and Portugal) population. These newcomers procured their own synagogues and cemeteries. They bought a plot in 1898, as an alternative to the mainly Sephardic Ballybough Cemetery (Nr. Fairview). This new plot in Dolphin's Barn - "The Aaron Steinberg Memorial Cemetery" - is very overcrowded, with few remaining plot spaces. As would be expected, Hebrew and the Star of David predominate visually on the tombstones and in general. The location of the Ballybough Cemetery is a legacy dating back to when the bulk of the Jewish population lived nearer the Liffey. Ballybough has a clearly defined boundary wall, and tombstones which give the place of origin of the deceased person, their profession and comments on the fact that they were "only passing through" Dublin. Such tombstones belonged to the rich merchant classes.

The 1950's bore witness to a further split - now between Orthodox and Progressive Jews. Progressive Jews sought to liberalise and modernise Judaism, which was anathema to Orthodox Jews, and resulted in the establishment of a separate, Progressive Synagogue and burial ground on Leicester Rd., Rathgar and Woodtown, Co. Wicklow respectively.

One of the finest examples, architecturally, of a redundant synagogue is that on the South Circular Rd., with its stained glass windows, with delicate Stars of David inserted. It's large size and quasi-classical grandeur are indicators of how important it once was. Now it serves as offices, and ironically, the Dublin Mosque has located virtually opposite, highlighting the increase in the Muslim community on the tail of the Jewish demise.

Much of the distinctive Jewish landscape of Dublin would go unnoticed to the untrained observer, primarily because the most obvious elements of any urban landscape (shops etc), are disappearing in accordance with the declining Jewish population. Also, areas that would once have been conspicuous because of their geographical solitude are no longer so because they have been subsumed into anonymity by the urban sprawl that is Dublin.



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EUROPEAN REGIONAL POLICY A GEOGRAPHICAL PERSPECTIVE

by Anne Keyes B.A.

The European Integration programme with its somewhat conflicting objectives of competition and cohesion has always been a cause of concern among countries located at the periphery. It has been widely documented that the benefits of market competition are likely to be unevenly distributed with the greatest benefits accruing to regions in which industries with economies of scale and highly innovative sectors are most prevalent.

The development of European Social Policy has been primarily inspired by the aim of offsetting any major dysfunctional effects of the single market and Economic and Monetary Union. One of the most obvious effects is the widening of regional disparities in the Community. The increasing emphasis in recent years on the 'regions' is against the background of knowledge that regional imbalances do exist and need to be dealt with in order for all regions and social categories to benefit from the dynamism of a large market.

A problem of peripherality exists in the community, where regions whose location places them at a geographical disadvantage are finding it extremely difficult to raise both their economic and social standards up to the European average. It is these regions that experience the highest levels of unemployment, where poverty is a serious social problem and where social protection for its citizens is relatively weak. The community has intervened in the area of social policy, concentrating its efforts on the creation of employment. The adoption of the Social Charter by the eleven member states (United Kingdom opting out) has significant implications for the working of the labour market and is aimed at improving the conditions of workers. The community has proposed the harmonisation of social security schemes in all the EC countries. These countries must also bring their economies in line in order to meet the economic criteria laid down in Maastricht before they will be considered for entrance to the next stage of Economic and Monetary Union. They are also faced with a constantly changing economic environment, characterised by industrial restructuring in more developed regions. In addition, new forms of spatial clustering of industries and a mobile labour force, tends to exert a strong pull towards the centre. The peripheral regions, therefore, will have to make major adjustments in order to counteract this pull towards the centre.

The community, recognising this problem, has introduced instruments to provide assistance to these peripheral regions. The instruments include:

1. The Structural Funds - which provides financial assistance for the development of the disadvantaged regions and the alleviation of long term unemployment.
2. The inclusion of the concept of economic and social cohesion in the S.E.A. and Maastricht - has placed the regional issue at the centre of community policy.

An important development on policy for the regions was put forward in the Treaty on European Union. This policy involved pushing decision-making back to the regions and looking for regional initiative and structures that respond to community needs. The effect of this is to bring community policy more in line with what is occurring "on the ground". This important initiative introduces the principle of subsidiarity, since the response within the regions is seen as critical if self-sustaining

growth is to be achieved. Subsidiarity, therefore, involves a "bottom up" approach. Ideas will initiate in the regions, having been cultivated by local networks and local and regional bodies, and then be sent to Brussels, where hopefully they will receive the support of the Community.

The establishment of a new Cohesion Fund, put forward under the Delors Package 2, was agreed upon at Maastricht. The objective of the fund is to finance expenditure in the areas of environment and transport infrastructure in the four less developed member states - Ireland, Spain, Greece and Portugal.

Article 198 of the Treaty on European Union proposed that a Committee of the Regions be established. This committee is to consider the growing volume of Community legislation and initiatives which have a direct bearing on the regions of the member states. The committee will be asked to voice its opinion in relation to the crucial areas of education, culture, public health, trans-European networks and economic and social cohesion.

Regional policy has become an important plank of Community policy. This involves a conscious effort to progressively reduce economic and social disparities between the richer and less prosperous regions of the Community. The community is aware that the achievement of a European Union will mean developing not only a large market area for goods and services, but also a 'Social Europe', where citizens in every region will enjoy the benefits accruing from European integration.

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Since we've had such a wonderful array of lectures from the Geog. Soc. why not have an analysis of the main points raised by the esteemed visitors.

Dr. Tanya Bowyens-Bower from Keel University (i.e. the middle of nowhere . . . She said that, not me) gave a very . . . em . . . Scientific lecture on rain making in Africa, but by all accounts the following discussion in a well known Hostelry was far more significant. "Is this the only thing that's Irish?" (Guinness) the esteemed lecturer asked. John Joe provided all present with a prolonged answer which included God, Guinness, The G.A.A., and the Late Late Show.

Prof. Johnson

(The migration man from the University of Lancaster) It is interesting to note that this lecture was mainly dealing with migration, in a week when departmental movement was at a peak! Also do you remember who the lecture was directed towards!! he gave us some crackers:
- Notice I say quite a large percent because I'm not quite sure of the percent
- He was destined for great things, divorce actually, but that's another thing
- Children leave home, you breathe a sigh of relief and polish up your bank balance

Mickie Lauria (The American from England)

A very technical talk from this Urban theorist. But he did have a good turn of phrase:
- Geographers aren't unique in this disciplinary paranoia
- I'm not going to talk about it. I just want you to know that I know about it
- I'll put this up, it's a map, and because I'm a geographer I've got to have a map

The Canadian Ambassador (He's from Canada, where-ever that is?)

A very capable speaker, but I hope the whole nation are better time-keepers: (he was late!)
- I'm not sure if it's the largest but it's BIG (Canada)
- Professor Smyth will give you the precise information I'm sure

Richard Douthwaite (The English man from Western Ireland)

gave a rather serious talk on Structural Funding (but he hardly mentioned Structural Funding) in which were to be found some gems of wisdom
- The way we look at problems often determines what the answer is going to be
- You cannot have infinite growth in a finite world
- For at least as long as unemployment exists, there is no economic argument for free trade

TRIVIA QUESTIONS

- Q1. What's the world's largest island?
- Q2. In which direction does the Nile River flow?
- Q3. What city is home to Europe's tallest building?
- Q4. What two countries can provide you with a view of Victoria Falls?
- Q5. What's the most popular drink in Greece?
- Q6. What islands inspired Darwin's theory of Evolution?
- Q7. What's the geographical term for a ring-shaped coral island?
- Q8. What country consumes the most wine per capita?
- Q9. What's the main boulevard of Paris?
- Q10. What does the D.C. stand for in Washington, D.C.?

THE GAIA CONCEPT

by Greg Coogan, 3rd Arts

Now the earth is a witch and we still burn her
Stripping her down with mining and the poison of our wars
Still to us the earth is a healer, a teacher and a mother,
A weaver of a web of light
That keeps us all alive.

Christy Moore ("Smoke & Strong Whiskey")

Some 4.5 billion years ago, a cloud of cosmic debris from the Big Bang coalesced into a star with thousands or millions of other celestial bodies, big and small, in orbit around it. Over the next billion years or so, the fiery, turbulent period of the Precambrian era called the *Hadean*, one of the medium sized blobs of molten matter gradually cooled and acquired a solid crust, this blob we now call Earth.

Our home planet is approximately the same size and mass as Venus, but there the comparison ends. Venus is swathed in a thick atmosphere of, mainly, carbon dioxide gas, with surface pressure perhaps a hundred times as high as on Earth and a mean temperature of hundreds of degrees Celsius, enough to melt metals like tin and lead.

Further out from the Sun, in the third orbital slot, Mars is a cold bleak place, where temperatures only occasionally rise a little above the freezing point of water, and even then only in the planet's equatorial zone.

Was it simply chance that the Earth formed at the right distance from the Sun, in an orbit where conditions would be neither too hot nor too cold? Perhaps it was, but what has kept those conditions suitable for so long, when Venus and Mars have, apparently, undergone such profound transformation? According to Ann Henderson-Sellers and Peter J. Robinson, the mean temperature of the Earth has varied within a range of only 30 degrees (275 - 305°K) in the past 3.8 billion years.

The intensity of Solar radiation reaching our planet has varied considerably down through the ages, but the planetary temperature has fluctuated much less. In human experience, only living organisms are capable of such feats of internal temperature regulation.

Professor James Lovelock was probably the first scientist to intuit that the Earth - or more precisely the biosphere - behaves like a living organism because, in fact, it is a living organism.

That insight began to mature in Lovelock's mind in the latter half of the 1960s, when he was part of a team studying the atmosphere of Mars. It turned out to be an atmosphere of high entropy, close to chemical equilibrium. Lovelock saw at once that Mars was dead. He began wondering why the same fate had not befallen the Earth, where free oxygen and reactive gases like methane had coexisted for aeons, something that in his view is "quite impossible in the atmosphere of a dead planet."

The living planet described by Lovelock was given a name by his friend and neighbour, the novelist William Golding (author of that thought-provoking novel "The Lord of the Flies") in the early 1970s. The name was Gaia, after the Greek goddess of the Earth, "The oldest and greatest of the pre-classical Greek pantheon of gods."

Tackling the eternally thorny question of what is living and what is not, he opts for a very broad definition "that includes everything that metabolizes and self-regulates as being alive, so that life is shared in common by cats and trees, as well as by beehives, forests, coral reefs, and Gaia . . ."

A possible objection to the idea of Gaia is the argument that this organism cannot reproduce, but neither can a beehive or a termite hill, both of which are incontrovertibly living and self-regulating systems. Besides that, perhaps Gaia has not yet reached reproductive age.

Lovelock believes that Gaia came into existence when life began on Earth about 3.6 billion years ago. Since then, life has sustained the Earth rather than the other way round. Whenever adjustment has been needed to maintain existing stability or to make the transfer to a new, more sustainable state, Gaia has responded.

Altering the properties of the atmosphere, such as its chemical composition, density, opacity and the temperatures of various layers, are only some of the devices and stratagems at Gaia's disposal. Countless species of living organisms are constantly evolving and evolution ensures that the right combination of forces is available to perform whatever metabolic functions are required.

Gaia has suffered some hard knocks, such as the devastation wrought from time to time by planetismals ploughing into her body. One such event, about 65 million years ago, probably caused the demise of the dinosaurs and many other terrestrial and marine creatures, and may have required a million years to recover from. She did recover, but became in many respects a new world, with a new population profile.

The present threat to the well-being of Gaia comes from nothing so dramatic as a hurtling mountain of interplanetary rock. Instead, the actions of one of the countless species that are of Gaia have begun to impact so severely on planetary cybernetics that drastic readjustment may soon become inescapable. Lovelock maintains that we are now further from the brink than we would have been some 15,000 years ago, when irresponsible use of carbonylfluorocarbons (CFCs), alteration of habitats and pollution in general might have triggered runaway positive feedback sequences much more easily than now.

Gaia, Lovelock argues, is sick with a disease which he calls *disseminated primatemia* or the people plague. Gaia, if we continue to hurt her, may be forced to adjust to a new regime in which there is no place for us. It would be good for us to bear in mind that the Earth Goddess in Greek mythology was "at once gentle, feminine, and nurturing, but also ruthlessly cruel to any who failed to live in harmony with the planet."

Lovelock warns: "If we in our follies destroy so much of the larger life on Earth, such as the trees and other plants, that homeostasis is threatened, it will be the bacteria that carry on and take over the management of the planet as they have done before." But bacteria and other microorganisms are only examples of the many instruments at Gaia's disposal. Others include continental drift, sediment deposition (which both modulates the amount of carbon dioxide in the atmosphere and may influence tectonic processes), orogenies and volcanic eruptions, and have most profound effects on global climate. Nor, given that oceans cover 70% of the planet's surface, should we underestimate their importance. They may be even more vital than the rain forest of which we nowadays hear so much. Other worrying trends are ozone depletion and an accelerating build-up of greenhouse gases like methane.

Whether or not one accords credence to the Gaia hypothesis, Lovelock has certainly focused attention on the complexity of the various interactive processes governing the state of the planet that is our only home. Humans are both the agents of change and potentially the victims of further change for which we have not planned. Rather than attempting to manipulate or manage the planet, we must accommodate ourselves to the requirements of the superorganism of which we are a very small part. James Lovelock may have done us a great service in prompting us to try to understand the rules of the Gaia club. We must understand them to be able to play by them. Otherwise we risk expulsion.



"Observe the sons of Ulster. . ."



"Gentlemen Farmers"

John Quilter and Bernard Green contemplate the rustic life at the Ulster Folk Museum.



"Recount . . . (Hic!) who wants a Recount?"
Stephen, Michael, Helen and Devika counting scores at the table quiz

PROCESS AND PATTERNS IN THE GEOGRAPHY OF DEVELOPMENT

by Derek McCormack, 1st Arts

INTRODUCTION

Any discussion of development is characterized by a difficulty in pinning down its essential features, a result of the sometimes arbitrary nature of its measurement and the plethora of attempts that have been made to address its problems. There are however certain issues at global, international, national and local scales that constitute the basic foundations for development and it is in the integrated addressing of these issues that present the best prospects for successful development.

DEVELOPMENT - ELUDING DEFINITION?

Development has become a vague term. Logically it should involve a movement from one level to another, the latter being somehow higher than the former. But this idea is crude, conveying none of the complexities covered by the concept of development. Development may involve the progressive restructuring and stimulation of many areas of concern, be they economic, social, political or environmental. Consequently the broad spectrum of issues creates problems in establishing criteria for gauging development. Economic indicators, such as the measurement of GDP per capita, have obvious advantages at the aggregate level but convey nothing of the effects of development on the individual and are inadequate for analysing the social implications of development. The PQLI assesses development on a wider scale using a number of social variables to determine the level of development in a country. Another indicator is the under 5 mortality rate (UMR) which gives an indication of basic health levels in a country (Congood 1991). It is clear therefore that quantifying the concept of development is extremely difficult and sometimes dangerous as one favourable indicator may mask more subtle problems creating an illusion of progress, one that may ease the consciences of national governments and international agencies but has no tangible benefit on a local individual level. Yet despite the difficulty in identifying the essential nature of development, various theories have been proposed with different perspectives and different degrees of success.

THE DEVELOPMENT THEORY - AN EXERCISE IN OVER-SIMPLIFICATION?

The need for development in Less Developed Countries (LDC's) emerged as an important international issue in the post WWII era. The success of capitalism in Europe and especially the U.S.A. fueled the assumption that the process of western development should be used as a blueprint for LDC's to follow (Farmer, 1988). Rostow proposed that there existed five distinct stages that an economy should go through in its development to a level termed "high mass consumption" at which the core industrial economies of the north were assumed to be at then (Congood 1991). This linear, revolutionary theory was based around the idea that by raising the level of investment in a country, economic development would occur. The thinking of the time favoured this type of concept and also theories of modernization. These were characteristic of neo-colonialism seeing the need for what they saw as traditional, primitive values to be replaced by the western ethos of achievement and all its materialistic trappings (Farmer 1988). In spatial focus they were regional in outlook, seeing specific areas of individual countries as centres for economic growth. They often accentuated the dual society, core-periphery structure that already existed in LDC's (Brown 1988). The possible social conflict arising from the

crash course development that these theories proposed was not appreciated and their neglect of social and structural issues was a serious flaw.

With the obvious failure of imposed modernization theories to address the social and political issues necessary to facilitate equitable economic development in LDC's, fresh perspectives emerged in the 1960's. To fully comprehend the plight of LDC's their role in the development of the northern core had to be considered. The underdevelopment of the third world was seen as a necessary element in the process by which the northern industrial core had developed. Capitalist growth in the north had been facilitated by extracting economic surplus from the then colonised LDC's, leaving them with a post independence situation of dependency on often only a single export commodity and with a ruling elite that had adopted the colonial attitudes and were opposed to political change (Knox, Agnew 1989). Locked in an unequal world trading system, development in these countries was seen as a combination of structural, social and economic reform in the light of overall political economy change (Brown, 1988). Attempts to remedy these conditions were largely unsuccessful as the finance required was only available from developed countries thus perpetuating dependency and because the interests of the pro-western ruling elite dominated economic policy.

A fundamental problem with the application of development models in the third world arises from the fact that the third world as a generic term does not imply homogeneity (Dickenson, 1983). Each LDC has specific geographical, historical, political and social characteristics that make the idea of a uniform development theory redundant. Development in the third world represents an interaction between forces external to a country and characteristics of the country itself. On a more concentrated spatial scale external forces may impact on various regions of a country in different ways. An understanding of development therefore requires an appreciation of local, regional, national and global forces and their interplay in the whole development process. (Brown, 1988).

DEVELOPMENT AS A FUNCTION OF GLOBAL AND LOCAL CHANGE

In 1988 the Nigerian government imposed a ban on wheat imports from the U.S. in order to protect its indigenous cassava and millet producers. In response the American administration threatened to use a special GATT provision to overturn the ban (Cheru 1992). This example highlights a problem that faces many LDC's. Strategies for development, such as the action of the Nigerian government, in the context of the world economy are met with fierce opposition by developed countries unless they complement the economic trading strategies of developed countries. As a consequence LDC's face a range of serious inhibitors to their individual development. The price for most commodities is determined by activity in the developed world. This results in unfavourable terms of trade for commodities exported from LDC's, reducing their foreign exchange earnings and squeezing their development programmes. This inequitable situation has, especially in the 1970's, precipitated a huge increase in foreign borrowing by LDC's facilitated by the excess of petro-dollars in international banks (Knox, Agnew 1989). Many LDC's are now burdened with huge debt repayments resulting in the paradoxical situation in 1987 where the amount being repaid to foreign banks by LDC's exceeded the amount being received by \$29,000 million (Swallow 1990). The World Bank has, since 1980, operated structural adjustment lending allowing it to dictate to an LDC what changes it needs to modify its economy's structure. This sort of policy has obviously both positive and negative consequences. Often it is strategic, selective and tied

to donor's economic interests. Also the eventual home of development aid is not in constructive projects. Frequently corrupt national governments allocate the foreign cash to military spending and large visibly ostentatious examples of development such as municipal buildings. Also large amounts of aid end up back in the banks of the developed world through widespread capital flight. Development therefore could be facilitated by a number of national and international structural reforms. Reduced protectionism, more equitable trading terms, better use of financial aid (through internal political change) and an alleviation of the constraining debt burden of LDC's are some of the most important. Prudent financial aid is definitely an integral part of development and with this in mind the UN conference on environment and development has set out capital costs of supporting the world population into the next century. As part of a programme of sustainable development it calculates the cost at about \$600 billion per year to be maintained until development becomes self sustaining (Piel, 1992).

