NORTH AUSTRALIAN RESEARCH

SOME PAST THEMES AND NEW DIRECTIONS

EDITED BY IAN MOFFATT AND ANN WEBB

Australian National University
North Australia Research Unit
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NORTH AUSTRALIAN RESEARCH:
SOME PAST THEMES AND
NEW DIRECTIONS

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Ian Moffatt and Ann Webb

NORTH AUSTRALIA RESEARCH UNIT
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The essays in this volume were to form the North Australia Research Unit's (NARU) annual conference to be held in Darwin in November 1990. The theme of the conference was to be NARU research in north Australia: past trends and future possibilities. The original intention of the conference was to present a sample of the research into north Australian topics undertaken at NARU from 1981 to 1990. The papers were, as far as possible, to report current research, evaluate past work and look ahead imaginatively to identify new lines of research. This decadal period represents both the term of office of the then Executive Director Dr Peter Loveday and, to a large extent, the research he helped to foster and encourage. Unfortunately, this conference did not take place due mainly to the untimely illness of Dr Loveday who has subsequently retired. Nevertheless, many of the contributors had already prepared their papers and were willing to allow NARU to publish them. In a sense, the essays act as a record of some of the research undertaken during Peter's Executive Directorship. His colleagues past and present wish him well in his retirement.

NARU's research brief is defined as the study of socio-economic problems associated with the consequences of development now taking place in north Australia. The geographical area of interest remains the whole of northern Australia, broadly defined as that part of the continent north of the Tropic of Capricorn, although this was not to be seen as a rigid boundary. The primary area of interest at NARU is in the social sciences, although work into the natural sciences is not excluded. At least six broad areas of study have been undertaken in the past decade, 1981-1991 (cf Appendix 1). These include research into politics with reference to elections, institutions and local government; economic development of the North including land tenure problems, mineral extraction and the use of the ORANI-NT economic model; studies into Aboriginal society and its reactions to non-traditional ways of life; population and migration in north Australia; research into small towns including service provision; and an extensive multidisciplinary study of the coastal wetlands in the Top End. Many of these areas of study are reflected in the essays in this volume.

The essays begin with Young's comparative study of aboriginal development in remote areas of Australia and North America. By focussing on detailed case studies of the specific political and economic contexts it is argued that our understanding of aboriginal peoples in remote areas of Australia and North America have been greatly enhanced. A similar detailed case study approach is adopted in chapter two by Hudson in her study of tourist development and community attitudes in Broome and Exmouth, north Western Australia. In both case studies a conflict between those inhabitants who are likely to benefit from the development process and others who are concerned or affected by the destruction of their local, cultural and physical environments can be perceived. In chapter
three Holmes makes a critical appraisal of land tenures in the Australian pastoral zone. The geographical scale and over-extension of privatisation of Australian land tenure leads to environmental and socio-political pressures which vary between the States and the Territory. The critical appraisal of land tenure in the pastoral zone leads to some policy directions being specified. In the fourth chapter O'Faircheallaigh examines some of the economic consequences of mineral development in north Australia. In particular he notes the impact of mining activities on employment and incomes in the area but shows that mining does not create many regional multipliers through the Northern Territory economy. He argues that new research aimed at examining changes in mineral employment and investment through time is required. He also notes that the relationship between mining enterprises and regional economic development policy needs further consideration. In chapter five Woodroffe and Mulrennan describe some of the changes in the past, present and probable future extent of tidal influence on the Northern Territory's coastal wetlands. This paper reviews the changes in the coastal environment for the past 10,000 years and notes that despite the uncertainties over sea level rises associated with the Greenhouse effect, further detailed research is required to successfully manage individual wetland areas in the Top End.

Whilst the case study approach is an essential aspect of NARU's research, it is clear that recent work has used sophisticated methodological and technical approaches in some aspects of the research programs carried out in north Australia. Chapter six, for example, reviews the types of techniques available for regional economic analyses. In particular Bandara illustrates the use of the ORANI-NT input-output model to the economic behaviour of various sectors of the Northern Territory economy. He suggests that the money invested in developing the computer programs and data collection has been inefficiently used by the Northern Territory government which has not supported these models with trained personnel. It is also noted that the techniques described in Bandara's chapter need to be cast into a dynamic framework. This theme is being actively pursued at NARU. In chapter seven Moffatt outlines an ambitious attempt to bring together both economic development and ecologically sound practices in a dynamic model of sustainable development, which, it is anticipated, will be linked to a geographical information system (GIS). This recent research indicates a new and complementary direction of research now gaining momentum at NARU.

One of the major themes of NARU's research has been an examination of political developments in north Australia. This theme is well represented in the essays by Loveday's overview of a political history of the north since the second world war. In chapter eight he argues that there are differences in climate, geography and in the attitude of north Australians and that these differences do matter in political affairs. In the following chapter Jaensch examines some of the political research undertaken by NARU. He suggests, among other things, that thematic and comparative studies of political topics in the north should be continued including the establishment and use of a data base for further study. One of the more vexed political questions in the Northern Territory revolves around the path of constitutional development for the Northern Territory. In chapter ten Heatley discusses the hurdles confronting any attempt at constitutional change.
in the Northern Territory to make it the seventh state in Australia. The final chapter continues this theme of constitutional changes by exploring the futures of federalism and indigenous peoples in Australia and Canada. Drawing upon his experience in both Canada and Australia, Jull argues that 'the Constitution is the supreme cultural statement of any country; it is the ideal place for Australians to come to terms with the millenia of natural history as well as the mere two hundred years of European habitation'. Clearly, the area of political change is likely to be a major research topic in the next decade.

It is, of course, difficult to predict the new directions of research that may emerge from NARU. No doubt as economic changes affect north Australia, new political, socio-economic and environmental problems will arise. Several research themes are already being developed at NARU as we enter the beginning of this, the last decade of the twentieth century. These themes include policy implications of major environmental problems such as the greenhouse effect, coastal management and sustainable development. Similarly, the continuing interest in mining, rural development planning, land rights and Aboriginal affairs in north Australia are actively being researched. In the domain of political studies, detailed work into constitutional reform is underway drawing upon some cross-cultural comparisons from other advanced countries. Clearly, as this collection of essays demonstrates NARU researchers, including visiting staff and dedicated support staff, have been heavily involved in research associated with the continuing development in north Australia.

Ian Moffatt & Ann Webb
Editors
CHAPTER ONE
COMPARATIVE ISSUES IN REMOTE AREA ABORIGINAL* 
DEVELOPMENT: AUSTRALIA AND NORTH AMERICA

Elspeth Young

The development of the remote areas of industrialised countries such as Australia, Canada and the United States has long been a concern of many people — politicians, business people and entrepreneurs, government administrators, academics and ordinary citizens, particularly the local residents of these regions. Problems discussed have focussed primarily on the economic or strategic implications of development; the exploitation of the renewable and non-renewable resources of these sparsely settled regions, or the establishment of an infrastructure which would make these regions less vulnerable to invasion from beyond national boundaries (Young 1991b). Social issues, primarily how such changes affect the resident population and the extent to which they can realise their lifestyle aspirations, have until recently received much less attention. And in general the particular problems, both economic and social, affecting the indigenous aboriginal* populations of the North American Arctic or the Australian outback have in the past scarcely been acknowledged. For example, a collection of studies of remote area development in Australia and the United States published only a decade ago (Lonsdale & Holmes 1981) contains no contributions concerned specifically with the Aboriginal, Indian or Eskimo people. Yet in both of these highly developed, industrialised countries a significant proportion of the population in remote areas belongs to these indigenous minority groups, and policies promoting development in such regions should cater for their needs.

The work of the North Australia Research Unit (NARU) during the 1980s, conducted both by its own resident academic researchers and by visitors, has gone far in redressing this imbalance. In reviewing this work, this paper focuses primarily not on the details of the varied research projects conducted during that period but on the common themes which have emerged. It argues that these themes provide an essential framework for the establishment of guidelines for planning for the future of the aboriginal peoples of these regions, guidelines of considerable relevance in the formulation of development policies.

Development — a brief preamble

Development, as discussed here, is defined as an improvement in the human situation, both from an economic and social perspective. Economic improvement includes better job opportunities, increased cash earnings, the growth of commercial business enterprises...
or, of particular relevance to many aboriginal people in remote areas, enhanced chances for subsisting directly from the renewable resources of the land. Social improvement includes the provision of better services such as health, education, welfare or recreation, and should also decrease social stresses causing conflict both at family and community level. These two components both complement each other and are also inextricably interlinked. Thus, on the one hand, economic development is affected by levels of education, and, on the other hand, improvement in health and well-being is strongly influenced by economic considerations. Recognition of the important linkage of social and economic factors has underpinned much of NARU's work on aboriginal economic development in remote areas. NARU researchers have also paid attention to the question of cultural influences on how development is assessed — whether it is measured from the point of view of the outsiders (non-aboriginal government officials, business people and politicians) or the insiders, the aboriginal people living in remote areas.

Aboriginal development research at NARU

In 1981 NARU held a seminar on 'Service Delivery to Remote Communities in Australia'. Concentrating primarily on problems affecting Aboriginal communities, it drew a diverse group of participants — Northern Territory politicians interested in opinions and studies of one of their most overwhelming and intransigent problems, the difficulties presented by sparse population, vast distances, high costs and cultural diversity in their newly self-governing region; members of Aboriginal organisations preoccupied with issues such as land rights, and overcoming the disadvantage revealed by the poor health, education and economic status of their constituents; Commonwealth and Northern Territory government officials, charged with providing services and supporting the development initiatives shown by people in remote areas; non-Aboriginal professionals, such as school teachers, nurses and accountants, responsible for delivering these services within the communities; academics interested both in the research needs and policy related research; and the participants themselves, Aborigines living in the remote regions. The topics covered, as the proceedings showed (Loveday 1982a & 1982b), ranged widely, including not only the delivery of conventional services such as health and education but also less commonly discussed elements such as legal services, community involvement in coastal surveillance and defence, and banking and financial services. Economic topics, such as the use of mining royalties paid to Aboriginal organisations, were also covered. A number of presentations concentrated on the particular problems faced by small, very remote and recently established Aboriginal communities — the outstations. These included basic facilities such as the provision of water, communications and store foods.

This meeting provided, as a number of participants commented, the first north Australian forum for general discussion of Aboriginal service delivery and development. Not only was a wide range of different views and experiences presented but some unexpected common ground emerged between individuals and groups formerly rarely in direct contact. Common issues which emerged included cultural constraints, often limiting Aboriginal access to services; cost restrictions, a serious problem in these sparsely settled and very remote areas; lack of flexibility at the bureaucratic end of service delivery, both in recognising the diversity of needs in different communities and in acknowledging the importance of cultural differences; and broader political and economic factors which limited the ability of those concerned with service delivery to adapt to local needs. Some contributors also discussed positive attempts to deal with these problems — the introduction of new culturally compatible training schemes for Aboriginal health-workers and school teachers; and the establishment of Aboriginal controlled schools concentrating on bilingual curricula with high levels of Aboriginal content.
This meeting merely marked the beginning of NARU's work on Aboriginal development. It continued throughout the 1980s. Relevant studies undertaken during this period include the problems of community retail stores (Young 1984); the delivery of adult education services in the Northern Territory (Loveday & Young 1984); employment and social security services (Sanders 1985; Stanley 1985a; Young 1985); economic enterprises in the Northern Territory (Ellanna et al 1988); the provision of housing in small urban communities (Loveday & Lea 1983; Loveday 1987); the development of relevant forms of local government (Wolfe 1989); the utilisation of Aboriginal land and resources (Cane & Stanley 1985); and Aboriginal mobility and its relevance for the delivery of services (Taylor 1989; Young & Doohan 1989). General studies of economic development in specific communities included Stanley (1983 & 1985b) and other related work includes that of Brady and Palmer (1984) on Aboriginal alcohol consumption and Altman (1989) on Aboriginal involvement in tourism.

These research projects were extremely diverse and were conducted under a number of different auspices. Some studies were funded entirely by NARU and the work was carried out independently. Others were government funded as consultancies; or received government support but were essentially devised and funded by NARU; and still others were conducted as consultancies for Aboriginal organisations. These differences to some extent affected both the conduct of the work and the presentation of findings. Thus some studies were more affected by time limitations than others, and therefore the amount of detailed primary research which they included varied; some focussed on recommendations rather than theoretical research implications; and some had to be conducted within guidelines set by the funding agencies — perhaps leading to restrictions on dissemination of information, or some control in the way in which the research was conducted. All were, eventually, published. And, despite their diversity, these studies revealed some common issues concerning Aboriginal development in remote areas. These are presented below.

**Factors Influencing Aboriginal development in remote areas**

Aboriginal development in remote communities is affected by a vast array of factors, both local in origin and operating externally. But, as NARU's research in this field suggests, these can be combined under only a few major headings. These are as follows:

1. The effects of physical distance, and resultant high costs of transport, communications and any other form of contact between isolated communities and centralised service centres.

2. Differing socio-economic and demographic characteristics of Aboriginal population compared with the non-Aboriginal population.

3. Cultural differences between Aborigines and the non-Aboriginal people responsible for assisting them in social and economic development.

4. Government programs and bureaucratic structures which are not really compatible with Aboriginal development goals.

5. The persistence of assimilationist attitudes and principles in the face of an avowed policy of self-determination.

All of these characteristics, although separately specified here, are inter-related, and the linkages must be borne in mind in any discussion of their origins and impact.
**Physical distance and high costs**

Physical distances and high costs undoubtedly affect every type of economic development and service delivery in remote parts of Australia. Distances between many Aboriginal communities and their service centres are vast and can only be covered by traversing rough country on unsealed roads unusable in adverse weather conditions. In areas like the Top End of the Northern Territory or Cape York in Queensland the onset of the monsoonal wet season spells the end of overland transport, and expensive air transport becomes the only practical method of coming or going for most people or goods. Overcoming these physical problems is inevitably expensive — high vehicle running costs and airfares for passengers and freight; or loss of goods in transit. High costs undermine the efficiency of commercial activities and inhibit the provision of a comprehensive spread of services. Telecommunication networks, until very recently, have also been very poor, making it difficult to maintain the vital links to central places.

Physical disadvantage was an issue raised in every NARU research project on Aboriginal development. Thus, in the provision of adult education services in Northern Territory Aboriginal communities (Loveday & Young 1984), the Department of Education was limited in its provision of an equitable spread of rural based teachers because its resources were inadequate to meet the high costs involved. Many communities had no access to an adult educator, and were disadvantaged because this inhibited people educationally and made it harder for them to carry out their planned community development projects. And since particular needs were normally relayed through the adult educator to the central office in Alice Springs or Darwin, those without this type of support person never had a chance to voice what they wanted. Often they did not even have a chance to find out what they could ask for because they lacked the relevant information. At the time of this study (1983), outback telecommunications were also very poor and rural-based adult educators themselves felt deprived, unable to communicate quickly with resource people in town, and hence suffering continually in delays with obtaining equipment or receiving answers to important queries. Other services, for example health, suffered from similar problems.

Physical disadvantage also affected economic activities. All Aboriginal commercial enterprises suffered from high costs because of distance, and, during wet seasons, complete interruption to supplies which might grind their activities to a halt. Retail stores, for example, often ran their businesses with very little margin for error, and wastage of goods damaged in transit on rough roads was common (Young 1984). Theoretically they could overcome the supply problem by buying in bulk, but in practice, because of their limited capital and inadequate storage facilities, this might not be possible. Problems such as these ultimately hurt the consumer because the first category of goods to be abandoned under these sorts of restrictions were fresh foods, and as a result the nutritional composition of people's diets in many remote communities was deficient and sadly lacking in variety. This in turn had health implications. Other forms of commercial enterprise, which like retail stores depended on imported raw materials, suffered similarly. Only when the raw material was basically local, as with cattle enterprises (Young 1988a), was the problem of high costs less severe. And even here the marketing of the product, beasts to the abattoir, cost more in the more isolated communities.

**The socio-economic status of Aboriginal people**

The socio-economic status of Aboriginal people, low in comparison with the non-Aboriginal population, also affects all elements of development. NARU's economic enterprise study (Ellanna et al 1988), for example, found that efficiency was adversely affected because of low levels of relevant skill in the Aboriginal work force, particularly
in vital areas such as management and financial monitoring. This reflected past failure to give Aboriginal people the opportunities to acquire these skills, coupled with acceptance of the belief that rapid involvement in economic enterprises would provide an appropriate channel for development. Without additional support in the form of training programs, there was no way that such an approach could succeed, and when failure resulted it was usually the Aborigines who received full blame for being unbusinesslike.

Low levels of education and skill also affected the development of better methods of service delivery because they excluded Aborigines from taking over the key positions. Thus in both health and education most of the controlling positions — nurses and doctors in the clinics, head teachers in the schools — were still held by non-Aborigines. Although schemes such as the Aboriginal health-worker training program (Hargrave 1982) had been very important in providing some skills to Aboriginal people, the process still needed to progress to more widespread true professionalisation in these fields.

Low levels of education are partly responsible for low levels of Aboriginal cash income, and hence for a chronic lack of capital in most remote communities. This, again, was found to be a major inhibitor to economic development through enterprise (Ellanna et al 1988). Because of lack of capital, Aboriginal entrepreneurs were unlikely to receive financial support through the conventional channels of banks or other financial institutions, and were therefore forced to accept money through funding bodies specifically set up for their benefit. These were predominantly under government control. Although they benefited from the lower interest rates charged on these loans, their activities also remained under strict surveillance, and their opportunities for running their own enterprises could be severely curtailed. Only those communities with access to independent sources of capital, such as that stemming from mining royalty payments in the Alligator Rivers uranium provinces were, as Altman (1983) and OFaircheallaigh (1986) have described, able to break away from this mould.

Service delivery was also affected by lack of capital. Dependence on government services meant dependence on limited resources inherently inadequate to meet the needs of the scattered Aboriginal population; only where other sources of finance were available had people been able to pay for their own services. Some Gagudju communities, for example, had used Ranger uranium royalties to pay for their own outstation schools because the government would not provide education in such small communities (OFaircheallaigh 1986).

The demographic characteristics of the Aboriginal population

The demographic characteristics of the Aboriginal population, particularly its youth and the predominance of large extended families, also affected development. This had particular implications for service delivery, especially education and health, with a greater need for remote schools in areas with high Aboriginal populations; and a complementary need for good post-natal and infant welfare clinics. Ideally these types of facilities would be provided in situ, where clients felt at home in a familiar environment, and where the family would not be split. In practice this has not always occurred. Schools, particularly high schools, have usually been centralised in distant towns like Alice Springs, alien environments for many Aboriginal students. As a result the drop-out rate has been high and educational disadvantage has been enhanced. At primary school level the main failure in service delivery has occurred in the small outstations, where younger families with school age children have been discouraged from taking up permanent residence because of lack of facilities. As a result many outstations have had abnormally old populations and their viability has been affected. Government authorities have usually justified such deficiencies in service delivery in terms of cost. However, as was suggested by NARU's
study of population mobility (Young & Doohan 1989), centralisation may also be favoured for strong political reasons. By undermining the outstation movement the reassertion of Aboriginal identity and autonomy in remote areas may also be undermined.

Aboriginal families also tend to be larger than average. This characteristic has affected housing provision, as studies of Katherine have demonstrated (Loveday & Lea 1985; Loveday 1987). The perpetual shortfall in meeting Aboriginal housing needs is in part due to these demographic factors, and cannot solely be attributed to lack of funds.

Cultural differences between Aborigines and non-Aborigines

Cultural differences between Aborigines and non-Aborigines account for many development problems in remote communities. Basically these differences underlie two different philosophies of development: that of non-Aborigines narrowly fixed on commercial success and material gain as a measure of successful advancement; that of Aborigines ranging more widely, including a social and cultural emphasis on the achievement of greater happiness, along with economic advancement in both the non-monetary subsistence sphere as well as increased benefit from cash. Since the process of development has been primarily imposed on Aborigines from non-Aboriginal society, it is scarcely surprising that failure to recognise key cultural differences between non-Aborigines and Aborigines is the basis of many problems. In terms of political and economic power, the flow has been predominantly in the one direction and the pressure on Aborigines to discard their cultural values in order to succeed in the non-Aboriginal world has been very strong. As Snowdon (1982) expressed in his discussion of Aboriginal educational needs in outstations, the attitude has been 'We've got the culture! You've got to change!'

For Aboriginal economic development in remote communities Aboriginal cultural characteristics such as the persistence of systems of reciprocity instead of an emphasis on cash profits, the desire to employ family rather than outsiders, and the close association between traditional land holding responsibility and the direction of an enterprise have all proved to be important (Ellanna et al 1988). But to most non-Aborigines such beliefs and forms of behaviour are seen as a hindrance rather than a help to business. Thus enterprises such as cattle stations have been judged as failures if they employ a large workforce of stockmen from related kinship groups rather than a small body of men, dedicated to earning as much money as possible (Young 1988a); similarly, for retail stores, the number of shop assistants employed has often exceeded that required for greatest profit-making, regardless of the fact that higher labour intensity spreads the direct benefits from employment more widely within the community (Young 1984).

Problems of cultural misunderstanding have also occurred in service delivery. It has been widely recognised that long-standing failure to improve Aboriginal health and educational standards must be partly due to the way in which these facilities are provided — Aboriginal mothers may well find a conventional non-Aboriginal run clinic intimidating and fail to seek assistance when they really need it. However some important measures have been taken to counteract these difficulties. For example, the introduction of appropriate curricula for Aboriginal schools (Snowdon 1982), or adult education which meets the needs of people who are bilingual and who have different priorities in the advancement of their families (Loveday & Young 1984) are all positive contributions. There have also been attempts to provide culturally appropriate health services in remote communities, often combining the skills of traditional Aboriginal healers along with those of professionally trained health practitioners. Aboriginal-controlled health services, such as the Central Australian Aboriginal Congress, have made important progress in this area. In the development of appropriate housing, Aboriginal ideas of architecture and planning
have been taken into account, again particularly by Aboriginal organisations such as Tangentyere Council in Alice Springs. Cultural characteristics have also played a prominent part in the planning of appropriate structures for new Community Councils (Turner 1986; Wolfe 1989), although the consequences have not always been as favourable as initially assumed (Ellanna et al 1988).

One of the main hindrances to understanding differences in Aboriginal and non-Aboriginal cultural perceptions of the aims of development is the failure to carry out appropriate consultation. While it is accepted that, for people in remote communities, linguistic barriers are considerable, the process of consultation practised by non-Aborigines, both in government and private domains, has often been perfunctory. Insufficient attention has been paid to the need for wide-ranging discussion and consensus decision-making amongst the Aboriginal group; and non-Aboriginal preoccupation with time and schedules often prevents adequate exchange of ideas.

