MILIEU 1997

GEOGRAPHY SOCIETY
ST. PATRICK'S COLLEGE, MAYNOOTH
22nd issue

CONTENTS

Editorial

This year's magazine has again attained the high level of quality which we have come to expect from the Maynooth Geography Society. One of the hardest jobs an editor has is deciding which articles to include in our forty pages of wit and wisdom. To those of you whose articles are not included we thank you for your contribution - they made very interesting reading. To the reader who may desire to follow up any of the references included in the articles, they can be acquired from the contributor in person.

As always, there is a wide range of subjects covered in 1997's edition. We travel from Russia to the States to New Zealand where the authors (Celine McHugh, Dermot O'Mahoney and Ro Charlton respectively) have observed agricultural, urban and volcanic landscapes. Closer to home, Emer Eddery's article brings us through the complexities involved in Urban Planning in Ireland. Ray Feeley's and Tom Corbett's articles compliment each other in revealing to us the complexities of the gathering and sharing of climatic data. Also on a par are the articles by Chris von Egeraat and Ger Fitzsimons where we encounter the changes which have occurred in the use of language and the ease with which ideas travel the world despite efforts to curb their movements. It is great to see medical geography making a comeback to the curriculum at Maynooth, a sample of which we find in Ann Coughlan's article.. Also in evidence is a fellow geography student from the States who gives us hope that there is life after our degree. Thanks Rob!

We also have some items on the 'lighter' end of the scale - all completely geographical (of course!). "Ode to a Field Trip" appears to have some incriminating evidence within (especially if the photos are anything to go by) and it would be worth noting that the Bard of Barretstown might have some protégés at hand. We have two quizzes, one on Dublin and - so that the rest of you don't feel left out - one on Ireland. Under the guise of the "Virtual Reality" Quiz you will find the questions which were left *out* of this year's Geog. Soc. Quiz - we wanted to give EVERYONE a chance to win!

It was a privilege for me to work with the Committee during this, my fourth and final year at Maynooth and as a member of the Committee. I wish you all good luck for the future and, above all, happy reading!

Ruth Bennett
(Editor)

Geography Society Committee

BACK ROW: L-R Johnny McFeeley, Karen O'Reilly, Niamh Brady, Dermot O'Mahoney, Áine Murphy, Gerard Fitzsimons

FRONT ROW L-R: Emer Eddery, Martin Whelan, Andrea Killoran.

FOREWORD

As we approach the end of the teaching part of the academic year it is a pleasure to welcome another edition of *Milieu*. The past year has been an extremely busy one for the Geography Society who have managed to organise on almost a weekly basis, an interesting and varied programme of events. I want at the outset to compliment the Geography Society for such a successful year which is culminating with the publication of this issue of *Milieu*.

The past few years have been a period of intense debate about education in Ireland. While there have been many dimensions to that debate one important set of fundamental questions that have been addressed concerns the intrinsic and instrumental perspectives on the role of education and of those that provide education services. The Education Bill and the Universities Bill both contain lengthy sets of objectives which require education providers to address an enormously wide range of concerns. Inevitably this leads to some attempts at prioritisation.

It is against this background that we need to monitor the position of geography. While Geography has been one of the most popular subjects in second level curricula the proposals earlier last year to remove it from the core curriculum and accompanying proposals to introduce new subjects were regarded by many as a serious threat. Happily, that issue has been temporarily resolved. One of the benefits that emerged from the debate surrounding the issue was a re-examination by geographers of the defining attributes of the discipline and an identification of the range of skills acquired through a training in geography. These issues were succinctly summarised by Professor Gillmor in a short article published in *Geographical Viewpoint, vol.23.*

At Third level there is also a growing emphasis on the acquisition of transferable skills so that graduates are better prepared for entry to the labour force. While attempting to provide a broad based undergraduate programme to large classes the Geography department has been experimenting with new ways of improving the skills component of the undergraduate programme. Last year small group-based projects were introduced as a replacement for the dissertation in third year. One of the objectives of the change was to facilitate the development of group work skills. The experience to date suggests that by and large this has been a successful experiment.

At postgraduate level all Masters and PhD students are now required to take a formal course on research methods. Additionally, Diploma courses have been put on to provide particular skills in certain areas. The Higher Diploma in Applied Remote Sensing and Geographical Information Systems is currently in its second year and approval with funding has been secured to run it again in 1998. The majority of the graduates from this course as well as from the Cultural Tourism Diploma Course move into employment very quickly. The funding provided for these and other initiatives, such as a Course on Automated Cartography for third level lecturers, have enabled the department to invest in a state-of the art (at least for the time being) computer laboratory which will facilitate further development of the skills component of all programmes.

J.A Walsh,
Professor

PRESIDENT'S NOTE

Welcome to Milieu 1997. It is becoming a tradition that Milieu be brought out after Easter, so maybe it's not too late this year. I hope that it proves to be enjoyable and informative for you. Maybe it will even encourage some of you to get involved with next year's committee.

At this point I must thank profusely the out-going committee members. This year the Geog. Soc. has been extremely active and, we hope, successful in promoting Geography, and the good life in Maynooth. This is down to the hard work, commitment and enthusiasm of the whole team. I can only wish that the new President is as lucky with their committee.

As I have already said, we have been very busy this year. We couldn't have had a better start than the presentation we had from Rosie Swayle, who gave the inaugural lecture. She astounded the huge audience with her courage, memory and entertaining style. It was a great start to the year. She was ably followed by the irrepressible Prionnsias Breathnach with his annual field trip memories, again a popular night. This year there was even some new evidence/footage from recent trips.

Paddy Duffy was our next victim who honoured us with a very informative and entertaining look at the 20th century Irish landscape. There was also a guest appearance by the Bard of Barretstown, who wowed the audience with his songs and poems, (the libel case is still pending). December 4th saw the first visit to Maynooth of Dr. Ann Buttimer, head of Geography in UCD. She traced the development of Geographical thought in the twentieth century.

Our most ambitious event of the year saw over 150 people attend a lively debate in the Aula Maxima. Six local community leaders and politicians, including Ger Griffin, S.U. President, argued the pros and cons of further development in the North Kildare area. Even the local press were present, and the debate featured in three separate issues. Thanks to a lot of effort from the whole committee the night was a great success for which we were congratulated by the participants and many of the audience. Perhaps a follow up debate could be held next year to examine any recent changes.

The following week we held our annual Table Quiz which was the best attended and sponsored quiz of the year. We had over £500 worth of prizes from Heineken and Marathon Coaches. The quiz ended our events for 1996, and the committee headed off for a well deserved rest to recuperate for the coming year.

Bright-eyed and bushy-tailed, we returned to face a new year. 1997 has proved to be just as busy as 1996. Sean McConnell from *The Irish Times* started off the year with a lecture on the state of Irish agriculture and BSE. A week later there was yet another showing of 'Boston Bound' by yours truly. I promise, never again!. On February 5th Lt. Col. McDonald from the Peacekeeping School in the Curragh gave a lecture on Ireland's participation in U.N. peacekeeping missions. This was a very interesting talk which provoked a lot of questions and comments from the large audience.

February 19th goes down in history as the first lecture to the Society by rookie lecturer Dr. Ro Charlton. A select audience were very impressed by slides of her intrepid solo adventures in New Zealand. She has promised a Ballooning show next year so keep her to it. Two weeks later we held our second Rag Week fundraiser. This year we put on a golf competition which raised £30 despite rain stopping play on the second day. Thanks to Guinness for the sponsorship and to all who helped out.

The last event before Easter was the wonderful slide show presented by Daragh McDonagh. He gave us the 'grand' tour of the Southwestern states of America, including Navaho reservations, the Grand Canyon and many other geographic and geological features. A reprise next year could well be on the cards. As I write Dr. Sheila Waddington and Fran are busy shooting more incriminating evidence/slides of two more field trips. All will be revealed shortly at the AGM, where we hope to see many of you clambering to join next year's committee. I have been privileged to work with such a talented and committed team of Geographers. It has been a wonderful experience and a great year for me. I wish every success to the next President, whoever that may be, and may he/she enjoy the year as much as I have.

Dermot O'Mahoney
President

Postgraduate Applications 1997-98

The College offers a range of over fifty postgraduate programmes (at Higher Diploma, Masters' and Doctoral levels) in the faculties of Arts, Philosophy, Celtic Studies, Science and Theology.

Entry Requirements:
Normally, candidates for an M.A. by Research (Mode I) should hold an Honours degree with at least a Grade 2:1 in the particular subject while candidates for a taught M.A. (Mode II) should hold at least an Honours degree, Grade 2:2. The entry requirements for a Higher Diplomas is available from the relevant Department.

Funding:
Some Postgraduates Diplomas and Masters' programmes may be ATS funded so full-time students who are EU nationals are exempt from programme fees. Prospective applicants should also contact the relevant Department to ascertain the availability of any other sources of funding.

Application Procedure:
It is recommended that candidates should consult with the relevant Head of Department as early in the year as possible. Details of the programmes and the application procedure can be obtained from the registrar's Office, South Campus, in the first instance.

Registrar's Office
April 1997

TRANSPLANT TO MAYNOOTH
by
Robert McNealy

Well Hello and greetings from the New World America that is! My name is Rob McNealy and I am a recent transplant to Maynooth. I arrived via Aer Lingus from Detroit, Michigan, from whence I hail.

I am writing this article for a couple of reasons;

(1) by way of introduction and
(2) to discuss a new sub-field of Geography known as Geo-Business or Business Geographics.

As previously stated, I am a native (non-aboriginal!) of Michigan, 'The Great Lake State'. I am a 24 year old American, of Irish descent. I am, or at least *was*, an undergraduate student at Central Michigan University in Mount Pleasant, Michigan. I say '*was*' an undergraduate student because I completed my requirements for graduation last December and when I return to America I will have my degree waiting for me. At Central my major course of study was Geography or, if you care to hear the long version, Land Use Planning/ Environmental Analysis/Geographic Information Systems. I also had a minor course of study in Marketing Logistics. All this babbling brings me to my second point - Business Geographics.

Business Geographics is a new and rapidly expanding field which mates Geo-Technical science with the calculating, capitalistic world of business. What comes out is a two-headed beast that is making cartographers and marketers alike jump for joy! The first head of this beast is the actual promotion of Geo-Business technology, including hardware, software and technical training. The second head is the application of this technology being used in every day non-science businesses for increased productivity and efficiency.

"What exactly is all the Business Geography stuff?" I hear you ask. The terms themselves are ambiguous as they are vague. Business Geography is a new way in which business information can be accessed, stored and manipulated, Geographically. What does this mean? It means that until only recently, most all business decisions were made based on information that was stored in databases and was viewed in either spreadsheet or graph form. This is a good way to view information and make decisions when all that matters is the bottom line and statistics. However what this system doesn't permit or allow for is quick and informed decision making. Spreadsheets need to be studied and charts usually don't reflect the *whole* story. They're both inefficient! Conversely, data that is mapped or geographically referenced (for the Geography Majors), is visibly and notably easier to understand and to analyse. For example, the market place was previously limited to looking at plain figures and statistics to understand territory demand. This proved to be a difficult way to discern between happenstance, coincidence and true market trends. Those involved in marketing had to use instinct to make decisions. This can prove fatal, especially when multi-million dollar market promotions are at stake. Now they can take the very same spreadsheet territory demand data, put it on a map and view it with an entirely new perspective. Now new trends can be seen, or even lack of trends, that were once elusive or lost in statistics.

Marketing is not the only use for the geographically referenced data. Law enforcement agencies in America are using Geographic Information Systems (GIS) to follow crime wave patterns over various regions. They are also using it to keep track of prisoners incarcerated on "House Arrest."

This article by no means covers all aspects and possible uses of GIS it only serves as a cursory introduction. Volumes have been, and continue to be written on the topic. I hope that I may have illustrated some of the other applications of Geography. At least some of you potential 'geographers' know that there are many lucrative career opportunities out there.
As for me, so far I really like Ireland and especially appreciate the warm and friendly welcome that I have received since my arrival in Maynooth. With that I will sign off and anyone interested in aiding me in my studies of Irish Sociology - I'll be in the pub!

INFORMATION
THE MEDIA AND IDEOLOGY

BY

GERARD FITZSIMONS BA

The remarkable advances in the development of technology over the past seventy years have created a world in which information can be transmitted between any two points, no matter how distant they may be from each other, instantly. This in turn has created a greater awareness among the world's population regarding what is going on in other locations. However, in some cases, states discourage active interest in world affairs among their citizens. This can be carried out in a variety of ways ranging from censorship of press and television to threats or acts of violence against those who disobey censorship laws. However, it is always possible to find ways of bypassing such regulations and these will be dealt with later. The purpose of this essay is to look at the relationship between information, the media and ideology, at how they compliment each other and how the media acts as a vehicle for the other two.