The allocation of such money is crucial to the facilitation of individual governments' development programmes. Within most LDC's there are many problems of importance that need to be addressed in order to move towards the goal of sustainable development. Growing populations in LDC's pose perhaps the greatest threat. Large populations, both rural and urban, create huge problems in terms of food security, infrastructure, social services and the environment. In essence the careful management of population is central to the idea of development. But in order to successfully implement a birth control programme, education of individuals and most importantly women is required. Some birth control programmes such as those in China and the Indonesian Islands of Java and Bali have had considerable success (Myers, 1984). The implementation of these schemes illustrates the nature of aspects of a successful national development programme. The programmes, though centrally controlled, permeated to all areas of the country through local participation. This type of concept, giving local communities power to adopt and implement nationally funded development plans is moving in the right direction. True individual control is of course absent in the countries mentioned and it is a prerequisite to the implementation of thoroughly effective locally based development, enhancing people's personal esteem and individual freedom to choose. (Myers, 1984).

Improving the basic standard of living of individuals through the proper provision of health-care, education and employment (in agriculture and industry) are vital to ensure the self sustaining development of a country. A suitable infrastructure is needed to implement these ideas and this is where international aid can play an effective part. The stimulation of employment, either in agriculture or industry, is likely to be the most difficult task of an LDC. Development planners in both developed countries and LDC's have long ignored and neglected the important role of agriculture in this regard (Cheru, 1992).

Agriculture has been seen as the domain of the large agribusiness firm in a policy of exploitation and cash crop dependency leading to soil erosion and desertification as peasant farmers are forced to use poor quality land which quickly degrades through overuse. A move toward food producing agriculture and away from cash crops is needed in LDC's. Food security, where climatic conditions allow, is vital and the stimulation of agriculture can be achieved by a combination of local tradition and experience with appropriate western technological assistance. Also, raising agricultural incomes above subsistence level creates a surplus which may be traded for domestically produced manufactured goods. (Ivory, 1991). The development of agriculture however, must be based on sustainable resource management. (Myers 1984). The per capita arable land in Africa declined from 0.5

hectares per person in 1965 to 0.3 in 1982, a serious reduction in the carrying capacity of the land that must be halted in order to stimulate agriculture (Cheru, 1992).

A pre-occupation with prestigious, rapid industrialization has also contributed to the neglect of agriculture in LDC's. While industrialization should be seen as a long term goal it should only be built on the foundations of agricultural self-sufficiency. This implies a bottom up rather than trickle down approach to development (Myers, 1984). In saying this, it is useful to examine the experiences of the newly industrialized countries of East Asia particularly South Korea and Taiwan. Are their experiences useful models for other developing countries to follow? The last two decades have seen massive economic growth in these countries following their relentless pursuit of export-orientated production. U.S. strategic interest, the globalisation of manufacturing by multinational corporations and active government policies have contributed to this growth (Henderson, 1989). But there is a darker side to this development. Protectionism in their vital markets threatens the viability of the NIC's export orientated production. Rising wage levels means their footloose labour intensive industry is moving to less costly production sites such as Malaysia and the Philippines. The growth of these countries is not built on democratic structures, and repressive regimes still control the governments. Pollution is widespread and agriculture has been dangerously neglected. But most importantly is the fact that the technology of foreign multinationals has not been incorporated into a research and development base within these countries (Bello 1992). There is a lack of indigenous technology being fostered. These countries remain assembly sites dependent on foreign markets and technology, while their attractiveness as sites of production is eroded by rising costs. Their development is an illusion, one that is economically remarkable but in social, political and environmental terms is flawed.

It is acknowledged that within developing countries industry is difficult to establish. Large employment-generating multinationals are attractive and give visible indications of development. However industrial development in LDC's must be oriented towards the production of goods for the domestic market as well as for export. The capital intensive industry existing in the core economies is often unsuitable for LDC's and creates unrealistic pressures on peoples expectations. Industry that is complementary to indigenous technology and innovation is more appropriate. High technology industry transplanted into a low technology society is in a sense out of synch. with the development of a country. Northern technology, based on northern infrastructures, social patterns and education is not always relevant to southern needs - particularly to local productivity and employment. This is a further example of the importance of bottom up development as recognition is made that traditional societies can be dynamic elements of change in their own right rather than inhibiting factors (Brown, 1988).

CONCLUSION

While recognising that genuine progress has been made in various spheres of development it is also clear that this has frequently been haphazard and lop-sided, addressing particular issues in isolation. Conventional development plans account for the "elements of third world change but not the essentials" (Brown, 1988). The time-scale for development objectives should be lengthened as rapid development may be self destructive. Future development plans demand substantial international and local structural change in addressing the inequities of the current world situation. Local based decision making and development incorporated into national plans which recognize

and are recognized by the global socio-economic system is crucial. Above all development must be seen as sustainable, not exploitative of human or environmental resources and not as a form of dependency on already developed countries.

THE BARD OF BATTERSTOWN

*(with pious apologies to St. Kevin of glorious
memory, geologists, geomorphologists, nuns
and the Burren Action Group)*

In Glendalough lived an owl saint
Renowned for his learning and piety
His interests were curious and quaint
In pleistocene geomorphology.
Fol dol der ol dol der dol
Fol dol der ol etcetera.

He explored the alluvial fan
At Pollanass near the low lake
He fished from the outcrops of schist
Using bits of his cassock for bait.

He lived in a cave that was u-shaped
And he walked barefoot on the scree
Though the talus was hard on his toes
It was all masochistical glee.

Twice on the bergschrund he sat
Meditating morainically esker
When Kitty skied up on the glacier
To see if the owl monk would assist her

To build an interpretive centre
That would spread the good gospel about
The island of saints and of snakes
And other events ecological.

It was then he gave her a shake
And aroused all the feminists' fury,
By throwing her into the lake (it was melted)
Cos it seems she only swam poorly...

AIDS IN AFRICA

by Dr. Dennis Pringle

AIDS was first identified as a new disease in the US in 1981. Since then, it has emerged in developed countries as a public health problem of massive proportions. The World Health Organisation (WHO) estimates that about 10 million people may already be infected worldwide, and that this figure could rise to over 100 million by the year 2,000. It is difficult to gauge the full extent of AIDS in underdeveloped countries, for reasons which I will come back to. Thus, although official figures suggest that Africa accounts for about 25% of all cases worldwide, the WHO estimates that up to two thirds of all cases may be in Africa.

This article discusses the nature of the disease, reviews problems associated with assessing its current prevalence, summarises aspects of its geography within Africa, discusses how it is transmitted, and finally outlines some of the implications of the disease for future African development.

THE NATURE OF THE DISEASE

AIDS is an infectious disease caused by a virus independently identified by US researchers as HTLV-3 and by French researchers as LAV. It is now generally known as HIV (Human Immunodeficiency Virus). A second virus producing similar symptoms was identified in West Africa in 1986 and is usually referred to as HIV-2.

HIV may be transmitted in several ways, but in each instance the virus enters the recipient's bloodstream via body fluids (such as blood, semen, cervical secretions). The most common means of transmission are through sexual intercourse (either homosexual or heterosexual); through contaminated blood or blood products (e.g. dirty needles as used by intravenous drug users; factor 8 used to treat haemophiliacs); or perinatally from an infected mother to her unborn child.

HIV cannot survive very long outside the human body; AIDS therefore is not a very contagious disease in the normal sense. The virus cannot be transmitted by water droplets or insect bites, or by contact with objects such as cups or toilet seats. Even deep, wet or French kissing, involving a transfer of saliva, is not believed to carry a risk.

HIV hides within the infected person's T-cells and is therefore very difficult to detect. However, after infection, the body's immune system manufactures antibodies to counteract the virus. These antibodies can normally be detected within about 6 weeks to 3 months of infection. The presence or absence of antibodies provides the basis for the most widely used tests (such as ELISA and Western Blot), although HIV can now be detected directly using a PCR (polymerase chain reaction) test. Persons carrying HIV antibodies are said to be HIV positive. However, the presence of antibodies does not necessarily indicate infection. Babies born to infected mothers, for example, normally test HIV positive at birth, but only about one third are actually infected and go on to develop the disease. Tests on babies are therefore very unreliable before the age of about 18 months.

For reasons not properly understood, the antibodies do not successfully counteract the virus. In fact, unlike most other viruses, HIV actually attacks the body's immune system itself, resulting in a slow deterioration in the victim's ability to resist other infections. Some people develop mild symptoms (seroconversion illness) similar to flu or glandular fever in the early stages of infection, but in many instances there may be no obvious symptoms for a period of several years after infection. Researchers in Frankfurt have suggested that about 50% of those infected proceed to full-blown AIDS within 5 years, but the median period in developed countries would more generally

appear to be about 9 - 10 years. During this period, the infected person may transmit the virus to others.

AIDS is an incurable disease. At best medical treatment may prolong the onset of full-blown AIDS, and after its onset may postpone death. However, AIDS is invariably fatal; in developed countries about 50% die within 2 years of diagnosis; 80% in less than 3 years; and almost all in less than four years. Only a very small minority survive for longer periods. Survival times vary depending upon ethnicity, social class, age, and gender.

DATA PROBLEMS

The WHO Global Programme on AIDS is probably the best source of information on its geographical distribution. However, the figures reported to the WHO are believed in many instances to be highly inaccurate. The WHO estimates that worldwide probably only half of all AIDS cases are reported. There are several reasons for believing that the figures reported for African countries may be especially unreliable.

First, some cases may remain undetected because of the sparsity of resources. Most African countries have very few doctors per capita. Most doctors are based in urban areas, so some cases in rural areas may remain undetected. Full-blown AIDS, it is true, produces symptoms which are unlikely to pass unnoticed, but because of the deterioration of the infected person's immune system, many people die of other opportunistic infections before proceeding to full-blown AIDS. HIV is believed to be responsible for recent increased rate of mortality from TB; it would also appear to exacerbate the damage done by the malarial parasite; whilst pneumonia has been found to develop opportunistically in people who are HIV+, even before they develop signs of AIDS. The impact upon other infectious diseases is not known at present, but it seems likely that mortality from other causes may disguise the true impact of AIDS.

Even when AIDS is suspected, it may not be possible to get proper confirmation. AIDS testing is expensive. Preliminary tests cost between \$1.00 and \$5.00; confirmatory tests cost between \$30.00 and \$70.00. The cost of a single test in many African countries is greater than the total annual per capita health budget.

The standard tests also tend to be unreliable in tropical countries, because there is a greater risk of blood stickiness arising from the accidental contamination of blood samples by bacteria. Also, common multiple endemic infections (such as malaria, schistosomiasis, tuberculosis, and worms) activate the immune system, and create excessive antibody 'noise'. The problems often give rise to false positive results, whilst it is estimated that the ELISA and Western Blot tests may produce false negatives in up to 5 - 10% of all cases. In one study only 18 of 40 people who tested positive with an ELISA test were confirmed positive using a Western blot test.

There is also a suspicion that, even when HIV is detected, some countries may not report the full extent of the problem, because of the disease's disreputable connotations. In the case of Africa, under-reporting is more likely to be a problem in the Islamic northern half of the continent. The Islamic countries only began to report cases of AIDS to the WHO several years after those in southern and central Africa. However, most African governments became very sensitive about reporting information on the prevalence of AIDS in the mid-1980s because of western accusations that the disease originated in Africa. These accusations, it should be said, cannot be substantiated. The official view of the World Health Assembly now is that HIV is 'a naturally occurring retrovirus of undetermined geographical origin'.

A reluctance to acknowledge the extent of the AIDS problem is not of course confined to Africa. Most countries tend to

attribute early cases of the disease either to foreign immigrants or to nationals who contracted the disease whilst abroad. Dr. Jonathan Mann (former Director of WHO Global Programme on AIDS) has noted that the official response to AIDS in each country tends to break down into three stages:

- (a) Denial and minimization of the problem;
- (b) Reluctant acceptance;
- (c) Constructive engagement.

Many African countries, especially those in central and east Africa, have now progressed to step 3. (We would seem to be at least one step behind).

PREVALENCE RATES

The spatial distribution of the cumulative number of cases reported by African countries to the WHO by the middle of 1990 is shown in Figure 1.

Officially, the worst affected countries (in rank order) are Congo, Malawi, Uganda and Tanzania. However, most countries in central and east Africa have high reported prevalence rates. The major exceptions are Mozambique and Angola, both of which have been ravaged by civil war since the mid-1970s. The true prevalence in both countries is probably greatly understated. The figures for South Africa also look suspiciously low. The South African government reported that 2,500 people were HIV+, whereas the WHO estimates the true figure is probably closer to 500,000.

In west Africa, the main concentration of AIDS would appear to centre on the Ivory Coast, which has a substantially higher reported prevalence rate than any of its neighbours. However, the disparity may be caused by its neighbours understating the true prevalence. The figures for Liberia, for example, are probably inaccurate because of the civil war. Likewise, the figures for Nigeria and Sierra Leone appear suspiciously low, although I am not aware of any particular reason why they should be.

The Arab countries in North Africa generally report extremely low prevalence rates - the cut-off points in the map form a geometric progression. Given the strict moral code found in Islamic countries, the prevalence rates in these countries probably are low. However, the official figures may understate the true extent of the problem for religious/political reasons. Further south, the extremely low rates reported by Chad, Sudan, Ethiopia and Somalia possibly need to be treated with caution because of disruptions caused by civil wars.

Nevertheless, despite the reservations expressed here about the accuracy of the figures for north African countries and, more especially west African countries, the evidence would seem to indicate that the centre of the pandemic in Africa is in central and east Africa.

MEANS OF TRANSMISSION

The US still accounts for more than half the total number of cases of AIDS worldwide. However, the reported per capita prevalence rate in the worst affected African countries is about twice that of the US. There would also appear to be a much faster rate of new cases - in some countries the number of new cases is doubling every six months. The main source of concern therefore is not so much about the situation as it currently exists (bad though it may be), but about what it is likely to be in five or ten years time.

Random blood testing, both of high risk groups and also within the general population, suggests that there is already a very large pool of infected people who will develop full-blown AIDS within the next 5 to 10 years. However, perhaps the most disturbing aspect about the situation in Africa is the way in which the disease is transmitted.

In developed countries, AIDS is still largely confined to comparatively small sub-groups within the general population, such as gay men, intravenous drug users, and haemophiliacs. These groups tend to be fairly self-contained, therefore there is a reasonable chance of controlling transmission within these groups and also of preventing the disease from spreading to other groups. The gay community has responded very positively to preventative programs, whilst blood screening ensures that haemophiliacs and others are now unlikely to be infected in developed countries whilst receiving medical treatment. HIV infection amongst intravenous drug users is more difficult to contain, and there is also a greater risk of the infection being spread to other groups via prostitution. Nevertheless, overall there are grounds for assuming that the incidence of AIDS may be contained at a fairly low level.

The situation in Africa is much bleaker. The disease there has already broken out into a much broader population. About 75% of all HIV infection in Africa is through heterosexual contact. Most of the remainder is either caused perinatally or by contaminated blood. Homosexual transmission and intravenous drug use, the main means of transmission in the west, are very minor sources of transmission in Africa.

Female prostitution often provide a reservoir of infection in Africa. For example, 40% of prostitutes tested in Kinshasa, and 90% of those tested in Nairobi were found to be HIV+. Male clients of prostitutes become infected and in turn infect other prostitutes. The problem of increasing transmission would be numerically less serious if it remained confined to prostitutes and their clients. However, the men often infect their wives and other regular sexual partners. As a result, although HIV infection in developed countries is much more common amongst males, in Africa the sex balance is much more even, with a slight female bias developing in some countries due to the fact that women seem to be at more risk of infection from men than the converse. It is estimated that over 3 million women of childbearing age have now been infected worldwide; and that 2.5 million of these are African. If an infected woman becomes pregnant, there is a one in three chance of the child becoming infected perinatally. It is estimated that about 250,000 infants have now been infected before birth.

The problem is further compounded in the African context by the shortage of resources for blood testing, resulting in a high risk of infection from blood transfusions. The per capita health expenditure in many African countries is less than \$10 per annum, whereas a machine for testing blood samples may cost up to \$15,000. As noted earlier, in some African countries the annual per capita health expenditure is less than the cost of a single blood test. Thus, unlike the situation in developed countries, almost the entire African population is at risk, making the disease much more difficult to contain.

At present AIDS tends to be more prevalent in the larger urban areas. In central and east Africa it is estimated that between 5 and 20 per cent of the sexually active age-groups in urban areas are already infected. The incidence in rural areas is generally much lower, but rural infection rates in Rwanda, Burundi, southern Uganda and Tanzania's Kagera region rival or may even exceed those found in the cities. There does not appear to be any reason to assume that other rural areas may not eventually be affected in a similar manner. We may still be looking therefore at the tip of the eventual iceberg.

IMPLICATIONS

The implications of AIDS for Africa are horrendous. At an individual level, AIDS has enormous implications for those unfortunate enough to be infected. AIDS victims everywhere are condemned to a low and lingering death, but those in

Africa are less likely to receive medical treatment to alleviate their suffering. The cost of caring for 10 persons with AIDS in the US is more than the entire budget of a large hospital in central Africa. Persons with AIDS also run the risk of being rejected by family and friends because of stigma or a fear of infection. They may therefore face a total breakdown in their family life at a time when they most need support, leading to divorce, eviction from family home, and possibly homelessness.

AIDS also has enormous implications for the rest of the victim's family. Apart from the risk of infection, and the strain placed upon family members caring for persons with AIDS, AIDS may impose enormous economic costs, especially if the infected person is the major breadwinner. People with AIDS may lose their job, leaving the rest of their family to meet the costs of treatment as best they can. Even a sick child can become an economic disaster for the whole family. In Zaire, for example, a single hospitalisation for a child with AIDS costs the equivalent of 4 months wages; funeral expenses cost about 11 months wages.

It should perhaps be stressed that AIDS in the African context is a family disease, with enormous implications for children. Apart from the risk of being infected themselves, either perinatally or by contaminated blood, children in the worst affected regions run a very high risk of being orphaned. If one parent dies of AIDS, the likelihood is that the other will die soon after, leaving the children dependent upon aging grandparents at a time when they themselves had probably hoped to be supported by their own children. It is estimated that about 5,000 children have already been orphaned by AIDS in the Kagera region of Tanzania alone, whilst USAID has predicted that up to 20% of all children in the worst affected countries may eventually become orphans.

In some respects AIDS might be easier to accept if it killed people quickly, but the slow insidious nature of the disease creates additional problem both for families and the public health services. AIDS is a prolonged disease requiring repeated hospitalisation. Persons with AIDS consequently occupy hospital beds and consume scarce resources in palliative treatment (such as medication and personnel time) which might otherwise be used to combat other illnesses that could be cured. One in every four hospital beds are already occupied by AIDS patients in parts of central Africa. The impact of this upon those suffering from other health problems must be substantial.

AIDS has had other knock-on effects for medicine. HIV infection complicates the treatment of other infectious diseases; for example, the symptoms are more severe, and transmission to others occurs more easily. The management of infectious diseases in general has therefore become more complicated and expensive. AIDS has also forced changes in medical practice: blood transfusions, formerly widely used to treat anaemia caused by malnutrition or endemic diseases such as malaria, are no longer safe, but there are no obvious substitutes. Blood transfusions are reported to have been cut by 72% in Zaire. HIV may also make immunization against childhood diseases more dangerous. Childhood diseases, such as measles, are major killers in Africa.

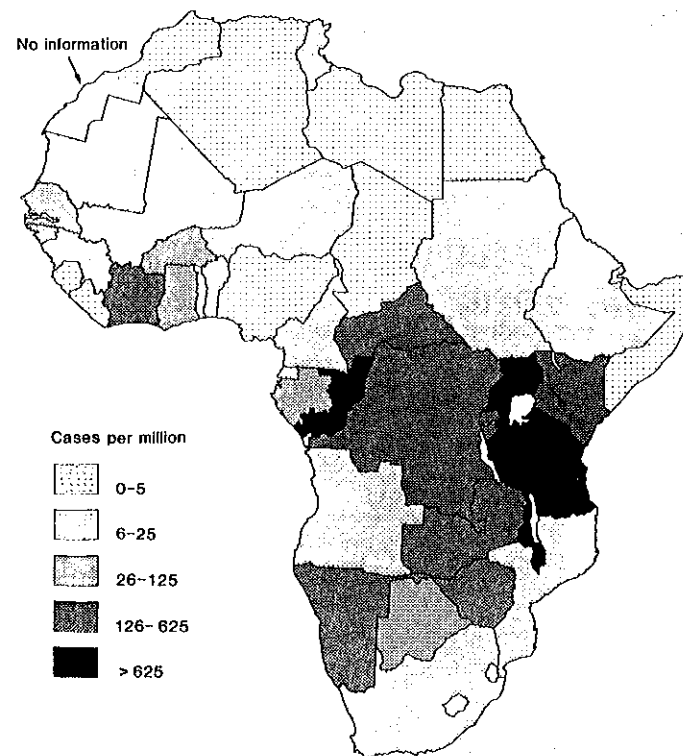
At a broader level, various researchers have attempted to assess the long-term economic and demographic impacts of AIDS in Africa. The economic impact is especially difficult to assess, because there are so many uncertainties, but there would seem to be general agreement that its impact will be both negative and substantial. High adult mortality rates will reduce the labour power available for food production in rural areas, and reduce returns on capital invested in education and training. A Harvard study conducted in 1988 predicted that the economic costs of AIDS in five badly affected African countries would begin to exceed total foreign aid to those countries by 1991.