**Programs provided for Aboriginal economic development are often much too inflexible**

Programs provided for Aboriginal economic development are often much too inflexible either to cope with cultural differences or with the diversity of situations which exist. Even though these characteristics are acknowledged there is a strong tendency on the part of policy makers to ensure that public funds are spent strictly according to preconceived guidelines, and also that policies are uniform and can be applied nationally. This is coupled with adherence to the non-Aboriginal approach to development, stressing commercial and material benefit above all else.

For development, one of the major disadvantages of this approach is that it fails to allow for the integration of social components with economic attainment. Thus enterprises such as cattle stations, stores or tourism ventures (Ellanna et al 1988) have been funded as if no social influences or spin-off existed, and when social aspects have apparently received some benefit from the enterprise this was seen as unacceptable. Similarly employment, discussed by a number of contributors in Loveday and Wade-Marshall (1985) and Wade-Marshall and Loveday (1985), was seen as having purely commercial benefits, although the social significance of, for example, increasing the numbers of people in jobs should have been obvious.

Service delivery must also be evaluated from both social and economic perspectives. Services not only provide jobs but also enhance many aspects of the lives of those without wage employment. They do not exist in a vacuum. However government funding agencies, on which service delivery organisations such as Aboriginal Councils depend, have often defined their role narrowly. Extreme difficulties have arisen when such an organisation, like the Tangentyere Council which serves the Alice Springs town camps, is threatened with large decreases in funding because some of the housing money has been used to cover related community needs such as home-makers and old people's services (Young 1988b).

The diversity of remote Aboriginal communities also causes problems in applying narrowly defined development programs. Not only are there cultural and linguistic differences between adjacent, and relatively small groups, but almost every community has a history of contact with non-Aborigines which has differed in political, economic and social terms. Thus no single policy, if applied without flexibility, could be suitable to many groups. Here the problem is rather to loosen the framework within which programs are applied, rather than to devise a host of different programs.
Assimilation policies still dominate Aboriginal development

Assimilation policies still dominate Aboriginal development, although they were in theory discarded 20 years ago. This problem, which follows logically from earlier statements concerning failure to take account of cultural differences, and the lack of compatibility between programs and what Aborigines want from development, is probably the most intransigent. It can be attributed to a number of different factors: the continued employment of government staff committed to assimilation and lacking any desire to discard these attitudes; lack of flexibility in the formulation of support structures for Aboriginal development; acceptance of the employment of non-Aborigines in managerial roles because this is easier than training Aborigines to take over; and a general perception that assimilation is more cost efficient. This last factor has exerted particularly strong pressures on Aboriginal economic development, where failure to achieve commercial success in enterprises has led to the imposition of stringent controls by government funding bodies. These bodies in turn justify this by pointing out that they are forced to show economic efficiency in their expenditure of public funds, and hence any deviation from the principles of commercial profitability cannot be accepted. For enterprises such as Aboriginal cattle stations, with strong social commitments as well as commercial aims, this may be impossible to achieve, and some have in the process lost their government funding. As they rarely have alternative sources for finance, that usually means the end of commercial operations. Although theoretically this only means the collapse of a small business which may not have earned much for the community, where Aborigines hold the land as pastoral leases rather than under unalienable freehold title, it could mean forfeiture of the land itself. This is a disastrous prospect.

Assimilation has also persisted in service delivery — in the method by which services are provided, with little attention to Aboriginal perceptions of appropriate methods; in pressure to centralise services even although the actual Aboriginal population distribution in remote regions has become more strongly dispersed; and in attempts to introduce 'user pays' systems in communities where customers lack the incomes to meet the costs involved. These points have all been raised in recent NARU studies (Ellanna et al 1988; Wolfe 1989; Young & Doohan 1989). Despite examples of cultural recognition in health and education, cited earlier, such policies still exert an extremely strong influence. Not surprisingly many Aboriginal people still feel that their moves to achieve meaningful self management are liable to be thwarted at every turn, and that ultimately the pressures on them to conform, to join the mainstream, may be too strong to resist.

Broader Implications of NARU's Australian Aboriginal development research

These common issues highlighted by NARU's research on Aboriginal development are not applicable only within Australia, but, as more recent work by NARU researchers and others has indicated, also dominate similar studies of aboriginal groups in remote parts of Canada and the United States. Their broader relevance suggests that they can be used to develop a model isolating factors which explain the development experience of aboriginal peoples in the industrialised world, and will also highlight the reasons for the persistent underdevelopment of such groups. These comparisons also provide a fertile arena for examining in greater detail how the various national and regional development policies are implemented, and hopefully discovering some solutions which have been successful in one country but not yet attempted in others.

During the 1980s the volume of international comparative social scientific research in the field of aboriginal development has significantly increased. NARU-based researchers have followed their Australian work with a number of North American studies. These
have included a study of Alaska's population (Taylor 1991); the delivery of retail services in Canada's North-West Territories (NWT) (Young 1987); the broad effects of resource exploitation on indigenous people in industrialised countries (O'Faircheallaigh 1991); comparisons of the economic implications of land rights agreements (Young 1991b); and the experiences of Canadian aboriginal peoples with political institutions. Researchers from North America — political scientists, anthropologists, historians and geographers from Alaska and Canada — have conducted Australian research on topics closely related to their previous interests in their home lands — community development and planning, the formulation of policies affecting aboriginal development, the history of colonialism, and the non-monetary, subsistence element in the aboriginal economy (Weaver 1984; Gibbins 1988; Ellanna et al 1988; Coates 1991; Jull 1991; Maas 1991).

These studies broadly confirm the importance of the main issues arising from NARU's Aboriginal research in Australia. The Canadian scene, for example, has been marked for the last three decades by moves to replace full aboriginal assimilation with a process of self-determination and self-management. But progress has not been consistent. The 1969 White Paper on Indian Policy, analysed by Weaver (1981) and the 1985 plans to force aboriginal development into the mainstream (The Nielsen Report, Weaver (1986a & 1986b)) were both met with a furor of protest by Indian and Inuit groups because they obviously focussed on assimilation. And aboriginal responses to more recent pressures to adopt full community government under the Department of Indian and Northern Development (DIAND) have, like those of their Northern Territory counterparts faced with the option of the Community Government Scheme, been wary because of suspicion of hidden assimilationist agendas along with a decrease in Federal government support. Cultural differences also pervade the scene, and aboriginal Canadians have, like Aborigines, proved remarkably resilient in maintaining their culture in the face of strong assimilationist pressure wielded through education (Coates 1988). Government programs and bureaucratic structures have also, as in Australia, been in the past firmly grounded in non-aboriginal concepts of development and similar problems of incompatibility between programs and aboriginal aspirations have arisen. And development in both Canada's Yukon and North-West Territories and in Alaska, where, as in Australia, aboriginal peoples form a high proportion of the population, must be able to cope with physical disadvantages which are perhaps even more extreme than in Australia — the long Arctic winter on top of vast distances, limited resource base and sparse populations. The two brief case studies which follow — one of the delivery of retail services in NWT and Alaska; and one of economic enterprise support from Canadian federal government programs — illustrate these points.

Case-study 1 — Retail services in NWT and Alaska

The delivery of all basic services to aboriginal people in both Canada's North-West Territories and in the state of Alaska is particularly affected by three of the major characteristics revealed by NARU's Australian research — physical disadvantage, distinctive aboriginal demographic and socio-economic characteristics, and cultural beliefs and traits which require sensitive understanding on the part of non-aboriginal administrators. These regions, apart from sources of mineral wealth or renewable resources such as timber or fish, are relatively poorly endowed for economic development, and their vast distances and harsh climate inhibit population mobility and add considerably to the cost of transport for both humans and goods. Their sparse populations, grouped into a number of small communities primarily aboriginal in origin, or in non-aboriginal controlled mining towns or service centres, need services but the provision of these is inevitably costly. Retail services, the staff of life in most remote aboriginal communities today, provide a good example of the problems involved.
To outward appearance, shops in remote NWT communities such as Cambridge Bay or Alaskan villages like Kiama look similar — they all sell a fairly wide variety of package goods, a range of basic hardware, clothing for both the Arctic winter and the short, often damp, summer, consumer goods such as TVs, washing machines and equipment for the modern day hunter — guns, fishing lines and nets, outboard motors, motor tricycles and skidoos. Fresh and frozen foods are less abundant, and often not of high quality. All prices are high compared with those in mining towns and service centres, and astronomical compared with costs in southern cities. In most shops the managerial staff are non-aboriginal incomers, but less highly skilled jobs are held by aboriginal Indian and Inuit/Eskimo. Shop operations are to some extent affected by community kinship networks, particularly in employment. All stores suffer from cash flow problems, partly caused by the demand for credit operations from their relatively impoverished customers, but also from the lack of banking facilities which inhibits the flow of ready cash into and within the community. Altogether, because of low levels of cash income, most of these stores tend to operate on very low profit margins, a factor which certainly contributes to their chronic financial vulnerability. Such characteristics, as I have described elsewhere (Young 1987) would also be typical of most stores in remote Aboriginal communities in Australia's central desert or north. But there are also some important differences.

In both Alaskan and northern Canadian settlements aboriginal owned stores have to compete with retail enterprises owned and run by non-aboriginal people. Until recently, in Canada, the main competitor has been the Hudson's Bay Company and although that component of the Bay was sold in 1988, their successors, Northern Stores Inc., operate in a very similar way. Altogether the significant cost savings achieved by the scale of these large operations have enabled them to function more efficiently and with greater stability than their aboriginal counterparts. In Alaska the competitors are individual non-aboriginal entrepreneurs, free to establish their own businesses if they own property in the village. Here the difference in the land-holding situation largely explains the existence of these competitors. In contrast, in those parts of Australia where Aboriginal rights to land have been granted (for example, in the Northern Territory), the Aboriginal community has the power to veto any non-Aboriginal person from setting up a shop.

The existence of such competition is partly responsible for the existence in both Alaska and Canada of extensive aboriginal-owned cooperative organisations ANICA (Alaska Native Indian Cooperative Association) and Arctic Cooperatives Limited (ACL) respectively, which not only provide streamlined and cheaper bulk purchasing arrangements but also provide managers, run management training courses and generally strive to overcome some of the basic problems which would make it very difficult for small individual entrepreneurs to survive in these environments. While similar approaches have been discussed and implemented in different parts of remote Australia, as with the Arnhem Land Progress Association, they have been attempted on a much smaller local scale. Reasons for the difference in approach probably include the early establishment in Canada of producer cooperatives, marketing goods such as fish and artefacts from remote Indian and Inuit communities and later developing conventional retail trading functions; competition from the Hudson's Bay Company which forced small operations to become more cost efficient; and a cooperative tradition which, on a national scale is particularly strong in Canada.

Characteristics such as physical and aboriginal socio-economic disadvantage and cultural differences undoubtedly affect aboriginal development in remote parts of North America. Because of them the services which people receive may be poorer, more expensive and less reliable than those available to non-aboriginal residents, and are certainly deficient compared to what is offered to people in southern states and provinces. This affects not
only the quality of life of clients, but also their ability to participate in other related opportunities available to them. Stores play a dual role here. They provide a service but are also commercial enterprises, potential contributors to economic advancement as a whole. In this second role they are, like other enterprises, affected by the broad government imposed framework within which they must function. This framework, discussed below, illustrates the two other broad factors apparent in Australian studies of remote area aboriginal development — the suitability of government programs and the perpetuation of assimilation.

Case-study 2 — Aboriginal Economic Enterprise support through the Canadian Federal Government

Economic enterprises in remote Canadian aboriginal communities, facing all the problems summarised above, are generally not large commercial successes, and often must be heavily subsidised if they are to survive. That subsidy usually comes from public funding, disbursed through government controlled organisations. As such they are strongly affected by government policies and the programs by which these are implemented. As in Australia, assimilationist approaches continue to form an important component of such programs. And even if not overtly assimilationist in the conventional sense these programs tend to be framed according to non-aboriginal rather than aboriginal paradigms.

Federal government support for aboriginal development through economic enterprises was traditionally the responsibility of DIAND, and primarily consisted of low interest loans for businesses which, although theoretically judged to have a chance of commercial success, were often incapable of paying them back. But that enterprise support role was essentially subordinate to DIAND's main role of welfare and service provision. Enterprise therefore played a minor part in DIAND's funding activities. The other federal department involved in enterprise support was Industry Science and Technology (DISTC), which from the 1970s ran a number of provincial based programs particularly aimed at improving economic opportunities of people, especially those of aboriginal origin, living in remote and rural areas.

During the 1980s significant changes to both DIAND and DISTC programs have radically altered enterprise support arrangements. In 1983 DISTC introduced its first national program, the Native Economic Development Program (NEDP). This program aimed primarily at supporting commercially successful ventures, and to promoting methods whereby aboriginal entrepreneurs would be able to join the financial mainstream, receiving their support through banks and financial institutions rather than through government. These aims could be interpreted as largely assimilationist. During the five years of its existence, until 1989, NEDP funded over 400 direct loans to aboriginal enterprises. On the limited evidence available, these loans adhered closely to their strict guidelines on proven commercial viability and it seems that many small aboriginal businesses had little chance of gaining financial assistance, especially if they were in the formative stages. Many of those receiving support were already established and had a proven track record. Thus, in this part of the program, NEDP did not seem to be effective in increasing the extent of economic development in the aboriginal community at large. Other components of the program perhaps offered more hope. Strong emphasis was also placed on the establishment of Native Development Corporations, regionally defined bodies ostensibly under native-control and responsible for lending money to applicants in the aboriginal community at large. By 1989 thirty one of these corporations, covering many parts of Canada, had been set up and although many were still too new to allow assessment of their effectiveness, it seemed that they would, by removing the responsibility for overseeing loans directly from government, be better able to meet the needs of their borrowers. Theoretically at least they were aboriginal controlled.
The splitting of responsibilities for economic enterprise support between government departments caused considerable confusion and was also felt to be inefficient. In 1989 DIAND and DISTC joined to administer the new Canadian Aboriginal Economic Development Strategy (CAEDS), replacing NEDP and other arrangements. This strategy also emphasises commercial viability but there is room to manoeuvre in the interpretation of guidelines, for example in its economic planning and development section. It seems likely, however, that commercial success will still be the chief criterion for funding. However the Development Corporation idea has been fully supported and it is through this avenue that aboriginal aspirations may be able to receive more appropriate recognition. The directors of a Corporation must determine guidelines for funding, and may therefore be able to take other aspects, such as community well-being into account. Thus the match between CAEDS form of support and that favoured by aboriginal clients may be greater.

CAEDS also promotes economic development through joint venturing, whereby an aboriginal enterprise group combines with another business, normally non-aboriginal, to raise the necessary capital, and find appropriate management expertise to operate the business. This approach, as yet fairly uncommon in Australia, offers opportunities otherwise not available, and may well mean success in receiving financial support from banks. It can also have its pitfalls. Inuit Tapirisat Canada (ITC), the main Inuit organisation concerned with economic development, has commented that there is no guarantee that the non-aboriginal partners in the venture would fulfil their expected commitments to training their aboriginal partners and transferring other skills to them; and that people approved as partners by CAEDS were often 'mates' of government people. In other words aspects of assimilation, as well as the redirection to non-aborigines of money specifically set aside for aboriginal support may also be present. Thus, although these Canadian programs apparently offer a better opportunity to match government assistance with aboriginal needs than do their Australian equivalents, this may not occur in reality.

**Conclusion**

As this brief overview has demonstrated, research which initially focussed on detailed studies of the development experiences of specific isolated aboriginal groups in one national context has broader implications. Through comparison of results from individual Australian studies, and the extension of these comparisons to related research conducted in North America, common issues and experiences emerge. These together suggest the following context for more appropriate future development for aboriginal peoples in remote parts of these industrialised countries.

(a) First, the disadvantages stemming from physical distance and environmental constraints must be recognised. Forms of development which assume equal competitiveness with activities and enterprises in more fortunate, less fragile environments elsewhere are inappropriate; and, because of further economic disadvantages, overcoming physical problems through large scale, costly investment is rarely an option for aboriginal groups.

(b) Secondly, socio-economic and demographic characteristics which differentiate aboriginal groups from their national populations — youthfulness, high morbidity, low levels of education or work skill, poverty in the cash economy — must inhibit development. To stress individual effort, and equal competition within the mainstream society, as the preferred way to advancement is to ignore these differences. Relevant support, providing appropriate opportunities, particularly for the young, and acknowledging the need to bridge the poverty gap, is essential in most cases and is likely to remain so into the foreseeable future.
(c) Thirdly, forms of development, whether primarily in the service delivery category or whether concerned with economic enterprise, which do not take account of cultural differences and historical experiences are unlikely to succeed. Adequate consultation is necessary if sympathetic understanding of the effects of these characteristics is to be achieved. And, once achieved, that understanding must be incorporated both into development oriented programs and into their practical implementation.

(d) Finally, government bureaucracies and the programs which they administer still reflect overall assimilationist attitudes, partly arising through failures in coming to grips with points (b) and (c) above. They are thus not really compatible with aboriginal development goals. This problem can only be addressed through recognition of the need to overtly favour self-determination, supporting people as they require in ways which enable them to define and achieve their goals.

The methods used in this overview — comparison of development in different historical, political, environmental and social situations; and the use of empirical material to extract general themes — also have wider implications. While the broad context of disadvantage for aboriginal peoples may be similar, the remedies attempted in Canada, Alaska and Australia at both national and regional levels have differed, particularly in detail. These remedies, whether they consist of specific ways of enhancing cultural content in schooling or the provision of health services, or whether they consist of wide ranging programs providing appropriate support for economic enterprises, may well be of value in other national and regional situations. Thus, for example, some of the initiatives taken for the support of the subsistence non-monetary economy in Canada's north may present useful alternatives worth considering in Australia's Red Centre. Similarly Australian efforts in developing joint management systems for National Parks have much to offer to Parks Canada or the administration of National Parks in Alaska.

Finally this overview has demonstrated that research into the complex area of appropriate development for aboriginal peoples may indeed be usefully approached from the bottom up. Through looking at the experiences of the people themselves, noting their own reactions to the changes occurring around them and setting these against the particular political and economic contexts at specific times, general principles emerge. Approaching the problem from the opposite direction — setting the general hypotheses and models and then testing them — may be equally valid. But it is unlikely that this more conventional theoretical approach would have provided as significant or detailed an understanding of aboriginal development issues as that arising from NARU's research in the last decade.

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CHAPTER TWO
TOURIST DEVELOPMENT AND COMMUNITY ATTITUDES IN NORTH WESTERN AUSTRALIA: CASE STUDIES OF BROOME AND EXMOUTH

Phillipa Hudson

Introduction

Tourism and associated development are affecting many north Western Australian towns. The pattern of the last decade has been one of expansion for all but two of the small service towns in the north west, in contrast to the mining towns which have lost population in this region (figure 1). This is in line with the overall growth of settlements right across the remote north of Australia (Hudson 1991). Tourism has played an important role in this development process, providing the stimulus for expansion in the service and retailing industries.

This paper will demonstrate the differing impacts of tourist development by focusing on the towns of Broome and Exmouth. Of all the north western towns, Broome has experienced the most rapid growth over the last decade. From the outside, such growth is generally perceived as good; it represents a town moving forward as it evolves new economic functions. From inside the community, however, such growth can be viewed differently. Although Exmouth exhibits some of the same characteristics, it contrasts with Broome in two main ways. Firstly, the major impacts in Exmouth are on the natural environment whereas in Broome, social and cultural issues assume as much importance as ecological ones. Secondly, in 1989, Exmouth was on the verge of a tourist boom, whereas Broome had been through its boom growth. These processes will be outlined by discussing the urban growth patterns and tourist development impacts in Broome and Exmouth. Community attitudes and responses to these changes will then be analysed.

The information below is based on four months of field work in Broome and Exmouth in 1988 and 1989, on local newspaper reports and ongoing personal communication with local residents. The research forms part of a wider study investigating processes of change and residential behaviour in small remote towns for a North Australia Research Unit project, 'Small Towns in Northern Australia'. The purpose of this article is to present the qualitative material obtained from informal interviews and discussions, as well as the data gathered during participant observation and involvement in community activities (see Miles & Huberman 1984 for use of qualitative methodologies in social science). This material was recorded in a field work research diary and provides one important source for the presentation of community responses to development changes (Burgess 1981). The other major source is from articles and letters to the local newspapers.
Figure 1: Small settlements in the more remote parts of northern Australia: population changes 1981-86 (town populations 2000-6000)
Broome — the boom town of the north west

For nearly a century pearling dominated the life and character of Broome. At one time there was a fleet of over 300 luggers and the pearling masters were the town aristocracy. Of the 4000 local residents, most were indentured workers from Asia, Japan and some Pacific Islands. The town’s fortunes fluctuated with the success and failure of the pearling industry; until the 1970s the unique character of Broome was based on being the 'Port of Pearls'. The winds of change were already being felt in the late 1970s, however, as Broome began its growth under the impetus of tourism. By the 1980s this had accelerated, removing much of that special 'atmosphere' for which Broome was previously known (see Dalton 1964).

The focus of new investment was directed to tourism. This is not to say that pearling, with an annual income of around $80m a year and 500 employees in 1989, is not still the major economic enterprise within the region, it merely indicates that tourism is highly localised on the town of Broome. Between 1983 and 1988, the number of accommodation beds in Broome grew from 508 to 1040 and caravan sites from 667 to 971. Occupancy rates increased to between 85%-90% during the dry season and 50% in the wet (WA Dept RD & NW & Shire of Broome 1989, 11). With the influx of these visitors and the controversies surrounding development projects, pearling became a secondary aspect in this rapid change. The new town power brokers were now the major tourist developers and the extent of outside control and influence increased.

Broome had become the boom town of the north. Its usual resident population grew by 61% between 1981 and 1986 (table 1). Estimated shire census data show that this population expansion continued in the latter part of the 1980s, increasing by a further 10.5% between 1986 and 1988. Its present 1991 town population is reported locally to be 8000 people but this figure would include the large number of tourists visiting during the dry season (information supplied by Broome Shire Council).

| Table 1: Usual place of residence, visitor and enumerated population counts for the town (as opposed to shire) of Broome 1981-1986 (ABS Census data) |
|---------------------------------|--------------|--------------|---------------|
|                                 | 1981         | 1986         | % change      |
| Usual residence count           | 2447         | 3950         | 61.4          |
| Visitor count                   | 923          | 1828         | 98.0          |
| Enumerated count                | 366          | 5778         | 57.6          |

Source: ABS Census 1981 and 1986

A new emphasis on the exotic tourist market has prompted expansion in all sectors of Broome’s economy. Throughout the 1980s three large luxury tourist resorts were built and three existing resorts were renovated to cater for a new upmarket clientele. Business and industrial activity was considerably stimulated by the influx of new residents and visitors. Between 1982 and 1990, 1,165 new dwelling units were constructed. The mushrooming residential growth triggered expanded community services and Broome became the
regional focus of the West Kimberley. By 1988/89, the annual development expenditure in Broome amounted to $76m (information supplied by Broome Shire Council).