Information, no matter what kind, is something that affects everyone's life and forms an important part in decision making processes. Those who have access to it are automatically placed in an advantageous position over those who do not. While it is important in its own right, the true significance of information is determined by how it is distributed, from where and whom it is obtained, how recent it is and who is receiving it. Demko (1994) summarises this as '*who gets what from whom and where*?' He classifies the who as the state, the whom as the producer of the information, and the where as the location in which the information is produced and consumed. Seen in this light, information becomes a commodity, something which can be used for beneficial or harmful purposes, which places those who possess it in a position over those who do not. Information therefore, can play a major role in preserving or destroying the position of a dominant body such as a regime in a state or a corporation in the business world. Through selective use of information a dominant body can justify its existence and ensure that nobody else attains a position to threaten its dominance.

Information is only as effective as the vehicle used to transport it to the receiver - the media. In today's world the media can range from something as simple as a Xerox copy of a document to something as complicated as the Internet. Perhaps the two forms which spring most readily to the mind are the press and television broadcasts, which use photographs and film footage to influence public opinion, which in turn can lead to political action. Bob Geldof's 'Live Aid' campaign to relieve the famine in Ethiopia and President Robinson's visit to Somalia in 1994, which highlighted the plight of those suffering from both starvation and ethnic cleansing, are just two examples. Demko cites similar examples of media coverage of such crises, especially the recent coverage of the unrest in former Yugoslavia. He also questions the ways in which the media can be used. For example, does Oliver Stone's film *'JFK'* present a true historical fact or is it just another assassination theory? Closer to home we could ask similar questions about *'Michael Collins'*. Is it intended to be taken as an historical documentary about the period or is it a tale woven around a true figure whose tragic demise in the civil war glorified him in the minds of many? The media can be a powerful tool in the hands of those who control it as it can be used to put across their own viewpoint. It can take many forms such as news bulletins, current affairs programmes or even comedies, but it can have implications for political policies at all levels, local and global.

Thompson (1990) views the media as a form of mass communication which, he argues, involves a one-way flow of messages from the transmitter to the receiver. This creates a gap between the producer and the consumer of the information, leaving the recipient with little opportunity to make any contribution to the process. Until recently in Britain and Europe a system known as 'public service broadcasting' prevailed. This involved a series of mixed programming with '*strict controls on the amount of foreign material shown*,' which, it was hoped, would '*help construct a sense of national unity*.' In his 1924 book, '*Broadcast over Britain,*' the founder and first director-general of the BBC, John Reith, identified four main elements in public service broadcasting.

> *"The rejection of commercialism, the extension of availability of programmes, the establishment of control over broadcasting, the maintenance of high standards, the provision of the best and the rejection of the harmful.'*

In his last point Reith, perhaps unwittingly, identified a key element in the provision of information, that of filtering. Filtering is a process whereby information is controlled by gatekeepers. These latter may be the state or its agents, powerful corporations or institutions, or individuals such as news editors and reporters. The information produced reflects the bases of these gatekeepers who may distort or withhold it to suit their own purposes.

Thompson also argues that since the advent of radio and television, broadcasting institutions have been vulnerable to the exercise of power by members of the government or the state. He cites the BBC as an example. The director-general was accountable to a board of governors who were appointed by the government of the day. These came from a narrow background, were mainly graduates of Oxford and Cambridge and few, if any, had any trade union experience. This ensured that the corporation was ultimately controlled by what was effectively an elitist body who would ensure that the ethos of the station laid down by Reith in 1924 would be preserved. By this measure the Government was ensuring that information which might present the state in a light that was contrary to the desired perception of it, would not be released through the BBC. It is a prime example of gatekeeping at work. By installing a few key individuals in prominent positions, gatekeepers can insure that their interests are protected and indeed enhanced through skilled manipulation of the media.

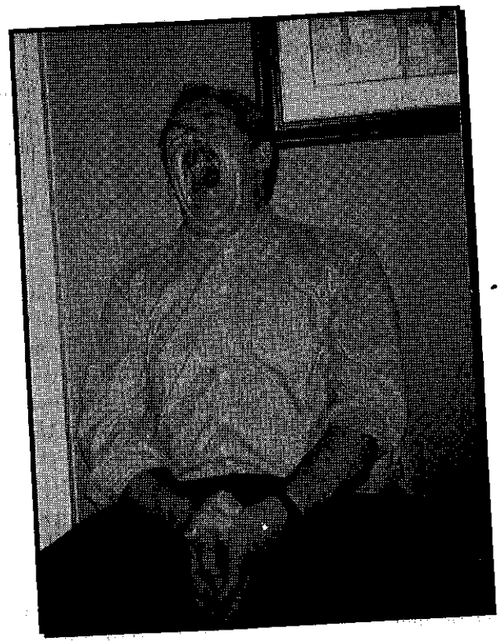
Modern technology has rendered the task of gatekeepers more difficult. During the student revolt in Tianamon Square in China in 1989, the Chinese Government imposed a strict blackout on press and television coverage. However this was by-passed by people who used fax machines to get information out to the western world. The modern world of telecommunications now means that nobody is completely cut off from the rest of the world and oppressed groups, minority groups or groups that are being generally discriminated against can now gain access to the media. Demko refers to these as the 'silenced voices' and states that modern technology gives these groups a voice and allows them to communicate with the world at large. Today's media has no political boundaries and can transcend state borders. No state can be completely shut off from the world anymore as satellite and cable transmission means that American programmes, for example, can be viewed almost anywhere in the world. This weakens the power of the gatekeepers as they can no longer control the flow of information into a country. People now have the choice to 'tune in' to 'foreign broadcasts' if they wish.

The term ideology was first used in 1796 by a French philosopher, Destult de Tracey, to describe a new science which was concerned with the systematic analysis of ideas and sensations, their generation, consequences and combination. Since then ideology has acquired a more sinister meaning and the work itself is taken to imply something that is nasty, treacherous and intimidating. However, it can take many forms and the boundary between it and information is not always very easy to determine. They both share the common factor of using the media as a vehicle to reach the rest of the world and in the modern age are unimpeded by national or international boundaries. Glassner argues that news and entertainment programmes can be influential in shaping peoples' opinions. American music, fashions and attitudes can infiltrate even the most enclosed societies on earth (generally through the medium of radio or television), inadvertently influencing the attitudes of the receivers towards them. The American Cable News Network (CNN) played a very important role in shaping the west's attitudes towards Iraq during the Gulf War.

Ideology is not confined to the invasion of states' media space by other states. Countries also use it at home to portray to their citizens how they want to be seen. When the Irish national anthem is played on television, viewers are shown pleasant rural scenes from the west of Ireland. Irish stamps portray Celtic designs and treasures while our coins all have the image of a harp on one side, supposedly the harp of Brian Boru. British stamps and coins carry an image of the reigning monarch while their national anthem is accompanied on television by a turning globe, harking back to the days when a vast proportion of the world was a part of the British empire. Demko argues that states use symbols such as flags, currencies and stamps to express how they view themselves and how they wish to be viewed by others. These methods can also by used to express social ills, such as AIDS awareness. National emblems such as the American eagle and the British lion symbolise strength and power, while America also uses her image of Uncle Sam to portray herself as a free and open country, full of opportunity for everyone.

The state can be seen as a key player in ideology. It decides the language, laws, school curricula and what information should be collected in censuses. Some of this information can be about how the state wants to be viewed by others. Information is produced at all levels of Government as the state seeks to justify itself by what it produces. Mass communication brings the producers of information into closer contact with the recipients. Live interviews put the interviewee in the spotlight and a wrong statement or answer on live transmission can be detrimental to a career or a policy. The decision to televise parliamentary sessions in Britain caused major political debate and Thompson questions whether this was because MP's would now feel more obliged to attend, or because they would be less inclined to shout at one another across the benches if they knew that the public was watching. Would they feel obliged to

"Ode to a Field Trip" Participants.
No sign of Paddy singing any ABBA here!



Weeeeeeeeeeeeeeeeell,
You know you make me wanna shout,
Come on yeah, Come on Baby .....

My Russian Experience
Reflections on Russian Agriculture
by Celine McHugh M.A.

On the 15th of February 1997, I set off for Mekrijarvi Research Station in Eastern Finland to take part in a course entitled 'Regional Development in the North-Eastern Edge of the E.U. The objective of the course was to assess the socio-economic transition of Russia and to examine regional development issues on both sides of the Finnish-Russian border. The course included a four day field trip to the Republic of Karelia (within the Russian Federation). The programme was very intensive, but overall very enjoyable and informative. There were about 70 participants in all, composing 15 different nationalities. The course was run through English but posed little problem for the non-English speaking participants.

Mekrijarvi was in the 'middle of nowhere', and a veritable 'winter wonderland' while we were there, with almost 3 feet of snow and sub-zero temperatures. The Research Station is attached to the University of Joensuu. The buildings were formerly a school which had closed due to a declining population in the surrounding rural area. The setting was really beautiful; beside a frozen lake, surrounded by mature woodland and very quiet - although the latter changed somewhat!

This article gives an overview of the information gathered while on the field trip into Russia. The area visited, in the southwest of the Republic of Karelia, was, as late as 1940, part of Finland and inhabited by native Karelians who spoke their own language, which was something akin to Finnish, and retained a distinct cultural heritage. It had experienced, with the rest of Finland, the boom of the 1920's, and had risen to western European levels. However, when the Winter War came to an end in 1940, Finland was forced to cede areas of Karelia to the Soviet Union. The northern part of the ceded area, Lake Ladoga Karelia was ceded to the Soviet Karelian Republic, and the southern part, the Karelian Isthmus, to the Leningrad Oblast. Most of the population of the Karelian area ceded by Finland moved to present day Finland. Russia settled a new population (mainly Belorussians and Ukrainians) in the ceded area. Today most of the 'true Karelians' live in Finland in Finnish Northern Karelia and Finnish Southern Karelia. In the already existing Russian Karelia, the original Karelian majority was reduced to a small minority when Stalin's oppressive national standardisation policy, which was intolerant of minority nationalities, came into force during the 1930's. The parts of Karelia ceded by Finland included three cities (large towns); Vyborg *"a bustling centre of traffic and commerce, and the most international city in Finland"* (Karelian Assoc. 1996), Kexholm (Käkisalmi) and Sortavala. We visited the town of Sortavala which still clearly bears the hallmarks of its Finnish past. A white crucifix marking the site of a Luthern cathedral and the contrasting Finnish and Russian architecture are poignant reminders of how things might have been in a town now struggling to survive in the post Communist era. Today, anyone relying on the state for wages has to wait upward of four months for payment.

I was assigned to the group which was to examine agriculture in Russian Karelia. I knew very little about the state of Russian agriculture, but discovered that it was a very interesting issue, especially given the major changes that have occurred since the demise of the Soviet Union.

Changing Structure of Agriculture in the Republic of Karelia

Over the last five years or so, agriculture in the republic of Karelia has been undergoing rapid change. This is not, of course, the only time that restructuring has taken place in Russian Karelia; the present period of transition must be placed in the context of the history of the entire Soviet Regime, and the drastic changes brought about by the introduction, and entrenchment of the socialist system. Karelian agriculture today could be described as being in disarray. The demise of the Soviet system has resulted in an agricultural economy without a 'raison d'etre'. Because of the concentration of economic activity within the 'forest industrial complex' since the 1930's - i.e. a production complex according to which enterprises in a particular area and using particular raw materials indigenous to that area (in this case forestry in Karelia) were merged into one organisation (Ranniko & Varis 1994) - agriculture had been taking a secondary, but supportive role in the Karelian economy. Moreover, there is very little agricultural land - 1.2% of the total land area in the Republic, with only 0.4% cultivated. Agricultural production fell by 12% in 1995, dairy production by 20%, but vegetable production increased by 10% in Karelia (International Business Statistics 1996).

The organisational structure of Agriculture and its changes.

The organisational structure of the agricultural sector in the Republic of Karelia during the Soviet era, which consisted in the main of large production units (state farms), has been carried over to the new era of the 'market economy'. These large farms have not only been production units, but local administrative and social services agencies as well. They had main specialities, but had to produce a lot of other products as well

(Wegren 1996, 152) and were heavily subsidised thus hardly ideal components of an emerging market-led economy. The following paragraphs describe the different types of farms that exist in the Karelian Republic at the present time. Some are enduring vestiges of the socialist past, others are emerging in response to new conditions, while yet others are adapting to the new and more liberal environment.

Table5.1. changes in the structure of farming in the Karelian Republic - 1991-1997

	1991	1993	1995	1997
Agricultural Enterprises	62	63	65	
State Farms	62		36	(30)
Mixed ownership	Nil		17	
Privately owned Subsidiary/Auxiliary Farms	Nil	50	12	
Private Farms	319	693	696	15-200
Unregistered Private Farms				50-100
Garden Plots	85.70	87.6	84.3	

*1997 figures are estimates obtained during interviews with the Head of Rural Advisory Centre Joensuu and the Deputy Mayor of Agriculture, Sortavala

About half of the state farms have been privatised since 1991. About 400 new private farms have been established in the same period. However due to economic difficulties in private farming and due to the non agricultural background of the majority of new private farmers, the number of operating farms is probably only around 150 to 200 in total. However, there are about 50-100 unregistered private farms which brings the total number of 'private' farms to approximately 300. The number of auxiliary farms has remained stable, but some of them have economic difficulties and have scaled down production. The number of garden plots has also remained stable but they tend to be more intensively grown now than earlier.