Long-term demographic predictions are likewise varied. However, it is estimated that AIDS may increase overall death rates in central and eastern Africa by as much as 60% to 80%. The WHO estimates that in Kampala, where 24% of all pregnant women tested HIV+, that HIV has already increased the infant mortality rate by 38% and has more than doubled the mortality rate for the under 5s. Models predict that some countries currently having high net population growth rates of 3% - 4% will, by the beginning of the next decade, experience a net population decline. Statistically speaking, the dependency ratio may remain much the same because the increased mortality amongst adults will be matched by increased mortality amongst children. However, in real terms, dependency will probably increase as healthy providers are diverted from the paid workforce to look after those who are ill.

AIDS is clearly emerging as a problem of massive proportions. However, it is important to keep its likely impact in perspective. The WHO estimated that in the late 1980s AIDS may have killed about 10,000 people per year. This figure is very small compared with the 250,000 children who die in the Third World each week from entirely preventable diseases. It also pales in comparison with the estimated 30 million currently facing death from famine in different parts of Africa.

On the other hand, the AIDS pandemic is still at an early stage of development. The WHO estimates that HIV will eventually infect about 10% - 15% of the entire African population (compared with only 1% in developed countries) and will give rise to an annual steady state mortality of about 1% of the total African population - i.e. about 6 - 7 million people every year. Seven million is obviously a much smaller number than 30 million but, unlike famine victims, AIDS victims have no hope of a last minute rescue by relief agencies. We are also talking about 7 million deaths every year - year in, year out.

There is obviously a lot of uncertainty involved in estimating the current prevalence of AIDS in Africa, let alone assessing its future ramifications. Nevertheless, the indications are that we are looking at a problem of massive proportions. It would not be true to say the problem has gone unnoticed in developed countries; however, the long term implications have not yet been fully appreciated.



Prevalence of AIDS, June 1990



"... at least I think it's a chamber pot..."
Bernard Green and John Joe Callaghan get hands on experience of how it was done in the old days.

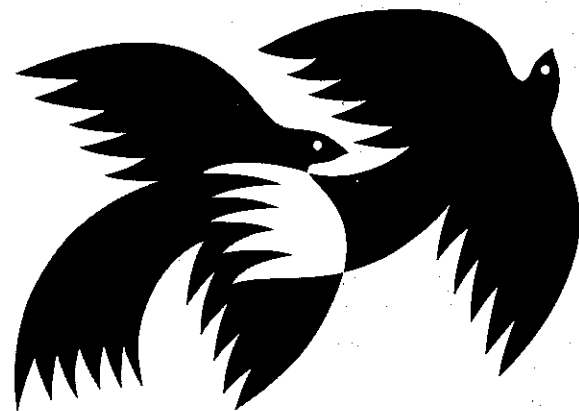


Dave "Shush, I can't hear Fran"
Fran "I can't hear myself"
Dave O'Callaghan and Fran Walsh sample the alternative delights of the Bangor fieldtrip.



City Slicker
Prof. Smith plays cowboy

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THE ROAD FROM RIO

by David O'Callaghan, 3rd Arts

The United Nations Conference on Environment and Development (UNCED) took place over a two week period in the sunshine and splendour of Rio de Janeiro. Politicians and diplomats came from countries worldwide to take part in this "historical" event of immense magnitude. However, despite the global audience, we must ask what actually took place... was it an immense step forward with regard to future generations or just simply another political fools paradise. Within this article I will attempt to give an overview, as to the events and topics dealt with, their relative success or failure and the consequential causes of these successes or failures. I shall conclude by expressing an opinion as to whether the summit was as "historical" as it believed itself to be and were the roads from Rio realistically paved.

Numerous conventions took place, the most notable and important being those on Climate Change, Biodiversity and the Forest Treaty. These conventions each experienced varying degrees of success, welcomed by some delegates yet opposed by others.

The framework convention on climate change sought for the stabilization of greenhouse gas concentrations, yet this treaty found itself constantly opposed by Arab countries fearful of losing oil profits if the world burned fewer hydrocarbons. Malaysia, India and Rainforest countries ignored the pleas of the western civilisation and rejected the forest declaration citing "national sovereignty" as their reason, although it was known that the protection of their native timber companies was the true reason. Overall, the absence of a close knit international agreement was regarded as an immense failure by many. In all of this many questioned as to why such relatively, less powerful nations as Malaysia could hold the summit to ransom. To understand this we must take a look at the United States and its role in the summit, noting that the U.S. itself is now regarded as the sole superpower nation left in the world, moreover we must look at the role of President George Bush and his effect on the summit.

President George Bush - the Environment President! was regarded by many as the saboteur of the Rio summit by refusing to sign a wildlife protection treaty, the Biodiversity treaty. The U.S. constantly defied signing this treaty and was eventually left isolated as over 130 countries agreed to it. President Bush referred to Environmentalists as "Extremists" and saw them as "trying to shut down the United States" in contrast to his 1988 election campaign pamphlets which stated that "successful environmental protection is a prerequisite to solid sustainable economic growth". He himself was quoted as saying "I have nothing to be apologetic for, I also have to be the one at this conference that is responsible for jobs and people being at work" which only further incited other national delegates. He became regarded as the protector of possible future profits of a handful of pharmaceutical and biotechnology companies.

People may regard such anti U.S. comments during the summit and after it to be greatly exaggerated, however, a closer look at the development of such a single minded stance may be traced as far back as January 1992 when a report was published on the "guidelines for the UN Environmental Conference" by the influential and powerful American think tank, the Heritage Foundation, who believed that the conference in Rio may "affect profoundly America's economic growth, productivity and International competitiveness". As an aid to the U.S. delegates going to the conference, this report lay out six major goals:

Goal one recommended that a UNCED discussion on global warming should be ignored since UNCED knowledge of this area is limited.

Goal two believed that a plan on the reduction of greenhouse gases was improbable since scientific knowledge on the subject is not yet advanced enough to prove their environmental effect.

Goal three asked delegates not to deal with topics dealt with by other international bodies.

Goal four sought the promotion of biotechnology as a necessity and its negative consequences as mere exaggeration.

Goal five advised the protection of private intellectual property rights from third world countries who are seeking to gain U.S. profit establishments in their countries. The report stated that "as the world leader in technology, America has an enormous stake in maintaining the integrity of intellectual property".

Goal six sought opposition to UNCED proposals to spend more money on environmental problems in developing nations. Let them finance their own problems through the creation of wealth from their own resources.

As can be seen all these proposals portray a negativity towards a summit which was seen as a green landmark, a "historical" event which saw the narrow commercial interest groups gaining. The reports belief in such goals as asking less developed countries to get their own wealth from their own natural resources (not mentioning the fact that the U.S. has most probably exploited these), is dubious since most resources are U.S. owned and will remain so according to goal five. However it is increasingly dangerous when it is an influential think-tank, like the Heritage Foundation, and not a minority extremist that proposes it. Judging by resultant actions at the Rio summit it appears a likelihood that President Bush ordered his copy of the report early and brought it along to the summit for advisory purposes.

Within this article I do not wish to appear negative, after all it was the U.S. who proposed the treaty to conserve the world's forests, yet how can such be effective when the source nation won't even sign another treaty such as the Biodiversity. Other countries, especially third world countries could only regard such a treaty with suspicion. Understandably the U.S. remained tight lipped during arguments against such countries as India and Malaysia when they would not sign the treaty, after all, who were they to argue and hence the "tit for tat" actions result. The fact that protecting forests was basically a necessity became conveniently ignored, hence instead of a world forest convention or a clear commitment to have such a convention, what resulted from Rio was a dull statement of forest principles, which itself was criticised as being actually worse than existing guidelines by the International Tropical Timber Organisation and the World Bank.

Britain was another possible power unit, especially under John Major, who invested much faith in the summit and actually attracted many European leaders to the summit through his genuine interest in third world issues, resulting from his years working in Nigeria. However they discredited themselves immediately by stuttering at the final hurdle, the Biodiversity treaty, once Bush had attacked it. Britain actually was indecisive for ten days before eventually agreeing to sign along with the other 130 countries. It was also Britain who watered down the EC statement on global warming so as to reduce U.S. embarrassment. Through their actions many believe Britain offered an EC that was too split to be effective, while Germany itself, a world leader, was too preoccupied with reunification to be a major player.

Hence through all this we may observe the knock-on effect of

major powers refusal to partake under certain treaty's. Immediately the minor powers send a plea of "if they can do it, so can we", hence being capable of refusal of a treaty due to less opposition from the major power.

And so, with regard to the resultant effect of the summit, numerous agreements and treaties were achieved and signed, yet little impact is expected in the long run with regards to the convention on climate change, this was seen as a positive step, however no firm commitments were involved in the signed treaty. More of a gradual stabilization is expected although nothing in the way of directives or deadlines were issued. Yet for most of the worlds population the main concern is with that of our ability to cope with climate change and sea level rise, consequent results of global warming, yet this point was continually ignored despite numerous attempts to bring it to the fore. On a positive note, the creation of this problem was historically recognised as to that of the industrial nations while the vulnerability of the less developed countries was also recognised, hence at least some foothold of an understanding was gained.

The debate and failure to recognise the worldwide deforestation problem was best summarised by Malaysia's forest spokeswoman, Jing Wa Lian who stated "our forests are not global commons, they are national resources. I do not say that North Sea oil or Alaskan gold should belong to the global community, why do you claim our forests?" This statement was quickly followed by Malaysia's Prime Minister Mahathair bin Mohammed who concluded "the North wants to have a direct say in the management of forests in the poor South at next to no cost to themselves".

Such statements help summarise the overall outlook and opinions taken by most at the summit. Self preservation, single mindedness, selfishness and lack of overall unity kept this summit from being a powerful factor regarding treatment of the environment and instead meant that it was little more than another building block in global protection. Unfortunately, however, time is of the essence and a more rigid and conclusive agreement is necessary.

Hence, finally it must be stated that despite this pessimistic outlook we must optimistically continue to search for answers to these problems. We must attempt to solve problems as has been done at the summit with Desertification in Africa whereupon a new intergovernmental negotiating committee was set up on the subject of battling this problem, the initial work is to be completed by June 1994. Also with regard to living marine resources, the fisheries initiative was successful and there will be a meeting probably in early 1993 in Newfoundland in Canada. Numerous other conventions were set up or are in the process of being so, hence the nations of the world must put aside their differences and singlemindedness and learn to regard all countries as unified upon a fragile earth which rapidly and desparately requires our assistance. We must put aside the constant bickering and understand that without co-operation and unity the future is not bright.

TIGLIN

by John-Joe Callaghan, 3rd Arts

Columbus, Marco Polo, Magellan, The Geog. Soc: Common denominator? The urge to go boldly where few could be bothered spending a weekend. I refer of course to the stalwart expedition that ventured to the wilds of Wicklow on the by now infamous 'Tiglin Fieldtrip'. It was a venture with many, many casualties. Our original number of fifty three fell to seventeen - thirty six brave souls lost . . . before we even left the College gates!

As organiser of the expedition I oft wondered whether Scott of the Antarctic had met with similar obstacles to mine in organising his date with fate. When numbers began to thin did he hear such cries from the crew as "I'm not going", "I'm afraid of heights" or "Me granny died, again"? Perhaps. Nonetheless, it was quality we were after, and quality we got. Seventeen of the bravest scholars the ranks of St. Patrick's College could offer up. A motley crew of geographers and non-geographers alike ready to risk life and limb for the greater glory of their Alma Mater. I'm joking of course. They had to have been the most misinformed, plied with drink, blackmailed and threatened group of sheep ever to have travelled in a mini-bus. Compromising photographs are said to have been produced as an encouragement for them to partake. Scuffles broke out at the last minute as the shout for "all aboard" went up. Those who tried to flee fell where they were shot. I had promised a field-trip, and by God they were going to enjoy themselves, whether they liked it or not.

After a perilous journey across the Wicklow Mountains, which at one stage involved the bus coming to a virtual stall midway uphill, we arrived at, to use the jargon of Great Expeditionists, BASE CAMP. A hospitable outpost that stood on the edge of the wilderness. We disembarked, keenly aware that we were now at one with nature (no, not naked). We breathed in the sharp mountain air, contemplated our spatial distance from the pampered urban life, and leading with our chins, went inside to watch telly.

We were welcomed by the staff who were very friendly, but, I thought, quietly smug about our by now high spirits. They advised us that we would need a good nights sleep as we were to begin our day at the ungodly hour of 8 a.m. the next morning. I ask you.

Dawn came and along with it a friendly morning call, followed by a less civil shout 15 mins. later. All were very quick to arise 20 minutes after the second call, with the introduction of a firehose. Maynooth Geog. Soc. were up and at 'em.

We partook of a very substantial breakfast prepared by an equally substantial cook called 'Mo'. We were then divided into 2 groups - one went orienteering and the other went rockclimbing. I was in the latter group.

For the uninitiated, rockclimbing involved attaching oneself to a rope, climbing up a rock face (usually 90°) and having reached the top abseil back down. This latter part takes courage and strength of character, and in the absence of these, insanity, alcohol and various nerve calming drugs will suffice. Scary but enjoyable would be my personal verdict, and our instructors were responsible, reassuring and patient. Although their little habit of pretending to cut the rope when I was abseiling. I found a tad disturbing.

This activity was followed in the second half of the day by an afternoon of orienteering - the Geographers sport. I was about to come into my own. I must say my performance could only be described as singular. The object of the exercise was to find various points by the use of a map, intuition, skill and a good sense of direction. Unfortunately, Yours Truly was at the back of the queue and all I was given from this list was the map. The memory of my humiliation of being 1/2 hour later than everyone else was not eased by nobody believing my story about being kidnapped by a Lebanese terrorist unit!

The day being over after this exercise, we washed, ate and were chauffeured to a local hostelry by a very kind and considerate female member of staff, whose skill and ability as an outdoor pursuits instructor were second to none, i.e. she was the only one who believed my kidnapping story. The night was young and we stayed with it till it reached old age, absorbing the atmosphere of the vernacular culture, music . . . and guinness. Our very own Johnny B. Quilter (Geog. Soc's resident musical

director) even played along with the local band until the Guards came and threatened him with incarceration. I jest of course, they merely threatened to jail him.

The next day saw our group off hill-walking, and the other group mountain biking. I lost many good friends on the side of that mountain (Kevin's Bed, Glendalough). No, nobody fell off the side or died, no such luck, they'd just sulked at having to stay up the side of a hill for so long and swore they would 'get me' for this. One regret of my life was the anxiety that many of my friends went through, and the other was not having a camera to record said anxiety, especially the look of terror on the face of one Resident Musical Director (HA!). Eventually we arrived back on terra firma, and after a brief stand-off at the minibus I was allowed embark, having promised never to bring them to a place like this again, never show the photographs, and never, ever, publish how most of them had near on the spot bowel movements out of sheer fear of heights. I eventually promised (HA! HA!), and we went back to Tiglin where we were awaited anxiously by the other group, as we were a little late back due to the intransigence of one member of the group, who stubbornly refused to get on the bus unless he could sit up the front and 'do the driving noises'. There's always one immature individual in any group so after quite a bit of deliberation and cajoling I was allowed sit up the front, but I wasn't allowed to 'do the driving noises'.

After a wash and a cup of tea back at the centre we prepared ourselves to hit the long, lonely road back to Maynooth. We parted company with our instructors at the centre, thanking them for their patience and professional approach, to which they replied that they'd love to have us, or indeed any group from St. Pat's, only next time make sure to bring a few of the doctors and nurses with us. Strange that . . .

So there is the abridged saga of what happened that weekend in Tiglin. I was assured by all who went that they would never forget it - 'seared in my memory' was the sum-up of one individual as she fumbled with the lid of her brandy flask. And it is to this satisfied customer that I give the last word.



Colm: "Have you got me in focus?"
Photographer: "Yeah Colm, just step back a little . . . a little more . . . a little more"

Colm about to abseil on Tiglin Fieldtrip



And now, a minute's silence for those who went hill-walking . . . suckers!!!

The mountain - biking desparadoes saddle up - it's a long way back to Maynooth!



Suzanne Nolan goes over the edge - exam pressure, don't you know.



Intrepid Explorers . . .

THE DUBLIN 'WASTE CRISIS' LOOKING TO THE FUTURE

by Ivan Devilly, B.A.

INTRODUCTION

Twenty eight million tonnes of solid waste are produced annually in the Irish Republic (ENFO, 1991). Almost all of this waste is dumped in public and private landfills, 205 of which were in active use in the 32 local authority regions (of the 26 counties) in 1984 (Boyle, 1987). Significantly, over fifty per cent of this waste is produced and inevitably dumped in the Dublin region. What this means is that over the next twenty five years about twenty one million tonnes of waste will be produced above the capacity of existing landfill sites. Three of the four sites, (Friarstown, Ballyogan and Dunsink) which have taken 85 per cent of Dublin's waste will reach capacity within two and a half years. The fourth site at Balleally will be full by 1998. A report by ESBI/Atkins completed last year suggests that a new landfill site be opened in South Dublin, and a second one bought to accept baled or processed waste as soon as possible to take over from the redundant sites (Herald, 9.3.92). But things are not as simple as it may first appear.

CHANGING ATTITUDES TO WASTE DISPOSAL

The whole approach of using landfills to dispose of waste is presently being questioned, both on an Irish and European scale because of the inherent risks to groundwater by polluted water (leachate) percolating through the soil and bedrock layers from the surface. Alternatives, such as incineration, which is widely used in other countries have been suggested, but the fact is that some residue is left which must be disposed of and landfill usually proves to be the only feasible disposal route. Other options would include reducing waste at source, reusing or recycling it, all of which would minimise the actual quantities deposited in tips. Again, these ideas have been examined and are actively practised in some areas, but because they are more expensive than simple landfilling, they have not caught on at a large scale. Therefore, landfills will continue to be of primary importance in waste management, and the next logical step must be to identify the best ways to select, develop, operate and maintain (both during and after the sites' active life) landfill sites (O'Neill et al., 1992).

Things have come a long way since the first EC policy on waste 75/442/EEC in 1975 which aimed to reduce waste at source and put the obligation of environmentally friendly waste disposal on individual member states (O'Neill et al., 1992). In Ireland (Dublin being no exception), the tradition was of dumping the wrong waste in the wrong areas with inevitable groundwater damage resulting. Today EC policy and public opinion are more critical than ever before, forcing much more controlled selection and operational management of landfills. A good example of the negative reaction to landfills is the case of Kill, Co. Kildare where locals have risen against the council and despite a favourable EIS (Environmental Impact Statement, which incidentally was required under EC regulations) continue to oppose this development. It is interesting in this case, that the EIS is positive, despite the fact that the site is underlain by highly permeable glacial till. The proposed solution is to use man-made liners such as High Density Polyethylene (McDonald, 92), despite the fact that it is known that these liners can and do leak.

PRESSURE ON LANDFILLING

So it is in the context of these pressures (plus soon, the proposed EC Directive on Landfilling of Wastes) that at least two new landfill sites must be purchased in the Dublin region within the

next two years. The selection of these sites will have to take into account Aquifers (areas containing significant quantities of groundwater), site overburden for covering waste, proximity of residential properties, access and proximity to waste source, the areas scenic importance, size of site and availability of land (Moore, 1993).