Under the influence of one major tourist developer, the architectural character of Broome was preserved and revived; old homes assumed a new importance commanding resale prices of $350 000 by the mid 1980s. Chinatown was spruced up and new retail premises were built depicting an Asian style of architecture. It became a very pleasant town for a tourist visit of at least a week, particularly if the tourist could afford the high costs associated with the new upmarket style of Broome. Caravanners and campers could still enjoy the turquoise water and long stretches of white sandy beaches, although comments from tourists about Broome becoming a 'rip-off town' were being heard with increasing regularity. But what is Broome like now for the local people?

Community divisions associated with development issues

Broome's residents can be broadly divided into five groups for analytical purposes. Tourism and development has affected each group differently, resulting in a considerable diversity of opinions and actions in response to the changes taking place (residential survey by Hudson in 1989*).

Newcomers, that is, residents who came to Broome on the wave of the development boom in the 1980s, form the first identified group. These residents are new private enterprise business people such as tourist operators, retailers, builders, tradespeople, and their employees. They comprise a major component of the pro-development lobby and are well represented in the local Chamber of Commerce.

The second group consists of a small proportion of the longer term residents who hold property and other assets, and who have been interested in capitalising on the rising prices and demand. These people have tended to link with the first group and the outside developers. A number can be found on Broome Shire Council and in the Chamber of Commerce.

Another section of residents fall into a third group of people who have 'resigned' themselves to accepting development. Most of these people have good jobs, typically government positions, they enjoy the better services and they tend to accept that 'you can't stop progress'. In 1989, their consolation was that at least Broome had a developer who did things with style and was not Japanese.

The last two identified groups fall into the anti-development category. Group four consists of the longer term non-Aboriginal residents who have not embraced the modernisation of their town. A very diverse range of people hold this view. They are not just the

* A questionnaire survey of local residents was undertaken in 1989. A sample of households was randomly chosen from the whole of Broome town. The 159 residents (representing about 3% of the town population) were interviewed. The full results of this survey and that of the other five small remote northern towns and their shires will be published later this year. The survey interviews also provided much additional qualitative material expanding upon the other informal sources of information. Every questionnaire was conducted on a face to face basis thereby enabling further discussions on many topics (see Jick 1979 for mixing quantitative and qualitative methods). This information assisted in the formation of the groupings outlined above. They are a perceptual classification designed for clarification of analysis (see Dalton 1964 for similar methodology when studying Broome).
conservationists and the environmentalists but also longer term business people, government service employees and those without permanent employment, which includes the older residents. These residents are present in the Broome Community Club, the newly formed Conservation Society and some are in the Service clubs.

Finally, there are the Aboriginal people who have been marginalised and divided in the development process. Before the 1980s, Aboriginal and 'coloured'** people were in the majority in Broome. Locals estimated that in 1970, 70% of Broome's population were Aboriginal or 'coloured' people. The decline in the proportion of Aboriginal people is evident in table 2. In view of the higher Aboriginal birth rate and their significant under-representation in the 1981 census (by an ABS estimate of 42% nationally), the decline is marked. Although this group may have been less vocal than group four, they represent a significant proportion of residents who express distress about the changes which have occurred in Broome.

It is the conflict between the interests and opinions of residents in the above groups, as well as the rate of change, which has created stress in Broome.

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<td>54.7</td>
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<td>As % enumerated shire population</td>
<td>42.2</td>
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**Source:** ABS census data, 1976, 1981 and 1986

**Reasons for community dissatisfaction**

As tourism and development intensified during the last decade, so did community dissatisfaction. Broome residents were experiencing a rising cost of living, particularly in relation to housing and food costs. There was a severe shortage of rental accommodation as new residents displaced longer term residents who were less able to pay the higher rents or who joined the two and a half year waiting list for government housing. Tourists were placing heavy demands on existing services and facilities, and residents were becoming frustrated by the long queues in the banks and post office. Their difficulty in obtaining medical and other appointments was a source of considerable discontent. Welfare services

**'Coloured' people is a local term used to describe residents who have both Aboriginal and Asian backgrounds. Many of the once 'coloured' people now identify themselves as Aborigines but there still remain individuals who refer to themselves as coloured, retaining their Asian identity.**
were inadequate for the pressures being created by increasing reported cases of domestic violence, more obvious alcoholism and rising crime. One local Justice of the Peace stated that there would hardly be one house in Broome by the end of 1989 which had not been affected by theft, violence or some other crime.

A shortage of recreational facilities and public open space for local residents in Broome stood in stark contrast to the new upmarket tourist resorts with their swimming pools, synthetic tennis courts and other facilities. Broome, the largest town in the Kimberley, still does not have a public swimming pool. Old basketball courts and limited sporting ovals and tennis courts prompted the community to put pressure on the council to commit money in 1989 to a new $800,000 recreation complex. The cost is being shared in a tripartite arrangement with the State Department of Sport and Recreation, the Education Ministry and Broome Shire Council; it is currently being completed. Funding for a proposed 50 metre $1m swimming pool is proving more difficult. Had a swimming pool been provided in earlier days when funding sources were more available and loans not so financially crippling, then the community would have had this much needed facility. Admittedly, access to the beach made this a lower priority than in other hot north western towns.

Other local inadequacies were apparent. The town still had no senior high school in 1989, inspite of having a population in excess of 6000. There was no Aged Care facility; safety of bicycle and pedestrian movement was becoming a concern also. Community resentment grew as footpaths were installed in new residential areas while, in the older areas, children on bikes and women with prams were forced onto narrow roads which now had increased vehicular traffic. The wide sandy verges had no cycle paths or footpaths except along one street. It was pointed out that extensive roadwork had taken place along the road to Cable Beach Club, the major tourist resort in Broome. Funding had been obtained for a bicycle path to Cable Beach. The 1989 residential survey recorded a strong public criticism that tourist interests had preceded community needs and residential public safety.

The growing residential resentment prompted Broome Shire Council to coordinate with the Department of Regional Development and the North West to undertake *The Broome Study*, published in 1989. The Hon Ernie Bridge, Minister for the North West and MLA for Kimberley, wrote in the foreword:

> I was alerted to a number of concerns regarding the pace and content of development in the town. Some involved issues which had the potential to change the character of the town as well as the impact on the lifestyle of its residents.

*The Broome Study* managed to bring a range of different people in the community together to discuss their grievances and to make recommendations. Council’s involvement was a step forward towards improved community relations. Although some may be critical that the report did not go far enough or that it has not altered things much, the majority would acknowledge that it was a start and that many of the recommendations cannot be achieved overnight.

**Pressure on Broome Shire Council**

Broome Shire Council was under pressure from developers, tourists as well as residents. Development brings council responsibilities for servicing new residential, commercial and tourist areas. The money required for this often precedes returns to the rating revenue.
Thus, to provide new roads, footpaths and other services, councils either have to borrow or divert income from other sources. Funding for new roadwork was apparently easier to obtain than for footpaths. Furthermore, local rural shire councils are experiencing increasing funding difficulties and yet they are expected to undertake wider roles, such as in the welfare and recreation spheres. This places them under pressure to broaden their rate paying base. Development can present opportunities for improved town infrastructures, an increased number of ratepayers, and a greater proportion of the grant and loan revenue from state and federal governments. Therefore, there is a tendency for councils to favour development and be less sympathetic to conservation and environmental concerns. Some councillors and council staff perceived conservation concerns to be inhibiting growth and progress. They also were feeling the constraints imposed by state government planning authorities.

Broome's growth now meant that the Shire Council could no longer make ad hoc development decisions in closed council meetings, a long standing practice. Planning requirements had to be met through the adoption of a town plan. In 1988 a draft report prepared by the Department of Land Administration, *Broome Townsite Structure Plan*, was released for public comment. Similarly, pressure was mounting from within Broome, as well as from outside government bodies, for council to adopt a coastal management plan. A substantial document, *Broome Coastal Management Plan* (Chalmers & Woods 1987), had already been published by the Environmental Protection Authority. Furthermore, environmental impact statements (EIS) were now required before any major development began. Councils are often frustrated by the delays and costs involved in their preparation. With the proliferation of these requirements, a few Broome councillors commented that, in their opinion, local government was having its control over local affairs usurped by state planning authorities. On the other hand, others considered this was a good safeguard. The following example demonstrates this latter point.

Changes to the natural physical environment were being closely monitored by the newly formed Broome Conservation Society, but it was not until Broome Shire Council levelled a sand dune near the Cable Beach carpark that the public was spurred into action. This levelling took place before the release of an environmental study on Cable Beach and Riddell Point by the WA Department of Planning and Urban Development (1990). Conservationists had been campaigning to keep Cable Beach undeveloped with the sand dunes remaining in their natural state, providing a barrier to beachfront development and preventing further coastal erosion. Broome Shire Council wished to construct a surf life saving club on the levelled dune. Council was no doubt surprised at the community reaction calling for state government intervention. A petition with 400 signatures was presented to council and residents expressed anger at a public meeting held to discuss the issue. During the meeting, the Shire President was reported to have taken an 'unnecessarily aggressive' attitude (letter to *Broome News*, June 1989, 29) accusing certain people of attempting to disrupt the shire by forcing a vote-of-no-confidence in the shire' (*Kimberley Echo*, May 1990, 1). However, the Environment Planning Authority (EPA) and the State Planning Authority (SPA) wrote to the shire expressing concern about the levelling of the dune and the actions of the shire, pointing out that the sand dunes were extremely vulnerable (*Broome News*, June 1989, 10-11). A change of attitude was evident at a council meeting in October when the Shire President directed council that any proposals affecting the sand dunes would not be considered until after the release of the SPA's report. In August the shire was commended by the SPA for its reversal of a previous decision to allow a helipad near Cable Beach (*Broome News*, August 1989, 12).

The conflict between conservationists and developers came into the public arena again with a proposal for a Heritage Trail. The WA Museum undertook a study of Aboriginal sites and complained that the shire had damaged a site during the previous year (*Broome
News, August 1989, 6). However, the debate intensified in September when it was learnt that the WA Museum was to recommend that a 70 km coastal strip, up to 2 km in width, should be set aside for a Heritage Trail for recreational purposes. The Trail incorporated 42 Aboriginal sites. Supporters of the pro-development lobby immediately reacted to this 'restrictive' suggestion and contacted certain politicians to intervene. One spoke on the radio, claiming sites had been found at Cable Beach Club resort and within the present Broome developments. This served the purpose of alarming existing residents and developers. The issue was clarified in October in the Broome News which informed the public that the Heritage Trail did not include any existing developments; it was not a land claim but was open to the public, and camping at designated sites was part of the overall plan. Aboriginal sites were merely to be protected (Broome News, October 1989, 4-5). In 1989, Broome Shire had no national park or recreation reserve set aside for its growing population or the increasing number of tourists.

Social and cultural changes to Broome

Although conservation issues assumed some importance within changing Broome, the most significant impact of the 1980s boom was felt in the cultural and social aspects of local life. In 1977, Mary Durack wrote:

Too much of the old town has already gone and more is under threat of demolition from the forces of nature and the dictates of 'progress'. May this little book which captures so much of the atmosphere of Broome serve also to encourage the preservation of its essential and strongly individual character (foreword in Bresser & Durack 1977).

The localised nature of economic and social life was disappearing. In 1977, Thomas (1977, 32) wrote that the old pearlimg families of Broome still controlled most of its businesses. By the late 1980s, the remaining long term pearlimg families were dominated by the new outside developers who now owned the major assets in the town. This was particularly evident for one local family who, for two generations, was the main local employer in pearlimg and retailing. Now the family's pearlimg interests have been reduced to management status only with outside investors controlling the company. The construction of new shopping complexes owned largely by outside developers, has reduced the importance of the long established stores. Employees working in the old established businesses had a different relationship with their employers. Residents report that an effort was made to look after local people in a special way, even if technology overtook their work. The new outside efficiency conscious employers do not have the same attitudes which came from growing up and living permanently within a small community.

The power structure in Broome had altered markedly, largely due to the influence of a major new developer with his reported $80m worth of local assets which are primarily focused on the tourism industry. Nevertheless, it was evident that longer term local people still felt a loyalty to the superseded 'aristocracy'. This was reflected in voting in the local elections. Initially, some of the established business people flowed with Broome's development but one wonders now if these people may have reconsidered their actions in the light of what has happened. Some may suggest that locals were powerless to do anything else. However, it can be argued that brakes could have been placed by council on the rate of growth and development. That is, unless one holds the view that 'without development, the town is going backwards'.
'Development' is often seen to be synonymous with 'progress' and with this, there also appears to be an assumption held by some that almost everyone benefits from progress. A letter to the *Kimberley Echo* (September 1989, 4) by a returning Broome resident outlines this point:

> Nowadays there is reasonable access to the beaches, creeks and other points of interest ... Bitumen roads, many kerbed ... litter and old car bodies and derelict camps have been pushed up and carted away ... Many old houses which were fast deteriorating have been resurrected and harmoniously restored ... new and attractive schools are now available ... New well laid out subdivisions are now starting to grow, hiding the older unimaginative fibro sections ... Trade services have improved out of sight and even shopping prices are marginally more competitive than before and what about a current newspaper each day? Tourism, the new resorts and related businesses now ensure much improved employment prospects. The hotel grottiness of earlier days has given way to provide for residents and visitors alike. Ovals, parks and beachfront facilities now service the area — and what price a world class zoo right on the doorstep? Chinatown's rejuvenation has been kept in harmony and is even more of a boom (sic) to the community than it was before. What about developments in the catering industry too? With proliferation of takeaways ranging through to first class restaurants. Local artists and musicians too are gaining recognition. I honestly do not think that too many Broome residents have much to grizzle about at all. In fact the prosperity, progress and quality of life now evident here earn the envy of much of the world. I for one would certainly like to be back here permanently.

The changes outlined above are not debated. The debate concerns how a resident views these changes and this largely depends on one's value system. Not everyone embraces the modern world with its fast foods, expensive restaurants, flash hotels, fast life style, tidy suburbs with neatly kerbed roads and improved vehicular access to a wider range of local spots. The writer obviously understood little of the old flavour of Broome or of the people who lived within it. With tourism much has been lost. Although there have been efforts to preserve many of the old houses and Chinatown, these historic buildings are now owned by a few key developers. They do not contain the original types of people and consequently an artificial environment has been created. The old history is there for tourists to see in a spruced up form but the living heart of this history has all but gone.

It is rightly pointed out that everything changes and Broome has now entered a new era. Whether it is progress or not depends on where one sits within the process, how one personally benefits and whether the changes are seen to be good or bad for the local environment. The changes have been detrimental to the local Aboriginals, for example. The rising cost of living, shortage of accommodation and the shift from being a majority group to a minority one are all factors assisting to push a number of Aboriginals out of Broome. Some have returned to nearby smaller Aboriginal settlements, a few have migrated further afield and others talk of leaving.

Other reasons given for the Aboriginal exodus include the changing environment, the town losing its friendly, relaxed way of life, and everything happening too quickly with little time for adjustment (residential survey data). There are growing social problems as work becomes harder for some to find. Opinions were expressed that the town was now money and tourist oriented and Aboriginals were increasingly being squeezed out of the social environment. There was only one pub left where Aboriginals felt welcome; their old
haunts have been renovated for a more sophisticated clientele. Aboriginal public drinking, littering and poorly kept houses were receiving greater criticism and attention. These things did not fit the new appearance of a well presented town. Racism was becoming increasingly evident since many newcomers had little understanding or experience of living with Aborigines. White residents were becoming resentful about Aboriginal 'perks' and benefits which they could not obtain and the white 'backlash' was a very real element in community dynamics. For many Aborigines, the town was no longer a pleasant place in which to live, yet they still had very strong ties to their home (Broome), land and local kin. So they were torn; one part was pushing them out but another part was holding them there. Some had decided to make a temporary move away, hoping the tourist boom would crash and the town would regain some of its former attractions.

Once Broome had a very special multicultural flavour (Dalton 1964). The population was a blend of Asiatic, Aboriginal and European peoples and the town reflected this through Chinatown, the earlier non commercial form of Shinju Matsuri celebrations and the mixed blood 'coloured' people. As well as the Aboriginal and European residential sections, there were also distinctive groupings of Japanese, Malay and Chinese people. In the past, although there was definite social stratification, long term locals speak of greater harmony and respect within the population because many grew up together in this town. In 1977 Mary Durack wrote:

*Its present cosmopolitan population is a community in the true sense of the word, the permanent residents, however different their racial backgrounds, being warmly united in the affection they bear to their home town ... (the) Aboriginal (who) seems, on the whole, to have blended more comfortably with the Asian than with the European. Indeed, as race relations become an increasingly important issue, the Broome community could well set an example to the world in mutual tolerance and understanding (foreword in Bresser & Durack 1977).*

A decade later the situation had changed radically.

A small proportion of Aborigines have accepted some of the changes because they have obtained benefits from new employment. Although very few work in the hospitality industry, a number are employed by government departments within the expanded service industry. Support for selected Aboriginal art, craft and music by a key developer has provided opportunities for some talented people. Consequently, there are differing attitudes to broader ideological issues of assimilation versus independence, the impact of development on traditional culture and land, and even to the way specific affirmative action policies for Aborigines are used. However, there is a general consensus that Broome Aborigines are increasingly feeling out of place in their changed environment and that too much has happened too quickly.

It is not just the Aboriginal people who feel alienated in modern Broome. Longer term white residents lament the loss of the more casual and friendly Broome. The new money-oriented, rushed urban atmosphere was what some of these locals came north to get away from and they are equally opposed to the way development has been thrust upon them. In 1989, some locals considered there was a kind of desperation to keep the momentum going, giving no one time to assess the changes or adapt to them. Was it greed or was it forward planning? Was it grab for today with no thought of the next generation? The residential survey showed that it was not just a minority group who thought the rate of change had been too rapid — 57% of the respondents did; only 27% considered the pace was about right. This indicates that the majority of Broome residents were not happy with the rate of so-called 'progress' associated with tourism and that council decisions were not
reflecting the real community feeling. They were responding to the powerful interest groups and the need for more revenue. The controversy surrounding the airport 'deal' clearly demonstrates the conflict between the opposing groups concerning development.

**The Broome airport controversy**

Towards the end of 1989, divisions within Broome concerning tourism and development were relatively marked. Strong opinions were expressed that Broome was 'being sold out' to outside developers and the town and environment were being turned over to their interests. One major example concerned the 'secret' deals over the current Broome airport land (*Broome News*, September 1989, 14-16). For nearly a year, negotiations were undertaken behind closed doors between Broome Shire Council, Federal and State governments, a major developer and an airline company regarding the future development of Broome airport. A new international airport was desired by the tourist industry but no tier of government had the funds to build one. The present Broome airport is on the very edge of the newly expanded town and the tarmac has only a further five year life. Broome Shire Council was eager to obtain a new airport, as were most of the commercial people, and so entered into a series of negotiations. However, it was the secrecy about the terms and agreements being drawn up that concerned some of the residents.

By August 1989, information was leaked and rumour abounded that the entire 304 ha of the present Broome airport were being given to one developer in return for the construction of an international airport on this developer's own rural land. The existing airport land represented an area of almost one third of the town and town land was selling at up to $1m for a hectare. Calculations were made that the current value of the airport land was around $200m. Nothing was known about the conditions of the new proposed international airport — who had landing rights, whether the airport was to be private or public or what were the other financial arrangements. There had been no consultation with the Aboriginal people who were the adjacent owners to the present airport and who later pointed out that a section of the land was in fact Aboriginal reserve land. Other residents began asking questions. The concerned group referred their queries to a visiting senator who raised the matter in federal parliament and in the media, thus moving the Broome airport issue into a more public arena. This caused a reaction from the Shire, the developer and the Chamber of Commerce. The developer threatened to pull out of Broome if the airport agreement did not proceed. The most outspoken of the opponents was suddenly threatened by the developer with legal action (in relation to a newspaper article published the previous year). This action appeared to be an effort to silence the opposition.

A public meeting was called on September 4th by the Chamber of Commerce in support of the new international airport. Although the hall was full, a large proportion were from the commercial lobby. Many residents did not know about the meeting since only two days notice was given via a blackboard in the main street. There was obvious fear at the meeting and some people were apparently intimidated before the meeting. Residents were informed that the airport land of 304 ha had been valued at $2m. Other details could not be revealed as they were at a 'sensitive stage of negotiations' and the shire was apparently bound to secrecy until the various governments had made their decisions. Council representatives told the crowd to 'trust them'. A vote was held at the end of the meeting and the majority present raised their hands to vote in favour of a new international airport, even though they did not know the terms or conditions of the deal. Of the few who had been game to speak out, some suffered the consequences the next day. One lost employment, another was told to write an apology and a warning was given for a future firing should it occur again. The Aboriginal speaker was more fortunate. Not only did he
speak powerfully, his point had political significance. There was no mechanism presented for public participation or information in the airport dealings.

The public meeting was cited to indicate community support for the new airport; yet the meeting represented little more than a powerful sectional interest group. The result did not mean that what was happening was right, as the political ramifications showed. As the concerns managed to filter through to other sources, the decision was delayed. Criticism of the $2m value placed on the Broome airport land continued, especially when compared with the much higher land values elsewhere in Broome or in Kununurra, for example (Kimberley Echo, April 1990, 4). The issue had become a political football between all three levels of government and by May, it was reported that the consortium had withdrawn its offer. Broome Shire Council expressed its disappointment, stating that the shire believed that the previous minister was badly advised and had paid too much attention to a small critical group, showing little response to the views of the elected representatives of the Broome community (Kimberley Echo, May 1990, 1). One year after the major developer's threat of withdrawal from Broome should the airport deal fail, half his tourist interests were on the market and the airport land was up for public tender. By 1991, this developer had all his tourist resorts on the market. Some may suggest that the setback is a long term benefit rather than a loss for Broome. Certainly, there is now opportunity for an open public process but it is being done in a depressed economic environment. The costs and benefits of tourism development have to be carefully balanced (see table 3).