The average sizes of the different types of farms are as follows: state farms ('sovkhozes') 3000 hectares, auxiliary farms 1500 hectares, private farms 20 - 30 hectares (unregistered. private farms even smaller), garden plots 0.15 hectares.

State farms (Sovkhozes)

During the period 1929 to 1930, agriculture in Karelia as in the rest of the Soviet Union, underwent a process of collectivisation (a policy included in the first of Stalin's five year plan). The state took over ownership of the land, private property was collectivised and households joined what became known as 'kolkhoz' - collective farms (Varis 1996, 14). During the late 1950's and early 1960's agricultural 'kolkhoz' were abandoned in favour of state farms 'sovkhoz'. These state farms, unlike the member-managed and owned collective farms, were directly state-owned and the workers were paid their wages from the state budget just like any other economic sector (OECD 1995, 113). In the Republic of Karelia there were 60 such state farms established; each made up of an average of 1500 hectares of arable field and 1000 to 1500 hectares of meadows, approximately 200 milking cows, and usually an equivalent number of beef cattle. In addition to providing employment for Karelians, the state farms provided a wide range of social services for the workers and their families - the farm and its village were independent units.

The collapse of the Soviet Union in 1991 brought with it a commitment to the policy of privatisation (privatizatsiya) (Varis, 1996). Most of the former collective and state farms in the Russian Federation have been reorganised into 'joint stock farms'. There are now approximately 30 state farms remaining in Russian Karelia. Lack of competition, poor efficiency and limited specialisation in the past has resulted in serious financial difficulties for these farms in the past Soviet era, who are also struggling to maintain their non-economic functions. Similar financial and operational problems beset those farms which were set up to become joint stock companies. Moreover, farm workers who hold shares are reluctant to leave and become independent private farmers, and try to compete with the larger units. As part of a large production unit, workers would have had access to machinery for example, which would no longer be an option to a private operator. The director of the Rural Advisory Centre in Joensuu (RAC) argued that state-farm employees tended not to have a 'culture of enterprise' - stemming from the fact that they would have had very specified functions on the state farm (e.g. mechanic, milker, driver) but no concept of the multiple skills required to run a farm independently.

Bolshevik, a state farm currently operating in Sortavala

Those state farms who have chosen to remain under state control have in reality very little input in direction and more importantly in financial terms. However as the director of the Advisory Centre in Joensuu pointed out, this situation has changed in the past year, as the government has taken a 'step back' and provided some investment capital to some of the state farms in Karelia.. Owing to the bankruptcy laws some continue to operate while no longer viable, while others have

scaled down production to such an extent as to merit them largely non-functional.

The Bolshevik state farm near Sortavala established in 1956, which our research team visited, is struggling to remain viable. The manager pointed out that the farm had not received state subsidies since 1992 and that they are owed 4 billion rubbles due to bad debts resulting from late payments from customers. Because salaries to workers are delayed by up to 4-6 months, the manager is worried about maintaining the 386 employees. Sometimes the farm will offer payment in kind to their workers in the form of food stuffs or seeds etc because of the lack of money. In spite of the difficulties the farm has not altered its production methods to any great extent in order to improve efficiency and productivity. According to the manager the volume of production has declined by an average of 25% since 1991. The farm is in need of investments and improvements in production methods (for example, a cow on this state farm produces at best only half of what a Finnish cow can produce). When asked why this state farm had not been privatised, the manager argued that it was a good farm, and that to be 'big' was better. He also said that other state farms when split up have more or less stopped production. The Deputy Mayor also stressed the difficulties with privatisation; resources such as machinery and buildings cannot be divided; it would be more efficient to invest in big enterprises rather then dismantle them and not replace them.. It was apparent from our meeting with the manager of the state farm that he felt he had an obligation to keep the farm operating for the sake of the workers' welfare. It is this additional non-economic burden that has crippled the finances of the state farms in the present competitive environment. The Advisory Centre representative argued that state farms could be profitable enterprises if they became more specialised and concentrated only on agriculture.

Subsidiary/Auxiliary farms

Agricultural production is also carried out on farms attached to industrial enterprises. The function of these farms is to provide the industrial workers with essential foodstuffs. There are approximately 50 such farms in the Republic of Karelia (Laurila 1994, 44). These auxiliary farms are not as big as the average state farm and they tend to specialise in milk and meat production. Even though agriculture is not profitable to the wood-cutting and processing plants in Karelia, inexpensive foodstuffs are an important way to encourage workers to stay (Nordplus research project 1993). In the Karelian Republic (1993), thirty-nine of the auxiliary farms were connected to the forest industry (Nordplus 1993, 1;3).

Private Farms

In 1991 it became possible for people to become involved in farming on an individual and private basis and purchase or acquire land from the disintegration of state farms. From 1991 to 1993 almost 700 private farms were established At this time economic conditions were more favourable and because of rising inflation, loan repayments were easier to make. The average size of private farms in Karelia is roughly about 25-30 hectares covering approximately 10 percent of the total agricultural land. Of the total amount of private farmers the majority do not have a farming background and only a few are former state farm workers. A contributory factor to this is the fact that former state farm workers who have been given shares/land in the privatisation process do not have the necessary skills to run their own complete operation. They may only be skilled in one aspect of farming, e.g. tractor driver, and do not have the business 'know how' required. The main contributory factor hampering the success of private farming are rising costs, lack of knowledge about farming, high taxation, and problems with finding markets for products.

Private farmer near Sortavala

Our research team met with a private farmer near Sortavala who experiences many of the problems listed above. He started farming privately in 1988 when he began renting land. He had previously been a lorry driver, so he had little knowledge of the business. He has subsequently bought the property. Because the farm was established in less harsh economic circumstances, the farmer was able to minimise debts. He also received, and is still receiving, help from Finnish farmers. In the early stages he received machinery and dairy equipment from Finland, and later he got some assistance in constructing farm buildings. The farm has the added advantage of being close to the road and is supplied with electricity. However, the farmer still has difficulties with rising costs of inputs and high taxation. He travels to the market in Sortavala every morning to sell the milk in order to get the highest possible price. Even by doing this he argues that he is making a loss on the milk production. Nevertheless the farmer is optimistic and has hopes to acquire land for forestry if and when the legalities are sorted out. This private farmer is one of about 200 registered as operating in Karelia. These farms only represent 1-2% of total agricultural production, but they are leading examples of what is possible in current Russian Karelia.

Garden plots emerged in the Soviet era following the first collectivisation period in Russia. These were small holdings, normally under one hectare

in size, upon which members of the collective were allowed to work for personal use. Originally, these 'household' plots were used for subsistence needs. When collective farm wages improved the peasants could utilise any surplus and sell them at the collective farm (Pallot, 1994). Rural depopulation began to take hold following the Krushchev policy of 'no-perspective villages' (i.e. withdrawal of services to villages 'with no future, see Varis, 1996), and later during the late 1970's in the Brezhnev era. As a result, private gardening became very prevalent. The rural homes, now mostly occupied by elderly people, became 'essential food management centres' for the whole family whose younger members had moved into urban areas (Varis 1996, 17). These so-called 'dachas' near urban areas are primarily worked by elderly members of the family because the younger people are working in urban areas. Because they are occupied and worked during the summer months, they are know as 'summer dachas' and they have become even more important in the post-Soviet era as a food source and increasingly, as an additional source of much needed income. In the Republic of Karelia, the most recent estimate of the number of garden plots is 84,000 (see table 5.1) (Goskomstat, 1996). All kinds of fruit and vegetables are grown on the plots; with potatoes and vegetables being the most dominant. The R.A.C. representative estimated that more than 70% of Russian Karelia's potatoes and 60% of vegetables are produced on these tiny garden plots. Some animal rearing also takes place on dachas and household plots. Garden plots have played a very important role in the past and in the present. There is also evidence to suggest that they will play an important role in the future. Already, the R.A.C. in Joensuu, Finland has organised projects to assist in developing commercial production on garden plots. The R.A.C representative suggested that the garden plots might, upon expansion, play a major role in the operation of private farming in the Republic of Karelia, for example specialising in berry production.

Conclusion

Our stay in Russia was very brief, but we certainly got a flavour of the difficulties being faced in agriculture and the general day to day living for the people. Feelings of disillusionment certainly are running high, but there was an air of expectancy too and more importantly some of the people we met were trying to do things for themselves for example, making use of their small parcels of land in a commercial way. The cultural and historical links with Finland are also being put to good use in the sharing of expertise in farming methods between Finnish farmers and the newly established private Russian farmers. There are still major problems to be overcome particularly with regard to crippling taxes on profits and the legacy of the Soviet era, lack of competition, low investment, stifling of entrepreneurial activity and lack of efficiency

On a less serious note, I thoroughly enjoyed my stay in Finland and Russia. The experience of carrying out research in another country and working with people of different nationalities was also very worthwhile. Moreover, I came back with money in my pocket - three cheers for the E.U.!!!!!

GEOGRAPHICAL VOCABULARY

By Chris van Egeraat, M.A.

To the following review of Jeroen Bosman's article (1995) I would like to add a *quantitative dimension* to the paper presented by Professor Ann Buttimer to the Geography Society on 4th December last about *changing states of the art in geography*. Starting with an account of her own early empirical interest in social space Professor Buttimer proceeded to trace important changes in the *practice* of geography through a content analysis of the themes and proceedings of the annual conferences held under the auspices of the prestigious International Geographical Union (IGU). According to Professor Buttimer, this type of analysis enables various trends to be discerned in the evolution of geographical thought and activity since the late 1960's. These include the following *changes of emphasis/direction* which have emerged in a sequential, albeit often overlapping, manner: (a) from ideas expressed by individual 'named' scholars to historically situated practice; (b) from characteristics of national schools and traditions to a search for cross-cultural and cross-national *interpretative* forms; (c) from a primarily Euro-American focus to tentative inquiries into the *diversity* of geographical thought globally; (d) from a concern with debate and discourse which was mainly intradisciplinary (i.e. geography related) to a more broadly based *interdisciplinary engagement*; (e) from an approach which had a primarily academic (conceptual) thrust to more *empirical and practical* engagement with worldly issues including global environmental concerns; and (f) from an approach stressing the need for scientific objectivity (and history) to one which acknowledges the subjective nature of human knowledge and action (and his/her stories).

With her presentation, Buttimer has contributed to the body of literature that tries to analyse the development of geography as a discipline. It is my belief that her *qualitative* analysis of geographical work could have been facilitated by the quantification of ideas and concepts in geography. Other theorists involved in the geographical discipline have attempted to quantify the extent and remit of the discipline by various means including (a) counting the number of geographers involved in different fields of research, (b) citation-analysis, (c) publication analysis and (d) the quantitative analysis of term-structures. All of these methods have their own shortcomings. Some measure the influence of a particular author, or 'citation cartel', rather than the influence of scientific ideas. Other methods lack scope. Bosman (1995) argues that many of the problems coupled with quantification can be overcome by using CD-ROM databases.

Bosman's *Geography* is the CD-ROM database of the publisher Reeds-Elesevier, contains methodology involved in the counting of word frequencies in abstracts included in all abstracts of human and physical geography as well as developmental studies that have been published on paper since 1980. However, Bosman had access only to the January 1990-August 1994 edition which contains almost 113,000 abstracts, 38,000 of which can be characterised as human geography.

Bosman counted the frequency of occurrences or 'hits' for 340 terms (including toponomies and names of persons) in the seven available years. He placed the terms into six categories: sub-disciplines; general geography; theory and methodology; economic-geography; city, population and housing geography and finally, political geography. Terms used in related disciplines of the spatial sciences (planology, environmental science and demography) were not presented in the article under review. The choice of terms is based on recent text books and geographical dictionaries. Many terms were omitted because the total frequency (over 7 years) was smaller than ten. Incidentally, this included some surprises, such as, *mental map, semi periphery, product life cycle* and *urban field.* The results are presented in the form of absolute frequencies and index numbers.

The absolute frequencies enable us to compare the relative use of different terms. However, the frequencies have been standardised for the total number of abstracts in a year. This means that the frequencies have been raised to the level of the year with most abstracts (1990 with 9,063 abstracts). Because of the relatively small number of abstracts of articles for 1988 we have to be very reserved in our interpretation of the raised figures for 1988. The index numbers give an insight into the rise and decline of the use of terms. For every term the year with the highest frequency is set to 100. In doing this Bosman disregarded the figures relating to 1988. Furthermore, he only refers to 'winning' (rising) or 'losing' (declining) terms when the index of 100 refers to an absolute number of 10 or more abstracts

The aim of Bosman's article was to establish the potential of CD-ROM as a means of effective quantitative analysis. The results presented below deal with *'basic' geographical terms, theory and methods, 'settlement* geography'; economic geography and political geography along with some commentary on the relative popularity of different regions as an object of geographical research.

There are large differences in the use of *'basic' geographical terms.* Geography commonly deals with description and analysis of processes and

patterns in, or between, geographical units and on a certain scale or analytical level. The terms for geographical units and levels are easy to count. It appears that the spatial-analytical terms like *space* and *location* are far from being replaced by what some interpret as richer terms such as *place* and *region*. Tables 1 and 2 (p.17)show that the number of hits associated with the terms scale and level of analysis are reasonably balanced.