On the operational and maintenance side, landfills promise to become more 'groundwater friendly', minimising leachate production by maximising evaporation, diverting/stopping surface water inflow and reducing wet tipping. Leachate treatment and monitoring are also destined to become the rule rather than the exception as is the use of containment sites which hold the leachate from escaping by using liners. All of these measures will increase the running costs of the tips, but soon there will be no acceptable alternative.

Leachate continues to be produced by landfill from 10 to 100 years after dumping has ceased (depending on the size of the dump). For this reason the future will see continued observation and leachate treatment following the closure of a site, again a costly necessity (Daly et al., 1990).

CONCLUSION

Dublin's waste crisis is at a critical stage. Waste reduction schemes and alternative disposal methods have been considered and rejected. Landfill is the only real option at present, despite the increasing number of constraints. These constraints reach from the initial site selection to eventual site closure stages of landfills. As a result, whilst the natural environment is being protected better than ever before, costs are increasing and life is generally being made more difficult for Dublin County Council. There is no easy solution to these problems to be seen in the immediate future. One thing which is clear however, is that at least two new landfills are needed in the Dublin Region as soon as possible. These will not solve the waste crisis, but merely ease it in the short term. The future sees no respite, waste will continue to be produced and dumped in landfills, available (and suitable) sites for which will become harder and harder to locate. Perhaps eventually the expense of transporting waste longer distances to be dumped will outweigh the costs of reuse and recycling, resulting in their proliferation. Time, however, may bring with it new technologies and alternative, cheaper disposal methods. Whatever the outcome, the Dublin waste crisis is more likely to get worse before it gets better, a long term solution being what Dublin County Council must strive to rapidly achieve.

QUOTES THAT WON'T EARN MARKS

by Fly on the Wall

Many of those attending lectures do so with regret, many do so to pass the time, many for the free heating, many to be seen by professors and fellow students, and many for the sleep. We even hear about the rare species of academic reveller who attends lectures for the sheer enjoyment of it. We find this hard to believe as none have been seen as yet.

We would like to introduce you to another class of student - the avid inscriber.

Just as with politicians, this species clings to every utterance, from the occupant of the rostrum before them. The following are a selection from the records of a group of this years note takers. Where possible, dates are given to add to authenticity, and to aid identification. Our hope is that no one will be offended either for inclusion or exclusion from this list, all that's left to say is thanks for the fun.

- 12-10-1992 - Every Tom, Dick and Harriet, if you want to be ... (mumble)
- 12-10-1992 - If I could draw properly, I could put in ploughed fields
- 13-10-1992 - (Re - 1960s) Plastic shops, plastic pubs, and singing lounges
- 13-10-1992 - (Re - sun never setting on the British empire) Because God didn't trust the British in the dark
- 13-10-1992 - Geography is a citizen's good guide to living
- 19-10-1992 - If you were dropped out of a helicopter ... at low altitude
- 3-11-1992 - (Re-popular images) Little house on the Prairie and Withering Waltons, wherever they come from.
- 9-11-1992 - Anyone with slanty eyes was thrown into a national park in World War II
- 10-11-1992 - I've forgotten where that sentence was going
- 11-11-1992 - Most mapping programmes are a B***** to use
- 17-11-1992 - Belfast should be double the size of Cork, but Cork doesn't quite make it
- 18-11-1992 - In terms of this course I think I've got the excremental end of the stick
- 20-11-1992 - For further readings on Irish Biogeography you'll have to go further afield!!
- 23-11-1992 - (Re - the Radio Tara mast controversy) in 1988 the locals were tuned in to environmental awareness.
- 23-11-1992 - (Re overhead screen) Does anyone know how this thing works?
- 30-11-1992 - The only way we think of trees is you grow them, then cut them down and burn them or make chairs
- 2-12-1992 - People beginning to get loose with axes, laying bare the landscape
- 7-12-1992 - This is the type of information Jim Walsh would have in enormous amounts
- 9-12-1992 - It's a bit of a ramshackle lecture today. I'm all over the place
- 14-12-1992 - Higgly Piggildied ... I'll use that term if ye can spell it
- 14-12-1992 - The emerging left bank ... though it's on the right bank
- 15-12-1992 - I've nothing against Lawrence Avenue, some of you probably live in Lawrence Avenue ...
- 15-1-1993 - I refuse to put them on a reading list as a matter of principle
- 15-1-1993 - If one looked at Sociology, one could see even more diversification into isms and ologies ... Codology
- 11-1-1993 - On a vastly smaller scale
- 13-1-1993 - In Ireland we're upwind of almost everything
- 18-1-1993 - Laying out grass, and spending all your time cutting it. I see it as a waste of time myself
- 18-1-1993 - I've lost it (transparency) It doesn't really matter 'coz you can't really see it anyway (finding the projector broken)
- 19-1-1993 - (Re Brendan Daly) He lost his seat to the most local outsider
- 19-1-1993 - Curses I've left it behind
- 25-1-1993 - This is a bit out of hand here
- 26-1-1993 - The cursed coloured photocopier broke down, so you'll have to do with black and white.
- 27-1-1993 - (Re mortality) These are people who are very sick
- 27-1-1993 - (Re degenerative disease) You get older and fall apart

- 3-2-1993 - This lecture isn't going very well (said as people left when they woke up in the wrong theatre)
- 3-2-1993 - (Tourism is expanded) usually by creating a completely false image
- 8-2-1993 - So that, in an extended nutshell, is what the course is about
- 9-2-1993 - Ridge and Valley country of the Waltons ... Fold mountains for those of you who are more purist
- 25-2-1993 - (Re. Charlie Haughey) He took a fancy to it as a left bank
- 26-2-1993 - Since it's County Meath, it's more likely to be bullocks than bulls, if that's any consolation
- 1-3-1993 - Having got here I'm not leaving. (Said by lecturer on crutches, in attempted outing)
- 3-3-1993 - (Re Italy) The catholic church and the mafia - I'm not saying they're the same thing

UNDATED CLASSICS

- Taking Europe as a hole ... (mumble) Which you shouldn't really 'coz it's a nice place
- Even Corncrakes have rights. (followed by startled comment from the back row) "Even cornflakes have rights???"

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POSSIBLE IMPLICATIONS OF FURTHER DEVELOPMENT AT LONDON HEATHROW FOR IRISH AVIATION

by Colm McNelis B.A.

INTRODUCTION

The doleful vocabulary that accompanies periods of recession is increasingly familiar to an open economy such as Ireland's. Terms such as rationalisation, financial restructuring and "recovery packages" all invariably involve a decrease in that industry's workforce, level of choice and service to the consumer. One such industry has been aviation which suffered severely from fears of terrorism associated with the Gulf Crisis in 1990/91 and has since borne the increasingly serious slump in demand for air travel. In the Irish case, this has meant a crisis in confidence in what was considered a potentially lucrative growth industry only two or three years ago. The Shannon based aircraft leasing group, Guinness Peat Aviation (GPA), the world's largest, has debts of \$5 billion and is in negotiation with its financiers. Meanwhile Aer Rianta, the Irish Airports manager and the national carrier Aer Lingus are also in dire straits with threats of large workforce layoffs and consequent knock-on effects for its dependant subsidiary, Team Aer Lingus.

In this context, it was all the more surprising when at the conference of the Institute of British Geographers (IBG), in January, the study group on aviation strategy and airport planning reviewed in upbeat terms the medium and long term prospects for the leading British Airport, London Heathrow (LHR). It is worth considering the plans at this, the world's busiest airport as its relative proximity to Dublin means that what happens there in the coming years has implications for Irish aviation generally, and all of us as passengers.

A BIG AND BUSY PLACE

As anyone that has passed through Heathrow will appreciate it is a very large and busy place. Just how large it is, however, probably escapes us as Irish passengers use Terminal 1, only one of four separate terminal buildings which combined handled more than 42 million passengers in 1991. These passengers are transported by more than 80 Airlines operating at LHR serving more than 200 destinations world-wide, and providing employment directly for 55,000 staff. With more than 1,000 aircraft arrivals and departures each day and handling £35bn. worth of airfreight per annum the airport is reaching its peak capacity. The British Airports Authority plc. (BAA), the privatised equivalent of Aer Rianta, is currently looking at plans to retain Heathrow's position as a major hub airport in the European context*. These plans are necessary because in BAA's opinion the current recession is a temporary downturn and it is expected that passenger traffic will increase by 2% per annum up to the year 2016. This will lead to a situation which in their view in the medium term where "demand is forecast to outstrip capacity at all four London airports by 2002". Furthermore LHR is not alone in making plans as "Rival European airports are already planning to expand: Paris fourfold to 80 million passengers per year; Amsterdam, Brussels and Rome threefold each".

DEVELOPMENT PLANS AT LHR

Later this year the official planning application will be made to develop a new fifth terminal within the 3,000 acre Heathrow site by BAA. This project is likely to cost in excess of £900 million and would increase the airport's capacity by some 30 million passengers a year to around 80 million per annum throughput

by 2016. After a two year public enquiry a Government decision is hoped for by 1997 with Phase 1 opening by 2002. Not surprisingly plans to develop further the country's already leading airport are set to inspire much controversy. At the IBG conference one contributor with a background in airport planning alleged that "Further major development at Heathrow and Gatwick is considered to have unacceptable environmental implications and will further exacerbate the regional economic imbalance." Arguments that the Southeast already benefits disproportionately from international air traffic while regional airports such as Liverpool are struggling to survive, have their corollary in Ireland where the debate over the Shannon stopover brings into focus the possible conflict between market forces and regional economic development.

A Research Director from BAA countered with a paper entitled "Airport planning in the United Kingdom - is there too much?". This speaker argued that as the UK aviation industry accounted for a disproportionate share of the world market the planners should facilitate its continuation in the economic interest of the national economy and that the air passenger as consumer obviously favoured the Southeast and Heathrow in particular. In the true ethic of a recently privatised company director the speaker argued that "Only planning solutions which take this fact into account will stand the test of time". Such approaches underline the competitive threat posed by other European airports and suggests that concentration of resources may be necessary to retain LHR's position as a major hub airport.

Concerns over the possible environmental impacts of a large increase in air traffic have been expressed by local residents. BAA are responding with a very professional and well financed PR exercise. (Matched in slickness perhaps only by our own Student's Union unveiling its plans for a new bar in the midst of a debate on USI membership). BAA's argument is that an increase in capacity can be accommodated without building another runway, no increase in night flights and only a 15% increase in the number of aircraft movements. This is to be achieved by policy changes in terms of what sort of aircraft use the airport and the technology involved in civil aviation. According to figures supplied to the IBG by British Airways (BA), which carries nearly half of all passengers at Heathrow, they hope to increase the proportion of long haul flights from the airport over time.

BIGGER PLANES

This means using more wide-bodied jets which carry more people further afield in every flight. BA hopes to progressively reduce the number of small planes using the airport and redirect these short haul operations to their regional airports such as Stanstead and Luton. Using bigger planes does not mean increasing noise pollution as, for example, the old and small BAC 1-11s that Aer Lingus use are noisier and incur penalty charges at LHR, whereas a new large Boeing receives rebates because of improved technology resulting in quieter engines. This has implications in the debate over the future of Aer Lingus where trade unionists fear a redirection of Dublin's Hub status for Ireland from there to Heathrow. As it is the stated intention of the airport authorities to reduce the number of short haul small planes using LHR any rundown in Dublin's status would simply mean a reduction of service frequency on the London - Heathrow route, a probable withdrawal of non profitable internal routes and a relative increase in fare tariffs as competition is removed.

Other technological innovations are being inspired by the runway limitations at LHR as BA are currently negotiating a development programme with Boeing in the United States for a new generation of super wide-bodied "777"s capable of carrying up to 800 people. By increasing the size of planes using the

existing two runways BA intends to vastly increase the number of passengers passing through its main airport each year. Once again the knock-on effect of using larger and more economical aircraft is a potential threat to Aer Lingus. At an expected current price equivalent of £85 million a piece Aer Lingus' competitors, by virtue of their larger size will be better able to finance such investment. Considering that our national carrier is already one generation behind in using the original 747s developed in the late 1960s and early '70s compared to the new larger and more economical 747-400 series replacement, and that the government here is apparently unable to provide finance to modernise the fleet, then once again British Airways and London Heathrow's gain may be Aer Lingus' and Dublin's loss. The only possible good news in this regard is a possible increase in aircraft servicing business at Dublin and Shannon as BA and the larger carriers may wish to relocate contracts currently placed in Hong Kong when the colony reverts to Chinese rule in 1997.

CONSOLIDATION

Most observers of the aviation industry agree, and it certainly was the consensus at the IBG, that consolidation of the world's airlines will continue towards a position early in the next century where there would remain a small number of mega-carriers. The turnover of the leading airline groups is already huge with the largest AMR (American) having, in 1991, a sales figure of nearly \$13 billion. BA, which is currently ranked 6th in the world with sales of just under \$9.5 billion has recently acquired a minority share holding in US Air, taken over British Caledonian and generally has sought to "mop up" the smaller British independent carriers. It is instructive to note that aviation, like any industry suffering recession is cut-throat in the extreme. The uncovering of BA's "dirty tricks" campaign against Virgin Airways underlines how smaller airlines, Aer Lingus included, can expect no favours in the battle for corporate hegemony among the larger carriers. As Aer Lingus suffers increasing losses in its core business, flying passengers, it may be increasingly vulnerable to hostile take-over bids by large airlines wishing to acquire its profit making routes, and remove another competitor thus confirming fears that the industry is inherently oligopolistic in nature.

CONCLUSION

Dublin is currently the second most popular destination for passenger departures from LHR with more than 1.5 million per year, surpassed only by Paris and well ahead of larger cities such as Amsterdam, Brussels and Rome. Aer Lingus, the principal carrier on this route, is highly regarded internationally as an extremely professional organisation which until recently appeared as a successful airline with a strong future. Nevertheless the trend towards consolidation in the airline industry, the challenge posed by further upgrading of facilities at Heathrow, only 50 minutes from Dublin, and the new technology which larger carriers such as BA can avail of, poses difficult questions for us in Ireland. It may be argued that Aer Lingus has for many years, justly, been a symbol of national pride and the reluctance of government to invest now threatens the group's future, while other European governments have and indeed continue to support their national airlines. In this context the future of Dublin Airport when compared to Heathrow is synonymous with the future of Aer Lingus compared to British Airways. No doubt companies like Guinness Peat Aviation will return to profitability when the expected upturn in leasing orders arrives, yet the threat to Dublin and Aer Lingus is one of structural change in the industry if trends towards consolidation continue. We should perhaps take more notice of international events, such as those outlined above, as otherwise we may regret the slow death by

neglect of the national carrier that has served the country credibly well to date.

*The meaning of the term "hub airport" is simply where an airport acts as a distribution point for connecting flights to smaller airports in the region. For example one cannot fly direct to Mexico City from any airport in Ireland so passengers must fly to Heathrow to connect to the direct service. Heathrow connects with 20 internal destinations in the UK while Dublin clearly acts as hub in the Irish context.

(References in this article have been omitted to make it easier to read, but the information and statistics are based on paper sessions by various contributors to the Transport Geographers Study Group at the Conference of the Institute of British Geographers held in Egham in January of this year, and on information supplied by British Airways, and the British Airports Authority plc, to a field trip party to Heathrow Airport Limited as part of the conference).

CONFESSIONS OF A FIELD WORK ADDICT

by Shelagh Waddington, M.A.

Going to school in England in the 1970's I had to make serious choices of examination subjects at age 14. History or geography was one choice - if you wanted to be a scientist you couldn't do both. I spent ages debating. What did geography have to offer? History was easier - lots of facts to learn, interesting stories to read. I even enjoyed it! Geography had one MAJOR advantage. In year 4 geography students got to climb Helvellyn in the sacred name of physical geography. (For the uninitiated, Helvellyn is a large mountain in the English Lake District). To someone who regarded the offer of a trip to the next town as irresistible, this tipped the balance. I signed up for geography!

In the 4th year, we duly set off, noting 'baskets of eggs' on the way and the reasons why Skipton was a tourist centre and a good defensive site, etc. Sadly, it was very hot, I was a VERY inexperienced hill climber and I didn't get to the top of the mountain, although I saw aretes and corries (and knew what they were!) for the first time ever. I was hooked - offer me a field trip and I would diligently follow.

For A-Level we went for a week to the Yorkshire Dales - my first experience of drinking alcohol in bars (somethings about fieldwork don't change!). It was also my first experience of sleeping in a sleeping bag on the floor in a freezing cold hut - Geographers can always find excellent accommodation. We did questionnaires and discovered one of the few real advantages of being a female geographer - farmers don't automatically assume that women are from the Department of Agriculture or the Revenue. This meant that they didn't set their dogs on us at first sight! I also got to go up Helvellyn again - and this time made it to the top! I went along with another generation of 4th years, of whom one passed out halfway up and another dropped his bag while walking along a knife edged ridge. It really made you aware of how YOU would bounce and roll if you fell. The tarn was a long way down.

Ever enthusiastic (or a glutton for punishment) I went to university and choose to study geography. Not only geography - I discovered that geologists also went on field trips. Geology field work had other new experiences for me - all the extremes of cold, wet and alcohol of geography, plus acts of violence. I observed a new agent of erosion at work - geology students with hammers! I also visited a wide variety of quarries and road cuttings, along with climbing Mt Snowdon on a weekend trip to North Wales. On this trip we stayed in another hut. We arrived

after midnight in an unfamiliar, totally unlit Welsh village. Have you ever experienced a first hand the response of a respectable citizen awakened from his bed at that time by a coach full of students?

On another field trip (this time to Anglesey - look out of the bus windows next time you leave Holyhead for London) one of our tents fell off the roof rack of the van in the fast lane of the M1. It's ability to remain upright and habitable in anything other than a flat calm (0 on the Beaufort Scale - smoke rising vertically) was severely impaired by the very large lorry which ran over it before the Police came and saved it for us. Did YOU ever share a three person tent with five other people? You really get to know your fellow students under those conditions!

Ever the addict - I went on a surveying course - three weeks in Mid Wales. Wales has a wet climate (would-be climatologists please note!) and we had three fine days in three weeks. We surveyed mostly on farm land. Note to Economic geographers - Mid Wales is a livestock rearing area. Even friendly and harmless cows can be a little daunting when they gather round you in large numbers and dribble green spit on your field note book!

I did finally survive the rigours of fieldwork and graduated to some degree or other. Prior to starting my first job as a teacher (yes, of geography, what else?) I was asked to go on a field trip with a crowd of 4th years from my new school. I arrived before my colleague. When the coach arrived I started to get on to speak to the driver - he yelled at me to get off and wait until my teacher arrived! (Yes, I did look that young once!)

I have continued ever since then with this obsessive behaviour. I am still a willing volunteer for any field trip. I have been known to send students out to examine the town of Maynooth - surely the most exotic venue for fieldwork known to civilisation! Even the Burren in winter, when the rain falls horizontally, has its attractions. Got to go now - somebody has offered me an exciting trip to Leixlip!

UP 'N DOWN

by F. Tripper

At the beginning of last November, once again a bunch of young, enthusiastic geography academics began the long and gruelling journey of yes, yet another geography field-trip. Amongst the well seasoned field-trippers there also lurked some new recruits, mostly of the 2nd year species, with the odd 3rd year who didn't bother his/her butt going on one last year.

Leading the bright eyed and bushy tailed inquisition was none other than Mr. P. Breathnach himself, and in case of complications our medical geographer Mr. D.J. Pringle was there to assist as midwife. Our destination was Bangor, Co. Down, a beautiful picturesque coastal town in the wee north, where a week or so prior to our attack on the town, a bomb blast had taken place. However, the young braves knew no fear and forward we marched armed with a very poor knowledge of our route, and accompanied by vast quantities of intoxicating liquor.

Our first major stop was at the Ulster Folk and Transport Museum. Let loose from our vessel we set out to explore this primitive settlement. Many, upon seeing such obsolete 'contraptions' as a spinning wheel or a 'po' thought they were about to discover the source of the Nile and with an eagle eye, trod upon the surface anticipating an encounter with the natives. However, nothing came of nothing, and so we returned, reunited once again with a hunger in our bodies and a severe lack of lubrication around the oesophagus.