Table 3: Costs and benefits of tourism development in Broome

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>* Marginalisation of the Aboriginal and</td>
<td>* Expansion of new services, and businesses</td>
</tr>
<tr>
<td>coloured people</td>
<td></td>
</tr>
<tr>
<td>* Too much power in vested interests</td>
<td>* More infrastructure and community facilities</td>
</tr>
<tr>
<td>* Destruction of multicultural flavour</td>
<td>* More sealed roads and kerbing and guttering</td>
</tr>
<tr>
<td>of the town and original form of</td>
<td></td>
</tr>
<tr>
<td>Shinju Matsuri</td>
<td></td>
</tr>
<tr>
<td>* Increased racism</td>
<td>* Increased variety of restaurants/</td>
</tr>
<tr>
<td></td>
<td>entertainment</td>
</tr>
<tr>
<td>* High accommodation costs/shortage</td>
<td>* Restoration of Broome architecture</td>
</tr>
<tr>
<td>* High local prices</td>
<td>* Better educational system</td>
</tr>
<tr>
<td>* Less friendly/more local conflicts</td>
<td>* Better health system</td>
</tr>
<tr>
<td>* Environmental impacts (eg dune</td>
<td>* Tidier town</td>
</tr>
<tr>
<td>destruction)</td>
<td></td>
</tr>
<tr>
<td>* Loss of historical character of town</td>
<td></td>
</tr>
<tr>
<td>and imposition of artificially created</td>
<td></td>
</tr>
<tr>
<td>atmosphere</td>
<td></td>
</tr>
<tr>
<td>* More crime/domestic violence</td>
<td></td>
</tr>
</tbody>
</table>

Source: Hudson (1990, 10)
Summary

Planners and decision makers need to reassess the long term consequences of the major changes which have occurred in Broome. The pilot's strike, subsequent financial troubles for a number of over-capitalised Broome businesses and now the evident slowing down of the major tourist developments, all highlight the ephemeral nature of tourism and the danger of making a local economy too dependent upon it. Other work indicates that where 30% of a town's retail sales are derived from tourism, residential attitudes become less favourable towards tourism development (Long, Perdue & Allen 1990). The indicators were that this is what happened in Broome. By the end of 1989, Broome was divided into sections, some overtly hostile. Tourism had created new power structures with one outside major developer in particular controlling much of the direction and momentum of change. The Aborigines had been marginalised and divided in the development process. In contrast, most of the white community had access to an expanded range of goods, services and work opportunities but not all valued these improvements. A vocal 'mischievous minority' fought to stop what they perceived to be the destruction of the unique qualities of their social and physical environment. The tide has turned since 1990 as the developers retreat and the economy struggles. And so the boom and bust cycles of the north continue.

Exmouth — a town on the verge of change

Exmouth, a town of nearly 2000 permanent residents on the North West Cape of Western Australia, is grappling with the dynamics of development and conservation as it stands at the threshold of imminent expansion. Its residential population has altered little but the number of visitors has steadily grown to a point where they now represent 50% of the mid year population (see table 4).

Table 4: Usual place of residence and visitor counts for Exmouth 1981-86

<table>
<thead>
<tr>
<th></th>
<th>1981</th>
<th>1986</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usual residence count*</td>
<td>1760</td>
<td>1780</td>
<td>1.1</td>
</tr>
<tr>
<td>Visitor count</td>
<td>757</td>
<td>1733</td>
<td>128.9</td>
</tr>
<tr>
<td>Enumerated count</td>
<td>2583</td>
<td>3514</td>
<td>36.0</td>
</tr>
</tbody>
</table>

* Not including US defence personnel living on Naval Communications Station

Source: ABS Census data 1981 and 1986
The town, since its establishment in 1963, has been economically dependent upon the Australian/United States Naval Communications Station, the Harold E Holt Base. In 1988, the economic benefit of the base to Exmouth was estimated to be approximately $9m per annum in indirect services alone (Exmouth Development Strategy, WA Department of Regional Development & the North West 1988, 7). This is in contrast to the smaller current financial contribution of tourism to date, largely due to the type of visitors who stay in Exmouth. North West Cape has, for over two decades, been a favourite location for retirees escaping the cold southern winters. However, these visitors typically spend little, arriving in their caravans with 'freezers full of food and departing with freezers full of fish'. Only more recently has Exmouth been attracting wider tourist attention.

The value of the Cape's coral reefs, white sandy beaches, limestone canyons, wildlife and fish is receiving increasing tourist recognition. Hence, the local economic potential of tourism is now becoming clearly evident. Unfortunately, as the number of visitors increases, along with plans for tourist expansion, so does the pressure on the local ecology. The challenge for Exmouth is to balance the need for a more diversified economic base with conservation of its fragile environment.

Cape Range National Park in Exmouth Shire and the newly formed first WA marine park, Ningaloo Marine Park, contain much of the unique and fragile ecology found in Exmouth Shire. Both parks are managed by the WA Department of Conservation and Land Management (CALM) and at first glance, this would appear to preserve a major proportion of the valued environmental resources. In spite of this, considerable controversy surrounds CALM's management of these resources. The history of this management has had an important bearing on community attitudes.

The management of Cape Range National Park and Ningaloo Marine Park

In 1984, a draft management plan for the Cape Range National Park was released for public submissions, in accordance with the Conservation and Land Management Act of 1984. The draft proved very unpopular resulting in local petitions to politicians and submissions to CALM. There were accusations from Exmouth residents that the publication of the submissions (May, [1988]) was selective. These events led to the formation of an Advisory Committee in 1985 which consisted of representatives from government and community sectors. Eight Advisory Committee meetings were held over a two year period, after which time the minister approved a final Cape Range National Park Management Plan (1987-1997) in December 1987. The following year a draft management plan for the Ningaloo Marine Park (1988) was released for public submissions.

Although the principle of public participation in Park management plans was established, there seems to have been great difficulties actually getting such principles practised. The three Exmouth representatives apparently had to fight considerable battles to move the Committee beyond a level where government personnel merely explained why certain things were to take place. Changes started occurring in the Park in 1988 without agreement from the Advisory Committee or approval of the final plan. Favourite campsites and fishing locations were blocked off as management controls were put in place. Local residents reacted angrily, holding a public protest meeting. Relevant politicians were contacted and they exerted enough pressure to obtain the retraction of the draft Ningaloo management plan. This was followed by a petition to the appropriate minister from 780 local residents objecting to the changes.
As a consequence of the above procedures, Exmouth residents lost confidence in their local Advisory Committee representatives. The Exmouth representatives had to regain community support by publicly dissociating themselves from the changes which had occurred in the Park. They requested the minister with the CALM portfolio to intervene and help give them a greater say at the Advisory Committee meetings. Eventually, the chairman introduced formal voting procedures. However, the importance of the Advisory Committee seemed to diminish and during its last year of operation in 1989 only one meeting was held. The Shire has requested to have full representation on the proposed Ningaloo Marine Park Consultative Committee but this has not yet happened.

In the final analysis, it seems the community in reality had very little influence on the management plans for the Parks. One conclusion expressed by a prominent local resident was that the Advisory Committee was established merely 'to appease the peasants'. However, it has to be acknowledged that local workshops were held and CALM concedes that it is still developing methods for improving public participation in the decision making process. It was significant that Exmouth residents were sufficiently active and vocal to force government personnel to improve upon local consultation procedures. Through continued perseverance by local conservationists, some concessions to local opinions are now being considered.

Conflicts between environmental preservation and economic growth

Normally residents in remote small communities seem powerless to turn the tide of change. Decisions are often made in distant capitals and the 'experts' advise what will happen. Exmouth's early public participation effort is therefore worthy of closer analysis.

Exmouth residents have been described as very individual and strong minded people. They are not afraid to speak out. Many are on good wages, employed by the Australian defence telecommunication base or other government departments. Residents enjoy their local lifestyle. Most treasure the 'paradise' in which they live. Thus, if the local environment is threatened, there are enough vocal residents who will rise to protest and try to prevent such changes. Further weight is given by the presence on Exmouth Shire Council of a few conservation minded councillors who are opposed to changes which they consider will negatively affect their environment. However, other councillors are equally concerned about the economic environment. There has long been insecurity in Exmouth about the continuation of the telecommunication base, and this has been heightened since the handover to Australian control. Consequently, there is an obvious need for economic diversification to assure the long term survival of Exmouth.

Tourism is seen to have the major developmental potential. In 1989, there were big plans for a proposed $12m marina, a large five star resort complex and other smaller tourist projects (see table 5). Consequently, there are two opposing forces operating within this town. Although tourism has the ability to stabilise the town's economic base but it also has the ability to destroy the very environment tourists come to see. One issue exemplifies this.

Once the Advisory Committee for the Parks was disbanded in 1989, on-going decisions reverted to CALM. Changes again began occurring along the west coast within the Cape Range National Park, to the dissatisfaction of a growing proportion of the local population. In the past, the reef and beaches along the west coast of the Cape have been
### Table 5: Anticipated effects of proposed changes to Exmouth in 1989

<table>
<thead>
<tr>
<th>Proposed in 1989</th>
<th>Perceived costs</th>
<th>Perceived benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighthouse Resort development ($10m)</td>
<td>loss of historic character of lighthouse</td>
<td>more tourists</td>
</tr>
<tr>
<td></td>
<td>proposed sale of lighthouse</td>
<td>more jobs</td>
</tr>
<tr>
<td></td>
<td>loss of open viewing of terraced anticline</td>
<td>more expenditure in local economy</td>
</tr>
<tr>
<td></td>
<td>more pressure on park, wildlife and coral reef</td>
<td></td>
</tr>
<tr>
<td>Coral Coast Marina ($12m)</td>
<td>environmental pressure on</td>
<td>5 star luxury resort</td>
</tr>
<tr>
<td></td>
<td>- fish</td>
<td>new shopping complex</td>
</tr>
<tr>
<td></td>
<td>- coral</td>
<td>government offices</td>
</tr>
<tr>
<td></td>
<td>- wildlife</td>
<td>caravan park</td>
</tr>
<tr>
<td></td>
<td>- parks</td>
<td>360 new residential blocks</td>
</tr>
<tr>
<td></td>
<td>danger of oil spills should ships use the marine</td>
<td>increased tourism</td>
</tr>
<tr>
<td></td>
<td>loss of small town life</td>
<td>increased employment</td>
</tr>
<tr>
<td>Sealing of Cape Range National Park road ($200 000 — 1st stage)</td>
<td>increased traffic speeds</td>
<td>easier access into park for tourists</td>
</tr>
<tr>
<td></td>
<td>greater tourist numbers</td>
<td>better visibility</td>
</tr>
<tr>
<td></td>
<td>further slaughter of wildlife</td>
<td>no further need to dig gravel quarries</td>
</tr>
<tr>
<td></td>
<td>loss of wilderness experience</td>
<td>healthier vegetation</td>
</tr>
</tbody>
</table>

reached via a narrow winding road running parallel to the coastline. The CALM Draft Management Plan had proposed a new upgraded wider road in the National Park to replace the old one. In 1989, the new road was bulldozed through the virgin Park vegetation. The objective was to open the Park to more cars but one consequence has been that these cars now travel at much higher speeds, resulting in many more reported wildlife deaths on the road according to local opinion. Little could be done about the new road as its construction took place too quickly. A letter by a Shire councillor to the *Exmouth Expression* describes this:

> Then a new policy, created by man, was introduced to cater for humans and not the heritage he was supposed to protect. Machines came in and tore out a 15 mile swath to create a new road as far as Mandu Mandu, a stark red gash that violated the scenic surroundings, and where was it put — in the worst possible place, against the foothills of the range cutting off the natural habitat of the majority of non human residents from their feeding grounds. Going and coming they ran the risk and failed so often to make it safely to the other side (Keenan, September 1989, 4).

Under the pressure of higher speeds, the road soon deteriorated to potholes, loose rocks and large corrugations. Dust was being blown onto the adjacent vegetation, apparently killing it. To rectify these problems, a decision was made to seal the road. This decision proved even more controversial. In late 1989, the newly formed Cape Conservation
Committee wrote 'Seal the road and SPOIL the Park', pointing out the inevitable increase in traffic speed, numbers of tourists and consequent further slaughter of the kangaroo population. Concern was also raised about the danger to the rare Rock Wallaby colony at Yardie Creek (Exmouth Expression, December 1989, 11).

CALM officers held a perception that only a minority of local people were opposed to sealing the road (personal communication December 1989). However, there were no community survey data upon which to formulate this view. To establish local opinion, a question seeking community attitudes to sealing the road was included in a random sample residential survey undertaken in December 1989(***). The results showed that 75% of the local respondents were against sealing the road (table 6). Those in favour were largely the visiting American defence people who cited damage to their cars as the main reason for wishing a sealed road.

Discussions indicated that CALM was being influenced by stated demands from tourists. It should be pointed out that these tourists may represent a different type of tourist from those who used to enjoy the Park in its more natural wilderness state. Others have noted that:

as the number and density of visitors at a particular site increases, and the characteristics of that area change in consequence, the type of people visiting the area, and their expectations, enjoyment and requirements, change over time. Those who have come to an area to enjoy wilderness pursuits based on the enjoyment of undisturbed natural environments are replaced by those who have come to enjoy sports or outdoor social activities. Visitor surveys may thus still indicate that visitors to the area are content with current conditions; but they are not the same visitors. Those who visited the area in its earlier, more pristine state, dissatisfied with changing conditions, simply no longer go there (Buckley & Pannell 1990, 28).

This has already happened in Exmouth. Improved roads mean more people and more people mean more controls. The stage is set for a new type of Park. Last year, some residents spoke of no longer going to the Park; 'the romance has been taken out of it'. One family had gone as far as leaving Exmouth before they saw the area 'completely spoiled'. The erection of barricades and people being 'herded' into a small number of selected camping sites was strongly criticised. An incompatible mix of recreational interest groups found themselves camped next to each other. In 1988, Dr Barry Wilson (CALM) stated that the Department believed in the principle of retaining and creating as many small, beach-side campsites as the Park could sustain. He foresaw that some of the existing ones may have to be closed for environmental reasons but suggested that new campsites would be opened to replace them. 'Our objectives will be to maximise opportunities in the park for this kind of camping. We will work with local people to meet this objective' (Exmouth Expression, October 1988, 2). Many residents considered that these early words amounted to little in view of the restrictiveness of the limited existing camping areas.

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*** A sample of households was randomly chosen from the whole of Exmouth Shire. The 134 residents (representing just over 5% of the total Shire population) were interviewed. The full results of this survey and that of the other five small remote northern towns and their shires will be published later this year.
Table 6: Exmouth Shire residents' attitudes to the proposed marina and sealing of the Cape Range National Park Road*

<table>
<thead>
<tr>
<th>Group of residents</th>
<th>Marina</th>
<th>Bitumen Road</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For</td>
<td>Against</td>
</tr>
<tr>
<td>Live in privately owned town dwellings</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Live in rented town dwellings and caravans</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Live in US owned houses in town and on base</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Live in the rural area**</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Total respondents</td>
<td>53</td>
<td>69</td>
</tr>
<tr>
<td>%</td>
<td>41</td>
<td>53</td>
</tr>
</tbody>
</table>

* These 2 questions were added at different times during the first week of interviewing hence they have slightly different totals of respondents

** The rural area covers the rural stations, Kailis, RAAF Learmonth, Northwest Seafoods, the Lighthouse Caravan Park and CALM employees in the Park

Source: Residential and rural survey conducted by the author, Exmouth, December 1989
It appeared locals had resigned themselves to the fact that now they could do little about the camping changes but the battle over sealing the road continued into the 1990s. In the July issue of the Exmouth Expression, the editor pointed out that 70 people at the first conservation meeting had expressed disapproval of the changes to the Park and a petition carrying 600 signatures endorsed the philosophy of 'Seal the road, spoil the park'. This at least has forced CALM and the Shire to take note of community opposition. By mid 1990, CALM stated that it was proposing to seal the road as far as the Park Headquarters, the Milyering Centre, but that the Department 'will be guided by the Shire on this controversial matter' (Exmouth Expression, July, 2). At the same time it was pointed out that if the Shire did not want $200 000 spent on sealing the Park road, then the money would be reallocated to another National Park. In other words, the choice was — seal the road or lose the funds. No other alternative of improving the Park with these funds was offered. The absurdity of narrowly defined budget allocations was clearly demonstrated. Perhaps it is not surprising to find that Exmouth Shire Council, behind closed doors, agreed to seal the road to the Centre. The price of preservation is too high for small local councils trying to get what they can in an increasingly difficult economic climate. A reasonable argument can be presented that there should be good access to the Milyering Centre and its displays, but the fear is that the sealing will not stop there. However, more recent discussions in December 1990 with CALM indicate that further sealing and widening of the road to Yardie Creek is being reconsidered.

Exmouth Shire Council is faced with the difficult task of balancing the need for economic development with the need to listen to community opinions. One way they have approached this was to appoint an Exmouth Development Committee in 1989 to advise the Shire Council. This Committee was made up of a cross section of community residents chosen from business, professional and government sectors, as well as two additional positions for interested residents. Exmouth was faced with a number of major planning changes and the Shire had been encouraged to obtain additional community input through the formation of such a development committee in the Exmouth Development Strategy Plan, published by the Department of Regional Development and the North West. The Shire Council's positive response to this suggestion placed Exmouth ahead of other small towns in terms of community participation in decision making.

Certainly, there were significant projects afoot which required much consideration (see table 5). The proposed $12m Coral Coast Marina with a luxury resort, shopping centre and 360 associated residential blocks required the most planning. Existing land users had to be relocated to their satisfaction and new recreational facilities developed for an anticipated expanded population. The Shire Council decided to adopt a more cautious approach after experiencing a community backlash over the Lighthouse development.

**The Lighthouse Resort**

In late 1988, Exmouth Shire Council sold 41 hectares of land at the northern tip of Cape Range, the Flaming Head Lighthouse area, to a WA mining company called Goult-Pro Hospitality for $255 000. A $10m resort for a Scandinavian tourist market was proposed with unit accommodation for 200 people, restaurant, cafe, cocktail lounge and sporting facilities. It was to be a development which could be utilised by both local residents and international visitors. 'The resort will be carefully planned to be compatible with, and enhance, the natural environment' said Mr Turkington (Exmouth Expression, November 1988, 1). In August 1989, it became known that the development was to be built into and around the Lighthouse Hill, generating community concern. A letter to the editor in September pointed out the heritage value of this ancient landform with its series of terraces marking former sea levels where fossils and unique rock formations could be

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found. By October, a public meeting was announced with a view to forming the Cape Conservation Committee to address issues, such as the Lighthouse development. A local medical doctor with considerable interest in Exmouth's environment and wildlife, spearheaded the debate stating in the October *Exmouth Expression* that the new proposal to enclose the Lighthouse was totally unacceptable. He drew an analogy with the Aborigines who showed they cared about their sites, questioning why Exmouth people cared so little about their only historic site on the Cape. The Commonwealth was even planning to sell the Lighthouse to the highest bidder. 'We must act now if we want to stop the desecration of the whole area. This is only the tip of the development iceberg. There are already other proposals for developments along the west coast' (*Exmouth Expression* October, 1989, 2).

Seventy people attended the public meeting; the Cape Conservation Committee was formed and community opposition to the Lighthouse development was expressed. Following this, a special Shire Council meeting was held in November where a decision was made to reject an application for extension of payment for the Lighthouse land by Goult-Pro Hospitality. The land reverted back to the Shire. The community had made its point about the value of keeping the Lighthouse and hill for posterity and council decided to declare it a reserve. However, it appeared that some councillors and staff held the view that the new Conservation Committee represented only a small minority who would soon fade away. Their view was that those involved in conservation concerns were anti-development and therefore not working in the best long term interest of the shire. Again, the development versus preservation conflict had a price. This time, the shire lost a possible $10m development, although there was uncertainty about the developer's ability to pay in any case.

*Is this Progress?*

The Conservationists then proceeded to ask the community what sort of a future they wanted for Exmouth.

*Do we want more satellite communities away from Exmouth townsites? In particular do we want to see developments all down the Cape's west coast? One returns to the fundamental question of: — What is it that brings tourists to North West Cape at all? Surely the answer is our unspoiled beaches and marine environment, particularly on the west coast. If we allow developments all along these beaches we are destroying the very thing that brings the tourists in the first place. There are all sorts of problems that have not been addressed. Where will these developments get their water? What will they do with their effluent — the water table is only a few feet under the surface? Where will they obtain their power — an extension of the present power lines (probably the worst eyesore in the world)? And all these questions come back to the same basic question — Will it not devastate the environment... is this 'progress'?* (Taylor, *Exmouth Expression*, December 1989, 2).

Certainly, residents held many more reservations about development than some councillors and staff seemed to realise. Residential interviews in late 1989 showed that the majority of residents were against the marina (table 6). Much of the uncertainty about the marina related to a fear of what would happen to the small and unique environment as a result of increasing pressure from tourists and development. The supporters tended to be the business people, those who owned property and saw advantages in increased asset values and the single people living in the nearby prawning village who desired more local
attractions. Those against the marina comprised local residents who valued the quieter, safe local environment (particularly stressed by the US residents) and those who feared further destruction of the local physical environment. Depletion of local fish stock was another matter mentioned frequently during interviews in 1989.

Both residents and regular seasonal tourists have noticed the steady decline in fish being caught by recreational fishers. It has become another controversial local topic. Various reasons have been suggested for the reduction in fish stock and they include increased trapping, the extensive prawn trawling industry, increased game fishing, encroachment by overseas countries on the marlin, deep sea longlining and increased recreational fishing. The 'greed' of recreational fishers who exceeded legal catch limits and the encroachment of outside commercial fishing operators were two topics receiving government attention. In September 1989, seminars were organised by the WA Department of Regional Development with the State Fisheries Department to gather information and press for education of the public on fish management. Further discussions took place in Exmouth in December between Fisheries departmental managers, research officers and fishing operators about the phasing out of commercial fishing in some areas of the Ningaloo Marine Park; other fishing boats were to be restricted to deep waters outside the reef. In the meantime, grass roots workers are at a minimum. Two Exmouth fishery inspectors attempt to cover the area from Carnarvon to Dampier (700 km of coast) and the Exmouth Fisheries office is now unmanned for much of the time. Financial constraints led to the loss of the $150 per week part-time clerk.

Concurrently, there has been devastation of the coral reef by the drupella snail with only 13% of the reef still alive along a large section of the Ningaloo Marine Park (Stoddart 1989). Theories linking the expansion of drupella with reduced fish stock were presented but not substantiated. It was suggested that certain varieties of fish eat the young snail and if these fish are being depleted, then the snail will multiply. A natural plague cycle, similar to the Crown of Thorns starfish plague, is the theory favoured by government scientists. Whatever the reason, the sensitivity of the natural ecological system to man's encroachment is heightened by the above changes. The general pillage of the ocean is having not only consequences at the small scale level, but the broader national consequences are becoming increasingly alarming.

Hence there were concerns relating to the depletion of wildlife, fish, coral and the pristine wilderness, as well as the impact of the proposed new large tourist developments on the environment. Other proposals had also raised conflicting interests, such as those between ski boats and dugong habitat areas, and those connected with turtle research and the effect of visitors interfering with turtle egg laying patterns.