The winners (i.e. terms showing increased usage relative to the base index) in the category *theory and methods* (Table 3 p.17) confirm the idea of a change in direction and methods in geography. Feminist geography has given *gender* its place in research and *geographical information systems* are also making a strong advance. Apart from that, much research has become strongly *actor*-oriented (although the researchers themselves will not refer to it as behavioural. The term *scenario* has gained strong popularity especially in policy-oriented research. The term *sustainable/sustainability,* initially reserved for environmental science, has gained ground in research dealing with social relations, town planning and industrial development. On the losing side, Bosman found, is specific Marxist jargon. The term *proletariat* is a clear loser with 3 hits in 1993 compared to 24 in 1989. Terms such as *accumulation* and *dialectic* are also losing. Only the more general terms used by Marxists (and others) such as *capitalism* and *class* are not losing.

The most important units of research dealing with aspects of settlement (Table 4 p.17) appear to be *city* and *metropolis* (the term agglomeration was not looked into since it can also refer to a process). The terms *town* and *village* are losing some ground. Winners are *ethnic, household(s)* and *migration*, illustrating the increase of research of (ethnic) minorities. Losers are *demographic transitions* and *(new) town(s).*

Within economic geography it is clear that the more physical-spatial (place based) terms are less often used than the more generic economic terms (Table 5 p.17). Among the winners (Table 6 p.18) are terms referring to the (changing) organisation of production: *just-in-time, network* and *sub-contracting.* The *European Union* has also gained ground as an object of research. The term *globalisation* seems to have gained at the expense of *internationalisation.* In 1989 the internationalisation/globalisation ratio was 27/6. By 1993 this ratio was turned around to 22/36. It appears that the term *world city* is going to be replaced by *global city* in a similar way.

The use of terms associated with units of research in political geography (Table 7 p.18) is probably very dependent on the administrative divisions of countries. Research in the UK will usually pertain to *counties*, whereas in the United States it typically refers to *states.* One would expect terminology of political geography to be relatively dynamic. Bosman, however, counted only two winners (*peace/province*) and one loser (*army*).

Finally, Bosman counted the frequency of the occurrence in abstracts of 38 names of countries. Relating the number of hits to the population of different European countries provided some surprising results. In spite of all the geographic upheavals in Eastern Europe, the region does not appear to receive much attention from human geographers. There are also differences between individual countries of a similar population size. The UK (with approximately 1,250 hits) seems to be far more popular than France and Germany (both 750 hits), while Italy (300 hits) is seriously neglected in Geographical literature. Ireland with its tiny population and over 300 hits, appears, in relative terms, to be the most popular country of Europe in so far as geographical research is concerned!

However, these results are very much a reflection of the extent to which geographers of a country publish 'internationally' (i.e. in the international language of English). This brings us to one of the biggest short-comings of the methodology applied by Bosman. By using the Reeds-Elsevier *Geographical Abstracts,* Bosman limits his framework for analysis to publications in the English language. Although, this does not mean that the database is limited to authors from countries where English is the main language, Geographers from other countries with important tradition of geography, like Germany and France, will most certainly be under-represented. This bias, in turn, will be mirrored in the subject matter of the publications.

Clearly there are methodological difficulties associated with the use of the quantitative approach employed by Bosman when seeking to ascertain changes in the direction and content of geographical research. The period of analysis used by Bosman is also far shorter than that covered by Buttimer. Nevertheless, discernible trends are highlighted by both the Buttimer and Bosman approaches. One potentially interesting avenue of research suggested by this review is the application of Bosman's empirical approach in a more focused manner (e.g. using an extended time period and combining terms) to verify the speculative ideas expressed in Buttimer's paper.

Table 1. Standardised frequencies of terms associated with (parts of) space.

	total*	1988	1989	1990	1991	1992	1993
area(s)	7664	2254	1847	1737	2005	1895	1620
region(s)	4421	1278	979	1035	1072	1110	1081
land	3694	1067	779	897	927	897	893
place(s)	2160	496	503	478	519	554	550
location(s)	1365	406	326	323	357	305	321
space(s)	1194	466	277	263	336	267	273
territory/-ies	523	150	129	108	126	139	126
habitat(s)	313	105	70	65	73	93	67
belt(s)	157	45	14	45	44	40	380
Total	21491	6267	4924	4951	5459	5300	5311

Table 2. Standardised frequencies of terms associated with scale levels

	total*	1988	1989	1990	1991	1992	1993
local	3641	676	779	827	922	923	933
regional	5429	1683	1305	1197	1325	1277	1450
national	4749	1263	1052	1108	1271	1130	1098
international	5722	887	1088	1384	1520	1410	1452
global	1345	180	232	306	332	388	349

Table 3. Winners in theory and methods in human geography (index of standardised frequencies, year with highest value = 100)

	100=abs	1989	1990	1991	1992	1993
actor*	91	38	40	71	71	100
division of labo(u)r	50	46	79	92	74	100
elit*	79	54	41	50	72	100
GDP/gross domestic product	63	41	65	67	75	100
gender	196	36	44	79	65	100
GIS	77	6	27	19	57	100
institutional	986	62	77	94	100	91
land use	277	70	100	96	99	100
life course	17	9	23	7	12	100
regression	171	55	60	65	68	100
scenario*	118	57	79	96	98	100
sustainab*	401	31	56	81	98	100

Table 4. Standardised frequencies of terms associated with settlements.

	total*	1988	1989	1990	1991	1992	1993
hamlet(s)	27	0	14	5	2	10	2
village(s)	776	256	200	165	215	184	161
neighbo(u)rhood(s)	321	45	74	76	98	67	70
town(s)	1328	421	380	307	342	297	258
city/-ies	3089	721	705	758	832	661	752
suburb(s)	214	45	45	42	71	51	44
agglomeration(s)	229	60	68	48	56	59	44
metropolis(es)	885	301	180	190	267	172	208
megalopolis(es)	17	0	3	3	7	4	3
Total	6886	1849	1669	1594	1890	1505	1542

Table 5. Standardised frequencies of terms associated with units of enterprise

	total*	1988	1989	1990	1991	1992	1993
firms	1007	225	227	222	264	217	301
enterprises	565	165	106	129	155	145	133
companies	544	75	117	127	146	130	137
business	197	60	35	41	68	47	39
offices	110	0	27	22	31	29	24
factories	104	0	23	33	20	22	29
Total	2527	525	535	574	684	590	663

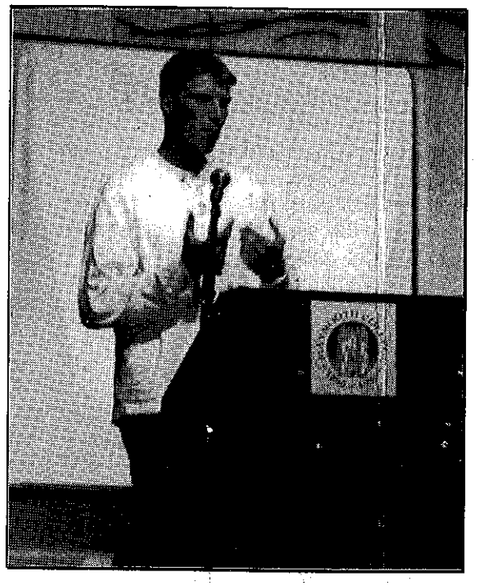
Table 6. Winners in economic geography (index of standardised frequencies, year with highest value = 100), 1989-1993

	100=abs	1989	1990	1991	1992	1993
blue collar	15	30	39	43	48	100
branch plant(s)	15	30	39	43	48	100
business service(s)	19	8	48	47	50	100
competiti*	407	74	81	75	91	100
EU/EC etc.	342	72	51	70	82	100
globali?ation	36	21	17	37	82	100
infrastructure*	263	69	84	89	91	100
innovati*	222	66	85	81	95	100
JIT/just in time	12	25	33	46	70	100
network*	276	69	84	94	100	90
privati*	403	34	58	64	99	100
quality of life	173	52	70	92	79	100
subcontract*	17	27	53	91	68	100
trade	581	69	85	87	91	100
welfare	193	49	79	74	83	100

Table 7. Standardised frequencies of aanduidingen for forms and level of territorial and political organisation, 1988-1993.

	total*	1988	1989	1990	1991	1992	1993
country/ies	6155	1548	1158	1392	1618	1635	1507
states	1536	466	453	366	289	364	391
county/-ies	861	165	512	142	182	128	144
province(s)	659	210	126	140	180	167	173
republic(s)	566	105	112	91	185	147	149
municipality/-ies	214	30	47	57	54	52	43
Total	10557	2629	2520	2279	2693	2640	2556

*The total refers to the actual, not the standardised, number of abstracts in which the term was found
* Denotes wildcard suffix



Ger goes public and gives the Geog Soc an exclusive interview about his upcoming BREAST ENLARGEMENT at the Rezoning Debate.

TARAWERA, NEW ZEALAND
by
Rosemary Charlton

On the night of June 10th 1886, Mount Tarawera erupted violently, tearing itself apart and causing unimaginable destruction. Many spectacular and horrifying accounts have been written describing the events of the night when a Maori village was completely buried in mud and the famous Pink and White terraces of Lake Rotomahana, described as one of the eight natural wonders of the world, were destroyed forever.

June 10th 1987 was bright and clear and the slopes of Tarawera lay red below an endless blue sky. Fascinated by this volcano, I had for several years wanted to come here. Now, climbing up the barren sterile mountainside, it was hard to believe the eruption took place so long ago. Below me a vast, elongated crater tore the mountain in two, a vivid testimony to the violence of the event. Multi-coloured fragments of scoria crunched underfoot; thin, brittle pieces of solidified lava. They had a honeycombed structure. By contrast, the upper surface of each fragment had a caramelised appearance, smooth and iridescent. The predominant colour of these fragments was the deep glowing red of Tarawera itself. Closer examination however revealed that some were black and burnt looking, others dusty autumnal colours of orange, terracotta, sulphurous yellow and a dark treacle-brown. When I stopped, all was quiet except for a high-pitched musical tinkling sound made as displaced fragments re-ordered themselves. Then the silence was absolute, almost overpowering, accentuating the vastness of that weird, primeval landscape.

The summit plateau was wide and flat. At my feet was some kind of volcanic bomb the size of an orange. It was surprisingly heavy and had a surface like crusty, new baked bread. As I held it in my hands and looked out towards the horizon I realised something which made me at once aware of the raw forces of nature, strong and invincible, in a way I had never felt before.

To the south I could see the peak of Tongariro with the snow coloured summits of Ngarahoe and Ruapehu beyond. A perfectly straight line could have been drawn linking those three summits with that of

Tarawera. The line extended still further beyond where I was standing to intersect the active volcano on white Island, which was smoking lazily out in the Pacific. One of the dormant mainland volcanoes could at any time destroy the tiny farms, houses and people going about their daily lives on the fertile land below me.

The molten ball of lava spewed out from the bowels of the earth exactly one hundred and one years before, felt rough and cool in my hands. I decided to keep it and take it home with me to London. A powerful reminder of this place far away from the seemingly infinite rows of houses, shops, offices, industrial estates, crowded roads and scurrying people.

KNOW YOUR DUBLIN

Each of the clues represents a well known area of Dublin. How well do you "know your Dublin"?

1. Church reptile
2. Sea creature's outhouse
3. A very dark boulder
4. A breed of sheep
5. A gravelly paste
9. Chimes demise
10. Big cats ville
12. Mr. Secombe is angry
13. Not a warm explosive device
14. Spheres cross over here
15. Is it falling down?
16. Sounds like duel weapons
17. A stormy retreat
18. Demolish leo
19. Assassinate leading actor
20. A rodent before the pits
21. A Scandinavian monocle
22. An elusive peer
23. A motionless musical instrument

ANSWERS ON PAGE 40

CORINE and CARBON DIOXIDE : ESTIMATING A LAND COVER BASED CARBON FLUX FOR IRELAND

by
Ray Feeley

INTRODUCTION

The general mechanisms of global warming are by now fairly well and widely understood. The insulation which results from the absorption of infra-red radiation by greenhouse gases is a necessity for life on earth. The most important of these gases is water vapour, followed by Carbon Dioxide, whose importance is due to its relative concentration in the atmosphere.

This natural process has been enhanced by anthropogenic emissions of greenhouse gases, primarily due to industrial development and the burning of carbon-rich fossil fuels. The Intergovernmental Panel on Climate Change (IPCC) predicts that under a 'business as usual' scenario, a rise of global mean temperatures by approximately 0.3° per decade could be expected in the future. It is the potential economic costs that may accrue due to the effects of such a rise, such as increased sea levels and shifting global agricultural patterns (which might not necessarily herald disaster for *all* regions) that has governments redoubling their efforts to reach a legally binding accord on greenhouse gas emissions. The recent declaration by the Second Conference of the Parties to the UN Convention on Climate Change-The Geneva Declaration-commits industrialised countries to negotiating a legally binding protocol to reduce their greenhouse gas emissions.