Soon we arrived at our place of stay. We unloaded the XXXXX and graced the hotel with our presence. Suffering from our long and gruelling exploits of the day we agreed that 'refreshments' should revitalise our weary bodies.

In our ignorance of where to find such liquid substances we took many wrong turns but alas one of the young braves turned a corner to find before his eyes the 'Fountain of Youth', 'Tir na nOg', 'Paradise Found' ... THE BAR.

Shortly thereafter we were called to dinner. We were presented with some concoction which was labelled Shepherds Pie. Acts of bravery, rather than hunger itself, persuaded us to eat this, washed down by the discovery of the weekend, McEwans!

This was followed by a sermon from our two navigators, with lively responses from the ever-loyal troops. After this we were once again let loose, this time to paint the town red. Some boogied the night away in some foreign disco while the more 'mature' veterans told stories of times past and sang aloud 'Mo Chailin Rua'. Song by song, pint by pint, we drifted slowly into the early hours of the morning and rapidly into the state of grace.

Night passed and morning came; the second day. This consisted briefly of a tour of Belfast, most of which nobody remembers as they were in a coma. In order to avoid embarrassing anyone, I will refrain from telling my crystal clear recollections. Sunday evening saw us homeward bound and eventually deposited at the college gates - mission accomplished!

TRIVIA QUESTIONS

- Q11. Where are three-quarters of the world's pineapples grown?
- Q12. What part is served by the river Taff?
- Q13. What country's capital is Tripoli?
- Q14. What letter is on the hot-water tap in France?
- Q15. What is Africa's largest lake?
- Q16. What civilisation's legendary lost city can be seen at Machu Picchu?
- Q17. What is the Taj Mahal made of?
- Q18. What is the world's second highest range of mountains?
- Q19. What's the capital of Australia?
- Q20. How many rivers are there in Saudi Arabia?

MAYNOOTH - THE IMMEDIATE AFTERMATH

By Sarah Drea, M.A.

Last August, with a sigh of relief, I handed my thesis to Peter Carr in the Registrar's Office and, thinking my essay writing days were over, I headed for the big bad world (via Caulfield's of course). My time of respite was to be short however as fate determined that I was to be encouraged once again to put pen to paper by the editors of this revered publication, as part of their tireless efforts to solicit articles. This time, rather than having the luxury of a choice of titles, I was given a specific brief - "Tell us what happens after Maynooth" ("oh and make it witty", no less!).

There is no point in my pretending I had a great life plan made for my post-Maynooth days - those who know me well enough would be sure to spill the beans. This particular story is not likely to be relished by all those planners out there but here goes anyway...

As soon as the post-thesis Caulfielding was over, I was faced with the daunting prospect of finding my place in the labour market - the thought of social welfare forms loomed, especially since the previous 104 Friday's issues of the Irish Times had not exactly been prolific in terms of opportunities for Geography graduates. However Lady Luck intervened.

A chance meeting with my old school principal led to a month's teaching in Kilkenny which was most educational for me and of course for the lucky pupils. I learned that far from being a 'handy number', teaching was a combination of rewarding (pay day) and draining (the Inter Certs!), the students learned everything from the intricacies of industrial location (well it is intricate if you're 12 years old and trying to read "Blue Jeans" at the same time) to the wonders of the European transportation system (unfortunately I didn't get a chance to do the field work on that section of the course).

My month's teaching over, I found the opportunity of another month's work in the Registrar's Office irresistible, and Maynooth beckoned again. While keying in student details I dreamed of the far away places that were "calling to me" and I laid my first post-Maynooth life plans. I studied the map of the world and my bank account, in that order, and decided to head off for a well-earned break. So much for my planning and my dreams of that Grand tour.

Another chance meeting and another chance of work - this time for 12 months, things were really looking up! This chance meeting led to a job co-ordinating an EC Programme in the Mid-West. So, parties over and bags packed, I headed for a new base in Limerick and a job in Shannon, Co. Clare (Ordnance Survey, sheet 17, grid ref. R 381 621).

I am working for a company called Rural Resource Development (RRD) which is headed by the charismatic and energetic Fr. Harry Bohan. RRD has jurisdiction over the LEADER Programme for Co. Clare and there are 8 people working on that.

My work is centred around another EC Programme which RRD is administering - RECITE (Regions and Cities for Europe). The aim of the project I am co-ordinating is to foster a communications network between companies, universities, research institutions and development agencies within the Mid-West region and between the Mid-West and four other EC regions which are also piloting the project. The network is to assist economic development by encouraging communication

and co-operation between economic actors in the regions with a view of facilitating both the exchange of technological information and the identification of potential partners for joint business ventures and/or research projects.

This is a very varied job, some of my time is spent dealing with correspondence relating to the project and contacting companies to encourage them to participate in the network. Other days I spend time visiting companies, or agencies like EOLAS, either to gather information for a company database which is being set up as part of the project, or to seek advice on how to progress the project further. I have also been involved in organising a meeting of the other partner regions which will take place in Clare next April, that means that if the slide projector breaks down, it will be my fault (actually the responsibility of it all is really overwhelming!).

So with the minimal planning and a lot of luck, life post-Maynooth has been very kind to this writer thus far and all those hours in the library, theatre 1 and the Computer Centre (not to mention the 'social outlets' of Main Street) seem well worthwhile. And if things can go lucky for one Maynooth-type person, they can surely go lucky for you too (so long as you don't mind the planning problems you'll encounter along the way!).

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IRISH GOVERNMENTAL POLICY TO ENCOURAGE SUSTAINABLE DEVELOPMENT

by Orla McCarthy, 3rd Arts

The way people think about the environment, about economic development and about the links between the two is changing considerably. The end of the 1980's saw a radical re-appraisal of our concerns over resource availability and use, the environmental consequences of resource exploitation and the relationship between the environment, poverty and economic change. The re-appraisal has given rise to a new approach to environment and development issues; an approach which seems to reconcile human needs and the capacity of the environment to cope with the consequences of economic systems. This approach is called sustainable development. The '70's and 80's saw a concern with resource shortages. Today there is little concern with resource scarcity, rather a great challenge facing the world is to cope with the impact of economic growth on environmental processes.

The idea of sustainable development was first used in the world conservation strategy (International Union for the Conservation of Nature (IUCN), 1980). This first formulation stressed sustainability in ecological terms, and was far less concerned with economic development. It argued for three priorities to be built into development policies:

- (1) maintenance of ecological processes
- (2) sustainable uses of resources
- (3) maintenance of genetic diversity

The emphasis was on the physical environment in its current state, and this formulation was criticised for being anti-developmental. It saw economy-environment relationships simply in terms of the human impact on the environment and tended to imply that any impact was negative. The re-formulation led to the creation of the world commission on environment and development (better known as the Brundtland Commission, named after its chairperson, Gro Brundtland of Norway) in 1984. The commission initiated studies which culminated in the publication of "Our Common Future" (The Brundtland Report), a report which has paved the way for all future discussions of sustainable development. "Our Common Future" defines sustainable development as:

"Development that meets the needs of the present without compromising the ability of future generations to meet their needs".

(Environmental Issues in the 1990's, A.M. Mannion and S.R. Bowlby. Ch. 2, Page 24).

Sustainable development set out in the Brundtland report is a call for policies which recognize the need for economic growth and seek to maximise growth, but do so in such a way that they do not jeopardize the resources of the future. The Brundtland report encourages development but not at the risk of a healthy environment. The report identifies two key concepts in sustainable development.

- (1) The basic needs of all people must be met in a way which provides for their needs with security and dignity - in the world today, where the needs of so many are not met, this inevitably means giving the needs of the poor priority.
- (2) There are no absolute limits to development - development potential is a function of the present state of technology and social organisation, combined with their impact on environmental resources.

(Environmental Issues in the 1990's. Ch. 2. page 25).

The report argues that poverty, resource depletion and environmental stress arise from disparities in economic and political power. From this it is argued that sustainable development at a global level can only be achieved through major changes in the ways in which the planet is managed. Governments and international agencies can no longer argue for policies in terms of simple economic growth alone. They must account for environmental implications for developmental policies that they undertake.

The question arises, what are the Irish government doing in favour of sustainable development. In 1990 the presidency of the European Community by Ireland was seen as an incentive and opportunity towards sustained development. "The new environmental programme will ensure that Ireland's natural environment, already of high quality, is fully protected and enhanced for the health, safety and well being of this and future generations". (An Environment Action Programme - Published by the Department of the Environment 1990).

The government set about making people become aware of the importance of preserving the environment. They proposed to set up an environmental protection agency. Other measures in the programme represented new efforts to protect the environment:

- (1) The concept of sustainable development, as advocated in the report of the world commission on environment and development (The Brundtland Report); This concept envisages a reasonable balance in humankind's interest between development and nature.
- (2) The principle of precautionary action even where there is no definitive scientific evidence to link emissions or discharges with detrimental environmental effects.
- (3) The integration of environmental considerations in all policies.

Now I will discuss how the government enacted their programme towards a better environment. As I have already mentioned, the government set about this by informing people about the environment. In 1989 they allocated £600,000 to enable a major new environmental information service - ENFO - to be established. They made provision for £200,000 to be spent on advertising and promotional work for the Department of the Environment.

The government also planned improvements in specific areas of the environment. These can be divided up into ten main areas.

- (1) **Air quality:** It is a fundamental necessity in a healthy environment. Ireland for the most part has a clean, unpolluted air but the government realised the importance of maintaining high standards. Dublin however has been a problem area so the government decided to ban bituminous coal from October 1990. They also acted on the carbon monoxide problem by decreasing prices of unleaded petrol in 1989.
- (2) **Inland waters:** The government concentrated on improving the quality of drinking water. They also zoned in on sewage treatment.
- (3) **The marine environment:** The government eliminated untreated sewage. Irish Corporations were ordered to stop dumping sewage sludge at sea by 1998 at the latest. Preservation of beaches was also on their agenda.
- (4) **Agriculture and the environment:** In the past Agriculture has been seen as environmentally friendly. However with increased commercialisation of agriculture has come many environmental implications. In 1988 and

1989 the government carried out farm surveys to tackle the problem of water pollution. In 1990 the government made grants available for pollution control. The government also encouraged organic farming.

- (5) **Forestry and the environment:** Increased grants for forestry meant encouraging people to plant trees. There were disincentives for planting on open land or high ground.
 - (6) **Industry and the environment:** The environmental impact assessment (EIA) system was mandatory from February 1st, 1990. It required formal studies of the environmental effects of major categories of development. This ensured that the fullest consideration of environmental issues in the making of decisions about major industrial proposals.
 - (7) **Waste recycling and disposal:** By International standards the proportion of waste recycled in Ireland is very low. Recycling helps to protect the environment and conserve natural resources. The government encouraged local authorities to become involved in recycling schemes. They also tried to encourage recycling on a commercial basis by providing tax incentives.
 - (8) **Wildlife habitats:** The Irish government endeavoured to protect and preserve habitats and species of flora and fauna. It is widely recognised that Irish peatlands are unique in European terms but are in serious danger due to over-development. Until 1989 a total of 19,500 hectares of blanket bog had been acquired for conservation purposes and £500,000 was provided for the purchase of more bogs.
 - (9) **Protecting the ozone layer:** The aim of the Irish government was to eliminate the production of ozone-depleting substances as quickly as possible. In 1990 £50,000 was made available towards the recycling of C.F.C.'s.
 - (10) **Climate change:** This is now a cause for widespread concern and international action has been mobilized to tackle it. Action is underway to eliminate C.F.C.'s and other chemicals which contain up to 25% of the so called "greenhouse gases". Action for the reduction of carbon dioxide emissions remains to be taken. In 1990 the government planned to carry out studies dealing with questions such as sea levels, the effects on crops and forestry and implications for the energy sector.
- Other measures included planning for environmental emergencies. They also discussed clean up activities which was dealt with by local authorities. The government made grants available for preservation of thatched cottages. There was also emphasis placed on archaeological heritage. They also designated certain areas as requiring environmental improvements, one of their special programmes being the Custom house docks area in Dublin.
- There is no doubt the Irish government have come a long way towards implementing a policy of sustainable development. This will ensure a healthy environment for the next generation of Irish. It will also enhance Ireland's tourist industry as Ireland has been marketed abroad as a clean unpolluted environment. In view of the fact that tourism is almost certain to become the biggest sector in International trade by the year 2000, a clean and healthy environment, unspoiled by the short-sightedness of economic development, is of the utmost importance.

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RANDOM THOUGHTS

by Kevin Griffin, B.A.

The random survey. That wonderful tool of geographical research that brings the innocent public in contact with the business like and efficient questionnaire. Given the suitable location, this form of academic sourcing can provide some delightful memories.

The Kerry people are long famed for their gift of the gab and their warm hospitality. The experiences of some of the 36 Rhetoric crew in Killarney last year can only add to their repute.

To avoid being arrested we decided to start on the first morning by presenting our credentials in the local law and order establishment. The grinning Garda hoped that we weren't there "to break windows and harass old people" (Thank you Marion F. & RTE).

The hospitality of the people was wonderful, and had we accepted all the offers of tea and biscuits (while we asked questions) we would have consumed double our annual quantity of both (those who know the 36 Rhetoric tea house will appreciate the people's generosity).

Dealing with a random selection of humanity there were obviously a couple of humorous events. One of my colleagues was force fed digestive biscuits and coffee (just after dinner) "eat all those biscuits or we won't answer your questions", that alone would provide entertainment, but the house was inhabited by five middle aged, eccentric female occupants. He couldn't escape fast enough, but the questions were answered.

On attempting to arrange an appointment with a Post Office worker, I was told to "Fire Away" and read out four pages of questions while a queue of eight people patiently waited - not missing a word.

The best example of group participation however was when I entered the typical all male Irish pub, where the occupants all drank pints (don't dare ask pints of what!), all wore caps, a card game was in progress "when I lead with a spade you should . . ." and a roaring fire was the focal point. A lovely rustic scene, but once my presence was felt, silence fell. The rustle of my questionnaire and echo of my footsteps the only sound. Once they heard that the clipboard was not tax related, and that I wanted to question the barman (honestly) the chill left the air. Then the fun started. I could not put in print any of the comments which were given to innocent questions such as "do you like tourists?"

On knocking at one door, a voice shouted - "Come in Mick" I stuck my head around the door and answered that I wasn't Mick. "Sure come in anyway" and before I had a chance to explain, I was at the table drinking tea and eating a jam doughnut. Mick (the postman) arrived a few minutes later and had to make his own tea.

On a serious note however we did make a few observations. Firstly being pushy doesn't work, and very often as we accepted rejection and turned away people changed their minds. Secondly, for goodness sake be tactful. Using the register of electors we had a few people who had passed away on our list and a few more who were in mourning. Of course we got the usual few who "had visitors" or who had been "called to earlier" by us (tell us another) and a few who were genuinely afraid of strangers.

Taking everything into account I would recommend this technique to anyone who is interested in humanity and human nature. It is a good sign that the miserable, cold, and wet weather conditions are fading from the memory leaving memories of an exercise that was good fun and useful (I think).

THE GRADED STREAM CONCEPT

by Edgar Morgenroth, 2nd Arts

INTRODUCTION

The concept of the graded stream was first put forward by G.K. Gilbert in the late nineteenth century. In the early twentieth century W.M. Davies developed these ideas further but it was J.H. Mackin in 1948 with his paper "The concept of the graded river" who is being credited with expressing this theory. Gilbert defines the graded stream as "one in which over a period of years, slope is delicately adjusted to provide, with prevailing channel characteristics, just the velocity required for transportation of the load supplied from the drainage basin. The graded stream is a system in equilibrium": (Mackin, 1948 p. 471 taken from Leopold, Wolman, Miller, 1964 p. 266).

It will emerge that the definition of the graded stream is no longer true as stated by Mackin and that a new definition incorporating the concept of steady state rather than equilibrium more accurately describes this condition of a river.

THE CONCEPT OF THE GRADED STREAM

In his definition of the graded stream Mackin put forward a number of propositions.

He suggested that a river erodes its channel until a stage is reached at which the gradient is such that the discharge of the river flows at a velocity which is strong enough to carry its load but too weak to erode its bed. Bank erosion may still take place as the river forms alluvial meanders but this is usually by bank deposition and therefore does not alter the state of the river.

A graded stream therefore is one which has attained a balance between erosion and deposition and this balance is referred to by Mackin and other authors on this subject as equilibrium. Mackin also emphasised the importance of the adjustment of the gradient as a necessary condition to reach this equilibrium.

This refers to the undulations along the longitudinal profile or 'talweg' of a river as these would lead to deposition or erosion due to a change in discharge velocity. These irregularities would be removed by the river as it adjusts to carry all its load. The river would deposit its load where the gradient is insufficient to create a flow powerful enough to carry all the load and conversely the river would erode when its energy is in excess of that required to carry its load.

The profile of such a river is then called the graded profile and this always takes a perfectly smooth concave shape.

A graded stream is then one which assumes a perfectly concave profile and has a perfect balance between erosion and deposition.

Mackin summed up the concept of the graded stream in an analogy. He described the equilibrium between erosion and deposition as such that a graded river could flow over cream cheese without eroding it.

TIME FRAME

Time frame is very important for the concept of grade. Mackin referred to a long time span over which periods of erosion and deposition would be equal thereby balancing each other out and this was the condition he called grade, the condition in which the system is in equilibrium. (Morisawa 1968 p. 125)

This excludes the short term in which either a flood or a drought might take place. During flood conditions the river has excess power and this will be used to erode the floor and sides of the channel. During a drought less water flows in the river and therefore less power is available to carry the load and the river will consequently drop some of its load which results in the filling of the channel with the heavier portion of the load.

During these two periods the river is not in equilibrium. The extreme long term is also not addressed in Mackin's definition. Over this time span the entire landscape including the river bed is being eroded and reduced in elevation.

This manifests itself in an extremely slow rate of downward erosion which can only be measured over geological time.

CLIMATE

Climate is also a factor which fluctuates or changes totally over time. The balance between erosion and deposition may not be attained due to either very frequent flooding or drought conditions. In such conditions a river may have excess power or insufficient power to carry its load for some time, thereby either depositing or eroding for long periods and this would alter the channel of the river significantly. This may also prevent the river from attaining 'grade' for some time.

Climate change may also give rise to changes in sea level for example due to glacial activity. If the sea level falls, the river which may previously been graded is rejuvenated i.e. the newly exposed river channel is not in grade. This often manifests itself in a knickpoint, a sudden steepening of the channel gradient.

OTHER CHANNEL VARIANTS

Mackin did not take into account other factors which influence the erosion or deposition of a river channel. These are vegetative cover, type and quantity of the load, means of transportation (bedload or suspension), underlying rock type, width, depth and type of bank material all of which influence velocity of discharge, energy lost through friction and energy required to carry the load. Changes in any of these would therefore disturb the equilibrium. There exists no one profile for the graded stream.

LONGITUDINAL PROFILE

Rivers need not have a smooth concave curve to achieve a balance between erosion and deposition, as rivers may adjust other channel characteristics to achieve this. Woodford points to the example of the Middle Rhine, which while having a slight hump in its profile opposite the Kaiserstuhl, probably as a result of a buried rock buttress of bed-rock, still seems to be in as much an equilibrium as other parts of the unregulated Rhine.

THE TERM EQUILIBRIUM

Some geomorphologists, realising the fluctuations of discharge over time, attempted to describe the resulting balance by the term quasi equilibrium or dynamic equilibrium. It more accurately describes the continual adjustment the river has to make to regain its 'equilibrium' following a change in any of the channel variants.

This discussion poses the question whether the term equilibrium in any form should be used to describe this condition as this would suggest some form of permanence.

CONCLUSION

This essay has identified a number of criticisms of the concept of the graded stream as put forward by Mackin. It emphasises the importance of gradient and does not adequately deal with variations of other factors.