Another serious conservation concern was offshore activity relating to oil cartage and exploration. Dr G Taylor, chairman of the Conservation Committee, pointed out that there were no contingency plans to cope with a major oil spill in the Exmouth/Onslow area, yet drilling was continuing.

*In a very short time oil tankers will be discharging oil-contaminated effluent off-shore, and taking on oil from Thevenard and Airlie Islands. These operations will no doubt continue through the cyclone season. The risk of a major disaster, as occurred in Alaska would seem to be very high. The impact of any oil spillage on fishing, prawning and tourist industries has not been addressed* (Exmouth Expression December 1989, 11).

Furthermore, seismic surveys for oil, proposed for the nearby Murion Islands, were seen as a danger to the wedge-tailed shearwater and the osprey, the stone curlew, the turtles and
some of the best coral on the whole coast. A request was made to have the Murions reclassified by CALM from C class to an A class reserve, as recommended in 1975 and endorsed by the government of the day. Shire support was requested but was only forthcoming to the extent that Lasmo Oil was asked not to undertake survey drilling on the island during the shearwater nesting season (Exmouth Expression October 1990, 1).

It is noted that the seismic survey went ahead this year during the nesting season regardless (Exmouth Expression March 1990). However, it is reported in Petroleum in Western Australia that great care was taken to minimise environmental damage and no wildlife suffered (Ryall 1990, 30). By October 1990, it became evident that oil drilling was to take place almost on the Murion Islands' beaches and would continue throughout the turtle nesting season and into the cyclone season.

The area to be drilled is part of a 'Special Protection Locality' based on the EPA's assessment of the area having global ecological significance and high economic (fisheries) and recreational importance...Diverse community groups in Exmouth...have long been advocates of the belief that the risk to the areas natural assets is too high to allow this exploitation to take place (Exmouth Expression, October 1990, 1).

The Murion Islands lie just north of the Ningaloo Marine Park and inner Exmouth Gulf (designated 'Environmentally Sensitive Localities') yet drilling solids will be discharged directly overboard from the drilling platform. Comments to the Shire were called for by the Exmouth Expression.

Conservation battles against powerful interest groups are hard to win but the momentum of the 'greenies' had been gaining ground in the late 1980s. However, with the current economic recession in 1990, voices against oil exploration sound faint. Yet an oil spill would spell the end of Exmouth's attractions and hence the end of its tourist industry. This was illustrated satirically in the Exmouth Expression (July 1990, 17) by the following conversation apparently 'overheard' in a local inn:

*Well, what makes an Aussie want to come to a hell-hole like this?*

'Used to be a beaut place ... that was a few years back. 'Well, it sure ain't anythin' beautiful now; it's hot as Hades, the lands all desert, all one can see is oil tanks, the beaches are black, the sea looks like a sewer...smells like it sometimes, too.' 'Used to be one of the top fishin' spots in Australia, coral sand beaches, beautiful reef ... they make it a Marine Park. A Marine Park ... you got to be jokin'.' Silence. 'Hey man, come on tell us what happened to this place?' 'Well first of all people caught all the fish, no-one realised how bad it was until it was too late. And then a small snail killed all the coral on the reef; that was all a few years back, but that was the start of it all. And then because there were no fish to catch, and the reef had died the tourists stopped coming; so they made it an oil town; there's lots of oil out there near the islands — you'll see the tanks out there as well when you look out from the Cape ... There used to be so much life in that water ... turtles, sharks, sea-cows, you name it — we had it.' 'What happened to the beaches?' 'Oh, the beaches were fantastic until the first spill; that was back in 1995; The spill that couldn't happen...Along comes cyclone Gerald ... it took them a week to plug the hole ... No-one cared after that...everything had gone; everything that meant anything.'
The tide has turned

Three events have changed Exmouth dramatically and conservation pressures have slipped into the background. The first event relates to the financial problems of WA Incorporated. The construction of the marina was immediately thrown into doubt and with this the future of Exmouth. It is now confirmed that the WA government does not have the funds at present to proceed with the marina. Secondly, Lord McAlpine's withdrawal from the Australian tourist market has meant that his company, Australian City Properties (ACP), will not be proceeding with the planned five star international resort which was to be part of the marina development, even if it does take place. The other ACP property in Exmouth, Norcape Lodge, is up for sale. Thus Exmouth has now also lost its international developer. The third event concerns the US handing over the telecommunication base to the Australian government. This has left Exmouth residents extremely uncertain about their longer term employment prospects at the base. The US contributed $12m to running the base in 1989 and investment in the capital equipment has been estimated to amount to $300m. There are questions about how the Australian government can afford the changeover and whether jobs will be shed in the process.

Thus, the whole mood of Exmouth has changed. Last year, Exmouth was on the verge of dramatic changes and the worry was whether the environment could cope with the influx of more tourists. This year, Exmouth has lost much of its future tourist development, for the time being, and the mainstay of its present economy, the defence base, is in an uncertain state. An attitude of depression is apparently reflected right across the town. At a recent land sale only four blocks sold out of the 63 blocks available at the auction. The previous year, there was concern that supply would not meet demand. The tide has completely turned and Exmouth's economic future and the town's continuing viability are now serious concerns.

Summary

The future of Exmouth was strongly linked to tourism. 'Exmouth was set to be the new growth centre of North Western Australia and thousands of new jobs in the tourism, service and fishing industries would be created' (Exmouth Expression, September 1989, 2). These words by the WA Transport Minister in September 1989 sounded hollow a year later. The ephemeral nature of tourism is again revealed. Exmouth felt this in 1989 with the airline pilots' dispute and since the 1990s with the economic downturn and the WA government's financial difficulties. Tourism is certainly not the 'panacea' for the north; but if introduced slowly and with careful planning, it obviously can have important local economic benefits, and it need not be environmentally detrimental. In fact, it can give sufficient weight to save ecologically valuable systems.

Although the expectant boom for Exmouth has faded away for the time being, like Broome, the lull has provided an opportunity to reassess the ability of Exmouth to absorb additional tourists into its environment without damaging it. The base has recently received a further seven year commitment from the US government which provides some short term economic continuation. Meanwhile, the physical attractions of the Cape will remain protected, one hopes, and subject to careful planning. That is, unless an oil spill occurs. Exmouth itself will not benefit at all from the nearby oil drilling: marine support will come from Dampier, and crews will be transferred by helicopter from Learmonth airport to the drilling rigs — a fly-in, fly-out arrangement which bypasses Exmouth. Yet the North West Cape stands to lose much if something goes seriously wrong.
Conclusion

Broome and Exmouth are two north Western Australian towns undergoing significant changes associated with a growth in tourism. However, their experiences differ markedly. To date, Exmouth’s residential population has remained relatively static whereas Broome’s usual residents have more than doubled during the 1980s. On the other hand, the number of tourists visiting these towns swamps Exmouth to a greater degree. Changes have happened too rapidly in Broome and residential conflicts and social problems have increased with tourist development. Local people expressed a loss of control over their own affairs and lifestyle, and they felt marginal to the decision making process. In contrast, Exmouth locals have played a more ‘up front’ role in planning and public participation. Exmouth Shire Council has responded to major residential objections; the appointment of the Exmouth Development Committee to advise Council places it ahead of Broome Shire Council by allowing wider community input. The slower pace of large scale development in Exmouth can be seen as an advantage. It has given more time for discussions and it has allowed local people to have a say without a powerful outside developer influencing the course of events.

There is a different response to the newly formed Conservation Committees in each town. In Broome, the conservationists are treated as a radical ‘mischievous minority’ by those pushing development whereas in Exmouth, although a few may see this group as being anti-development, the majority are not only behind a more cautious approach to changing the environment, but there is a greater respect for the conservationists. The fact that the local medical doctor is chairman undoubtedly has something to do with this. Furthermore, Exmouth has some conservation minded councillors leading to greater debate and compromise at council meetings over tourism and development issues. In 1989 Broome Shire council discussed very little in open council meetings whereas in Exmouth it was rare for business to be debated behind closed doors.

Both towns have now experienced a set back in their tourist development. For Broome, it may well prove to be a much needed lull to allow for reassessment and adjustments, although businesses will obviously be suffering from over supply and over-capitalisation. For Exmouth, the loss of all major developments will see the town revert to its previous state of economic insecurity and place another cloud over its long term survival. Nevertheless, it also provides Exmouth with the opportunity to seriously assess just how much tourism or development this small, fragile Cape can handle without destroying its natural assets. As we are so often reminded, the natural resources are only given to us in trust for future generations. Few still seem to heed these words.

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CHAPTER THREE
LAND TENURES IN THE AUSTRALIAN PASTORAL ZONE:
A CRITICAL APPRAISAL*

John Holmes

The ownership, use and management of Australia's vast areas of pastoral leasehold land are matters of increasing public concern, encompassing a wide array of national issues. Of these, major ones relating to ongoing pastoral use are:

- land degradation;
- loss of habitat and indigenous species;
- over-subdivision into non-viable holdings;
- retreat from northern marginal lands under pressure from disease eradication campaign;
- control of feral animals; and
- pressures from leaseholders for more secure tenure, including conversion to freehold.

Issues arising from growing demands for alternative uses of land include:

- restoration of aboriginal land rights, whether including pastoralism or not;
- nature preservation;
- wide-ranging recreation and mineral exploration;
- water catchments;
- defence and quarantine;
- locally focused but widely scattered intensification of land use, for tourism, mining, agriculture, urban, defence, spaceport and other activities; and
- a growing incidence of land held for speculative purposes.

Viewed in retrospect, the philosophy underlying leasehold tenure and the related policy and administrative outcomes have served Australia well. Policy and practice have been moulded by the hard experience of over a century and a half of evolving pastoral occupancy and shaped by the interplay between current and prospective use, between present and future requirements and between the various public and private interests to be served. There are two major assumptions underlying this philosophy.

The first assumption is that pastoralism is the preferred, indeed the only significant, form of extensive land use available on lands beyond the frontier margin of agriculture.

The second assumption is that for most of these lands there is a predictable progression towards intensification of rural land use, requiring a parallel progression towards privatisation of land ownership by tenure conversion, with land alienation to freehold being the final step.

* Paper delivered at the meeting of the Institute of Australian Geographers, University of New England, Armidale, September 1990
The philosophy underlying pastoral leasehold is still highly relevant and indeed could well be reaffirmed to advantage in some contexts. However, the underlying assumptions clearly are no longer valid. Many unanticipated pressures are now being exerted on leasehold and vacant crown land. These are not adequately encompassed under existing legislation and administrative practice, and major disjunctures have developed. The most striking of these have been generated by the exceptionally rapid land tenure transformations, already accomplished and with many more in train, through the belated recognition of aboriginal land rights. While the initial wave of aboriginal land awards was confined to former aboriginal reserves and to vacant crown land, increasingly these land awards will impinge upon existing pastoral leases. This is occurring either by purchase of entire leases for aboriginal ownership and use, or by programs for awarding excisions within existing leases as aboriginal living areas.

Yet the advisory and decision-making mechanisms relating to aboriginal lands and to pastoral lands exist in almost complete isolation from each other. Of course, this separation is most striking in the Northern Territory, where the national government has handed over land administration to the Territory government save for powers pertaining to aboriginal land claims and major national parks. However, this divorce exists within the various states, largely for historical and political reasons.

As a result, the various wide-ranging reviews of pastoral land tenure, undertaken in all major pastoral jurisdictions save Queensland over the last eleven years, have given only token attention to aboriginal land issues or have totally ignored them. Nevertheless, the number of major enquiries undertaken, and their very wide terms of reference, is a clear indication that there has been a recognised need for major reviews of land tenure policy. There have been five separate public inquiries into overall land tenure policy (see Jennings et al., 1979; Martin et al., 1980; New South Wales Parliament, Joint Select Committee to Enquire into Western Division, Second Report 1983; South Australia, Minister for Lands 1981; WA Department of Premier and Cabinet 1986). Further impact into policy review has come from recent reports into two marginal regions, namely the Kimberley District (WA Department of Regional Development and the North West 1985) and the Northern Territory Gulf District (Holmes 1986; also see Holmes 1990).

All of these enquiries are constrained either by the limited set of issues addressed, as with the reports on northern marginal regions, or by their identification with established wisdom and tradition, as with the supposedly wide-ranging reviews of land tenure, in which the entrenched views of land administrators, however enlightened, are clearly dominant. Thus, although the various major policy issues, listed in the first paragraph of this paper, all receive considerable attention, the ensuing discussion and recommendations are usually generalised and inconclusive, relating almost solely to minor adjustments in tenure covenants. This paper seeks to propose ways in which much needed reconceptualisation of land tenure and land use issues in pastoral Australia may be achieved as a prelude to substantial changes in land policy and its implementation. Underlying this paper are the following major premises:

1. Existing legislation and administrative practice have become entrenched and incapable of responding effectively to rapidly changing and increasingly complex demands, thereby being unable to serve the needs either of the various interest-groups or the wider public interest.

2. The present piecemeal approach to policy review needs to be abandoned in favour of a more comprehensive, holistic approach, both within each state or territorial jurisdiction and also, ideally, at the national level, to the limited extent allowable under the Australian constitution. The prevalence of leasehold tenure invites a
marriage between land tenure and land use policies, with tenure provisions being used to facilitate the implementation of land use and land management strategies.

3 As a prelude to this overarching review, land tenure and land use issues confronting Australia's pastoral zone need to be reconceptualised, within a wider historical and geographical context. A preliminary attempt at such a reconceptualisation is made in this paper.

**Basic questions to be addressed in land tenure policy**

While the basic questions may appear to be self-evident, nevertheless it is useful to remind ourselves of an irreducible set which need to be addressed, particularly where the state continues to exercise some elements of direct control under a leasehold system by which ultimate title still resides with the state. These questions are:

1. **Land Title**: Who shall be eligible for title over land?
2. **Land Use**: For what required, permitted and/or excluded forms of land use?
3. **Land Rent**: At what rental payments?
4. **Land Development**: Under what provisions for further development and maintenance of 'improvements'?
5. **Land Conservation**: Under what provisions for conservation of the land and biota?
6. **Land Access**: With what rights of access to others?
7. **Tenure Security and Transfer**: Under what rights to ongoing title or sale of title?
8. **Tenure Conversion**: Under what entitlements to tenure conversion available to the leaseholder and/or reserved to the state?

While some of these issues, such as land use and land conservation, are also of public concern on developed freehold land, there is a persuasive case to argue that there are greater challenges, needs and opportunities in developing an effective land policy in areas held under leasehold tenure. Three main points can be made, relating to: the ongoing strong public interest in leasehold land; the continuing public powers over this land; and the matching public involvement in shaping regional economic/social/environmental strategies for our most marginal regions.

Firstly, on leasehold land, the public interest remains very strong *vis-a-vis* the private interest, in practical as well as a legal sense. Private use is tenuous, private investment is low, land tracts are very large, and there is a diversity of actual and potential interests, other than pastoralism, which may need to be taken into account.

Secondly, the retained public powers under leasehold tenure do enable land administrators to develop a comprehensive land policy, touching on all seven questions raised above. There is no comparable single source of public authority over freehold land.

Thirdly, the relatively underdeveloped economic and social status and the ecological fragility of marginal lands all demand a parallel stronger public involvement in comprehensive economic/social/environmental strategic planning of marginal regions. As
is argued later in relation to Cape York Peninsula, there is an urgent need to ensure that land tenure legislation and administration can be harmonised with the growing demands for wider regional strategic planning. In the case of Cape York Peninsula, the need for such planning had already been accepted by the recently-ousted state National Party government, and is likely to be pursued more assiduously by the newly installed Australian Labor Party government. However, to date, there has not been adequate recognition of the need to integrate land tenure policy with land use planning.

It is also noteworthy that in the most recent of the wide-ranging pastoral tenure enquiries, notably those in South Australia and New South Wales, there is some recognition of the need for wider regional strategic planning and of the link to land tenure administration, but these linkages are discussed only in the most general way.

The Australian context: overextension of private tenure

A perusal of table 1 and figure 1 suggests that Australia differs markedly from most western capitalist nations in its restrictions on private land ownership, with only 16.2% of all land being either alienated or in process of alienation to freehold. This land is almost entirely confined to the more intensely settled agricultural lands, comprising the Australian ecumene. Beyond this is the vast pastoral zone held largely under leasehold and also lands of negligible pastoral value, formerly held as vacant crown land but increasingly being returned to aboriginal ownership. An estimated 52.6% of Australia’s total area and 76.4% of all land held for private use is under leasehold tenure.

<table>
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<td>Australian Capital Territory</td>
<td>27.2</td>
<td>72.4</td>
</tr>
<tr>
<td>Australia</td>
<td>52.6 (est)</td>
<td>31.1 (est)</td>
</tr>
</tbody>
</table>

Source: Year Book Australia, No 66 1982. 'Other' includes 'occupied by the Crown', 'reserved', 'unoccupied' and 'unreserved'

Note: The Australian estimates for the two categories of public lands are derived from estimates of the two categories within Tasmania. The highest possible error is less than 0.1%.
Figure 1: Land tenure in Australia

Key
1. Vacant, land still held by the Crown, unoccupied and unused
2. Reserves, including national parks, forest reserves, military reserves and scientific reserves
3. Aboriginal lands: a—Aboriginal reserves; b—Aboriginal inalienable freehold; c—Lands under claim by Aborigina
4. Leaseholds, mainly pastoral leases the size of which is not limited to 'living areas' or 'home maintenance areas'
5. Leases, mainly pastoral leases the size of which is limited to areas thought sufficient to support an average family, i.e., 'living areas' or 'home maintenance areas'
6. Aliensed, mainly purchased land held in free simple

Notes For clarity the areas of mining leases have not been included. Because of the map scale and lack of detailed information, particularly for New South Wales, the area depicted as aliensed is probably an exaggeration.
Sources Maps: Aboriginal land and Popuлаtion, 1982, scale 1:1,000,000, N.A.map, Canberra: Australian Public Lands, mid-1981, scale 1:5,000,000, N.A.map, Canberra, Northern Territories Aboriginal Land and Land under Claim, 1983, scale 1,000,000, N.T. Department of Lands, Darwin; South Australia showing Land Tenure, 1981, scale 1:1,000,000, S.A. Department of Lands, Adelaide. Various state government sources.

Source: Heathcote 1987, 266-7
Pointing to this low level of alienation, and arguing, if unconvincingly, that leasehold tenure constrain their borrowing capacity and investment programs, certain leaseholding interests continue to urge expanded provision for land alienation. This argument is reasonable if applied to the most productive pastoral land. It conforms with the traditional philosophy, where freeholding matches the final phase of land intensification. At the same time, there needs to be clearer recognition of the very major differences within the pastoral zone in the productivity and resilience of the land and thus in the capacity for intensification of land use. At the other end of the spectrum are very extensive tracts of marginal and submarginal land, encompassing much of the arid, semi-arid and tropical wet/dry climatic zones, where pastoral occupancy is tenuous and the case for privatisation of pastoral land ownership is weak.

Indeed, mounting evidence of severe, seemingly irreversible land degradation in the arid zone and also the recent retreat of pastoralism from the most submarginal northern lands under the economic pressure exerted by the Brucellosis and Tuberculosis Eradication Campaign (BTEC) (see Holmes 1990) raise serious questions as to whether indeed the privatisation of land occupancy has not proceeded too far at the outer margins. A case can be made that private proprietorial rights have been overextended, and that these rights now act as a major impediment to needed public decision-making on major issues relating to the future of these marginal lands. Overexpansion of private ownership rights in Australia is in marked contrast to marginal lands elsewhere, notably in northern Scandinavia and northern Canada. Even in the heartland of private property rights, the United States, public intervention by the Federal Bureau of Land Management in the management and use of marginal rangelands is much greater than in any Australian state.

There are two dimensions to this overextension of privatisation in Australia. One relates to the environmental context dictating resource use. The other relates to consequential social and political pressure.

1 **The environmental/resource context of overextension**

The overextension of private tenures onto our most marginal lands is an outcome of the dominance of pastoralism, based on the introduction of alien livestock and management modes, entailing the award of land rights to the owner of the livestock. This is in marked contrast, for example, with the modes of resource use pursued in Canada's northern marginal lands, where fur-bearing native animals such as muskrat, lynx and beaver offer more lucrative prospects than any domesticated animal. Commercial exploitation was readily attached to indigenous hunting and trapping. There was no need to pre-empt the resource rights of the indigenes, and these traditional rights are still largely recognised over most of Canada's northern sparselands. In Australia, there was no comparable advantage in subsuming aboriginal production systems. These were destroyed and the aboriginal people dispossessed and displaced, even in those areas where pastoralism has exercised a tenuous occupancy based upon irregular 'harvesting' of semi-feral cattle. While levels of management and economic returns compare unfavourably with commercial trapping areas in northern Canada, nevertheless this occupancy carries a proprietary land tenure, not awarded in Canada.

2 **The social and political context of overextension**

The momentum of pastoral occupancy ensured its entrenchment over all available land, being displaced only by 'higher' forms of land use, notably mining and agriculture. Just as Nature abhors a vacuum, so also have Australian land administrators. In Queensland, for example, where vacant crown land covers less than one percent of the state's area, the
declared policy has been to offer leases and occupational licences generously over all available land, to ensure that for all land parcels, some person has a responsibility to 'look after the land'.

Paralleling this 'horizontal' pursuit of expanded occupancy has been the 'vertical' expansion of the rights of leaseholders to the present stage, where, in some circumstances, the distinction between freehold and leasehold land has become blurred, and the official description of leasehold as public land (see table 1) can be regarded as misrepresentation. This reinterpretation of the rights of lessees has only partially resulted from legislative change, but has been mainly the result of gradual reinterpretation of property rights by lessees, administrators and governments, largely related to stabilisation of the system of landholdings and increasing private investment.

During the prolonged phase of state-sponsored closer settlement, land administrators used their legal powers to pursue an interventionist role in forcing the pace of development, by enforcement of covenants on capital inputs and by resumption of land, with little or no compensation, from larger leaseholds. This phase of pastoral subdivision terminated in the 1950s in New South Wales, Queensland and the Northern Territory and earlier in the other two pastoral states, South Australia and Western Australia. As the system of landholdings has stabilised, or even entered a phase of enlargement by amalgamation, and as the original development covenants have been fully met, so the well defined rural developmental role assigned to land administrators has been lost, without adequate replacement by any alternative role. Special-purpose development responsibilities, related to agriculture, tourism or other purposes have emerged only fitfully and have yet to be handled consistently. The newly emerged custodial role, which land administrators are well placed to accept, has yet to be addressed in a purposeful way, either in ensuring effective conservation of pastoral land or in setting aside an adequate system of nature reserves. On pastoral land, conservation goals, standards and appraisal procedures are less readily specified and less easily accepted by landholders than are development requirements. Also there is very strong opposition by local landholders to the transfer of pastoral land into nature reserves, arising from anticipated plagues of kangaroos, dingoos, pigs and various other 'vermin'. On these issues, land administrators tend to align themselves with their landholding 'clients' leading to the perverse situation where achievement of an adequate system of nature reserves can be more difficult on low-value pastoral lands than on more intensively occupied areas. In Queensland, the biogeographical regions encompassed by the pastoral zone have the lowest percentage areas held in national parks and nature reserves.