However, the operationalising of controls on greenhouse gas emissions will be fraught with difficulties. It is only by accurately establishing the extent of emissions that legislative controls can be comprehensively and equitably enforced, but obtaining such data can often prove to be an elusive goal. Increasingly, the importance of the role that the terrestrial biosphere plays in the carbon cycle is being recognised. The IPCC has requested all parties to the UN Convention on Climate Change to prepare national inventories of CO_2 emissions using methods which take account of the impacts of both land use and land use change on national sequestration and emission totals. Net emissions are a function of the total volume of CO_2 emitted *less* the quantity of carbon that is sequestered. Sequestration involves the removal of carbon to storage by the earth's atmosphere, oceans and terrestrial biosphere.Various land cover types and their associated activities have differing sequestration *and* emission rates It is in this context of land use and land use change that the significance to the Irish planning community of developments in the area of greenhouse gas legislation becomes apparent.

AIMS AND METHODOLOGY

In anticipation of the compilation of a detailed national inventory of greenhouse gas emissions, this study attempts to derive an initial estimate of the carbon flux (i.e. movement of carbon) between the atmosphere and biosphere in an Irish setting. Working in a Geographic Information Systems (GIS) environment, the assessment of the relative contributions of various land uses and land cover types to this flux, using data from the CORINE Land Cover Project (Ireland), form the central focus of this work. Flux factors are adapted from Adger *et al* (1992) and applied to the land cover statistics to derive regional and aggregate totals for all of Ireland. The results are analysed with particular emphasis being paid to the utility and limitations of the method applied.

THE CORINE Land Cover Project (Ireland)

The CORINE database was constructed using "the computer assisted interpretation of satellite images, with the simultaneous consultation of ancillary data" (O'Sullivan, 1992). Although the CORINE land cover database is a very important addition to the suite of geographic information available to researchers in Ireland, there are a number of limitations to the database which are recognised and highlighted by the teams responsible for its production. It is highly important that such limitations be noted and explained in the context of any projects that employ CORINE data. As it is however, CORINE is the first national land cover database available for Ireland and therefore it provides the only means of estimating a land cover based carbon flux in a comprehensive and unified way.

Establishing A Budget Of Carbon Exchange According To Land Cover Type

The establishment of an Irish carbon budget is based here on the relatively simple concept of applying appropriate flux factors to the areas of varying land cover and land use types as extracted from the CORINE database. These factors, expressed in tonnes of carbon exchanged, are estimates of how a particular land cover type either emits or sequesters carbon and have been derived by other studies (some modifications were required for the Irish case). The average yearly flux in carbon for a particular land cover type is then given by;

$$F_i = a_i.(Sf_i+Bf_i)$$

where

F = annual carbon flux,
I = 1,2 ..n land cover categories,
a_i = area of land cover in category *i*,
Sf_i = carbon flux factor for soils under land cover *i*,
Bf_i = carbon flux factor for standing biomass on land cover *i*

RESULTS

An estimate of annual carbon sequestration attributable to the land cover of Ireland has been derived by this study. This was found to be 1,867 kilotonnes of carbon. This is the equivalent of 6,845 kilotonnes of CO_2 which is 22% of total emissions in 1990. Emissions from land cover are estimated at 70 kilotonnes of carbon. These are mainly associated with arable land use. These results can be disaggregated on a regional or sectoral basis, facilitating further analysis.

SPECIAL FOCUS - FORESTRY

Forestry is a particularly important sector requiring further analysis due to the role thrust upon it by the official state policy for the control of CO_2. In "Ireland Climate Change: CO_2 Abatement Strategy" (Department of the Environment, Ireland, 1993) the sequestration of carbon by the national forests is a significant feature. The policy outlines the steps to be taken to limit any growth in CO_2 emissions to an increase of 20% on 1990 emission levels. This derogation from the stated EC policy of maintaining emissions at 1990 levels was accorded to Ireland on an economic basis.

It is estimated in the strategy that already (up to 1993), forests in Ireland absorbed 1.4 million tonnes of carbon annually. This figure is based on an absorption of 3 to 3.8 tonnes of carbon per hectare of sitka spruce per year and 2 to 2.6 tonnes of carbon per hectare of broadleaved forest per year. The policy document concludes that the increase in storage capability by 0.8 million tonnes of carbon, due to increased planting, will balance to a significant degree the expected rise in national emissions of CO_2. Therefore the expected rise of 20% in CO_2 emissions would be offset by 9%.

When the Abatement Strategy figures are adjusted for 1991 data in order to allow a comparison to be made with the results determined by this study, it is immediately apparent that a significant discrepancy exists between the two figures (Table 1).

Source	Total Forest Area (ha.)	Carbon Sequestered (kilotonnes/yr)
Abatement Strategy	381,000	1,383
CORINE-based	298,237	399

Table 1. Contrast between CORINE and Abatement Strategy estimates of forest area and annual carbon sequestration by that sector.

It is vital that such a wide variation be examined very carefully as national CO_2 emissions control policy is based entirely on these figures. For comparative purposes, two other methods were used to determine the annual carbon flux total for forestry. It was hoped that this would help to smooth any inaccuracies in the first set of results due to any bias inherent in the CORINE dataset. In the first case, the methodology described by the inventory reporting instructions of the IPCC was employed. The second method took into account the fact that land cover is not a static characteristic and various categories of land cover are constantly being transformed from one form to another e.g. peatbog converted to woodland. Four estimates of an annual carbon sequestration figure for Ireland can now be compared (Table 2).

Estimate type	Carbon flux estimate (kt C)
National Abatement Strategy	1,383
CORINE derived estimates	399
IPCC method	316.3
Land use change out of 3 categories	158.2

Table 2. Estimates of carbon sequestration by forestry in Ireland in 1990-91.

It is immediately apparent that the CO_2 Abatement Strategy estimate is much greater than the next closest estimate. The abatement strategy figure is over 4 times greater than the estimate from the IPCC method, the method which countries are supposed to use when reporting their national inventories to the IPCC, and 8 times the land use change estimate. It might be argued that of the two lower estimates the land use change figure might in fact be a more accurate assessment of the flux due to the resolution of its focus on changing land use. If this is the case then the abatement strategyies figure is grossly overestimated and requires serious review.

CONCLUSION

In discussing the results for a small nation like Ireland, there may be a temptation to dismissdiscrepancies in inventories due to the small relative size of our national contribution to atmospheric

CO_2. This is however a disingenuous argument. If a national inventory is required by international agreement, its aim should be to derive as accurately as possible estimates of emissions and sequestration of greenhouse gases.

A further highly important consideration is the ongoing development of the political aspects of CO_2 emissions management. Although currently not the case, it is entirely within the bounds of possibility, and, perhaps practicality, that a more pro-active role in such management could be passed to the regional level of administration. In such a scenario, emissions budgets for each area could be incorporated into a local authority (or perhaps a regional) planning mechanism and taken account of in the planning process. This could provide enhanced conservation possibilities for land-cover types which act as effective sinks for carbon. The advent of new legislation, expected from Brussels in the near future (Bradley *et al* 1991), revising directive 85/337/EEC (CEC,1985) on environmental impact assessment, and providing for strategic environmental assessment on a regional or sub-regional basis could act as further incentive to this development.

WOMEN'S RULES FOR MEN

1. Call.
2. Don't lie.
3. Never tape any of her body parts together.
4. If guys' night out is going to be fun, invite the girls.
5. If guys' night out is going to involve strippers, remember the zoo rules: No Petting.
6. The correct answer to "Do I look fat?" is never, ever "Yes."
7. Ditto for "Is she prettier than me?"
8. Victoria's Secret is good. Frederick's of Hollywood is bad.
9. Ordering for her is good. Telling her what she wants is bad.
10. Being attentive is good. Stalking is bad.
11. "Honey", "Darling", and "Sweetheart" are good. "Nag", "Lardass", and "Bitch" are bad.
12. Talking is good. Shouting is bad. Slapping is a felony.
13. A grunt is seldom an acceptable answer to any question.
14. None of your ex-girlfriends were ever nicer, prettier, or better in bed.
15. Her cooking is excellent.

MEN'S RULES FOR WOMEN

1. It is only common courtesy that you should leave the seat on the toilet UP when you are done.
2. If you are cooking a special dinner for a man, be sure to include something from each of the four major male food groups: Meat, Fried, Beer, and Red.
3. Don't make him hold your purse in the mall.
4. Despite the overwhelming evidence to the contrary in many of the fine bars and fraternities throughout the country, not all men are cretins deserving your contempt.
5. Shopping is not fascinating.
6. When he asks for a threesome with you and your best friend, he is only joking.
7. Unless the answer is yes.
8. In which case, can he videotape it?
9. If you REALLY want a nice guy, stop dating good-looking assholes.
10. The man is ALWAYS in charge of poking the campfire with a stick and/ or tending the grill.
11. Trying to provoke a large, dangerous-looking felon from across the room is not funny.
12. Money does not equate love. Not even in Nevada.
13. Any attempt by a man to prepare food, no matter how feeble (ie microwaving a burrito, fixing Spaghetti, etc) should be met with roughly the same degree of praise a parent might shower upon their infant when it walks for the first time.
14. Those male models with perfect bodies are all gay. Accept it.
15. He heard you the first time.

THE BOSTON LANDSCAPE

by

Dermot O'Mahoney

INTRODUCTION

There are three main topics which will be developed through a broad examination of the city of Boston and it's metropolitan area. These three topics are segregation, fragmentation and renewal. The first two are the same as Brendan Bartley's theory about Los Angeles. The third is due to the unique nature of Boston in American terms.

LOCATION:

Boston, capital city of Massachusetts and seat of Suffolk County, located in the eastern part of the state on Boston Bay (an inlet of Massachusetts Bay), at the mouth of the Charles River. Boston is the largest city in Massachusetts and New England and serves as the commercial, financial, and cultural centre of the six-state region. The city is situated on a magnificent natural harbour opening onto Massachusetts Bay.

At one time the city occupied a relatively narrow peninsula of land, restricting city expansion, but extensive filling of tidal flats has greatly increased the city's land area. Boston not only dominates much of New England but also exerts influence on the rest of the country through its financial institutions, insurance companies, and educational institutions.

HISTORY

Before the coming of European explorers and settlers, the Boston region was inhabited by several tribes of the Algonquian nation, who resided along the coast and the interior river valleys. Archaeological evidence of their long settlement is widespread and abundant. The introduction of European diseases greatly reduced their numbers by the early 17th century. The Boston area was visited by French explorer Samuel de Champlain and English explorer and coloniser John Smith as well as by settlers from Plymouth before the first permanent settlers arrived in 1630. These first colonists were Puritans from England, led by John Winthrop, who moved to Boston from nearby Salem. Their primitive settlement on a small peninsula (known as Shawmut to the Native Americans) was declared to be a town in the fall of 1630 and was named for Boston, England.

The town was soon made the capital of the Massachusetts Bay Colony, and the population swelled as new settlers, many of them artisans and professional people, were attracted to the region. Boston itself served as the springboard for other settlements in eastern Massachusetts.

By 1750 Boston had grown into an important seaport and trading centre with industries associated with maritime activities. Colonial life was dominated by political quarrelling with England and by the strong secular power of the Congregational church. The city became part of the new Federation in 1776, when independence was won from England. In comparison, Los Angeles wasn't founded until 1781, and didn't become a city until 1850. In the early 19th century Boston grew as the metropolis of New England, as new overseas markets (notably China) opened and new trading fortunes were made. Boston became Massachusetts's first incorporated city in 1822, and a vigorous program of land filling accommodated the growing population. Manufacturing assumed a greater role in the city's economic life.

During the second half of the 19th century Boston annexed several adjoining communities to increase its land area several times over. Waves of immigrants, first from Ireland and later from Canada, Russia, and Italy, streamed into the city. By 1900 Boston was the undisputed capital of New England and had achieved national status in finance, education, and medicine. Changes in the region, however, had their effect on Boston, especially the accelerating decline of the textile and leather industries, mainstays of the port and of the city's commerce. By 1950, Boston's population had peaked at 801,444 and had begun a steady decrease. Dramatic steps in urban renewal undertaken during the 1960s and a massive office-building program encouraged during the 1970s had limited success in reversing the city's economic decline. Because of this history, both in foundation and immigration, Boston is a very European style city. It is compact, self-contained and extremely diverse in terms of population, culture, social class and economic activity.

POPULATION

Boston's population increased from 562,994 in 1980 to 574,283 in 1990. According to the 1990 census, whites constitute 62.8 percent of Boston's population; blacks, 25.6 percent; people of Asian background, 5.3 percent; and Native Americans, 0.3 percent. Hispanics, who may also be counted among other groups, comprise 10.8 percent. The population of Boston's metropolitan region increased from 5,122,000 in 1980 to 5,455,000 in 1990; notable population centres in the region besides Boston are Worcester and Lawrence.