The implied concept of a perfectly concave longitudinal profile has been largely dismissed by most commentators. The definition by Mackin has been replaced by new definitions. Chorley, referring to the variations of a river channel and particularly magnitude-frequency changes of discharge, points to a condition of steady state rather than grade.

Morisawa also redefines a graded stream using the term steady state. "A graded stream, is one in which a steady state has been reached such that, over a period of time, the discharge and load entering the system are balanced by the load and discharge leaving the system."

This definition while still leaving scope for some criticism better defines the condition of grade, as it does not emphasise any special channel characteristics or long term static state of any channel variant.

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THE ROLE OF GENDER IN DEVELOPMENT GEOGRAPHY

by Sarah Barlow, 1st Arts

'Development without women' is the third of a list of Seven Deadly Sins of Development published by U.N.I.C.E.F. in 1989. This states that "the women of the developing world are responsible for producing and marketing most of its crops; they also carry the main responsibility for food preparation and home-making, for water and fuel, for nutrition and health care, for hygiene and for the education of the young. Yet in development assistance efforts to date, most of the education and training, the technology and inputs, the investments and the loans have gone to men (75 : 25, p. 14). In this essay I will look at the question of gender and its effect on development with regard to agriculture, migration, land tenure and international development policy.

AGRICULTURE

The position of women in traditional agricultural societies is illustrated by Dr. A.K.H. Weinrich in "Women and Racial Discrimination in Rhodesia" (U.N.E.S.C.O., 1989). Among the Shona, an agricultural population comprising 80% of the indigenous population, surplus was produced chiefly by the agricultural labour of women. Men did not contribute to cultivation of crops except when the Shona system of shifting cultivation made the clearing of new land necessary. Men were instead involved in hunting and cattle rearing, producing highly valued meat.

While women in such agricultural communities are valued for their labour power, the superior position of men is guaranteed by their control of the land, enabling them to appropriate surplus created by women. Men of status (tribal chiefs and elders) practice polygamy. Several wives can cultivate larger fields, producing enough grain to feed their husbands' councillors and visitors. This inequality is exacerbated and perpetuated by the fact that most aid to Third World farmers is offered to men, often for "modern" agriculture, i.e. cash crops.

As in other developing countries, Shona women also perform all domestic and child-rearing tasks. This excessive workload for women is a serious problem for development in general. Malnourished women face increasing demands due to public service and aid cutbacks during the 1980's. Such problems are unfortunately often compounded by schemes designed to increase women's incomes without consulting women, which frequently lead to a further increase in women's work with little or no profit.

MIGRATION

While the problems of land tenure, low productivity and lack of employment are among the factors contributing to migration, the greatest "pull" is the potential for higher income. In Zimbabwe labour migration is highest on the list of strategies for coping with food deficits in rural areas. Where the male head of a rural household migrates to urban areas there is a linkage between the rural household and the urban destination. This gives rise to opportunity for rural households to earn money from migration, especially if the older sons also migrate. With widows and younger households there is no opportunity to earn money from such migration. Women's workload on the farm is increased by inadequate household labour. While other members of the community do help, these farms are often last in the queue during the sowing season. Without machines of their own there is more time required to prepare the land, which leads to late sowing of the seeds, which in turn leads to a late season and lower productivity.

The human implication of migration leads to stress on the urban system. Shortage of housing results, and to get a house the migrant has to have money, and to get money he first has to get a job. If the migrant has no money to send home there is decreased agricultural productivity due to lack of money for seeds, livestock and technology. Where there are a number of children to be supported and the woman is illiterate the cycle of poverty is complete.

LAND TENURE

In the Third World today the unequal situation of women has often been exacerbated by misplaced western concepts of what a woman's place in society should be. This has undermined the traditional, and often quite powerful, roles played in their communities by the women of the Developing World, for instance as farmers and traders. This has had adverse results for development in general.

State and international institutions have contributed to the increasingly unequal position of women in relation to land tenure in developing countries - a recent study by the U.N. Population Fund found that women were not allowed to own land in Columbia, Nepal, Kenya, Ethiopia, Panama, Chile, Iraq and Egypt. New land reform laws exclude divorced women from land ownership in Gambia, Tanzania, Ethiopia and Nepal.

Under many pre-colonial societies in areas of the (so called) Third World women had strong if not always equal rights to work the land. This was particularly true of sub-Saharan Africa, where women traditionally held both the responsibility for the production of food for the family and the rights of access to the land in order to do so. In other regions men also produced subsistence-level crops, and today these men have increasingly taken on the "modern" sector, farming cash crops. Modern African land tenure systems have been introduced based on western perceptions of a male-dominated agriculture and the concept of a male-dominated household, which means that many of these systems deny women any legal right to land ownership. The U.N. report to the U.N. Decade Conference in Nairobi in 1985 warned that it was becoming clear "that a factor contributing to Africans' acute food shortages is the way women have been systematically excluded from access to land and from control of modern agriculture in that region".

INTERNATIONAL DEVELOPMENT POLICY

"Two-thirds of the world's labour, one-tenth of the world's capital, one-hundredth of the world's property". (Women, International Development and Politics, p. 291)

International aid planners invest minuscule amounts of available resources in women; In 1979, only 2% of the U.S. Agency for International Development (A.I.D.) budget was allocated to projects benefiting women, and by 1986 this figure had risen to a mere 4%. For U.N. agencies, 3.5% of their projects benefit women; less than 1% of the U.N. Food and Agricultural Organization (F.A.O.) projects involve women. While private agencies are sometimes taught to be more receptive to women's programmes, the Ford Foundation allocates only 3.5% of its monies to women's programmes.

A further problem regarding women in development is the under-representation and isolation of women in the decision-making apparatus of development. Few women hold decision-making positions and the men in power are reluctant to change this situation. Some sources blame conventional ideologies and lack of acceptance of women in development as a legitimate professional concern. The World Bank continues to see women mainly in terms of their reproductive roles, with their educational and employment needs addressed only as a means of population

control. It sees women alongside other specific target groups such as resettled populations and other minorities that projects should attend to. They appear to have no guidelines as to how much weight should be given to women in development relative to other criteria.

The United Nations has long advocated that women be integrated into the economic development process. They advocate the establishment of machinery to eliminate discrimination and that such machinery should include bureaus, ministries, commissions and non-governmental organizations to name but a few. Despite this, little has been accomplished with attitudes that legitimize women's subordination remaining, as do small budgets and mandates that focus on welfare. Despite a decade of research bureaucracies perpetuate programmes based on the ideal of men as breadwinners and women as domestics. Rather than include women's economic activities or their potentials, we have "few historic models for development policies that empower women" (Women, International Development and Politics, p. 9).

CONCLUSION

In Africa, as in other Third World countries, women's situation differs widely. One has to take into account the different ethnic, cultural, economic, historic and political factors as well as geography, language and climate. Alongside or even before development there is a need to provide health clinics, safe methods of contraception and childbirth, infant nutrition and post-natal care. In most Third World countries women transport fuel and water over great distances, and are the traditional cultivators of food crops for the family. Women must, therefore, stop waiting for the men to free them and must improve their own agricultural skills and secure access to the land.

To bring about real change, women must have open access to resources such as education, credit, training and chances for improved incomes. Women must, therefore, also be taken into account in development policies and in awareness programmes. There can be no real development anywhere in the world without the active participation of women.

A GUIDE TO THE SPATIAL LOCATION OF GEOGRAPHY BOOKS IN THE JOHN PAUL II LIBRARY

by Anne Kehoe, B.A.

We the weary library staff of the JP II library, often get questions from enthusiastic geography students. However, too often we get questions like the following:

Student (with pleading eyes) "I'm looking for a book" to which we reply - with a smile of course!!
Weary Staff member: ("No S*** Sherlock")
"Well, you're in the right place!"

But other questions from these fanatical students, can be much more difficult to answer, for example;
Student: "Why are all the geography books not in the one confined, easy access, handy place"
Overburdened Staff member: "I don't know!!"
(In other words *****)

The people who could possibly rise to this challenge, and answer this intricate question, are those geography students who have survived lectures on "The Nature and Philosophy of Geography" given by Prof. W.J. Smyth on a Tuesday morning (Oh yes I

remember them well). In those dawn lectures, we learned that the discipline of geography was 'like no other'!!

Therefore how can geography the discipline be classified. Is it science or humanities? Could it be even classified as a Theology subject, pray tell!! The reason I ask this is that while undergoing research for this article, I came across a book by Yi-Fu Tuan (remember him?) called "The Hydrologic Cycle and the Wisdom of God: A theme in Geoteleology".

Hold On!! Although a recommended book on all of Dr. P. Gibsons courses, it cannot be found in the JP II library and under no circumstances will InterLibrary Loans process any requests to find this book. Just do without it, there are plenty more to choose from.

In J. May's (1970) book on "Kant's Concept of Geography" it was shown that "major difficulties occur when trying to find a place for geography among the sciences, since it is generally agreed upon by geographers that their discipline has no objects of study that are peculiarly its own".

As I recall, Prof. Smyth said that "Geography is a science of synthesis - it contains many disciplines, so some people believe that geography is 'Jack of all trades and master of none'. This means that geography attempts to colonise a wide variety of subjects (it will shortly be invading beauty therapy and needle-work!!). Geography is a mother discipline which borrows from realms of knowledge, such as meteorology, geomorphology, plant ecology etc.

Books then of a geographical nature can be located in the JP II library, however their placements are quite diverse. Starting on the ground floor, geographical abstracts can be found in the reference section. In the reserve section the geography department have broken all records, with over a 1000 articles available. (Of which Jim Walsh and Dennis Pringle are responsible for 999!!) (Where are yours J.S.???)

Strolling up to the second level, having obeyed the "No Talking on Stairs" signs, the geography student is confronted with a vast array of books relating to courses. Social geography is located beside the sociology books, the early 300's. Political and Economic geography books are found among the 330's (or on the trolley's, or among the Music boxes on the third floor, bet you've never checked there!). Down in the section, books relating to geomorphology, climatology, biogeography and medical geography. The New European Documentation Center is of valuable use to all those doing Western Europe (behind the Periodical Office). Periodicals also occupy a large area in the northwestern end of the library. There are a vast number of periodicals relating to the discipline of geography, journals from many countries provide an insight into this academic subject abroad such as Annals of American Geography, Transactions of the Institute of British Geographers and last but not least Irish Geography.

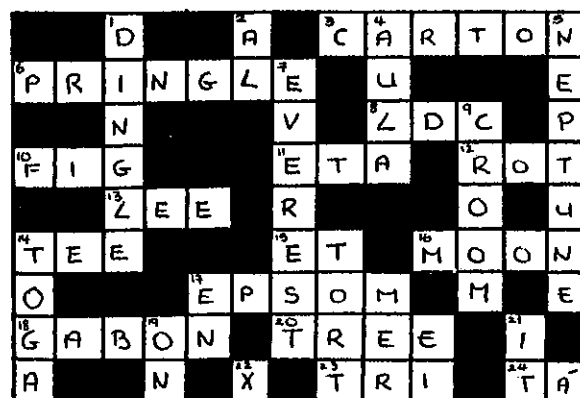
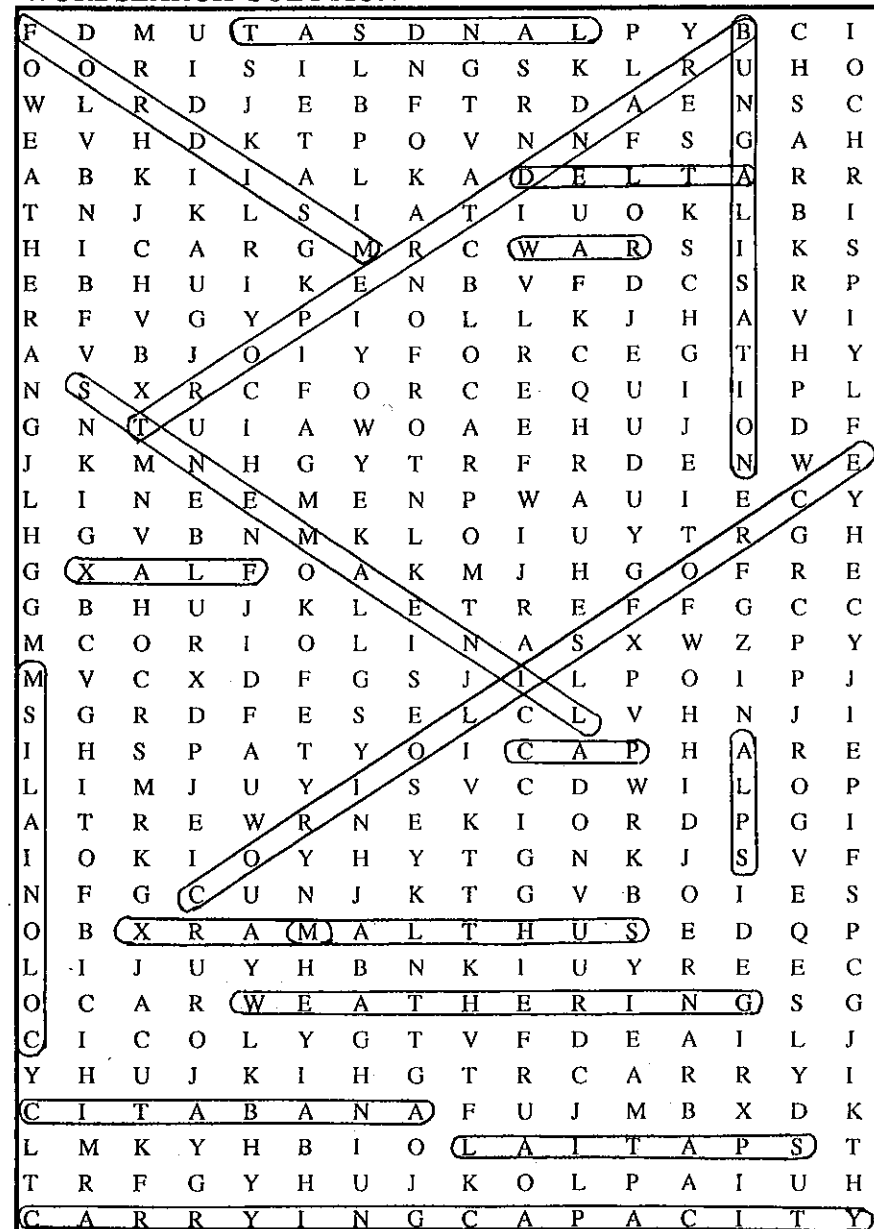
Ascending to the highest level of academia (NOT!), the third level offers the enthusiastic geographer an opportunity to discover the necessary tools of the subject. Yes folks, we are talking about MAPS!! Maps of all descriptions can be found here, big ones, small ones, thin ones, fat ones, but most importantly maps which can be used. Also on this floor are Urban geography books, statistical books of use to geographers (explaining once again multiple regression analysis, and the Mann-Whitney U-test). OOPS! and not forgetting historical geography which is also located here.

Of course, for the adventurous student the JP II library offers many more weird and wonderful books for those who are willing to discover more about the subject of "Geography".

A little reminder, be kind to the desk staff - some day you might need them! Last but not least, don't forget the Map Library in Rhetoric House, where the privileged geography student can avail of the large range of relevant geography books and yet more photocopied articles, not to mention the personalised service . .

SOLUTIONS PAGE

WORDSEARCH SOLUTION



TRIVIA ANSWERS

- | | |
|---------------------------|--------------------|
| A1. Greenland | A11. Hawaii |
| A2. North | A12. Cardiff |
| A3. Moscow | A13. Libya's |
| A4. Zambia and Zimbabwe | A14. C? |
| A5. Quzo | A15. Lake Victoria |
| A6. The Galapagos Islands | A16. The Incan's |
| A7. Atoll | A17. Marble |
| A8. Italy | A18. The Andes |
| A9. The Champs Elysee | A19. Canberra |
| A10. District of Columbia | A20. None |

NATIONALISM AND NATIONAL CONFLICTS

by Christina Merriman, 2nd Arts

"A nation implies a common culture, common symbols, a particular view of the world which is distinct from other world views. What makes a nation different from other cultural groups however, is that one of the symbols associated with its values and attitudes is a particular piece of territory."

This perception of a nation, held by Lanyi and Williams, is the basis for the most powerful force in world politics today - nationalism. Since nationalism emerged in the eighteenth century "no other vision has set its stamp so thoroughly on the map of the world and on our sense of identity." Nowadays nationalism plays an increasingly important role in world affairs. In countries such as Yugoslavia, where there are numerous ethnic differences, nationalism has become a link between culture and politics. In consequence national conflicts have emerged as ethnic groups have continued to fight for their cultural and political independence. Therefore in this analysis of nationalism its origins and development, the main types of nationalism and its impact on world affairs, especially in Yugoslavia, will be discussed.

Nationalism as an idea can be traced back to the earlier concept known as the 'principle of nationality'. This principle that every nation has the right to its own state emerged in the eighteenth century. It became a major force in world politics in the nineteenth century and has come to dominate the twentieth century. According to Tivey and Smith, the idea of nationalism is based on a common doctrine that;

- A1 The world consists of a mosaic of nations.
- A2 World order and harmony depends upon expressing this mosaic in a system of free nations
- B1 Nations are the natural units of society.
- B2 Nations have a cultural homogeneity based upon common ancestry and/or history.
- B3 Every nation requires its own sovereign state for the true expression of its culture.
- B4 All nations (rather than states) have an inalienable right to a territory or homeland.
- C1 Every individual must belong to a nation.
- C2 A person's primary loyalty is to the nation.
- C3 Only through the nation can a person find true freedom.

Nationalism was initially a revolutionary movement for social change and improvements, and its development created a sense of national identity. This sense of national identity gave rise to political demands for new states in which people of the same national identity could live together. These demands in turn led to conflict between the ethnic groups and the ruling classes. Examples of this include Germany and Italy, who were both unified in the 1870s and who fought against France and Austria to regain German and Italian speaking areas.

Orridge, in his discussions on nationalism, identified five varieties. These varieties are state, unification, separation, liberation and renewal nationalism. It is necessary to examine these if we are to analyse the effect of nationalism on the world today.

(1) State Nationalism

In this variety of nationalism it is often said that the state came before the nation. It presents the idea of a people as a nation incorporating all sections and classes. People were becoming more involved in politics but nationalism was not fully developed as an ideology until later in the nineteenth century. Orridge

describes this as "the nation preceding nationalism". Key examples of this are England and France around 1800.

(2) Unification Nationalism

In Europe there were a number of small independent states mixed with provinces of larger empires, for example Germany and Italy. After 1800 the Napoleonic wars disrupted this pattern which had been imposed a century and a half earlier at the Treaty of Westphalia (1649). Although the Congress of Vienna in 1815 attempted to keep the old regime in Europe, revolutionary movements began which were to dominate the rest of the century. "Nationalism was the justification for uniting most of the German cultural area under Prussian leadership into a new German nationstate, and transforming Italy from a mere 'geographical expression' to an Italian nationstate. These are the prime examples of unification nationalism".

(3) Separation Nationalism

This is mainly associated with Eastern Europe which was divided between four major empires in the mid nineteenth century; Prussian, Russian, Austrian and Ottoman. Economically it lagged far behind Western Europe and resentment formed in these peripheral regions against the core regions. The German concept of nationalism had an immediate appeal in Eastern Europe. While it was used as a means of bringing people closer together in Germany, it was used to separate from the state in Eastern Europe. The Intelligensia believed that political independence would offer solutions, and from the 1930s onwards it took an interest in cultural things - local folk customs. There was a renewed interest in ethnic groups and a developed awareness of cultures. Where national culture didn't exist they invented it. New languages were formed - Slovak was formed from local dialects. The next step was independence. Nationalism developing first created a sense of national identity and gave rise to political demands for a new state. Most of the large states that developed had peripheral regions which were not linked to the main area. Therefore there were new groups in the periphery. This type of nationalism existed primarily in Eastern Europe but Ireland was similar in the 1830s. Ireland however was the only country where separation occurred.