This is yet another instance of the needs of pastoralism, as perceived by pastoralists, being allowed to take precedence over other legitimate land use needs.

**Differences between states**

There is a high degree of commonality in the pastoral tenure systems of the five main pastoral jurisdictions, New South Wales, Queensland, South Australia, Western Australia and Northern Territory, as is well shown in Young's comparative appraisals of arid land administration (Young 1979a, 1979b, 1983).

Historically, the most significant divergence was in the level of commitment to the goals of closer settlement entailing the ongoing subdivision of leases to achieve a near uniform set of family living areas. New South Wales has been most persistent in pursuit of this policy, throughout its entire Western Division, with Queensland also pursuing the same path, with some amelioration under the influence of WL Payne, who cautioned against
over-subdivision, with prophetic comments about adverse economic, social and environmental consequences. Particularly in the first half of the twentieth century, land settlement policy in these two states was strongly influenced by the continuing adherence of Labor Party politicians to the principal of 'unlocking' the land to the common man, entitled to have a 'home maintenance area' (New South Wales) or 'living area' (Queensland). This policy was assisted, in part, by the higher productivity and resilience of major pastoral areas and by more advantages of accessibility and infrastructure when compared with pastoral lands in other states. In South Australia the Wakefield system of land subdivision foundered on the agricultural margins and was pursued in only limited fashion in the more accessible pastoral lands. In Western Australia and the Northern Territory, remoteness and the tardiness of rural settlement precluded the achievement of pastoral closer settlement. The outcome is that New South Wales in particular, and Queensland to a lesser extent, have a serious problem of undersized pastoral holdings, of marginal viability, requiring an ongoing program of restructuring. Effective programs have yet to be commenced. Indeed it was only in 1968 that New South Wales lifted its tightly enforced restriction against single ownership of more than one home maintenance area. Interstate differences in policies and the outcomes in the size distribution of holdings have been discussed in Young (1979b).

In recent decades another major policy divergence has developed. This relates to the property rights awarded to pastoral landholders. As shown earlier, there has been an inevitable, gradual expansion of these rights, by custom and through private investment, but not necessarily by legislative amendment. However, Queensland and the Northern Territory have moved much further in 'land privatisation' than the other three, not only by administrative reinterpretation but also by legislation.

In spite of having the least developed pastoral economy, comprising the largest leases, with the lowest use intensity, capital inputs, land values and lease rentals, the Northern Territory has made giant strides in increasing the rights of leaseholders since being awarded self-government in 1978. Three significant developments have been:

(a) Following the recommendation of the 1980 Pastoral Inquiry, legislation was enacted allowing transfer from limited-term to perpetual lease, by satisfying certain modest conditions concerning property development and herd control.

(b) The 1980 Pastoral Inquiry also recognised a number of circumstances in which the rights of leaseholders extended well beyond pastoral use only, including a proposal that, where land development for another use is approved, the leaseholder will have first opportunity to undertake the development or arrange for subdivision and sale, with the leaseholder retaining the capital gains.

(c) During 1987 the Northern Territory government prepared legislation to enable conversion from pastoral leasehold to pastoral freehold. It proceeded with, this proposal would have dramatically altered the map of Australian land tenure (see figure 1). However, this proposal became the most controversial single issue in the 1987 election, with a very strong wave of public protest against this over generous award of property rights to a small group. The dissent was so strong that the government dropped the proposal.

The rapid pace of change in the Northern Territory reflects the political strength of pastoralists in a very small political arena with a limited economic base. The chief protagonist of the freeholding proposal was President of the ruling Country Liberal Party at the time. Further prompting the push for greater 'land rights' for Europeans was the strong antagonism against the rapid change in aboriginal land tenures, granted by the
national government and confined to the Northern Territory, under constitutional powers. In arguing for parity with the new aboriginal freehold title, pastoralists conveniently refrained from any comparison of land quality, failing to note that almost all aboriginal land is confined to areas unwanted for pastoralism. It was also not recognised that aboriginal freehold does not award any individual private property right.

Queensland resembles the Northern Territory and differs from the other states in one important respect, namely in the political strength of rural landholders, exercised over the extended period of conservative government rule dominated by the National (formerly Country) Party from 1955 to 1989. There has been a persistent strengthening of private property rights attached to pastoral tenures, by both administrative interpretation and by legislation, culminating in the highly exceptionalist position described for Cape York Peninsula later in this paper.

It must be recognised that special circumstances provided a rationale for freeholding for certain pastoral lands, but not for its extension into marginal areas. Particularly in South Australia and Western Australia, it is fairly simple to demarcate agricultural from pastoral land tenures, along a very sharp, if seasonally fluctuating, agricultural margin. The adjoining pastoral lands have low productivity, and there is little case for expansion of tenure rights. In Queensland, and to a lesser extent, in western New South Wales, there is a broad land use transition zone, incorporating extensive lands of high pastoral productivity and with some opportunities for extensive cropping. Growth in capital investment, in productivity and in land value provided a case for freehold conversion within this zone, resisted by previous, long-serving labor governments.

The major 1962 revisions of the *Queensland Land Act* were directed primarily towards this anomaly in land tenure, and provided the means by which Grazing Selections and, to a limited extent, Pastoral Leases could be gradually converted to freehold, using the transitional tenure provided by Grazing Homestead Freeholding Lease. This legislation would have been entirely appropriate if its formal provisions or Ministerial interpretations had been clearly limited to the well-developed pastoral lands. However, as has become progressively clearer, the legislation has been applied in remote areas of near-zero pastoral development and equally minuscule pastoral prospects, where the intent clearly is to use a low-cost mechanism for freeholding as a means of negotiating land sales for prospective higher value non-pastoral activities.

Even for those areas remaining as pastoral leasehold, there has been an ongoing Ministerial reinterpretation of the rights of lessees, towards equating these almost equally with those attached to freehold.

The divergence between current Queensland practice and that of the other states is clearly indicated by quoting from the 1986 *Final Report on Pastoral Land Tenure* in Western Australia. The philosophy of this report is clearly revealed in the section titled 'Desirable Characteristics of a Pastoral Land Tenure System', where the relevant paragraphs are as follows.

The Study Group considers that the desirable characteristics of a pastoral land tenure system suitable for Western Australia are:

(a) That the Government should continue to be defined as the owner and 'land-lord' of the rangelands of the State with the rangeland being used for pastoral purposes by lease agreement;
(b) That the pastoral land tenure title adopted should provide sufficient equity, security and incentive to enable the pastoralist to manage and maintain the rangeland as a valued resource;

(c) The land tenure system adopted should not preclude any change of land use in the future which could accommodate conservation, tourism, community, Aboriginal, mining, or other interests;

(d) The land tenure system should also allow Government to change the land use, consistent with land use policy and strategy at any time, without having to await the termination of a lease;

(e) The change of land use should be implemented by Government resumption after sufficient time has been provided to allow the lessee to adjust or restructure in an orderly manner;

(f) Compensation should be provided to the lessee whenever the Government wishes to:

(i) Resume the lease and reallocate the land to another use;

(ii) Decrease the permitted intensity of use by allowing joint or multiple use;

(g) Compensation should be based on the value of the rangeland for pastoral use and be commensurate with the manner in which the lessee has maintained the rangeland resource;

Thus, the committee strongly reaffirmed the following principles:

Continuation of leaseholds with no freeholding

Provision for future land use change involving government resumption

Fair compensation, but based only on the assessed value for pastoral purposes.

A recent news report (Australian 14 Nov 1989) confirms that the West Australian government continues to adhere to these principles. With the resumption of the pastoral lease on Dirk Hartog Island for inclusion in a new National Park, the Premier is reported to be prepared to pay compensation at the pastoral valuation of 'little more than $1 million' and not the $6 million demanded by the lessee based upon its tourist potential. This reaffirmation, in Western Australia, that pastoral lease provides an entitlement only to pastoral activities, is in very sharp contrast with the recent over-extended interpretations of the property rights of lessees, which have emerged in Queensland and the Northern Territory. The consequences of these reinterpretation, in generating a wave of land speculation with consequent distortions to the land markets, creating impediments to effective land use change and to land use planning, can be observed by an examination of recent developments in Cape York Peninsula.

Cape York Peninsula: outcomes from overextension of property rights

Cape York Peninsula shares with the Gulf and the northern Kimberley Districts the dubious distinction of containing Australia's most difficult pastoral lands. The combined
effects of environmental disabilities and extreme locational disadvantage have placed these lands at the outer margin of profitability. Commercial cattle enterprises can survive only by relying upon extensive cost-minimising pastoralism based on irregular, incomplete, opportunistic mustering of semi-feral cattle. Capital investment is negligible and the economic value of the land is at or below zero, with realistic prices for properties being no higher than the turn-off value of the cattle plus the modest, depreciated fixed capital. The attributes of the most marginal properties are similar to those described for the Gulf District (see Holmes 1990). As in the Gulf District, the survival of the most marginal holdings is doubtful, given the stringent enforcement of the provisions for effective herd control or alternatively for destocking and shoot-out of uncontrolled cattle, under the national Brucellosis and Tuberculosis Eradication Campaign (BTEC). Some of the most marginal stations are currently being totally destocked, thereby depriving these holdings of their only significant current income-earning asset. Even under the generous financial assistance offered under BTEC it will be a very difficult and financially unrewarding task to restock these holdings.

The economic potential of the Peninsula’s cattle holdings is indicated by the annual lease rental per square kilometre, as shown in figure 2. There is a general zonal gradient from annual values of A$1.00 on the alluvial lands fronting the Gulf, in the south-west, to values of 12.5 cents or less in the most marginal lands in the east and particularly in the north. The decline towards the north reflects a marked deterioration in accessibility as well as in pasture quality. As a first approximation, it can be conjectured that leases with rentals of 24 cents per square kilometre or less will either be totally destocked or will retain only a very small nucleus herd in limited fenced areas, where disease has been found in the herd. This raises serious doubts about their survival. Also those with rentals from 25 to 49 cents per square kilometre will require persistence and an unusually high level of managerial skill to continue through without serious economic difficulty. The final destock and shoot-out, in 1989, has left depleted herds, totalling no more than 13 000 cattle for the entire area north of Coen, compared with an estimated number of over 60 000 head less than ten years earlier.

Land speculation on the Peninsula

In marked contrast to this retreat of pastoralism from the marginal lands has been the very sharp increases in the market value of some marginal pastoral leases. Two recent purchases, in 1988 and 1989, suggest that buyers are recognising the speculative opportunities, based on prospective non-pastoral uses, as a reason for buying pastoral leases. The remote, undeveloped Bertiehaugh lease, of 1396 sq km and with an overall annual lease rent of $139, has recently been purchased by a Cairns developer, at a price of $500 000, with its immediate worldwide marketing for resale at a price of $5 000 000. Bertiehaugh has never succeeded in functioning as a viable cattle station; it has negligible fixed improvements; and it is currently being totally destocked under the BTEC program, with negligible prospects for restocking in the immediate future. Its one advantage is its proximity to the proposed spaceport on Bromley holding, some 55 km to the east of Bertiehaugh’s eastern boundary (see figure 3 for locations).

The Geikie lease, of 1127 sq km, with an annual rental of $248, has just been purchased by a Melbourne syndicate at a price of $600 000. On the western flanks of the McIlwraith Range, the Geikie block has been regarded as wild country suitable only for periodic forays in search of scrub bulls and has attracted no investment improvements.
Figure 2: Cape York Peninsula: annual rental on pastoral leases

Source: Department of Land Management
The Peninsula has been largely exempted from previous land booms because of its remoteness, lack of infrastructure and limited development prospects. The records show only two epidemic phases in land purchasing, in the mid-1960s and late 1980s.

The 1960s boom was based on expectations of major productivity gains in the cattle industry, prompted by advances in land clearing, pasture improvement, herd upgrading and road transport. Through the vigorous promotional efforts of Sir William Gunn, American investors engaged in property purchases and land development projects across North Australia. A report in the Sunday Mail (13 March 1966) stated that Americans had purchased 15,000 square miles of Peninsula leases, supplying 10,000 of the Peninsula's annual 17,000 head of cattle turned-off to market. Ambitious, if shortlived, programs of development were undertaken on some properties, foundering on the twin burdens of excessively high costs and technical failures in clearing and pasture improvement. Save in the single case of 'Silver Plains', the original American investors subsequently sold or forfeited their leases.

In the land boom of the late 1980s, vendors invariably make reference to the prospects for pastoral intensification. However, it is clear that, with the possible exception of some leases in the southern Peninsula, in the Lakeland-Laura district, it is not the prospect for pastoral development which is fuelling the rapid escalation in sale prices.

This is suggested by the following indicators:

1. In most cases, land prices have spiralled well beyond the market levels set by even the most optimistic scenarios for pastoral development.

2. The land attracting speculative attention is invariably of very low pastoral potential, being of inferior quality and extremely inaccessible. Some prime targets for speculative attention have been the following leases or occupation licences: Bertiehaugh, Bromley, Line Hill, Geikie, the Nesbit River OL north of Silver Plains and the Starcke lease. With the possible exception of Bromley, these blocks have been unable to sustain even low-cost extensive pastoralism, and have remained undeveloped.

3. On the other hand, all of these blocks offer prospects for investment in non-pastoral activities, connected with tourism or the spaceport proposal. These prospects have been emphasised in the subsequent publicity blurbs seeking new buyers or partners.

Clearly, the current land speculation epidemic on Cape York Peninsula is triggered by great expectations associated with tourist resorts and the proposed spaceport, and anticipated spin-offs in population, urbanisation and infrastructure upgrading. The speculative surge has been further fostered by the state government, in two significant ways:

1. Vigorous promotion of hypothetical development prospects, beyond any reasonable level of expectation;

2. The use of land tenure legislation related to pastoral leaseholds in a manner which confers exceptional benefits on lessees, willing to 'work the system'.

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Existing land legislation and its interpretation

Central to the current wave of land speculation in Peninsula pastoral leases are the highly unusual ways in which the former Queensland government bestowed additional rights on the holders of these leases, far beyond those generally accepted for such low-rent, low-value, limited term leases. There are two fundamental components in the Queensland policy. These are:

1. The right granted to private pastoral lessees to initiate steps leading to conversion of substantial areas to freehold, together with very generous conditions for freehold purchase.

2. The increasing trend, partly by legislation, but mainly by Ministerial interpretation, to award to pastoral lessees a set of property rights far beyond those needed for pastoral purposes, and also well beyond those customarily considered appropriate for a low-rent, low-investment, low-value, large-area form of land tenure.

Problem one: conditions for freeholding

Existing legislation allows strategic portions of Pastoral Holdings to be converted to transitional tenures and hence to freehold on satisfaction of certain conditions, of which the most important is completion of a program of pastoral development according to specifications approved by the Minister. There are two basic flaws in the current interpretation of the legislation, in the Peninsula and in similar remote underdeveloped areas:

a) Premature freeholding

Land is being considered for freeholding well in advance of any substantial capital investment in pastoral development. Current policies are allowing lessees to ‘jump the gun’ ie, to gain the benefits, real or potential, of freeholding, without adequate investment in development.

b) Undervaluation of freehold title

Given the continuing uncertainties concerning real estate values in the Peninsula, there are formidable difficulties in assessing market values for land. Currently speculative money is pushing market values far beyond the pastoral value of the land. If the costs of freeholding are set at realistic levels relative to pastoral values, the purchaser will make substantial windfall gains at the public expense, since freehold land is currently being valued in relation to non-pastoral activities. Given the problems of sound valuation, it is advisable to adopt a cautious policy, restricting the freeholding of large tracts of land which are perceived to have considerable potential for non-pastoral uses.

The Queensland government was made aware of the problem of premature freeholding of marginal lands following the public outcry and questions in Parliament concerning the freeholding of the small Line Hill lease, in the remote but scenically attractive coastline between Lockhart River and Portland Roads. Freeholding commenced in 1972 at a purchase price of under A$10 000. This same piece of land, still undeveloped, was sold for A$14 000 000 in 1987 for the purposes of a resort development, yet to commence.
In spite of the adverse publicity, the former Queensland government also accepted proposals for freeholdng of 188 sq km on Silver Plains lease and 52 sq km within an area held under occupation licence on the Nesbit River (see figure 3). In these cases, although freehold title can only be awarded on the assumption of capital investment in pastoral development, the selected areas have low pastoral potential but offer prospects for developments related to tourism. Again, the freeholding costs are low, being set at A$250 000 at 1989 prices, while the owner has offered to sell a half-share in these freeholding leases and in the balance of the Silver Plains pastoral lease for $4 500 000.

**Problem Two: overextended interpretation of property rights**

Although pastoral leasehold tenure is designed to award only limited entitlements to the lessee, and to entail only a limited commitment in capital investment with very low annual rentals, nevertheless the current interpretation of the 'rights of private property' is conferring a highly privileged status on the lessee, including the pre-emptive right to veto any land development or land transfers from his lease, save on terms and at prices agreed to by the lessee. While the state government continues to retain extensive legal powers of land resumption on pastoral leases, the current stated policy is to use these powers only as a last resort and only for public purposes. Pastoral leasehold appears to be treated in a manner similar to freehold. Buyers can acquire local land monopolies by purchase of pastoral leases, generally ranging in size from 1000 to 2000 sq km. If the speculative element is discounted, the basic entry cost is remarkably low. Realistic non-speculative purchase prices of land plus fixed assets, bare of cattle, are no higher than $50 per square kilometre, while annual rentals are generally around 10 cents per square kilometre in the northernmost Peninsula and up to 30 cents south of Coen. Recognising the advantages in pre-emptive acquisition of a local land monopoly in areas for prospective development, speculators are currently pushing up prices to unprecedented levels, far beyond their value for pastoral purposes as already shown for the Bartiehaugh and Geikie leases.

Those who defend the present system may well argue that market forces will ensure a return to realistic prices. However, the current legislation clearly leads to a severe distortion of market forces, by creating extensive local land monopolies which provide the means to extract unrealistic charges from latecomers, particularly by those with only limited land requirements. While this may act as an inhibitor on development, and therefore may be considered desirable by those opposing development on the Peninsula, nevertheless it is contrary to the development thrust of the state government. It also may lead to development at inappropriate locations.

**Outcomes of land speculation**

While land speculation may yield windfall gains to the smart and the lucky, everybody else loses. It is important to recognise that land speculation has an impact extending well beyond the leases actually subject to speculative purchase. There is a strong impact on land prices generally within the Peninsula, particularly in the present phase when speculation is reaching epidemic levels. Unrealistically high land values can have negative effects on implementing any overall land use strategy for the Peninsula, designed to reconcile the goals of development and conservation.

Land speculation will have a very adverse impact on the cattle industry, already reeling under the impact of destocking and compulsory herd control programs under BTEC. Speculative prices of pastoral leases, at unrealistically high levels relative to their pastoral
income-earning capacity, will exclude *bona fide* cattlemen and will militate against any effective revival of the local cattle industry. Most speculative buyers will have a vested interest in leaving their holdings unstocked and unimproved as they await an opportunity to sell all or parts of their leases.

Investors seeking to establish commercial activities requiring only limited but highly selective land parcels will readily be held to ransom by the holders of local land monopolies. This may well have already happened, for example, with an abortive 1984 proposal for an intensive mariculture venture on land adjoining Princess Charlotte Bay. Similar problems may well be faced by any proposals for more intensive use, including mariculture, horticulture and tourist facilities.

Conversely, economically unsound development proposals can readily be pursued, buoyed by the windfall real estate gains accruing to the land speculator. The current exceptional wave of large scale, stand-alone resort proposals, extending the length of the Queensland coast, is largely founded upon the anticipated profits from speculative land dealing. The Peninsula is not exempt from these forces. Indeed, the ready availability of unusually large land tracts at low entry prices, and with prospects for special development leases and subsequent freeholding, make it an attractive target for speculation-inspired development proposals.

The acquisition of land for public purposes or to meet the need of aboriginal traditional owners is also negatively affected by the escalation in resumption costs which are tied to market prices. This will inhibit any program of land purchases, whether for conservation, development or other public purposes.

The current speculative land boom on Cape York Peninsula could be regarded as an aberration induced by an exceptional conjunction of misguided land policies with tantalising, if unrealistic, prospects of major real estate developments.

However, the current episode on the Peninsula should not be so lightly dismissed. Australia's marginal lands, particularly northern coastal lands, will increasingly become attractive for development proposals, some with realistic economic rationale, but many otherwise. The advent of the large, self-contained resort, remotely located, and with its ancillary income-generating real estate venture has already provided the medium for an extraordinary proliferation of proposals along the Queensland coast, most without any substantial financial backing. There are also many other emerging avenues for development ventures in the north, involving specialist agriculture, intensive livestock raising and mariculture.

If land policies continue further along the paths recently pursued in Queensland and the Northern Territory, it is reasonable to assume that an endemic form of land speculation will become entrenched within the land market for a high proportion of northern marginal pastoral leases, ensuring that purchase prices will remain well above the income-earning capacity of leases. This form of speculation became well established in marginal leases in the Northern Territory following the northern cattle boom of the late 1960s. In 1974 the then federal lands administration in the Northern Territory initiated lease forfeiture action against eleven lessees subsequent to speculative buying (Northern Territory Minister for Lands and Housing 1980, 85). In the Gulf District endemic speculation remains the sole identifiable 'land use' on a small group of marginal leases, and is an element in the land market and occupancy of several others. This endemic form of land speculation is not as visible as the current epidemic form on Cape York Peninsula, but it has a significant impact in distorting land prices and land use options.
Outcomes from overextension of property rights

Within the wider Australian context, it can be argued that, to date, there have been only two major negative outcomes from the overextension of the rights of pastoral leaseholders. These have been the adverse environmental effects from unregulated overgrazing on marginal arid and semi-arid rangelands, and also negative social impacts from the displacement of aboriginal peoples, most notably from lands where economic returns have been relatively insignificant. Only in recent decades have these adverse effects received even limited public recognition, but they now loom large as two of the major challenges facing Australia.