ECONOMY AND EMPLOYMENT

Service industries dominate Boston's economy, employing 93 percent of the city's workers in the mid-1990s. Because Boston is the seat of government for Massachusetts and the site of many offices of the federal government, 16 percent of the workforce is engaged in public service, making it the leading branch of the service sector. Next in importance are financial services, employing 15 percent of the workers. The Boston metropolitan area is the largest centre for banking and insurance in the north-eastern United States, and several national firms have headquarters in the city. Fostered by both a highly skilled workforce and local medical research and educational facilities, the biotechnology field has grown substantially in recent years. The city is known for its high-quality health care facilities, including 16 teaching hospitals and several institutions that are pioneers in medical research. The health care industry accounts for 14 percent of total employment. Some 12 percent of workers are engaged in wholesale or retail trade. Manufacturing is substantially less important to Boston's economy than it once was, losing ground throughout the second half of the 20th century. In 1969 manufacturing and construction employed more than 16 percent of the workforce; by the mid-1990s it had fallen to less than 7 percent. The once-important fishing industry experienced a similar decline. High-technology industries, including computer, electronics, and engineering firms, have meanwhile created employment. Many of the firms have located outside the city core. Printing and publishing are the leading manufacturing employers in the city, continuing Boston's long tradition as a major book-publishing centre. Other important manufactures include fabricated metals, processed food, instruments, apparel and textiles, electronic equipment, and industrial machinery.

The port of Boston, located in one of the best natural harbours in the world, was once the premier port in the United States and still retains considerable importance. A deepwater channel connects waterfront terminals with the open ocean, and there are about 40 km (about 25 mi) of docking space in the inner harbour. Petroleum products and sugar are the largest imports; grain, iron, and steel are the principal exports. Container cargo terminals, first added in the 1970s, have greatly increased port activity. In the early 1990s containerised general cargo constituted more than 90 percent of all cargo handled. The tourism and convention industry is also important to the economy of Boston, with the city hosting more than 11 million visitors each year

EDUCATIONAL AND CULTURAL INSTITUTIONS

Boston is a centre of higher education in the United States, even more so if its adjacent suburbs are included. The two largest universities within the city itself are Boston University (1839) and North-eastern University (1898). In nearby Cambridge are Harvard University (1636) and Massachusetts Institute of Technology (1861). Tufts University (1852) is in Medford, Boston College (1863) in Newton, and Brandeis University (1948) in Waltham. The Boston public school system is the oldest in the United States.

THE URBAN LANDSCAPE

The geographic shape of Boston is peculiar, extending much farther to the south and southwest of its economic centre than to the west and north. The city is also subject to 3 separate legal and planning jurisdictions-Federal, State and City, the most influential of which is the city. The city administration subdivides Boston into 19 districts for planning purposes. Several of these districts are identified by their dominant resident ethnic group: Roxbury and Dorchester as black, Charlestown and South Boston as Irish, East Boston and the North End as Italian. Several Chinese and Hispanic neighbourhoods are now well established. Beacon Hill and Back Bay are historically more affluent communities, and are home to a mixed ethnic population.

In spite of its unusual configuration, Boston has a well-integrated transportation system. The Massachusetts Bay Transportation Authority runs several rapid transit lines, supplemented by extensive bus lines. A network of expressways enters Boston from the south, west, and north, and the city is the eastern terminus of the Massachusetts Turnpike. Logan International Airport, located near the city's centre, is one of the busiest in the country, especially in transatlantic passenger movement. Passenger use of the port, however, is minimal.

DEVELOPMENT OF THE URBAN LANDSCAPE

Boston has more than tripled its original land area since the town was founded. However, in terms of being a modern city, it is still very small. The actual

city limits are smaller than the postal areas of Dublin, but the sphere of influence is much larger. It extends across 6 states, which together are bigger then Ireland. As with many of the Eastern U.S. cities, Boston grew with the expansion, first of the agricultural sector and then during the early industrial revolution. This growth was based on financial services and city based manufacturing, such as cotton and other textiles, steel and machinery.
Following the civil war era of the late 1800's, and well into the 1900's, a large proportion of the manufacturing sector migrated south. This phenomenon affected the whole of the north eastern region severely, and it had knock on effects, with a population decline after the 1950's. As a result of this many factories and warehouses became disused and derelict. This lead in turn to a decline of the inner city area and the CBD. Coincidentally, at the same time, a trend towards suburban living was spreading throughout the US, which overall was experiencing an economic boom after the second world war.
To see the effects of this we must look beyond the city limits of Boston. The city itself is surrounded by other towns and cities, and so, even in the 1950's, the suburbs were at least 10-15 miles from the city centre. This wasn't a problem for the rich middle classes with their high car ownership, and a consistently improving public transport system.

There were serious impacts in the city. There has always been a pattern of ethnic hierarchy, in terms of one group taking over a neighbourhood after one leaves. This is a common phenomenon in cosmopolitan cities. In Boston, this hierarchy is immigrant dominated. Jewish communities would follow an Anglo one. Then the Irish or Italians would take over. They would be succeeded by Black Americans, or Asians who, in turn made way for Hispanic communities. This is a dynamic process, and only a few of Boston's neighbourhoods have resisted this movement. These are, of course, the most affluent areas, Beacon Hill and Back Bay. These areas are dominated by white, upper-middle class professionals, living in expensive luxury apartments and condos. It is an exclusive area, with little ethnic mixing. It is also the most preserved area of the original city.

SUBURBANISATION

The Boston area has a number of unusual characteristics which I have already referred to. Because it is so old, in American terms, it is surrounded by other towns and cities. This means that the middle classes who left Boston either had to live in one of these neighbouring urban centres, or move further away from Boston to the more rural areas. This meant living at least 10-15 miles away. This may not seem much, but, like Dublin, all the traffic comes from only 3 directions instead of 4, so congestion is a problem, especially at peak hours. However, the Federal transport policy of the post war era oversaw the construction of a national highway system that further encouraged this move to suburban living. This period also saw a large investment in public transport, particularly in the Boston area. It is integrated with a regional rail and bus network based around a Park and Ride system. These two factors combined to make the suburbs more accessible.

This racial bias is only slowly changing. There have been attempts by the city authorities to reverse this exodus. They now require that all city employees be resident in the city. This accounts for up to 12% of all workers in Boston, and has had some positive impacts. Not only does it keep more professional class people in the area, with their taxes, disposable incomes and consumer driven behaviour, but it gives them an added incentive to improve their city. What this has meant is that large sections of the city have been and are continuing to be rejuvenated, due to the demand for high quality housing and amenities. As in Dublin and other cities world wide, certain areas have benefited from investment incentives and tax exemption. There is also a requirement for chain stores of all kinds, including fast food, banks, clothing stores and supermarkets. Businesses of this type are also required to reinvest a percentage of their local profits in disadvantaged areas. Because of the federal and 'city-state' system, cities like Boston have wide ranging powers to deal with their individual problems as they see fit without government interference. This is proven by the amazing transformation of the C.B.D..

THE C.B.D. REJUVENATION

Boston experienced a severe loss of manufacturing jobs up to and after the war, along with a large scale abandonment of factories and warehouses. This lead to a run-down landscape, that was unattractive and depressing, both visually and economically. The main movers behind the rejuvenation were the city authorities and the major financial companies such as Prudential, The Hancock Company and the main U.S. banks. A combination of renovated city offices and new tower blocks improved the landscape and created jobs by the thousand. This brought people back into the city centre which fuelled a retail resurgence. The city centre was able to compete with

out-of-town shopping malls. In turn, this made city living more popular again, and cultural and leisure attractions began to do better.

THE CURRENT SITUATION

At the moment Boston is a thriving city, with a very young energetic population that is among the best educated in America. It also has a solid base in high-tech industry, both in terms of research and ownership. On top of that, the financial services sector is booming, and looks set to continue that way. In terms of ethnic problems and ghettoisation, the situation is still serious, but is improving yearly. The suburban towns in the metro region are still growing as well, so the overall picture is positive.

"o"o"o"o"o"

IRISH GEOGRAPHY QUIZ

1. A city found at the top of a bottle?
2. A city that reminds us of a five lined witty verse?
3. A Kildare town that sounds like a part of the lower limb?
4. A monastery with a plumbing problem in Co. Laois?
5. It could be a bloody town in Leinster?
6. A rodent infested cake in Co. Clare?
7. Is this inlet in Ulster made of aluminium?
8. This musical instrument is not tardy?
9. A county where candles are inclined to go out?
10. The fossil fuel is precipitous in this Ulster town?

ANSWERS ON PAGE 40

THE BSE STORY
BY
SEAN MAC CONNELL
AGRICULTURE CORRESPONDENT
IRISH TIMES

The Bovine Spongiform Encephalopathy story has its roots in Britain in the 1970s when despite a warning from the Royal Commission on Environmental Pollution, the rendering industry brought in changes to save money. These involved a drop in the heat treatment and duration of heat treatment in the production of meat and bonemeal and a withdrawal of a chemical called lye which had been used on the carcasses of sheep infected with scrapie. Scrapie, which occurs in most European countries but has a very high incidence in Britain, is a disease similar to BSE in sheep. It is a disease of the central nervous system.

By 1982 vets in the south of England where the dairy farms are concentrated, began to notice that cows were suffering from a disease similar to scrapie in sheep. In November 1986 BSE was identified by the Central Veterinary Laboratory in London as a disease in its own right and the EU member states were informed through the standing veterinary committee of its appearance. In April 1987 the British Ministry of Agriculture set up a study of 200 herds to see how the disease was transmitted, by that stage hundreds of cows were suffering from the disease.

The initial reaction in the UK in July 1988 was to ban the feeding of ruminants with meal containing reminant derived material and in 1989 it banned infected animals from entering the food chain. In February 1989, when there were over 10,000 cases of what the mass media were calling "Mad Cow Disease", a Royal Commission of Inquiry into the matter said it was unlikely that BSE would have any effect on human health.

The first cases of BSE turned up in Irish herds in January 1989 and we introduced the controls which had been put in place in Britain. Most of the animals with the disease in the Republic had been imported from Britain or fed on imported meat and bonemeal. Seven years on there have been 208 cases of the disease here in a herd of seven million cattle whereas in Britain there have been over 171,0000 cases in a herd of nearly 12 million cattle.

We avoided a greater degree of infection because Ireland did not change over its system of rendering meat and bonemeal at the same time as the British and because the level of scrapie infection is virtually nil in the Republic. Nevertheless we cannot claim to be BSE free in the Republic and ironically, at a time when the British, who created the disease, appear to be getting

on top of the problem, our figures seem to be rising. In the years 1989 to 1995 there were never more than 19 cases of the disease discovered but in July 19996, there was a dramatic increase in recorded cases. By the end of 1996 there were 74 known cases of BSE in Irish herds.

Why did this happen? No one is sure but the finger of suspicion is being pointed at the continued feeding of meat bonemeal to cattle which may have been contaminated. While the original cause of the disease may have been feeding infected sheep brain in meat and bonemeal, it now appears possible that many cattle infected with the BSE were being rendered and despite regulations banning it feeding, some farmers continued to feed the banned material.

It continued to be legal to feed ruminant rendered material to pigs and poultry and while poultry feed may have been illegally fed to cows, there is also plenty of evidence that there was contamination of feed at compounding plants which mixed feed for both red and white meat supplies. Scientists now know that very small quantities of BSE infected material can cause the disease in cows and this is thought to be the likely reason why figures are rising rather than falling. Earlier this year the Government brought in very strict controls on the meat and bonemeal sector and purchased all the meat and bonemeal which remains in the country. It did this on condition that the rendering plants here re-equip their facilities and bring them up to EU standards. It also designated that only one rendering plant could manufacture and then store meat and bonemeal made from the most at risk-organs of cattle and sheep. The skull, brain, eyes and spinal cord of all cattle and sheep are called Specified Risk Material (SRMs) and must now be processed and kept out of the animal food chain.

It could take some years-BSE has an period of up to seven years-before the benefits of these strict controls will be seen to have worked. Meanwhile, Ireland can boast that it has the strictest controls on BSE in Europe and the most expensive-we slaughter all animals in a herd where infection is found-and we can look forward to a time when we can boast that Ireland is BSE free.

EVALUATE THE ASSERTION THAT THE GLOBAL GEOGRAPHY OF DISEASE IS CHANGING RAPIDLY AS THE TWENTIETH CENTURY DRAWS TO A CLOSE

BY
Ann Coughlan 1st Year

I propose to evaluate this assertion firstly by beginning with a background outline; secondly, by taking a brief look at the causes of disease and thirdly, by dealing with the topic under a series of headings, each of which represents an area of global change which has implications for the global geography of disease. Finally, I will comment on my findings and make some concluding remarks on the validity of the assertion that the global geography of disease is changing rapidly as the 20th century draws to a close.

At the beginning of the 20th century in the developed world people were beginning to live longer. Infectious diseases such as small pox, typhoid, pulmonary disease (TB) and cholera had all been eliminated or controlled by vaccinations. Improved living conditions and medical advances accounted for this betterment with the former having the greater effect. The benefits reaped from expansion and improvement of public health services, implementation of improved sewage treatment and responses to housing plight, all ensured a downward trend in the rate of infectious disease. At this time also, the more affluent in society began to take an interest in disease eradication. They realised that infectious disease was no respector of class. To avoid contracting disease themselves and to prevent the loss of any more of their skilled labour force, they supplied some of the much needed capital to make the above mentioned improvements (e.g. the Guinness Ivy Trust Foundation in Dublin provided improved housing et. For its employees). This downward trend in infectious disease was further reinforced by advances in medicine, so that by the start of this century people were living longer and infectious disease had been eradicated. The increase in life expectancy continued during this century and is reflected in the following figures: at the beginning of the 20th century the average life expectancy in Europe was 40 years; by 1970 this had increased to 75 years. Most people began to survive to die from degenerative diseases and therefore the emphasis switched from infectious disease to degenerative disease. However, in the Third World, right up to today, infectious diseases are still the main killers and this is of major concern to developed countries in evaluating the global geography of disease.