(4) Liberation Nationalism

This is the main type of nationalism found in former colonial areas, for example America, most of Africa and large parts of Asia. It is the most important category in terms of human involvement. It is similar to Separation Nationalism in that it is motivated by a desire to break away from an empire and form an independent state. The area for which independence was sought was overseas. Cultural uniformity doesn't have much affect. Argentina didn't want independence because of cultural reasons, but because she was tired of being under imperial control. Many of the states formed were culturally diverse, for example America. Culture has a very limited role in liberation nationalism. America provided the earliest example of liberation nationalism in the 1770s. From 1940s to 1960s there was a lot of liberation nationalism coming to the fore with many African colonies gaining independence.

(5) Renewal Nationalism

These are states with a very long history that remained independent throughout the period of colonisation. They are reduced to the economic periphery and their leaders borrowed European notions of nationalism to renew their cultural identity, for example Turkey, China and Japan, which have distinct cultures.

These five types of nationalism cover the period from the emergence

of nationalism in the eighteenth century to the present day.

Nationalism has led to numerous conflicts throughout the world since its emergence. It has a territorial and a political dimension. Conflict arises when ethnic groups are living in an area which is controlled by a different ethnic group. This problem has led to a serious national conflict in Yugoslavia which is based on religious and cultural differences. Yugoslavia was formed in 1918 as a nation state for the southern Slavs. However as the boundaries didn't correspond to the distribution of southern Slavs some of them still live in other countries such as Italy and Austria. This was a constant source of tension between Yugoslavia and surrounding states. The main problem however is the different Slav groups in Yugoslavia. Southern Yugoslavia has six nationalities;

- (1) Serbs - These occupy Serbia and form thirty six percent of the entire population (8 million).
- (2) Croats - These are the second largest group in Yugoslavia and form twenty percent of the population
- (3) Slovenes - These occupy Slovenia which is an economically developed area.
- (4) Montenegrins - These occupy Montenegro which was previously independent.
- (5) Macedonians - These are a complex group. The Yugoslavians say that they are similar to the Slavs, the Bulgarians say that they are similar to the Bulgars and the Greeks also say that they are similar to them.
- (6) Muslims - These form a large population in Bosnia-Herzegovina.

Between these six groups there are religious differences with the population being divided among Catholics, Orthodox Christians and Moslems.

Ethnic Diversity in Yugoslavia



Slavs:	Location	Language	Religion	Alphabet
Serbs	Serbia	Serbo-Croat	Orthodox	Cyrillic
Croats	Croatia	Serbo-Croat	Catholic	Roman
Slovenes	Slovenia	Slovene	Catholic	Roman
Montenegrins	Montenegro	Serbo-Croat	Orthodox	Cyrillic
Macedonians	Macedonia	Macedonian	Orthodox	Cyrillic
Bosnian Moslems	Bosnia	Serbo-Croat	Moslem	Cyrillic
Non Slavs:				
Italians	Istria	Italian	Catholic	Roman
Germans	(Expelled)	German	Catholic	Roman
Magyars	Voivodina	Magyar	Catholic	Roman
Romanians	Voivodina	Romanian	Orthodox	Roman
Bulgarians	Serbia	Bulgarian	Orthodox	Cyrillic
Turks	Macedonia	Turkish	Moslem	Turkish
Albanians	Kosovo	Albanian	Moslem	Cyrillic

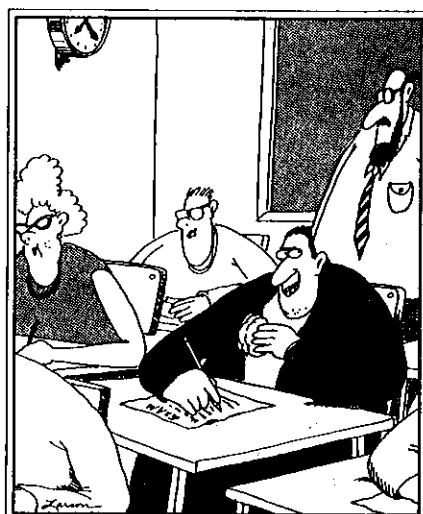
Figure 1: The widespread ethnic diversity in Yugoslavia has resulted in a serious national conflict.

The Serbians and Croats speak a different language than the Slovenes and Macedonians. As a consequence communications are impaired by this language difference and also different alphabets. As well as different Slav groups there are also non-slavic groups such as the Italians, Germans, Magyars, Romanians, Bulgarians, Turks and Albanians. This ethnic diversity has caused serious conflicts in Yugoslavia since its creation in 1918 (Figure 1)

The Serbians controlled the government at first and it soon became apparent that the Croats and Slovenes considered the state was being used for Serbian advancement. A feudal constitution was introduced in 1939 in an attempt to satisfy Croat demands for autonomy. During World War II Yugoslavia was occupied by the Germans, and following the war Marshall Tito gained control of a communist government. This system of government continued until his death in 1981 but he had to fight continually against separatist sentiments. The government gave concessions to regionalisms and managed to keep the federation intact. However since Tito's death in 1981 Yugoslavia has been in conflict again. With the break up of communism in Eastern Europe in 1989 the fragmentation of Yugoslavia has quickened. The new republics are keen for western democracy but there Serbs are keen to keep the state together under the old federal system of communism. The Croats and Slovenes have made stronger demands and declared independence in the summer of 1991. This has led to a national conflict between Croatia and the other republics seeking independence, and Serbia who is trying to grab territory before the break up. The conflict has continued with several ceasefires and the intervention of United Nations troops to maintain peace. The situation in Yugoslavia still remains serious with no apparent solution to its crisis.

"Nationalism involves the forced mobilisation of the masses, and becomes invariably romantic and populist, in an overall situation of 'relative helplessness' (or 'underdevelopment').".

The above statement conveys how nationalism unites people of the same national identity to pursue their own nation. It satisfies people's need to belong. Nationalism on the one hand is a positive force when it is associated with weak states freeing themselves from foreign oppression. However, it can also be a negative force as with Nazism and Fascism. According to Rostow "the First World War in 1919 was blamed on the suppression of nationalism, in 1945 the Second World War was blamed on the expression of nationalism. However, whether it has had a negative or positive impact on the world up to now, there is no doubt that nationalism and national conflicts will continue to have a strong impact on the world in the future.



Midway through the exam, Allen pulls out a bigger brain.

CONFLICTS IN THE MIDDLE EAST

by Susan Doherty, 1st Arts

"CENTRE OF HELL"

"The skies rain death and destruction in the Gulf today as further waves of devastating allied bombing raids hit Iraq and Kuwait. Baghdad, which bore the brunt of the bombs, was described by eye-witnesses as the 'Centre of hell'". (Evening Herald, Vol. 100, no. 14).

Such were the headlines of papers worldwide, on January 17th 1991, as Operation Desert Storm commenced, with allied cruise missiles hitting their targets with pinpoint accuracy, making Baghdad "the centre of hell". Our then Taoiseach, Charles Haughey, "described the opening of hostilities as a 'tragic setback for all humanity'" (Mullan, 1991 : 1). The mighty power keg of the Gulf had exploded - with tragic consequences. Nevertheless, the recent Gulf crisis in the Middle East, can not be viewed as an isolated event. Tensions in the Middle East have been high for centuries as seen in the eight year long Iran-Iraq war (1980 - 1988) and the Arab-Israeli conflict. This article will deal with both these conflicts, discussing the causes, course and consequences of the Iran-Iraq war, and the background to, and the wars of the Arab-Israeli conflict. In the case of the Iran-Iraq war, the emphasis will be placed more so on the causes of the war - since the causes usually are more geographically orientated than the war itself. Similarly, in the wars of the Arab-Israeli conflict, the emphasis will be placed on the territorial aspects of the conflict.

THE IRAN-IRAQ WAR 1980 - 1988

The Causes:

Non-territorial issues did play an important part in the movement towards war, such as ethnic differences between Iraqis, Arabs and Iranians (Persians). Coupled with these ethnic differences are religious differences. The "ideology of Iraq is Arab nationalism; in post-Shah Iran Islamic fundamentalism prevails" (Swearingen 1988 : 412). Even though both countries are Islamic - they are divided up between Shi'ite and Sunni Muslim governments. Iran is predominantly Shi'ite. Sixty per cent of the Iraqi population is Shi'ite, however, the government is led by Sunni Muslims who emphasise Arab nationalism. Therefore "the war . . . represents a clash between two mutually exclusive types of legitimacy, two different and opposing sets of values" (Swearingen, 1988 : 412). Also since sixty per cent of Iraqs population are Shi'ite and twenty per cent are Kurds, the government is constantly in fear of political instability. The spread of Shi'ite fundamentalism and (as seen in Map 1) "its ability to undermine the West's composure and self confidence through the use of terrorism" (Evans, 1989 : 9) could have (and probably did) lead Iraq to attack Iran in order to stop a similar Shi'ite fundamentalist revolution occurring in Iraq. Before going on to explain the territorial issues involved, we must not ignore the fact that both countries have been fighting for political aspirations. They both have important oil resources and both wanted to become the dominant superpower in the Middle East.

The main bone of contention between Iran and Iraq, however, is the territorial dispute over the waterway known as the Shatt al-Arab, which can be seen as a frontier between Iran and Iraq. This boundary has been "subject to dispute for nearly five centuries" (Swearingen, 1988 : 409). Since 1535 there have been no fewer than eighteen treaties signed addressing this subject of tension and each redefined the boundary of the Shatt al-Arab waterway. The most important adjustments in this boundary can be seen in Map 1. In at least four of these treaties, the boundary of the Shatt al-Arab has been shifted in the favour of Iran, and at the territorial

loss of Iraq. The most recent boundary adjustment of 1975 was the most significant in terms of a) the relationship between Iran and Iraq and b) the psychological effect on Iraq. The dividing line of the waterway was shifted further west at the expense of Iraqi territory. The Shatt al-Arab is the sole link between Iraq and the rest of the world - for without it Iraq would be a landlocked state. This would effect its economy, for it would be unable to export oil through the Gulf and its political aspirations for dominance of the Middle East. When Saddam Hussein became president of Iraq in 1978 he "vowed to redress the boundary situation" (Swearingen, 1988 : 408) and to restore national pride. It is significant to note that "Saddam became President of Iraq, and less than a year later the Iran-Iraq war began, which was to leave a million dead in eight years" (McCarthy, 1991 : 26). When Iraq attacked Iran in 1980, he justified the act of aggression by claiming to be fighting for territorial rights of the Shatt al-Arab waterway.

In his article, Swearingen puts forward five other major territorial issues that influenced the outbreak of war between Iran and Iraq. He argues that the focus has been on the territorial issue of the waterway and that "other crucial territorial problems either have been ignored or have been given insufficient attention" (Swearingen, 1988 : 413). Given this, these issues shall be outlined briefly below:

1. Tension was created when Iran forcibly annexed the strategic and economic oil rich territories of the heights of Azin al-Qaws and Saif Saad from Iraq. Under the terms of the 1975 treaty, Iran was to return this territory to Iraq, but by 1980 this term had not been completed.
2. The Kurdish territories - rich in oil resources - are another factor in the conflict. The basic problem was that Iraq wanted these territories for itself and Iran was acting as - the defender of the Kurds.
3. Another cause for aggravation was the dispute over water rights of almost thirty rivers, the sources of which were in Iran, but flowed into Iraq.
4. The fear of a Shi'ite rebellion is also important, for in the territorial concept, if the Shi'ites succeeded and established their own state, this would be at the loss of Iraq and probably at the gain of Iran.
5. Finally, the question of Khuzistan has been a source of tension for over sixty years. Formerly a part of the would-be state of Iraq, Khuzistan, after the first world war, was ceded to Iran by Britain. Therefore "The Iraqi invasion of Khuzistan in 1980 raised speculation that repossession of the province was an ultimate goal of the Iraqi government" (Swearingen, 1988 : 415).

Therefore, in summing up the causes of the outbreak of war between Iran and Iraq, it is important to remember that the Shatt al-Arab waterway was not the one and only territorial issue involved - the other five are equally significant. Also, we can not underestimate the role played by the non-territorial issues in the mounting of tension that led to the outbreak of war.

The Consequences

The economic and social consequences of the Iran-Iraq war were expensive both in terms of life and money. The Iran-Iraq war has been seen as the "bloodiest and most destructive military conflict since World War II" (Swearingen, 1988 : 405). It is estimated that over one million people died in the conflict and that a further million became refugees. It has also been estimated that the cost of the war well exceeded \$300 billion (\$1 billion a month) crippling the economies of Iran and Iraq. Be that as it may, the most significant result, it is now clear, was the fact that Saddam Hussein's attention was now directed elsewhere. On the 9th September 1988, to the annoyance of Hussein and

Iraq, Kuwait decided to increase its oil production in the wells at Rumailah "which is situated in a border region long claimed by Iraq and the subject of bitter diplomatic debate" (Sallinger, 1991 : 2). Hussein saw this as an act of betrayal and provocation on behalf of Kuwait. Kuwait (with Saudi Arabia) had loaned Iraq \$30 billion in the war against Iran, and on the 24th February, 1990, Hussein, recalling this loan said to the President of Egypt, Hosni Mubarak, and the King Hussein "If they don't cancel the debt and give me another \$30 billion, I shall take steps to retaliate". (Sallinger, 1991 : 7). A year and a half later, he kept true to his word, for on the 2nd August, 1990, Saddam Hussein invaded Kuwait. As Sallinger said "On 8th August 1988, the Iran-Iraq war came to an end. Little did anyone suspect that this date would also mark the beginning of the Gulf crisis of 1990 - 91" (1991 : 1). The Middle Eastern crisis of the Iran-Iraq war had now erupted into the international/crisis known as the Gulf War.

THE ARAB-ISRAELI CONFLICT

"The Israel-Arab conflict has a dual territorial dimension. On the one hand, it is a conflict between states and national entities with mutual territorial aspirations. Israel is also faced with an internal conflict between a dominant (Jewish) and a subordinate (Israeli Arab) population". (David Newman, 199 : 217).

Background to the Conflict

The Arab-Israeli conflict is significant because it illustrates the importance of territory. One component of the conflict is territorial, a struggle over a mutual homeland in Palestine, the other component been the religious struggle.

However it was the Balfore Declaration of 1917, showed British support for the idea of a Jewish homeland in Palestine. As Steve Sherman wrote in "Gaga - A History of Conflict", "The British . . . support for the establishment of a Jewish Homeland in Palestine . . . sowed the seed of communal strife." (Sherman, 1988 : 20). It was now that the Arab opposition to a Jewish state became apparent. The Arabs, the majority inhabitants of Palestine, had been in control of Palestine since the seventh century AD and opposed any "Zionist immigration to any part of our country" (Houston, 1989 : 18). After the first World War, the Versailles Peace Conference divided the Ottoman Empire Arab lands into "Mandated territories" controlled by Britain and France on behalf of the League of Nations. By 1920, the ratio of Jews to Arabs in Palestine was 1 : 10 (60,000 Jews to 600,000 Arabs). By 1930, the Arabs were demanding a total ban on Jewish immigration. Tensions began to mount and anti-Zionist riots broke out. These violent outbreaks, however, did not lead to a full scale war but continued till 1946. After the King David Hotel in Jerusalem was blown up in July 1946 and the bloody reprisals carried out in its aftermath, British public opinion of Palestine was seen in January 1947 headlines of the Sunday Express "Rule or Quit!" (Houston, 1989 : 32). On 13th May 1948, Britain ended her Mandate and began to withdraw from Palestine. At that time the ratio of Jews to Arabs had risen to 1 : 2 (600,000 Jews to 1.25 million Arabs). The UNSCOP (United Nation Special Committee of Palestine) drew up the Partition Plan to divide Palestine between these two groups (Map 5). Fifty seven per cent of Palestine went to the Jews (this included 14,760 square kilometres of the most fertile land, the coastal strip and Negev), the remainder went to the Arabs. The state of Israel was then declared. It was now that the violent outbreaks exploded into a full scale series of wars.

The Conflict

The Arab-Israeli conflict can be divided into five different wars all with their own style and territorial context but this article will confine itself to detailing the most recent.

The Fifth Arab-Israeli War

From 1978 the presence of Palestinian guerrillas in Lebanon led

to alternate Arab raids on Israel and visa versa. However, in the Lebanon, by the 12th, Beirut was encircled, and the PLO and Syrian forces were evacuated to Syria. Then in 1985, Israel withdrew from the Lebanon, with no gains or losses in territory. Nevertheless, the situation is still tense, since the return of the PLO in 1986 and no compromise has been reached in the ongoing series of Middle Eastern peace talks.

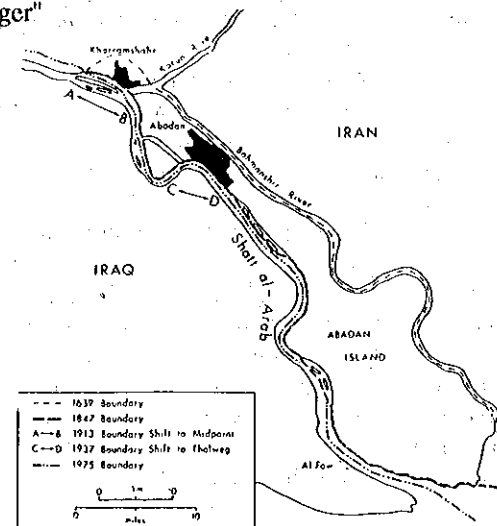
In conclusion, it is visible from this composition that the Middle East is a region torn apart by war and conflicts. But why the Middle East, why not another area? The answer is simple. Ethnic, ideological and religious differences, hand in hand with territorial issues have caused tension in this region. In the Lebanon, for example, the 1956 census showed six different ethnic groups in the one area.

Table 2
The 1956 Census of Population in the Lebanon

Ethnic Group	Estimated number of people	% of Total
Maronite Catholics	423,000	33
Greek Orthodox	149,000	12
Greek Catholics	91,000	7
Sunni Muslims	281,000	22
Shi'ite Muslims	250,000	19
Druzes	88,000	7
	1,282,000	100

(Based on Houston 1989: 92)

With such a varied population it is no wonder that tension should point. The consequences of these conflicts are tremendous. In the most recent conflict, the Gulf War "between, 100,000 and 150,000 Iraqis . . . estimated to have been killed as the allies' cease fire came into force". The economic consequences have been very costly, especially with the Gulf war, which is a major aspect of the ongoing worldwide recession we are facing today. The Middle East has become a permanent stage for war to be fought on. As already mentioned, the break down of last years peace talks and the deadlock of the ongoing talks has shown as Salinger, talking about the Gulf War, said "peace is highly complicated, particularly in the Middle East. Defeating Iraq was rapid, but long-term peace may not be easy to achieve". (1991 : 224). The many obstacles such as religious, ethnics and territorial issues have to be overcome before a final settlement and peace are reached. However, we should not be so quick in saying that a compromise would not be hard to reach - for these same issues have led to death and conflict in our own country. Peace is not as easy as it seems. As Franklin D. Roosevelt said: "When peace has been broken anywhere, the peace of all countries everywhere is in danger"



SOME OBSERVATIONS ON THE PARADOX OF BEING A FOURTH AND FIRST YEAR STUDENT

by Kevin Griffin, B.Ed.

On my first morning in Maynooth College, a few short months ago, my first task was to obtain a map (in the tradition of the dedicated geographers everywhere). After blindly following people who seemed to know where they were going, I found myself somewhere called "The Art's Building". Those guys in the green uniforms (a momentary pause to lament their passing) seemed to be important, and sure enough, on request, I received one of those little blue books, with a terribly bad, but functional map inside it. My salvation and bible for the next few days.

Inside among the usual letters of welcome, mug-shots, welfare and academic advice, useful addresses and bus timetables, I discovered one wonderful piece of advice, which told new arrivals to enjoy the fact that everything around them was new and to live with feeling uncomfortable. WOW! It struck me that there were hundreds of lost souls around me in the same situation. The difference being that I had gone through all this before and survived it.

For you sceptics out there, I am not referring to a former life, but to a different college. I spent three years in college in Mary Immaculate College of Education in Limerick (Mary I.). After receiving my B.Ed. and going against the norm, I spent two years involved in a local History research project. I then decided to do some post-graduate work hence my presence in the hallowed halls of Maynooth's Geography department.