The probable future outcomes, if current trends in land tenure policy are to continue in their present directions, can be summarised as follows:

1. Continuing priority to pastoral ventures, real or imaginary, even in contexts where pastoralism is hardly viable, as on the northern margins, or where the long-term environmental damage outweighs any short-term economic benefit as under certain existing management regimes in the arid and semi-arid zone.

2. A consequent failure to give adequate priority to other extensive forms of land use, including those of aboriginal peoples or of nature conservation.

3. A persistence of land speculation, particularly on northern marginal lands, where a modern form of 'inverse squatting' may become entrenched. Whereas pioneer squatters gained the use of the land without title, today's 'inverse squatters' gain title to the land awaiting a chance to gain legal recognition, while inverse squatters are opportunistic non-users of marginal land, awaiting the prospect of speculative gain.

4. An exacerbation of the ongoing confrontation between pastoralist interests and the protagonists of aboriginal land rights, with land demarcation decisions continuing to be made according to land title rather than on the relative merits of each case.

5. Inappropriate mechanisms for achieving land use change, with land use decisions being distorted by a speculative land market and location decisions by fortuitous considerations of land title.

Needed policy directions

The broad principles underlying an appropriate land policy can be stated in very simple terms, as follows:

1. Reaffirmation of the long-standing but often abandoned principle that a pastoral lease gives pastoral rights only.

2. Reaffirmation of the responsibilities of governments to resume pastoral leases and reallocate to other uses and tenures where there is a clear public interest in reallocation.

3. Redirection of leasehold covenants towards sound land management.
Greater recognition that the lease-resumption and tenure-conversion powers of governments provide a powerful mechanism to engage in land use planning, with a clear need to relate decisions on land tenure to those on land use.

Recognition of the changing demands for land, particularly in the more marginal lands of the pastoral zone, in the arid interior and tropical north. There is a strong public interest in seeing that the needs for aboriginal peoples, for nature conservation, and for tourism and recreation are given further recognition. While pastoralism will remain the most widespread form of extensive land use, and the dominant use in prime pastoral lands, it can no longer expect unquestioning acceptance as the top priority mode of land use on marginal lands.

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CHAPTER FOUR
MINING AND ECONOMIC DEVELOPMENT IN THE NORTHERN TERRITORY: WHAT WE KNOW, WHAT WE NEED TO KNOW

Ciaran O’Faircheallaigh

This chapter deals with the relationship between mining and economic development; while it focuses specifically on the Northern Territory, its findings are relevant to North Australia generally. It discusses the current state of our knowledge in relation to a number of key issues, seeking to describe the nature of particular impacts, to explain why they take the form they do, and to consider whether policy initiatives might modify them so as to enhance mining’s contribution to economic development. It identifies some important gaps in our knowledge, and suggests the sort of research required to fill them; in some cases new research initiatives are needed, but in others gaps result from a failure to continue work on specific issues over sufficiently long periods of time.

Mining in the NT

Mining was the first industry established by Europeans in the Territory, and in value terms is by far its largest industry sector (1). Until the second world war, mining activity was limited in scale, based on small, rich deposits of high-value minerals (gold, wolfram, tin) exploited by individuals or small companies. In the late 1940s and the 1950s a number of larger gold and copper/gold/bismuth deposits were developed near Tennant Creek, using mechanised mining methods. In 1964 BHP (Broken Hill Proprietary Co Ltd) discovered manganese on Groote Eylandt, a discovery which initiated a new phase in the NT’s mining history as the Groote Eylandt Mining Company Ltd (GEMCO) was to become one of the world’s largest suppliers of manganese ores. This was followed by the establishment of bauxite mining and alumina refining at Gove (1971) (NABALCO Pty Ltd) and of uranium mining at Nabarlek (1979) and Ranger (1981). During the 1980s oil and gas production commenced south of Alice Springs and offshore in the Timor Sea, and a substantial number of small and medium-sized projects were developed, most of them gold mines.

Extensive additional reserves of minerals have been identified, but are not yet being exploited for political, economic or technical reasons; most notable are the uranium deposits in the Alligator Rivers Region, and a lead/zinc deposit at McArthur River which is very large by world standards.

Table 1 provides some details regarding NT mineral production in selected years since 1964. The value of production has risen very substantially over this period, from $10 million in 1964 to $1,314 million in 1989. Output was initially dominated by copper and gold, which accounted for 88% of total production by value in 1964. In the early 1970s the industry became more diversified with the establishment of manganese, bauxite, bismuth and lead/zinc mines. However by 1975 the two most valuable minerals, bauxite and manganese, accounted for 69% of output by value, and by 1982 uranium and bauxite accounted for 82% of the total and uranium alone for 66%. The commencement of oil production and the expansion of gold mining in the late 1980s has again diversified the industry to some extent.
Figure 1: Location map for selected NT mine sites and mineral resources
Table 1: Northern Territory Mineral Output, Selected Years 1964—1985, Quantity (as Indicated) and Value ($000)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Value</td>
<td>Value</td>
<td>Value</td>
<td>Value</td>
</tr>
<tr>
<td>Gold</td>
<td>kg</td>
<td>2567</td>
<td>2581</td>
<td>5417</td>
<td>20145</td>
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<tr>
<td>Silver</td>
<td>Kg</td>
<td>3047</td>
<td>107</td>
<td>1007</td>
<td>103</td>
</tr>
<tr>
<td>Copper</td>
<td>Tonnes</td>
<td>10090</td>
<td>6057</td>
<td>2642</td>
<td>2854</td>
</tr>
<tr>
<td>Uranium</td>
<td>&quot;</td>
<td>335</td>
<td>n.a.</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Manganese</td>
<td>&quot;</td>
<td>216</td>
<td>16</td>
<td>1554909</td>
<td>27730</td>
</tr>
<tr>
<td>Tin</td>
<td>&quot;</td>
<td>28</td>
<td>75</td>
<td>20</td>
<td>88</td>
</tr>
<tr>
<td>Lead/Zinc</td>
<td>&quot;</td>
<td>7</td>
<td>2</td>
<td>222</td>
<td>89</td>
</tr>
<tr>
<td>Bauxite</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>4049847</td>
<td>62638</td>
</tr>
<tr>
<td>Bismuth</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>854</td>
<td>11631</td>
</tr>
<tr>
<td>Construction Materials</td>
<td>&quot;</td>
<td>174965</td>
<td>969</td>
<td>2053677</td>
<td>4963</td>
</tr>
<tr>
<td>Oil</td>
<td>Kl</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>Kl</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Total All Minerals</td>
<td></td>
<td>9815</td>
<td>130239</td>
<td>403762</td>
<td>606582</td>
</tr>
</tbody>
</table>

Source: O'Faircheallaigh 1990, Appendix Table A; NT Department of Mines and Energy, unpublished data provided to the author
Despite the establishment during recent years of a substantial number of small and medium sized projects, a few large enterprises dominate the industry and account for the bulk of employment and mineral output. In 1986, four mines (Ranger, Nbarlek, GEMCO, NABALCO) accounted for 75% of the total value of mineral production. The dominance of the industry by a few commodities and a small number of large firms leaves it highly susceptible to the instability which characterises world mineral markets.

The following sections discuss four key issues which are central in assessing the mining industry's contribution to economic development: the industry's capacity to generate employment, directly and indirectly; its significance as a source of government revenue; the broader economic impact of the social and physical infrastructure required to support mining; and the link between mineral revenues and Aboriginal economic development.

Direct and Indirect employment

Direct employment

It is now generally recognised that the mining industry's capacity to generate employment is limited. This is indicated, for example, by the fact that employment in mining grew by only 50% between 1968/69 and 1985/86, from 1,281 to 1,903, whereas the value of mineral output grew seventeen-fold. Over the same period, the proportion of the NT workforce employed in mining fell from 5 to 3 per cent.

This situation reflects the fact that mining projects in the Territory are highly capital intensive relative not only to Australian manufacturing but also to the Australian mining industry as a whole; in other words, they employ large quantities of capital relative to the employment they generate. Expenditure on fixed assets per employee in NT mining averaged $29,411 per annum during 1969/70-1984/85, compared with $18,356 in Australian mining and $1,814 in Australian manufacturing. Like other industries in Australia, NT mining is becoming more capital intensive as time goes on; fixed capital expenditure per worker was $11,082 during 1969/70-1976/77, and $45,677 during 1977/78-1984/85, an increase which cannot be accounted for solely by inflation. However NT mining is also becoming relatively more capital intensive; during the first half of this period, fixed capital expenditure per employee was 10.6 times that in Australian manufacturing, while during the second half the equivalent figure was 16.2 (2).

Rising capital intensity reflects both the fact that new mines tend to be more capital intensive than older ones (this also applies to small and medium scale projects), and that existing mines are becoming more capital intensive as time goes on. An example of this latter process is provided by GEMCO's manganese mine which employed 650 people to produce some 2 million tonnes of ore in 1980; it produced a similar quantity in 1985 with only 550 workers. The continued rise in capital intensity means that employment is unlikely to increase significantly even if the industry continues to expand rapidly.

Wage levels in NT mining are relatively high; in 1985/86, for example, average wages in NT mining were $583 per week, compared with $414 in the NT as a whole and $359 in Australia (3). This reflects the skill composition of the workforce in what is a highly-mechanised and technologically sophisticated industry; the need to attract labour to geographically-remote and climatically-extreme areas; and the high productivity of labour in a capital-intensive industry.
Indirect employment

Considerably controversy surrounds the extent of indirect employment generated in other sectors of the economy as a result of the mining industry's operations. The NT government's economic development strategy has always rested on the assumption that it is substantial. Its spokesmen have argued that four or five additional jobs are created elsewhere for every one in mining (see, for example, Tuxworth, Northern Territory Parliamentary Debates [NTPR], 21 November 1978, Pt 1, 315; 17 August 1982 - 2 September 1982, Pt 1, 2701), and have regarded these jobs as particularly valuable because they result from expansion of other sectors of the economy and so permit the establishment of a diversified economic base. These developments are expected, in turn, to lead to significant population increase, mitigating the economic and social disadvantages created by the Territory's isolation and the small size of its population, opening up the way for its further economic growth (see, for example, NTPR, Everingham, 23 August 1983-1 September 1983, Pt 1, 691; Tuxworth 12-21 February 1980, Pt 1, 2829; Coulter, 5-14 June 1984, 391). Thus mining is seen as a catalyst which can set off more broadly-based economic development, and creation of indirect employment is the crucial link in this process.

Before considering this issue further, it is necessary to emphasise that there is no generally accepted definition of 'indirect' or 'multiplier' employment. A conventional definition (ie, one employed in economic analysis based on input-output data) usually consists of: (i) the employment effect of the mining industry's demand for inputs of goods and services, and the flow-on effect of this demand as firms supplying the mining industry purchase goods and services from other enterprises; these are referred to as 'first round' and 'industrial support' multipliers respectively; (ii) the employment effect which results from expenditure of wages and salaries generated in the mining sector ('consumption-induced' multiplier). But other definitions variously include employment generated in industries which process mineral output (smelting, refining, basic metal fabrication), in government agencies which operate in isolated mine towns, and as a result of consumption expenditure by those earning income on capital employed in mining.

As regards mining's demand for goods and services, the first point to note is that mining in general, and NT mining in particular, generates relatively little demand for intermediate inputs. Between 1969 and 1983 Australia's manufacturing sector spent between 63 and 70 cents on goods and services for every dollar of sales; the equivalent figures for Australian mining were between 31 and 38 cents, for NT mining between 18 and 35 cents (4).

In addition, a high proportion of the NT industry's material inputs consist of energy, which has traditionally been imported, manufactured goods produced in industries characterised by significant economies of scale (equipment and machinery, truck tyres, chemicals, explosives) and, reflecting the geographical isolation of the NT's major mines, transport and catering services. The Territory's relatively undeveloped economy is not in a position to provide many of the items required in technically-complex mining operations; provision of services can generate opportunities for local firms, though they sometimes lack the expertise to meet the industry's requirements, for instance for specialised transport or largescale catering services. Thus a high proportion of goods and services are purchased interstate or abroad. In 1983/84 the Ranger uranium mine, for example, purchased only 42% of its goods and services in the NT, and this figure overstates the significance of local purchases since in a substantial number of cases the Darwin office of a firm was paid for goods or services which were in fact supplied directly to Ranger by an interstate subsidiary (O'Fairchealalgh 1986b, 14, 18). Mines which are isolated from Darwin tend to have a lower proportion of 'local' purchases.
As mentioned above, wage levels in NT mining are relatively high, and this implies that individual employees have substantial disposable income, creating a potential for significant consumption-induced employment. However, since comparatively little labour is used by the mining sector, total wage payments are small in relation to sales and value added; in 1983/84, for example, the NT industry paid $87 000 in wages and salaries per million dollars of turnover, whereas the equivalent figure for Australian mining was $157 000, and that for Australian manufacturing was $197 000 (5). Also relevant is the skill composition of the industry's workforce. It is frequently not possible to hire the skilled labour required for mining locally, and the industry recruits a high proportion of its workers interstate. In 1984, for example, some 70% of Ranger's workforce had been recruited from outside the NT. Mineworkers in the NT have a high propensity to save, particularly in remote locations such as Alyangula and Nhulunbuy, and labour force turnover rates are high (eg, 24% at Ranger in 1984/85, 16% at GEMCO in 1984); consequently a substantial proportion of wage and salary payments are accumulated and taken interstate when the worker leaves, and do not find their way into the Territory economy.

In combination, these points would suggest that indirect employment (in the conventional sense) generated in the NT by mining will be limited, and the available information indicates that this is indeed the case. Reliable data are not available for the industry as a whole, but the author has conducted a detailed study of indirect employment generated by the Ranger project, and this suggested an NT job multiplier (for first round, industrial support and consumption-induced employment) of 1.7, ie, 0.7 jobs are created in NT industries selling goods and services to Ranger and its employees for every job in Ranger itself (O'Faircheallaigh 1986b, Chapter 2). A similar multiplier probably applies to the Nabarlek mine. Earlier research in Tennant Creek suggested a multiplier there of about 1.6 (O'Faircheallaigh 1986e, 57). Job multipliers for GEMCO and NABALCO are probably lower than for the other major mines, given their more remote location and their tendency to purchase goods direct from east coast ports. It seems, therefore, that the NT job multiplier of mining is certainly not above 1.75, ie, three-quarters of a job is created elsewhere in the Territory for each job in mining.

These figures ignore employment generated through provision of public services in mining towns. The jobs involved here do not represent an equivalent net addition to national employment, as those services would have to be provided regardless of where the populations involved resided. However, they do represent a net addition to Territory employment, since most of the individuals concerned are not permanent NT residents and in the absence of mining would have generated a demand for services elsewhere. It must also be recognised that mining towns usually play a regional service role and some support economic activities other than mining (see below), and consequently all public service employment cannot be attributed to mining. Adding public service employment in Jabiru to the 'indirect' employment generated by Ranger would increase the NT multiplier to 2.2.

Much of the NT's mineral output is exported in raw form, and consequently little additional employment is generated in mineral processing or fabrication. The only significant exception relates to the refining of bauxite into alumina at Gove; NABALCO does not release separate figures for its refinery workforce, but apparently it numbers several hundred.

Because of mining's high capital intensity, a large proportion of the value of output will accrue to those who provide the large sums of capital required for mineral development. If the resources involved were spent locally, their expenditure could create substantial indirect employment. However, mining in the Territory is almost entirely owned and
financed by companies resident in metropolitan centres (especially Sydney and Melbourne) and abroad, and so the funds involved flow out of the NT.

In summary, we now know a considerable amount about the direct and indirect effects of mining on employment in the Territory. This knowledge implies that mining will make only a limited contribution to development via employment creation. This does not of course represent an argument against mining; the choice is not usually between investment in Territory mining and investment in other activities in the NT which would be more labour intensive and have stronger links with other sectors of the economy, but rather between investment in NT mining or no investment. In other words, the choice may be between limited benefits and no benefits at all. Nevertheless, it is important to have realistic expectations regarding what mining can contribute to employment creation.

Could government help to increase the mining industry's contribution to employment? There is little indication that there is any scope for government to influence the capital intensity of mining in the NT, which presumably represents an economically rational response to the relatively high labour costs faced by mining companies, costs which reflect not only high wages but also the expense of recruiting, accommodating and catering for labour in remote locations.

However government might be able to influence indirect employment, particularly by acting to increase the local supply of skilled labour (helping to keep wage income in the Territory), and by facilitating the establishment of input-supplying and mineral processing industries. As regards the first, an increase in the supply of locally available skilled labour is of course required not just for mining but also to meet the needs of other industries and of the public sector. The government is endeavouring to achieve such an increase through general education and training programmes, including the establishment in 1986/87 of a University College of the NT (now the Northern Territory University).

It seems unlikely that government initiatives can significantly increase the proportion of goods and services purchased locally, because use of imported inputs usually reflects the absence in the NT of relevant manufacturing capacity; since the industries concerned are characterised by significant economies of scale, it is unlikely that their establishment will be economically viable in the near future. One exception relates to energy inputs, where use of natural gas from the Centre or from offshore areas could substitute for imported fuel. The government has of course been active in this area, but it must be remembered that persuading the mining industry to use gas will only result in net benefits to the Territory if alternative markets are unavailable. In these circumstances, the government's role is largely restricted to ensuring that existing firms in the NT are fully aware of the opportunities which do exist in the minerals sector, and in fact it has been endeavouring to do so, particularly since mid 1987.

Thus while there is some scope for mining to assist in generating employment, its contribution in this regard will continue to be limited. This makes it even more important to assess other areas in which the industry can have an impact.

**Mining as a source of government revenue**

Many of the NT's mines have been highly profitable, and this creates a potential for government to substantial enhance its revenues. The following comments relate to some of the Territory's larger mines.
Energy Resources of Australia (ERA) has earned annual pre tax rates of return of up to 25% on shareholders' funds (ERA, Annual Report, various years). Relevant information has not been published by Queensland Mines Ltd (QML), but in 1982/83, for example, it apparently contributed $24 million to its shareholders' earnings (derived from Pioneer Concrete, Annual Report 1984, 39), giving a return of 24% on QML's total initial capital investment, three-quarters of which was loan capital. Australian Development Ltd (ADL), the Tennant Creek gold producer, incurred significant losses during the 1980s, but earlier in its life was one of Australia's most profitable mines, returning its shareholders their initial capital 40 times during 14 years in the 1950s and 1960s.

Conventional rate of return calculations are not a good guide to GEMCO's profitability. It is a wholly-owned BHP subsidiary and surplus funds are at times retained in GEMCO to fit in with BHP's general dividend, taxation and investment policies, thus inflating shareholders' funds and reducing rates of return. However, it is clear that GEMCO has earned substantial profits, as indicated by the fact that it paid BHP $115 million in dividends during 1977-1985 (BHP, Annual Report, various years). It is very difficult to comment on the profitability of NABALCO, since the major joint venturer, Austraswiss, apparently uses production costs rather than 'arms length' prices as the basis for sales to its parent, Alusuisse, and because the substantial Swiss franc loans it owes its parent have absorbed an increasing part of Austraswiss's operational surpluses during recent years (Austraswiss, Report of the Directors, various years). However, it would appear that Gove is not as marginal an operation as is often suggested; in 1981, for example, Gove Aluminium earned a gross profit of $17.5 million on its 30% share of the project, representing an after-tax return of 21.4% on shareholders' funds (Gove Aluminium Ltd, Annual Report 1984, 24).

Of course not all of the Territory's mines are profitable, but clearly the NT industry as a whole does generate very substantial operating profits. To date, the NT government has not captured a significant share of these surpluses, the bulk of taxes generated by the industry being collected by the Commonwealth. The recent situation is illustrated by table 2, which uses the available information to indicate the division of taxes between Canberra and Darwin in 1983/84. ERA's earnings were not liable to income tax in that year; in 1984/85 its liability amounted to about $53 million, and this would skew the distribution of taxes even more heavily in Canberra's favour.

This situation partly reflects the Commonwealth's control over lucrative company and income taxes and its ownership of uranium, which supports one of the most profitable sectors of the industry. It also reflects the fact that the fiscal regime inherited by the NT government in 1978 was in general very generous to the companies involved; as a result, mineral royalty payments as a proportion of the value of mineral production have been lower in the NT than in any of the states. In 1983/84, for example, the NT figure was 0.7%, compared with 6.9% in Western Australia and 4.1% in Queensland (which also imposes 'de facto' royalties through rail freight charges) (6).

The NT government did of course have the capacity to alter the royalty regime applied to mining, which could in turn have allowed it to substantially expand benefits from the industry. It took a step in this direction in 1982, introducing the NT Mineral Royalty Act which applies an 18% profit-based royalty after deduction of certain allowable expenditures. However the impact of this legislation has been, and will continue to be, limited. It was not applied to existing mining leases and the major mining operations will only become subject to it as their leases expire. In June 1987 the government amended the Act in ways which, while not changing the nominal royalty rate, reduced the effective rate by as much as 4 percentage points (according to the Minister for Mines, Mr Coulter) (7).
Table 2: Identified tax payments by the NT mining Industry, 1983/84, $000

<table>
<thead>
<tr>
<th>Commonwealth</th>
<th>Amount</th>
<th>%</th>
</tr>
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<tr>
<td>- Income Tax*</td>
<td>30 006</td>
<td>49.2</td>
</tr>
<tr>
<td>- Employee Taxation**</td>
<td>19 753</td>
<td>32.4</td>
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<tr>
<td>- Total</td>
<td>49 759</td>
<td>81.6</td>
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<table>
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<th>Northern Territory</th>
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<tr>
<td>- Royalties, and Grants in Lieu of +</td>
<td>8 368</td>
<td>13.7</td>
</tr>
<tr>
<td>- Payroll Tax**</td>
<td>2 823</td>
<td>4.6</td>
</tr>
<tr>
<td>- Total</td>
<td>11 191</td>
<td>18.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>60 950</td>
<td>99.9</td>
</tr>
</tbody>
</table>

Notes:  
*Four largest projects. Information on Ranger, Gove Aluminium, Austraswiss and GEMCO from their Annual Reports. Figure for QML is estimated by applying standard rate of company tax to its declared post-tax earnings.  
** Five major projects — Ranger, Nabarlek, Gove, Peko Mines, GEMCO.  
+ Industry as a whole.

Source: Information provided by individual companies; company annual reports; Northern Territory of Australia, Statement of Revenue Sources 1984-85, Budget Paper No. 2, 1983-84.