In any discussion dealing with the global geography of disease a look at the causes of disease is necessary. However it is not the purpose of this essay to expand on these causes.

The following changes which are occurring, or are predicted to occur, have and will continue to have, major implications for the global pattern of disease.

1. Demographic Transition

'In four decades, the world's population more than doubled, from 2.5 billion in 1950 to over 5 billion in 1988'. *(Cliff & Haggett, 1995)* They state that by the end of the century the population is expected to reach 6.25 billion and 8.5 billion by the year 2025. A most important point of consideration is that 94% of the increase will occur in the developing world, therefore, more people will be living in tropical areas and exposed to infectious disease. Population pressure will lead to degradation of soil and forest. The question of just how much more sustainable development is possible in the event of such huge increases in population will have to be addressed. Consequences of an increase in world-wide population will have reverberations for all causative factors of disease *(fig.1)* e.g. the resultant increase in industrialisation will lead to increased pollution, environmental degradation, overcrowding and accordingly, increase in disease.

2. Change in the Third World

This is one of the most important considerations in the changing global geography of disease. As mentioned in the outline, infectious diseases are still the main killers in the developing world. We might then ask if they are at the same point as we were at the end of the 19th century. Despite the knowledge of the developed world, and their succession overcoming infectious disease, the whole problem in the developing world has been approached from a different angle High death rates were not countered by improvements in living standards but by medicine. As a result, the birthrate is still high. The combination of low death rate and high birth rate leads to increases in population and its associated problems. The situation is an extremely difficult one as the developing world continues to be kept in poverty and dependent on developed countries for drugs and medicine. The multinational drug companies are only too happy to maintain this supply in order to keep up their enormous profit margins and in fact spend a vast amount of money in advertising which creates the image that medicine is successful. Therefore, the developing world is in a "catch 22" situation: their population continues to increase, infectious diseases still survive due to lack of environmental improvements and their life expectancy continues to increase due to medicine (e.g. Ethiopia in 1950 had a life expectancy of thirty years, in 1990 that rose to fifty years) which means that they are also open to degenerative diseases (see table 1). Although the predictions for infectious diseases in the third world shows a downward trend, this figure relates

to actual mortality rates from infectious disease. Therefore a person could, for example, be suffering from malaria but due to medicine intake, actually survive to die from a circulatory disease.

3. Global change in Long Distance Travel.

According to Andrew Cliff and Peter Haggett, the spatial range of travel has increased ten fold in each of the last four generations so that a person's range of travel today is one thousand times wider than that of his/her great-grandparents.(1995). With each person traveling more, the international movement of people has increased dramatically at the rat of 7.5%-10% per annum since the middle of the 20th century as compared to a world population growth rate of 1.5%-2.5% per annum for the same period. *(Cliff & Haggett, 1995).*

These movements are made up of business travelers, tourists and migrants and one consequence of this longer range travel and migration is the probability of sexual unions between people from formerly distant countries. Genetic diseases from one area could be spread to a new area as a result. (Conversely, the advantage of reducing the possibility of certain diseases such as cystic fibrosis exists since such a disease is more prevalent in consanguineous unions). *(Cliff & Hagget, 1995).*

Another consequence is the exposure of people to infectious diseases while travelling, which, if they are contracted, can then be transmitted to other people in their home countries. This is evidenced by the occasional outbreak of tropical diseases in higher latitudes.

Aircraft can carry vectors from reservoirs such as happened in Geneva in 1989. Mosquitoes survived the plane journey to escape in Geneva and a malaria outbreak occurred among residents near the airport, some of whom had never been to a malarious country. *(Cliff & Haggett, 1995).* The larger the aircraft the larger the number of infected people can travel, who may not even know they are infected due to the length of time it takes for symptoms to develop. Therefore a person may complete an air journey while infected but not know until many hours after the flight has been completed.

Thus global change in long distance travel patterns have far reaching implications for changes in the geography of global disease and all of its causative factors (see fig. L, especially bo
x A).

4. Global Climatic Changes

Continued global warming, its associated climatic changes and the on-going depletion of the ozone hole both have implications for disease patterns. The latter is resulting in the increased presence of skin cancers in animals and humans.

As Andrew Cliff and Peter Haggett stress *'The magnitude and spatial manifestations of global warming are still speculative' (1995).*

Depending on the level of temperature increase, tropical diseases could spread to higher latitudes as is seen from this table. Associated with global warming are: rising sea levels, increased seasonality in rainfall and storm frequency increases, all of which would impact greatly on all causative factors of disease

However, as Haggett and Cliff stress, no precise measurements for prediction purposes are available and as such the future effects of global warming are not known. Nonetheless the potential for change exists and therefore must be taken seriously.

5. Emergence of New Diseases

The emergence of new diseases in recent years such as Aids, Lyme disease, Legionnaires' disease and Toxic Shock Syndrome together with the re-emergence of TB as one of the fastest growing diseases, is an extremely important factor in the geography of global disease. It raises the possibility of the appearance of even more new diseases and questions our capacity to understand and deal with them. Some of these new diseases account for part of the increase in the rate of infectious disease in the developed world, as referred to in the outline.

TB, which was eradicated in the developed countries, is growing at a rapid rate in Africa. This is due to the fact that the disease was never fully eradicated but instead, allayed by treatment with medicine. It can only be a matter of time, taking changes in global travel patterns into consideration, before TB returns to the developed world.

One factor which is causing concern today is the growing ineffectiveness of antibiotics in the treatment of infectious disease. The apparent capacity of certain agents to change their genetic composition and thus evade the intended effects of antibiotics is one which, if it continues to increase, could have far reaching implications for the global geography of disease.

Conclusion

Changes in global disease patterns being manifested as a result of the above mentioned global changes are still at a relatively early stage. How changes will continue to emerge depends a lot on the predictions made for each scenario. Disputes surround the speculations regarding population increase, the degree of global warming which may occur and in the long-term, travel predictions. For example, new technology is eliminating the need for business travel with the introduction of video/tele-conferencing. Business people can now conduct fully interactive business conferences simultaneously with many world-wide locations without leaving their offices.

Global warming could also have positive effects e.g. sufferers of bronchitis, asthma and recurring chest infections would benefit from such a predicted increase in temperature. The same is true for other diseases.

With regard to the emergence of new diseases, in the *Independent on Sunday* newspaper of 22nd October 1995, Steve Connor wrote the following article entitled *'Aids - The Routes of a Virus*

It is a truth universally acknowledged among scientists that they have been extraordinarily fortunate in the timing of the Aids epidemic. Had HIV made its appearance in the middle rather than at the end of the 20th century, then the genetic technology needed to identify the virus - let alone study it - would still not have been invented. It is a small consolation but one that holds out the promise of answers to the questions; why did HIV emerge now and where did it suddenly come from?'

If improvements in medical technology continue along these lines, the resultant medical advances may help to solve some of the problems in the area of new disease emergence. Remote Sensing can now also be of immense value in mapping the location of disease causing organisms at different times throughout the year.

In a recent talk in the college entitled "On Being Green", environmentalist Dick Warner pointed out that since the first satellite pictures of our planet became available (due to Space technology advances in the 1060s), and increased awareness of its fragility is beginning to permeate its population albeit at a very slow pace. If this continues to happen perhaps some positive action will occur to alleviate some of the on-going and predicted problems discussed above.
However, the foregoing comments are not intended to detract from the seriousness of the situation or indeed, to elevate the position of technology, but merely to show that not every aspect of the global changes mentioned above are negative. It is important to remember that the global changes are speculative with regard to their extent but it is equally important to be prepared in the case of the predictions being correct.

In answer to the question therefore of the validity of the opening assertion, that the global geography of disease is changing rapidly as the 20th century draws to a close, my evaluations have led me to a position of uncertainty. What is certain is that medical geography can play an important role with improved G.I.S. Application mapping. This type of spatial analysis combined with an Ecological approach and especially a commitment to tackling the environmental problems of the developing world, could help to ensure a healthier world for all.

CLIMATE CHANGE UNDER THE IGBP

by

Tom Corbett, 3rd Arts

"to describe and understand the interactive physical, chemical and biological processes which regulate the total Earth system, the unique environment that it provides for life, the changes that are occurring in this system, and the manner in which they are influenced by human actions." (Ireland and the Global Change Programme, 1991)

Introduction

The largest and most ambitious scientific research project ever undertaken on a global scale lists the above as its principal objective. Few incline to have heard of the *International Geosphere-Biosphere Programme on Global Change (IGBP)* or indeed are aware that Ireland is a participant. The focus of this essay, consequently, will study the origins of the IGBP and outline some of the reasons for its foundation. A brief assessment of the programme, its management and its funding will be followed by examination and discussion of the principal scientific projects under its authority. The threats posed by Asia to the global balance will be highlighted and a conclusion will consider reasons for Ireland's admittance to the programme and her role, if any, within it.

The need for a global programme

The Earth's environment is a complex system of interacting physical, chemical and biological forces which between them constitute a fragile balance *(Ireland and the Global Change Programme, 1991).* It was out of a growing plethora of abuses against the Earth's environment in the post World War II era that led to the establishment in 1986 of *the International Geosphere-Biosphere Programme on Global Change.* Its objective: to harness a plan to develop a global model of the Earth's environment which would eliminate, or at least retard the causes of global change while in tandem researching and predicting likely future trends.

With the advent of the industrial revolution in the latter half of the eighteenth century and the subsequent population growth and industrial development it precipitated, the Earth environment has, through to this decade, suffered from both natural and anthropogenic shifts in biochemical cycles. Documented evidence on a global scale continues to increase, showing augmenting ozone layer depletion in the Antarctic region particularly, plus the steady accumulation of greenhouse gases in the atmosphere. Local effects are felt in pollution of the Environment along with deterioration in land conditions associated with highly populated regions often where heavy industrial activity occurs. Irreversible changes, long recognised by scientists have already been set in motion leading to global mutations such as sea-level rise and changes in meteorological patterns with consequences for a higher and more rapid frequency of natural disasters. Scientists still admit their limited scientific knowledge of the complex processes at work, be they attributable to human activities or simply natural processes. It is this limitation that fuels their urgency to develop a more comprehensive understanding of these processes if the life of the Environment is to be sustained.

Key scientific projects under research by the IGBP

To attain a wider comprehension of the meteorological interactions at work in the Environment system, several research projects have been instigated to monitor water vapour, cloud-radiation and ocean-circulation feedbacks. Complex research is being conducted in monitoring centers at identified latitudes where the effects of meteorological change are significant. Following is a brief discussion of five of the 'core' projects:

Terrestrial biosphere-atmosphere chemistry interactions

The emission large amounts of CO_2 caused by fossil fuel burning and the generation of halocarbons by industry are widely accepted as being responsible for the acceleration of global warming trends. Due to their entry into the atmospheric layers, the ability of the atmosphere to shield harmful UV radiation from man and animals has lessened. Furthermore, recent alarm at ozone depletion in the polar regions has given rise to quantification and monitoring of atmospheric gas levels. Never before has there been such an intent for greater understanding of the meteorological and chemical processes which regulate the composition of and their reaction towards trace antropogenic gases in the atmospheric layers.

Marine biosphere-atmosphere interactions

As 70% of the Earth's surface is water, it plays a dominant role in the behavior of climate not least by being a significant contributor of carbon dioxide to the atmosphere. However, because this exchange is not yet fully understood, the IGBP has identified the behavior of oceans as a study for the aggravation of the Greenhouse Effect. A case in point is that higher pressure gradients which lead to increased winds and subsequently greater wave heights are the result of major fluxes of energy from the ocean to the atmosphere in the form of water vapour. Until more is known about the way in which oceanic processes influence and respond to changes in climate many coastal zones of high population density will suffer intrusions or risk complete inundation.

Biospheric aspects of the hydrological cycle

Biospheric effects to the hydrological cycle can be determined by close examination of the physical and biological processes which form a complicated interplay between land and atmosphere. By researching this interplay on a local, regional and global scale in relation to soils, vegetation and atmosphere, the IGBP has acknowledged the need to comprehend further how vegetation interacts with the water cycle. Satellite imagery is a significant source of data for the IGBP for the escape of water from different soil types under varying condition of vegetation.

Effects of climate change on Terrestrial Ecosystems

Over the next fifty years, predicted global warming of 2-4.5° C will have a profound effect on today's climatic patterns with consequences for the alteration or elimination of terrestrial ecosystems. We can expect the global ecosystem to produce negative feedbacks due to these changes. To counteract this, the development of new crop varieties adaptable under climatic extremes and capable of adjusting to the metamorphosis in land usage is already underway but it needs to be enhanced. Ireland's interests in this regard are paramount with its large agricultural base which, if threatened, poses serious economic implications for the future.