Many among you may not know much about the country's establishments for primary teacher training. Mary I. was affiliated to UCC (in my day) but now is an independent 'colony' of UL. The logistics of the three year course are as follows: in first year all students must do academic Irish (poetry, prose, grammar). Education methodology courses give a basic grounding in the practical teaching of the complete range of primary subjects (religion, P.E., Art, The Three Rs, Social and Environmental studies etc.) Students must also choose two academic subjects - I chose Geography and Philosophy (other less important arts subjects are also available). We also start a three year Theology course.

In second year two of the academic courses are dropped, in my case Irish and Philosophy. For those dropping Irish, the terror of second and third year is 'professional Irish' which involves a revisitation of leaving cert. grammar, conversation etc. (the motivation for choosing Irish is often based on the escape from these weekly exercises). In the place of the dropped subjects students enter the realms of 'theory', with Educational Psychology, Philosophy, and Sociology, Curriculum Theory (now replaced) and History of Education. Methodological Ed. still remains and Academic courses receive more time slots.

In third year no more methodology (thank goodness). Theory remains for the degree exam and one new practical option appears (now two by replacing Curr. Theory) where students get a chance to specialise in particular areas of Ed. I chose to do Art for my pedagogical option (I love that phrase). Other popular choices are Children's Literature, Infant teaching, Language acquisition, and specialisation in the various primary subjects also exist.

The next element of the course is the children of Limerick getting "stewed apple" twice a year. Before Christmas and Easter the little monsters are subjected to exposure from varying qualities of first and second year students. The most important points of Teaching Practice (T.P.) are (1) The day one hears "the lists are up" and discovering, who got what school (that's when rumour comes to town). (2) Initial visit to the designated test site. (3) Probably the most important step "Who did you get?" from demon to saint supervisors are assigned (rumours of how many s/he

failed last time etc.) (4) First day teaching which varies in intensity depending on preparation, personality, school, class teacher and many more variables (5) The visitation (depending on supervisor, this can vary from twice to ten times in the fortnight) (6) The grilling when they tell you how bad you are doing (7) Everyone's worst nightmare the 'libat' (the head honcho with power to fail or give an 'A' who you may have for a visit) (8) The party. Every child in time to expect a party at the morning of the last week, and considering our own party (the Disco) on Thursday night, who would break with tradition?

In September of third year, TP lasts four exhausting weeks. Up each night making charts and handouts, writing lesson notes (eg. Teacher then screams loudly) this is where stamina is pushed to the limit. The positive side is that the school this time is the student's own choice, usually the home town. It's rather difficult to get used to being called "sir" or "Mr. Griffin", especially in an environment where a few years previously one was on the other side of the desk. Return to real student life then abounds in telling who visited you, what happened when . . . and a wonderful feeling of having it all behind you.

Now that I've set the scene, perhaps some of my observed differences between Mary I. and St. Pat's might be of interest.

Maynooth has the name of being a small intimate college. Due to Ed. cutbacks Mary I. had 450 students when I was in third year (subsequently dropping to 300), indicating the true meaning of the word.

Roughly 95% of Mary I. graduates end up teaching (initially) but here, in Geography alone the choices are widely varied; town planning, civil service or the H.Dip. Adding scientists and other life forms, a huge variety exists on the campus.

Mary I. had only a couple of 'mature students', unlike Maynooth which has an exceptionally positive approach in this area.

In Mary I. the students' union receives no capitation grant of any form and the nearest we had to a 'wonderful bar service' was a coffee bar. Our entire students' union executive were unpaid, and were all full time students who carried out a very high standard of operations. They organised Balls, Gigs, and a wide variety of events with little or no fuss, and actually ran at a profit! Being a 15 minute walk (when sober) from famed Limerick City Centre there was a range of grotty venues at affordable prices. I must confess however that these are no match for Maynooth High Street or the S.U., in terms of designer gro!

There is no doubt that Maynooth has more facilities, from clubs and societies, to catering, and subject choices, but both colleges seem to have a similar approach to their students with both treating them as people (unlike some un-named establishments).

The main difference I have noticed between the two colleges however is Maynooth's lack of focal point, both in geographical and emotive terms. In Mary I., everyone had to go through the reception area at least twice a day, which provided a physical and social nodal point. On the less tangible but equally important side, Mary I. has a unique spirit of solidarity and comradery. This may arise from the common course of studies, as it is evident in separate departments here. Any college would envy Mary I., for example on the occasion of important sports fixtures. I recall one occasion when 5 - 6 coach loads of supporters, and about half the lecturing staff travelled to a league final match in hurling. On the other side of such unity however is the highly active 'grape vine'.

To date I cannot complain about my choices of academic establishment, both very different, both unique, and I would like to thank everyone for making this first year fourth year feel at home.

MANAGING IRELAND'S BOGLAND RESOURCES

by Hazel Craigie, 3rd Arts

It would not take a particularly perceptive visitor to these shores to realise that Ireland has an extensive bogland landscape, one which he/she is unlikely to have witnessed to such an extent before and certainly not in such an intact and wild state. To many Irish people it may seem a little strange when others take note, in a positive way, of what is often considered locally as unproductive land. By urban dwellers its conceived remoteness is often used as a derogatory expression, the 'bogman' up from the country.

In contrast David Bellamy has described Irish peatlands as 'one of the wonders of the world'. Similarly, it was the Dutch who in the early 1980s were one of the major driving forces behind the encouragement of conserving Irish peatlands. Of particular importance was a speech given by Dr. M. Schouten of the University of Nijmegen at UCD during a 'Bog Conservation Week' organised by An Taisce. It has often been quoted that familiarity breeds contempt, so perhaps it is not surprising that, with the exception of a few academics and amateur naturalists, the general Irish public has not been, until recently, aware of the value of our bogland resources. As well as being part of our natural and national heritage they are also of immense scientific, educational and aesthetic value.

This growing awareness of the importance of peatlands has been reflected in an effort to study them in more detail by government and independent bodies such as An Foras Forbartha, An Taisce, Irish Peatland Conservation Council (IPCC), the Wildlife Service, and Bord na Mona. Bord na Mona have handed over a number of sites considered worthy of conservation to the Wildlife service and An Taisce. Probably the greatest single reason for this growing interest is the realisation of the destructive capacity of advanced technology.

Ireland's integration into the EC has had side effects on our bogland resources. On a negative note it has provided grants for large amounts of coniferous afforestation on marginal land, leading to many previously intact bogs being drained. The EC also supports headage payments and ewe premiums which are inclined to encourage overstocking and hence to overgrazing, so damaging the fragile bogland ecosystem. On a more positive note the EC has introduced and included in its membership a number of environmental measures which should aid in the conservation of our boglands. It is also likely that EC membership has made Ireland more accessible to countries such as the Netherlands, which, having already exploited their bogland resources to the extent of almost complete annihilation, now have a vested interest in encouraging Ireland to use and conserve her boglands in a wiser fashion.

In order to meet the pressures of local interests, of international demand, and of Ireland's tourism and economic policies, it has become increasingly essential to manage Ireland's bogland resources within some sort of coherent framework, capable of supporting sustainable development, where development is seen as necessary, and of conserving intact sites of bogland where possible.

Originally 17% of the Irish land surface was covered by peatland. Of this 313,830 ha was raised bog and 896,810 ha was blanket bog. Each of these peatland types have their own ecology and vegetation, each has developed their own stratigraphy and history. That there is a threat to the existence of Irish boglands is irrefutable. Hammond in his survey of 1979 estimated that 36% of the entire peatland area had been modified including 62% of raised bog and 26% of blanket bog. The greatest agent of modification has been for fuel and energy through private enter-

prises (67%) and, since 1946, Bord na Mona. Ireland and Russia are the only two countries that use peat as energy to produce electricity. In the 1970s two million tonnes of peat were consumed annually in Irish peat fired stations.

A second major use for which boglands are exploited is horticulture. As well as catering for domestic use Ireland exports large quantities of peat to the UK. The efficiency of exploitation has increased with the development of machines capable of 'vacuuming' peat off large expanses of raised bog. Blanket bogs are under threat also from mechanisation in private ownership. These machines, commonly called 'sausage' machines because of the way they cut the turf in long round strips, are relatively easy to get a licence for.

A further threat to blanket bogs is the increase in afforestation. The dept. of Fisheries and Forestry plan to plant up to 10,000 ha per annum, mostly in bog areas. The problem with forestry is that it needs adequate fertilisation and drainage to be a success on bogland. Drainage leads to oxidative decay of the surface peat and hence to wastage so that forestry on bogland is not sustainable in the long term. It is possible that cut away peatland may be more productive for forestry, this is something that Bord na Mona is investigating.

The question arises as to whether there is a need to preserve our bogland resources? Is it detrimental to the local economy? Management of bogland resources must take all considerations into account. In their book *Peatlands*, Moore and Bellamy have defined conservation as 'the sensible utilisation of natural resources'. This seems a reasonable definition as it implies the concept of sustainable development, of benefit to all. There are many lessons to be learned from other countries in our utilisation of peatlands. In East Anglia, rheotrophic mires (developed in drainage lakes) were drained for agricultural use over the last 500 years. This has produced excellent farmland but in places the contemporary rate of peat wastage is huge so that continued exploitation relies on complicated water systems. In the Netherlands wastage in mires situated in low lying coastal areas can bring them below sea level requiring sea defences. In Finland it is feared that afforestation on such a major scale - 350,000 ha each year - will have effects on the climate and water balance. Drainage and rotational burning are management practices in Britain, they have led to a breakdown of the mire ecosystem and a loss of the peat blanket. The result has been that many British uplands have turned into barren wetlands unfit for humans or nature.

It has been discovered that where ombrotrophic mires (most of Ireland's bogs i.e. rain fed) have developed over-rich alluvial soil deposits there is the possibility of long term agricultural use, e.g. Flanders Moss in Perthshire, with the removal of the ombrotrophic domes. Bord na Mona is exploring this usage for some of the bogs already exploited by them for fuel. There is a potential for 'Irish fenlands' to rival East Anglia. The question remains as to how long this would be sustainable and whether it would be economically viable to convert this land when set-aside is being encouraged by the EC.

Managing Irish bogs does not simply mean arriving at the best means of their exploitation. There are times when the most economically viable solution is to resist exploitation. This is particularly true in the area of tourism. This is a growing sector in the Irish economy and an increasingly important source of revenue. Ireland is promoted as a rural country, one in which it is possible to experience a sense of remoteness, of the wildness of nature at first hand. Management practices in this area can be linked into those necessary to preserve the scientific value of certain bogland sites - both need large, intact sites to be of optimum interest.

One of the first steps in management is to identify areas

worthy of conservation. The selection process is as objective as possible given the fact that there are social and economic forces to be taken into account. Assessment takes into account the size of the site, its hydrological condition, the diversity of species and habitat and the integrity of the site.

Initially seven such sites were selected in Ireland including Clara bog in Co. Offaly with its series of soaks. The distribution of bogland for conservation along the east-west rainfall gradient is also taken into account so that at times a bog of poorer quality e.g. in Co. Kildare, may be selected. The second phase of conservation is to acquire and protect the designated sites. At present there are sixteen declared Nature Reserves (i.e. they have a legal basis) all managed by the Wildlife Service with the exception of Mongan bog in the hands of An Taisce. The Wildlife Service completed a survey of raised bogs in 1987 and is now surveying blanket bogs. 1 : 126,720 scale maps of the raised bogs have been circulated to Bord na Mona, local authorities and other relevant organisations to prevent any excuse for their unwitting destruction. Under the 1976 Wildlife act, protection of identified sites can only be effected by acquisition or on the basis of management agreements. Compulsory purchase orders are a possibility in cases where there is reluctance to sell but this is seen as a last resort by the Wildlife service as they want local co-operation, not antagonism.

National Parks have been established by the Office of Public Works. The most important one for peatland conservation is in Connemara, established in 1980 it covers an area of 2,699 ha. The aim of National Parks is to preserve interesting flora and fauna in their mature state and to provide for an appreciation of them to the visiting public while still maintaining their integrity.

In spite of recognition by the government (Treacy, 1990) that the ideal requirement for peatland conservation is 10,000 ha of raised bog and 40,000 ha of blanket bog, there is a lack of real commitment on their part to ensure the protection of designated areas of peatland. For instance, no planning permission is required for afforestation (unless on a very large scale) or turf cutting. Legislation could be amended to allow Bord na Mona to serve CPOs for conservation as well as development. Areas designated as Areas of Scientific Interest need legal backing to prevent their destruction (for example Roundstone bog in Connemara).

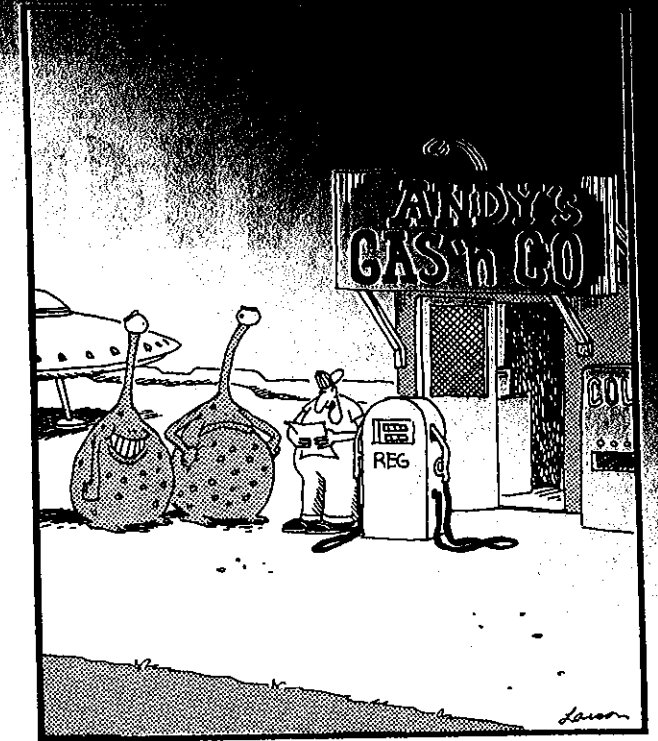
Not everything is gloom and doom. In their annual report 1986/87 Bord na Mona stated its general approach 'as a primarily commercial organisation, is that a realistic balance must be struck between the commercial benefits of bog development on the one hand and the needs of national heritage and amenity on the other...'. They have well planned and long term development programmes and a co-operative approach with the Wildlife Service and An Taisce has been taken.

In conclusion, therefore, it can be seen that management of Ireland's bogland resources must take into consideration a wide range of issues. While conservation of designated intact sites is important there remains the question of how best to manage the remaining bogland. Bord na Mona have been investigating potential usage for many years and are fortunate to have the experiences of other countries to guide them. Forestry is an increasing use to which bogland is being put, but it may not be as productive a use as was once hoped. In 1990 An Taisce published a critique of Irish forestry suggesting the need for industrial forestry 'to be located on more robust land and away from intact peatlands of conservation importance'.

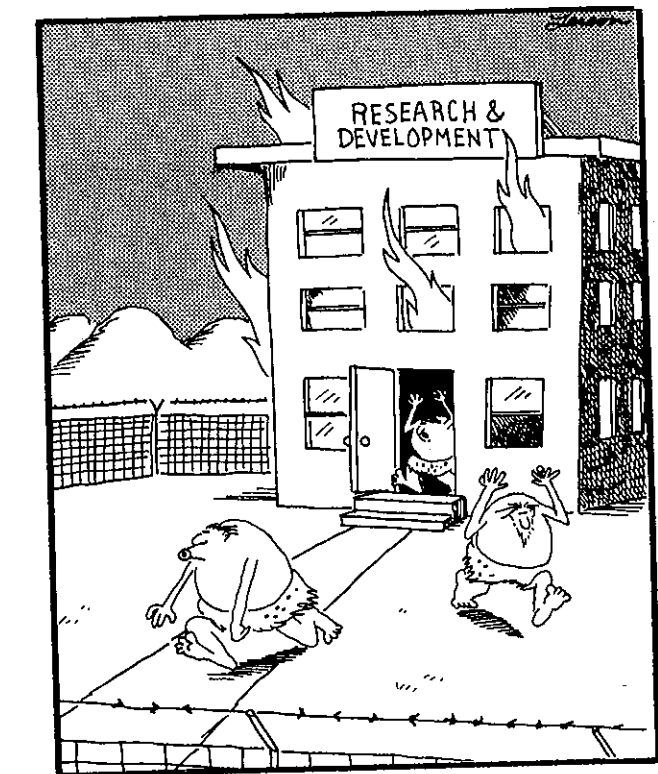
Exploiting bogland resources for the tourist industry is a very real possibility. To ensure that this is sustainable, careful management is needed as boglands are a fragile, non-renewable resource.

Finally management is necessary to ensure that intact peatlands

remain for scientific investigation. Perhaps, above all else, our bogland resources should be preserved to ensure that future generations will have the opportunity to appreciate the peace and tranquillity that is the central Ireland's national heritage.



"Shoot! You not only got the wrong planet, you got the wrong solar system... I mean, a wrong planet! I can understand—but a whole solar system?"

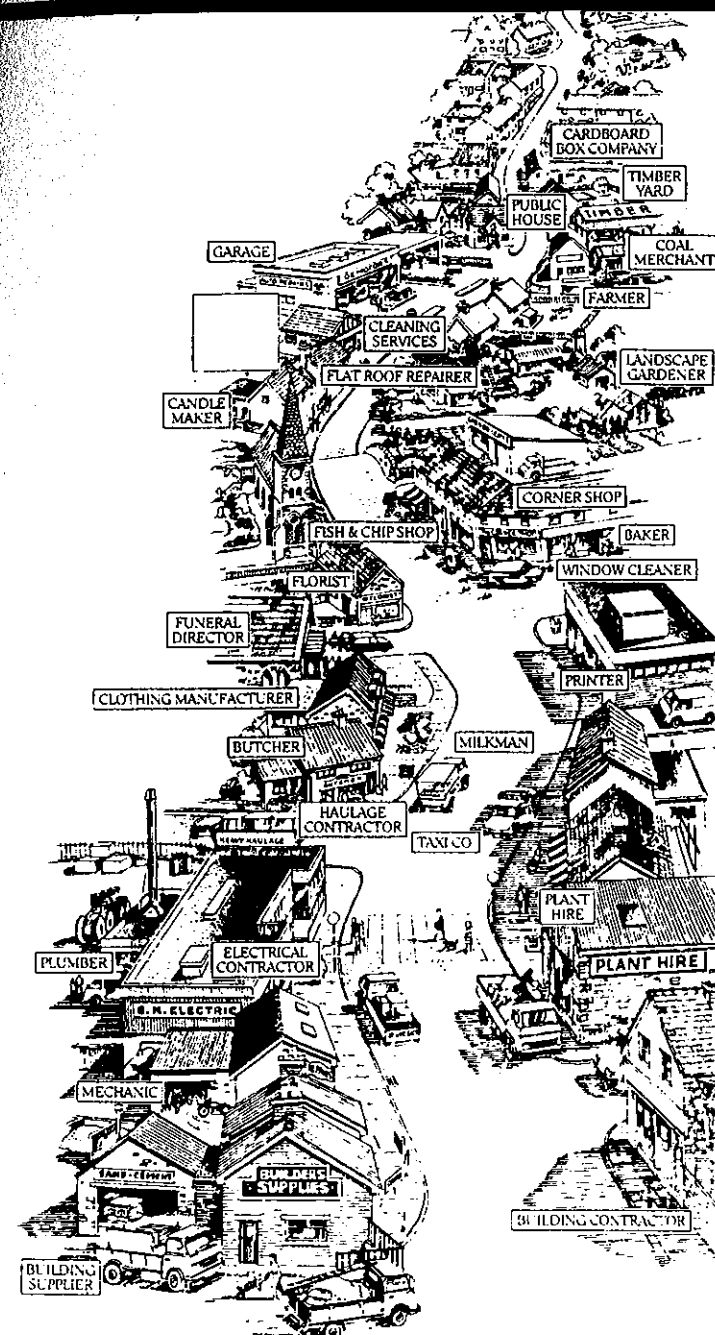


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