Global Analysis, Interpretation and Modelling

The IGBP has instigated procedures to co-ordinate internationally researched data on environmental and meteorological observations into a worldwide accessible databank. The use of standardised monitoring techniques and remote sensing by space satellites are used to achieve this. This kind of work supercedes any previous international scientific collaboration which before had failed to unite scientists in different countries working in different disciplines and employing a variety of instrumental techniques. Clearly, the Secretariat of World Scientists recognises that a systematic approach must be pursued in relation to research activity if its objectives are to succeed. It follows then, that conformity to standard agreed practice, the containment of proper quality control procedures and the proper documentation of findings to be made widely available are stated as a precedence by the IGBP (*Ireland and the Global Change Programme, 1991).* In response, advanced information systems have been adopted for the acquisition and storage of the vast amounts of measurements and research findings which will be generated. Additionally, swift and easy access by world scientists to these records has been implemented.

Threats Posed By Asia To The Global Balance

The continuous growth of Asia's economy where half of the world's population resides has undoubted repercussions for the increased mobilisation of carbon, phosphorous, nitrogen and sulphur. High growth trends in Asian energy use within the agricultural and industrial sectors in succeeding decades are inevitable leading to augmented mutations in natural cycles at local, national and international levels. Reliance on the use of fertilisers will increase due to rising populations and reduced carrying capacity of land surfaces thereby becoming deficient in the supply of nutrients to grow food. In 1990, for example, Asia accounted for almost 45% of all nitrogenous fertiliser used worldwide; by 2020, this figure will rise to 65% De*ekshatulu B.L. & Nash S., 1995).* Such threats by Asia to the biochemical cycle precipitated the SAC to convene its latest two yearly council in Beijing during October, 1995. Of primary importance in this regard was the exchange and collaboration between Asian scientists researching global change and their western counterparts whose work has concerned Asia. According to Richards (1995) the total area of land under forests and wetlands has fallen by 47.75% between 1880 and 1980. He cites human actions in southern Asian countries such as India, Bangladesh, Thailand, Malaysia and Indonesia as being responsible for their conversion from a rich biomass ground cover to a severely depleted one inside 100 years. Such changes in land use have resulted in an estimated emission of 29 x 10^6 T of carbon to the atmosphere this century alone (1995). But it is the perilous greenhouse gas methane which has significantly wider implications for destruction. It is produced in rice-paddies and released to the atmosphere through ebullition and rice plant mediated diffusion. A recent continental expansion of irrigation to increase production of wetland rice has augmented methane fluxes to the atmosphere from the rice fields. On a positive note however, the development and implementation of technologies in accord with sustainable increasing rice production holds much optimism for the future *(Heinz-Ulrich Neue, 1995).*

Ireland and the IGBP

Ireland's fine tradition of scientific research into environmental issues has gained international respect in the past two decades. The relatively unpolluted atmosphere and unspoiled habitats that contribute to the rich value of life here are of national concern and warrant protection. But the effects of increasing industrialisation at home and the spiral from environmental hazards originating abroad which drift onshore place that protection under threat.

Ireland's participation and contribution to the IGBP since the inception of an Irish National Committee in 1988 and its later affiliation to the programme is admirable. In recognition of her unique habitats, a rising number of prominent foreign scientists visit Ireland periodically to fulfill research projects and

collaborate with their Irish counterparts. Under the IGBP on Global change they monitor Irish atmospheric/land atmosphere fluxes, study marine, coastal and continental shelf ecosystems and gather environmental data to aid the reconstruction of pasclimates *(Ireland and the Global Change Programme, 1991).*

Conclusion

Today the struggles of global politics to address prolifically the natural and anthropogenic abuses to the Earth's environment has incited a policy approach by scientists from all disciplines worldwide. Science offers a better chance of success provided it emphasizes the social dimension of climate change. It must ensure that knowledge flows between the Science community and the general public motivating thinking which will improve environmental awareness and enable mankind to live in harmony with the Earth. The adoption of strategies to counteract existing and potential challenges must be orchestrated. I argue that the *International Geosphere-Biosphere Programme on Global Change* is aiming to accomplish these goals through the accumulation and supply of scientific research information, improved educational resources and thoroughly focused research and development. By taking the initiative to understand further the interactions between the physical, chemical and biological elements that regulate the Earth environment system its role is assured at least beyond the dawn of the next century.

THE PLANNING SYSTEM AND ATTITUDES OF PLANNERS TO BUILDING CONSERVATION

By
Emer Eddery, BA

Irish planning has been referred to as being 'amongst the most democratic of systems to be found anywhere' MacLaran, 1993: 79). This statement however should not take away from the fact that our system has encountered numerous and various problems over time.

Recent rezoning scandals have brought the system into disrepute. In the earlier half of this century housing problems and slum clearance were two issues of much concern. These, along with other important planning issues led to the Town and Regional Planning Act 1934 (Bannon 1989).

The Local Government (Planning and Development) Act 1963 repealed the Town and Regional Planning Acts of 1934 and 1939 (Nowlan 1989). Local government in Ireland has had much of its power centralised to national level and it carries out relatively few functions in comparison to its European counterparts. One of the primary functions of local government however is planning. In Dublin county there are now four recognised local authorities. These are Dun Laoghaire-Rathdown, Dublin County Borough, Dublin Fingal and Dublin Belgard. The planning and Development Act requires that each local authority produces a development plan, to be revised every five years (Grist, 1983). The practicalities involved in planning have meant that a review generally takes longer than five years. The development plan consists of policies and objectives of the local authority along with relevant maps. Under section 77 of the Act the local authority is encouraged to engage in development, but due to a lack of financial resources this right has not been exercised very often.

Developers must obtain planning permission for proposed developments and planners must ensure that all proposals are in line with the development plan. Under the 1934 Act the onus was on the developer to ensure that prior to the planning application the site was zoned for the particular type of development. This approach would appear to be more economical, in terms of time and money for the planning authority.

Planning decisions may be appealed by application to An Bord Pleanala. The Irish planning system is unique in that third party planning appeals may also be made. Many criticisms of this aspect of the system have been highlighted as documented by McGuirk (1991). She found that public participation was easier for the middle class than the working class and that planners felt they represented the public and so the public did not need to speak.

A major loophole in the planning system is the provision of compensation. The basis of this is that 'The constitution contains a guarantee that the state shall not attempt by law to abolish the right to private ownership of property. The basis of compensation is a recognition that planning permission must be refused in certain cases, but the persons thus denied the development potential of his property should be compensated. Planning authorities tend to grant permission in certain cases to avoid incurring massive compensation claims. Between 1964 and 1987 the total amount paid in compensation was £135,000 but outstanding claims for compensation amounted to £12 million in 1987 (MacLaran 1993).

The 1963 Act set out four objectives: flexibility in the planning system; promotion of industrial and commercial development; preservation and improvement of amenities and the establishment of a compensation system. In 1982 a fifth objective was added concerned with protecting the natural and built environment. An examination of the literature outlining the views of gives some insight to their attitudes towards conservation. There is an extensive range of literature on the area of conservation much of which is written by planners.

'Although there is a clear relationship between the physical form of a city, its buildings and patterns of streets and spaces, and the functions that a city performs, the physical fabric commonly outlives the functions for which it was created' (Burtenshaw, 1981: 144). Conservation policy in the Dublin city Development Plan 1991 covers many areas. For the purpose of this essay it is only necessary to focus on the conservation of buildings.

Conservation is not a new phenomenon. Over the centuries many buildings have been used for functions they were originally not intended for. An apt example of this is the Parliament Building in College Green which is now used by the Bank Of Ireland. The Dublin area has many eighteenth

century buildings of value but it has also lost many in favour of modern buildings.

McDonald (1985) catalogues developments in Dublin from the 1950's to the early 1980's. He is critical of the manner in which many fine Georgian and Victorian buildings were demolished only to be replaced by modern buildings which were uncharacteristic of the local area and often very much lacking in architectural significance. The increased demand for office space in the 1950's and 1960's led to a rapid increase in the construction of office blocks. These were preferred to older buildings because of the need for larger open spaces and a flexibility within the building to allow for change.

The Corporation began to list buildings of significance in their 1971 Development Plan. Previous to these lists being put in place the demolition of a building did not require planning permission. There are many anomalies in these lists which need to be clarified. Since the 1971 plan there have been eighty buildings demolished that were listed by the Corporation. Obviously these lists are not binding. McCarron (1986) feels that listed buildings should be considered in the 'wider context' of the area in which they are situated. The area should reflect the prestige of the building itself. He also feels that there are areas which do not have listed buildings but are important in civic design terms. These proposals are dealt with by the 1991 Development Plan policy which defines Conservation Areas and approaches to be taken by the Corporation in dealing with such areas.

Another problem with listed buildings is that all those in private ownership must be maintained by the owner and because of this financial burden many buildings have deteriorated. They may eventually be demolished as they are considered dangerous. The local authority does fund some maintenance and repair of these buildings but the fund does not meet the demand of the listings by any means. In most other European countries there is a substantial fund for preservation. A major problem in Ireland is the fact that compensation claims loom over the local authority and this results in a situation where valuable buildings are sacrificed to avoid further financial burdens for the local authority. The private sector is reluctant to inject finances into conservation. A primary reason for this is that the incentives simply are not great enough. In the 1986 Urban Renewal Act there is no inbuilt incentive for conservation. This is needed to create an environment in the development world that promotes activity in conservation. The perceptions of the financial institutions are that it is more expensive to refurbish, the space provided is poor and inflexible, and these buildings are more difficult to let or re-let. These attitudes prevail because of a perception that 'modern buildings are trouble free'. However McDonald (1989) points out that nearly two dozen modern buildings required major structural repairs in the last two decades while many Georgian buildings still stand strong after two hundred years. If an old building is to be restored and conserved for further use it must comply with building regulations. As a result of this the nature of the building could be compromised. The Corporation is pleased by the interest of individuals and groups, such as An Taisce in conservation. This has helped both sides to understand the views of the other. An Taisce was formed in 1948 and has been very active in its aim to conserve the built environment and has helped to increase public awareness. It could be said however that the greatest contribution that could be made to conservation would be a greater involvement by the public in the continuing life and protection of our listed buildings and historical areas.

From the literature it can be seen that planners have a positive attitude to conservation and do favour it in general, but there are many factors which hinder conservation. The issues of listed buildings, costs involved in conservation, financial support, departmental regulations and other personnel who are influential in the conservation field are all issues which influence building conservation and the attitudes of planners to the area.

o"o"o"o

"Did you say Fran was singing?"

Dermot, Brendan and Martin at the recent Geog Soc Debate. Brendan was the Chairperson for the evening

The Geography Society of Ireland

Cumann Tireolaiochta na hEireann

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

Meetings

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

Field Trips

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

Publications

The society's principal publications are the internationally known journals, Irish Geography and Geonews. Members receive both of these free of charge and may also obtain some journaks 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 material reviewed in Irish Geography. The Geography Department Librarian at Trinity College also acts as Honorary Librarian to the Society and may be contacted at 01-772941 ext.1454.

Membership

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

Answers

'Know your Dublin' Quiz	'Irish Geography' Quiz
1.Chapelizod	1. Cork
2.Dolphin's Barn	2. Limerick
3.Blackrock	3. Athy
4.Newcastle	4. Abbeyleix
5.Stoneybatter	5. Gorey
9.Ringsend	6. Bunratty
10.Leopardstown	7. Lough Foyle
12.Harolds Cross	8. Belfast
13.Coolmine	9. Wicklow
14.Ballsbridge	10. Coleraine
15.Crumlin	
16.Swords	
17.Windy Arbor	
18.Knocklyon	
19.Kilmainham	
20.Rathmines	
21.Finglas	
22.Lucan	
23.Stillorgan	

TOP TEN REASONS WHY STUDYING IS BETTER THAN SEX!

10. YOU CAN USUALLY FIND SOMEONE TO DO IT WITH.

9. IF YOU GET TIRED, YOU CAN STOP, SAVE YOUR PLACE AND PICK UP WHERE YOU LEFT OFF.

8. YOU CAN FINISH EARLY WITH-OUT FEELINGS OF GUILT OR SHAME.

7. WHEN YOU OPEN A BOOK, YOU DON'T HAVE TO WORRY ABOUT WHO ELSE HAS OPENED IT.

6. A LITTLE COFFEE AND YOU CAN DO IT ALL NIGHT.

5. IF YOU DON'T FINISH A CHAPTER YOU WON'T GAIN A REPUTATION AS A "BOOK TEASER"

4. YOU CAN DO IT, EAT AND WATCH T.V. ALL AT THE SAME TIME.

3. YOU DON'T GET EMBARASSED IF YOUR PARENTS INTERRUPT YOU IN THE MIDDLE.

2. YOU DON'T HAVE TO PUT YOUR BEER DOWN TO DO IT.

1. IF YOU AREN'T SURE WHAT YOU'RE DOING, YOU CAN ALWAYS ASK YOUR ROOMMATE FOR HELP!