The government's actions in limiting the scope of the Act and in reducing its severity were in response to mining industry claims that its terms were excessively onerous and were likely to deter exploration and development (OFaircheallaigh 1986d, 11-14). It is of course the case that any generally applicable mineral taxation system involves a trade-off between deterring investment in marginally economic mines and capturing a larger share of revenue from highly profitable ones; reducing the tax rate implies a lower risk of deterring investment in the former, but less revenue from the latter. Thus the NT government has accepted that revenue from highly profitable mines in the NT will be reduced, and in return there will be less risk that mineral deposits which are perceived to be economically marginal will not be developed. But as the previous section showed, the direct economic impact of mining on the Territory economy is slight. This implies that economically marginal mines which generate little financial surplus will not contribute greatly to economic growth. Thus the NT government has sacrificed potential revenues in order to encourage investments of a sort which are unlikely to bring substantial economic benefits to the Territory. In other words, it has espoused a philosophy which suggests that mineral development is of worth for its own sake, rather than primarily because of the revenues it can generate. Such an approach does not appear appropriate given the character of the Territory's mining industry and the structure of its economy.

It could be argued that the NT government had little choice but to respond to industry demands, given the Territory’s economic dependence on the mining industry. On the other hand, it could also be argued that its response resulted from poor policy analysis, which led to a basic misunderstanding of mining’s place in the economy; this weakness might reflect, in turn, the industry's capacity to exert substantial influence over the policy process. However it is difficult to make any conclusive comments on these points,
because little systematic research has been conducted into the formulation of mineral policy in the NT, or into the mining industry's role in the policy process (for a preliminary review see O'Faircheallaigh 1986d). This is clearly an area in which additional work is needed.

The Ranger and GEMCO mines

A clear illustration of some of the specific points discussed in the preceding sections can be gained by examining the way in which income earned by individual mining projects is distributed. Table 3 provides detailed information on the Ranger project; it gives a breakdown of the principal payments made by the operating company and its parent during 1982/83-1984/85.

Table 3: Principal payments made by Ranger/ERA, 1982/83-1984/85, per cent

<table>
<thead>
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<th>1982/83</th>
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<tbody>
<tr>
<td>Labour</td>
<td></td>
<td></td>
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<tr>
<td>- Wages &amp; Salaries (net)</td>
<td>3.9</td>
<td>4.2</td>
<td>3.8</td>
</tr>
<tr>
<td>- Non-wage costs</td>
<td>3.4</td>
<td>3.6</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>0.4</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Goods and Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Foreign</td>
<td>17.7</td>
<td>19.2</td>
<td>15.1</td>
</tr>
<tr>
<td>- Local</td>
<td>4.5</td>
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<td>6.1</td>
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<tr>
<td></td>
<td>13.2</td>
<td>13.8</td>
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<td>3.7</td>
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<td>- Commonwealth</td>
<td>1.5</td>
<td>1.6</td>
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<tr>
<td>- NT</td>
<td>1.9</td>
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<td>1.7</td>
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<tr>
<td>- Local</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Aboriginal Interests</td>
<td>5.9</td>
<td>5.6</td>
<td>5.1</td>
</tr>
<tr>
<td>Rehabilitation Fund</td>
<td>3.0</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Providers of Capital</td>
<td>65.8</td>
<td>64.7</td>
<td>63.8</td>
</tr>
<tr>
<td>- Interest Payments</td>
<td>26.8</td>
<td>23.7</td>
<td>19.7</td>
</tr>
<tr>
<td>- Loan Repayments</td>
<td>25.0</td>
<td>25.0</td>
<td>21.6</td>
</tr>
<tr>
<td>- Dividends Paid*</td>
<td>14.0</td>
<td>16.1</td>
<td>22.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes: * Net of dividend withholding tax on dividends paid to foreign shareholders.

Source: ERA, Annual Reports; information provided by Ranger and ERA.

Labour received only 4% of total payments, indicating the high capital intensity of the project. Suppliers of goods and services received between 15 and 19%; Ranger purchases only 14 cents worth of goods and services for every dollar of sales. The Commonwealth received 7.8% of the total in 1984/85, but it should be noted that its share will have increased from 1985/86 onwards, when ERA became fully liable for payment of company tax. Had its tax liability for 1984/85 been payable in that year, the Commonwealth's share of total payments would have been close to 20%.
Another major point which emerges from table 3 is the very high proportion of total payments received by providers of capital (between 64 and 66%). This proportion will decline significantly as loans are repaid; additional income will flow to the Commonwealth, and there will be a shift in payments away from providers of loan capital towards shareholders.

The available information permits a detailed geographical break-down of income flows from the Ranger project, and indicates that in 1983/84 19% of Ranger's payments flowed into the NT economy, at least initially. Its NT payments were broken down as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages and Salaries (net)</td>
<td>18.7%</td>
</tr>
<tr>
<td>Goods and Services</td>
<td>41.6%</td>
</tr>
<tr>
<td>NT and Local Taxes</td>
<td>10.6%</td>
</tr>
<tr>
<td>Payments to Aboriginal Interests</td>
<td>29.1%</td>
</tr>
</tbody>
</table>

It was mentioned above that a substantial part of wages and salaries leaves the NT economy, and that a significant proportion of payments for goods and services are to branch firms in Darwin which act simply as transit points for goods shipped in from interstate. Both of these factors serve to overestimate the share of payments made in the NT, and to underestimate the share of NT income flows accounted for by payments to Aboriginal interests.

Ranger is the NT's newest large mine and certainly one of its most capital intensive, and while it does account for nearly 20% of mineral output by value, it might not be considered typical of the industry as a whole. Table 4 combines information on Ranger's principal payments with data on GEMCO, whose manganese mine has been established for nearly twenty years and is significantly less capital intensive than Ranger. Ranger and GEMCO represent projects at different stages of development, and table 4 should consequently give a fairly accurate impression of the pattern of payments for NT mining as a whole.

**Table 4: Principal payments made by Ranger and GEMCO, 1984/85**

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages and Salaries (net)</td>
<td>5.4</td>
</tr>
<tr>
<td>Goods and Services</td>
<td>17.9</td>
</tr>
<tr>
<td>Taxes</td>
<td></td>
</tr>
<tr>
<td>- Commonwealth</td>
<td>11.0</td>
</tr>
<tr>
<td>- NT</td>
<td>1.7</td>
</tr>
<tr>
<td>Total</td>
<td>12.7</td>
</tr>
<tr>
<td>Aboriginal Interests</td>
<td>3.4</td>
</tr>
<tr>
<td>Providers of Capital</td>
<td>45.8</td>
</tr>
<tr>
<td>Other</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>99.9</td>
</tr>
</tbody>
</table>

Source: Information provided by Ranger and GEMCO.

Inclusion of the GEMCO data modifies the picture somewhat, but the basic pattern remains unchanged: a relatively low proportion of payments flowing to suppliers of goods and services and especially to labour; the Commonwealth receiving the bulk of taxes and the NT's receipts accounting for a very small share of payments (1.7%); and nearly half of total payments flowing to providers of capital.
Mine Infrastructure and economic development

While the impact of mining itself on the NT's economic development may be limited, it is possible that the industry could contribute substantially to growth if the infrastructure it developed (roads, ports, airports, townships) was utilised in other economic activities which could not themselves support the full cost of developing infrastructure in remote regions. In is in this context that Australian politicians have frequently referred to the role of mining in 'opening up' Australia's North.

During 1985 the author conducted a detailed study of mine infrastructure and economic development in North Australia, which attempted to establish empirically whether such infrastructure had in fact contributed to more broadly-based economic growth (O'Faircheallaigh 1986c). The record was mixed. In Tennant Creek and Jabiru, infrastructure established for mining was used extensively in other forms of economic activity, especially tourism and (in Tennant Creek) meat processing. On Groote Eylandt and at Gove, its use was almost entirely restricted to mining. This contrasting experience is very evident when one examines the employment structure of the Territory's mining towns; tables 5 and 6 provide some relevant information for Alyangula (GEMCO's township) and for Tennant Creek, based on census data and on surveys undertaken by the author in 1985.

Table 5 indicates that Alyangula has been dominated by mining throughout its twenty year history. In 1985, no evidence of agricultural and manufacturing employment was found. Mining accounted for 72% of employment, but it should be stressed that other industry sectors are heavily dependent on GEMCO's operations for their continued survival. In 1985, for example, 52 of the 80 people employed in the construction sector worked for enterprises which receive in excess of 90% of their income from sales to GEMCO, while the remaining enterprises receive in excess of 75% of their income from GEMCO (O'Faircheallaigh 1986c, 38). Virtually all employment in other sectors involves provision of retail, transport, business, social and personal services to GEMCO's employees and those of its suppliers.

Thus, nearly two decades after its establishment, Alyangula's employment structure is still entirely dominated by mining, directly or indirectly, and if GEMCO's operations ended, employment would virtually cease.

The situation in Tennant Creek is markedly different, as indicated by table 6. A comparison of the data for 1981 and for 1985 shows that employment in mining declined dramatically between these years, from 824 to 311, or from 40 to 23% of the total workforce. Yet the impact of declining mining activity on employment in other sectors was limited. It is difficult to give precise figures because of the substantial 'not classified, not stated' category in the Census data; it would appear from mining company employment records that about 50 of those in this category were actually engaged in mining, in which case non-mining employment declined by only about 120 between June 1981 and mid 1985, compared with a fall in mining employment of 513.

There are a number of reasons for the limited impact of cutbacks in mining operations. First there has been a strong growth in tourist activity in Tennant Creek during 1981-1985 (O'Faircheallaigh 1986c, 49-50), which explains the substantial net rise in employment in the Personal Services sector and which provided some compensation to retailers for the loss of mineworkers' wage and salary expenditure.
Table 5: Employment by Industry, Alyangula, June 1971 and 1981, October 1985

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persons</td>
<td>%</td>
<td>Persons</td>
<td>%</td>
<td>Persons</td>
<td>%</td>
</tr>
<tr>
<td>A Agriculture etc</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>B Mining</td>
<td>188</td>
<td>68.9</td>
<td>507</td>
<td>66.6</td>
<td>546</td>
<td>71.4</td>
</tr>
<tr>
<td>C Manufacturing</td>
<td>4</td>
<td>1.5</td>
<td>13</td>
<td>1.7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>D Electricity, Gas, Water</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E Construction</td>
<td>15</td>
<td>5.5</td>
<td>57</td>
<td>7.5</td>
<td>80</td>
<td>10.5</td>
</tr>
<tr>
<td>F Wholesale, Retail, Trade</td>
<td>3</td>
<td>1.1</td>
<td>24</td>
<td>3.2</td>
<td>23</td>
<td>3.0</td>
</tr>
<tr>
<td>G Transport, Storage</td>
<td>5</td>
<td>1.8</td>
<td>8</td>
<td>1.1</td>
<td>11</td>
<td>1.4</td>
</tr>
<tr>
<td>H Communication</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0.4</td>
</tr>
<tr>
<td>I Finance, Property, Business Services</td>
<td>3</td>
<td>1.1</td>
<td>10</td>
<td>1.3</td>
<td>13</td>
<td>1.7</td>
</tr>
<tr>
<td>J Public Admin., Defence</td>
<td>5</td>
<td>1.8</td>
<td>7</td>
<td>0.9</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>K Community Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>24</td>
<td>3.2</td>
<td>23</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other and Undefined</td>
<td>5</td>
<td>0.7</td>
<td>16</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>2.9</td>
<td>39</td>
<td>5.1</td>
<td>49</td>
<td>6.4</td>
</tr>
<tr>
<td>L Recreation, Personal, Other Services</td>
<td>24</td>
<td>8.8</td>
<td>19</td>
<td>2.5</td>
<td>40</td>
<td>5.2</td>
</tr>
<tr>
<td>M/N Not Classified and Not Stated</td>
<td>18</td>
<td>6.6</td>
<td>77</td>
<td>10.1</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Grand Total</td>
<td>273</td>
<td>100.0</td>
<td>761</td>
<td>100.0</td>
<td>765</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Included in Community Services  
na Not applicable

Table 6: Employment by Industry, Tennant Creek, June 1971, 1981 and 1985

<table>
<thead>
<tr>
<th>Industry</th>
<th>1971 Persons %</th>
<th>1981 Persons %</th>
<th>1985 Persons %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Agriculture etc.</td>
<td>3 0.4</td>
<td>12 0.6</td>
<td>*</td>
</tr>
<tr>
<td>B Mining</td>
<td>234 31.0</td>
<td>824 39.7</td>
<td>311 22.3</td>
</tr>
<tr>
<td>C Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food, Drink, Tobacco</td>
<td>102 4.9</td>
<td>215 15.4</td>
<td></td>
</tr>
<tr>
<td>Textiles, Clothing</td>
<td>2 0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal prods, Machinery</td>
<td>34 1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other and undefined</td>
<td>11 0.5</td>
<td>12 0.9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17 2.3</td>
<td>149 7.2</td>
<td>227 16.3</td>
</tr>
<tr>
<td>D Electricity, Gas, Water</td>
<td>10 1.3</td>
<td>28 1.4</td>
<td>31 2.2</td>
</tr>
<tr>
<td>E Construction</td>
<td>59 7.8</td>
<td>94 4.5</td>
<td>100 7.2</td>
</tr>
<tr>
<td>F Wholesale, Retail Trade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale trade &amp; Undf.</td>
<td>55 2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail trade</td>
<td>134 6.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97 12.9</td>
<td>189 9.1</td>
<td>140 10.0</td>
</tr>
<tr>
<td>G Transport, Storage</td>
<td>19 2.5</td>
<td>52 2.5</td>
<td>45 3.2</td>
</tr>
<tr>
<td>H Communication</td>
<td>29 3.9</td>
<td>32 1.5</td>
<td>33 2.4</td>
</tr>
<tr>
<td>I Finance, Prop., Bus. Serv.</td>
<td>22 2.9</td>
<td>40 1.9</td>
<td>37 2.7</td>
</tr>
<tr>
<td>J Public Admin., Defence</td>
<td>45 6.0</td>
<td>135 6.5</td>
<td>** **</td>
</tr>
<tr>
<td>K Community Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>85 4.1</td>
<td>98 7.0</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>80 3.9</td>
<td>85 6.1</td>
<td></td>
</tr>
<tr>
<td>Other and undefined</td>
<td>59 2.8</td>
<td>184 13.2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>87 11.5</td>
<td>224 10.8</td>
<td>367 26.3</td>
</tr>
<tr>
<td>L Recreation, Personal, Other services</td>
<td>79 10.5</td>
<td>74 3.6</td>
<td>105 7.5</td>
</tr>
<tr>
<td>M/N Not Classified and Not Stated</td>
<td>53 7.0</td>
<td>222 10.7</td>
<td>na</td>
</tr>
<tr>
<td>Grand Total</td>
<td>754 100.0</td>
<td>2075 100.0</td>
<td>1396 100.0</td>
</tr>
</tbody>
</table>

* Unavailable
** Included in Community Services
na Not applicable

Second, employment in the Food, Drink and Tobacco subdivision more than doubled during 1981/85, due mainly to an increase in abattoir employment from less than 100 to 211; in 1985 it accounted for 15.4% of total employment. A new abattoir was established, operating on a year-round basis and employing about 25 people; the existing abattoir, established in 1980, nearly doubled its workforce, and while its operations were seasonal (five to eight months, depending on climatic and other factors), meat workers earn very high wages and the absolute increase in spending power was thus considerable.

Third, employment in the public sector did not decline and indeed increased slightly; in 1985 it accounted for 26% of the total. This partly reflects the necessity to maintain basic services for the remaining population, but also the fact that Tennant Creek has, over the years, developed a function as a regional service centre. The expansion of tourism and meat processing and the maintenance of government programmes helped to support employment in the Construction, Transport and Storage, and Business Services sectors, with the result that retail and wholesale activity also remained at reasonably high levels.

Tennant Creek, a town which initially owed its existence to mining, supported a range of economic activities by the mid 1980s, and consequently had a reasonably well diversified economy capable of surviving a drastic decline in mining. However it is not clear whether these activities provide a basis for either sustained growth, or even for survival, over the longer term. The closure of its major abattoir in 1987 represented a setback for the town. At that time, tourism continued to grow strongly, providing some compensation, but tourism in the NT generally declined substantially in 1989-1990 due to the pilots' strike and the economic recession. In the absence of more recent research data on employment structure, it is not clear how these developments have affected Tennant Creek. This provides a good example of where research needs to be sustained over longer periods of time if we are to obtain a full understanding of mining's contribution to economic development.

What explains the contrasting experience of Alyangula and Tennant Creek? Clearly their location is a vital factor, and especially the non-mineral resource endowment of the surrounding region. Groote Eylandt either lacks resources which might support alternative forms of economic activity (eg, agriculture) or its extreme remoteness raises costs and so reduces the prospects for establishing them (eg, raw material processing, service, light manufacturing and tourist industries). On the other hand, Tennant Creek's location astride a major tourist route and close to the pastoral properties of the Barkly Tablelands has provided the potential for use of mine infrastructure in more broadly-based economic activity.

Government policies in a range of areas are also important. The fact that social infrastructure originally developed for mining in Tennant Creek now supports other economic activities is due in part to the NT government's use of public funds to encourage tourism, pastoral activity, meat processing and development of Tennant Creek as a regional centre. Some tourist and meat processing activity would probably have occurred in any case, but almost certainly on a smaller scale, while public investment was crucial in developing the town's regional service role (and in the process stimulating construction and retail activity). While the importance of public investment is clear, the political processes which facilitated its allocation to Tennant Creek have not been documented.

The question of whether mine townships are 'closed' company towns or 'open' public communities is also important, particularly because it largely determines whether a free market develops in housing and other accommodation, which in turn influences the prospects for establishment of commercial activities. This is particularly so as regards
small-scale ventures, since availability of accommodation is crucial in determining whether individuals can remain in mine towns and set up small service or light manufacturing establishments after terminating their employment with a mining company, contractor, or government department. Tennant Creek has always been an 'open' town and private interests and public organisations built up a substantial housing stock over the years. A number of Peko's exemployees were consequently able to remain in the town and set up small businesses, initially servicing Peko but subsequently widening their sales base. The existence of numerous small establishments, many of which could have come into existence in the absence of a 'free' accommodation market, helps to explain the fact that the retail and personal services sector accounted for 17.5% of total employment in Tennant Creek in 1985, compared with 8.0% in Alyangula, a 'closed' company town which lacks such a market.

Thus mine infrastructure may have the potential to contribute to more broadly-based economic growth in the NT. Whether that potential is realised depends on its location, on the resource base of the surrounding region, on public investment policies, and on government and mining company policies on housing and access to mine infrastructure. Two points should be stressed. First, studies into the industry and employment structures of mining townships need to be maintained over longer periods of time before we can reach more definite conclusions. Second, as in the area of mineral taxation, our understanding of the policy processes at work is limited, and deserves more careful attention.

Mining, Aborigines and the NT economy

Payments to Aboriginal interests represent a major component of the mining industry's impact on the NT economy. For example, such payments account for a higher proportion of Ranger's local expenditure than do labour costs, and for three times as much as the company's payments to the NT government (see above). Similar figures applied to the Nabarlek mine. Payments arising from other projects on Aboriginal land (the GEMCO and NABALCO mines, the Granites gold mine, oil and gas operations in Central Australia) are on a more modest scale, but are still substantial.

Payments to Aboriginal interests are made to the Land Councils (Northern, Central, Tiwi), to associations representing traditional owners of land affected by mining, and to Aboriginal communities throughout the Territory. Payments to the Land Councils are made via the Aboriginal Benefits Trust Account (ABTA), and have played a vital role in financing their activities, representing almost their only source of income. Total payments to the Councils during 1981/82-1983/84, for example, amounted to about $17 million.

Funds not allocated by the ABTA to traditional owners or the Land Councils are made available to Aboriginal communities throughout the NT via a grants procedure. This was described and assessed in detail by Altman in 1984, but has not been the subject of recent research (Altman 1984, Part A). Recommendations for payment of grants, generally to community groups or organisations rather than to individuals, were made by an Advisory Committee composed of nominees of the Land Councils and a Chairman nominated by the Minister. The total value of grants approved rose sharply during the early 1980s, from $913 000 in 1982/83 to $6,983 000 in 1983/84 and $4.5 million in the first quarter of 1984/85. Expenditure of this magnitude threatened to exhaust the ABTA's resources, and in November 1984 the Advisory Committee called for a moratorium on grant applications (Altman 1984, 35-6).
A substantial proportion of grants were utilised to purchase vehicles, mainly for outstations and outstation resource centres (75% of total grants or $1.5 million during 1978-82, 46% of the total or $5.5 million during 1983-84). In the earlier period the remaining grants were for educational/cultural purposes (5.1% or $100,000), community facilities (16.1% or $318,000) and boats (3.8% or $75,000). During 1983-84, educational/cultural grants accounted for a similar proportion of the total but a much larger absolute amount (5.2% or $623,000), while boats accounted for 1.2% or $145,000. In this latter period the ABTA approved major grants for establishment of community facilities (24% of the total or $2.8 million), purchase or promotion of enterprises (12.3% or $1.5 million), and purchase of property (11.8% or $1.4 million). The items involved included three community stores, two pastoral properties, equipment for Central Australian Aboriginal media and pastoral associations, and construction of a workshop and two community halls (Altman 1983, 80-1; 1984, 39-41).

The author has been unable to identify any systematic research into the longer-term effects of these expenditures, examining, for instance, the role of vehicles and boats in encouraging outstation development, the use of community facilities, or the 'success' (in economic, social or cultural terms) of enterprises, including purchased properties. Neither has there been any detailed analysis of the ABTA's grants program since 1985.

Research on the operations of Aboriginal associations which receive payments from mining projects is also patchy, both in chronological and geographical terms. Little has been published on the operations of royalty associations which gain revenues from oil, gas and gold in Central Australia. Altman examined the operations of the Gove and Groote Eylandt associations in the early 1980s (Altman 1983), but they have not been subject to systematic analysis since then. He also discussed the early history of the two associations which received uranium royalties, Gagudju (Ranger) and Kunwinjku (Nabarlek), as did Kesteven (1983). The author carried out detailed studies of Gagudju (1979-1985) and Kunwinjku (1979-1987), and Altman (1988, 198-204) provides some more recent information of a general nature on Gagudju.

The operations of royalty associations can have very significant social and economic effects, positive or negative, on Aboriginal economic development. However our understanding of the processes involved are limited, and a systematic study of a large sample of associations over an extended period of time would be required to improve it.

A summary of the author's work on Gagudju and Kunwinjku (O'Fairchealaisigh 1986a, 1988) provides a basis for analysing some of the major issues involved. The Gagudju Association is composed of traditional landowners who have received royalty-related and other payments from the Ranger mine since 1979, under the Aboriginal Land Rights (Northern Territory) Act 1976. Over the period 1979-1985, Gagudju received payments totalling $12 million, and earned other income of $1 million. Its expenditures have been divided up as follows. Thirteen per cent was accounted for by cash payments to association members, most of which was spent locally. Thirty eight cents in every dollar was used to provide services to communities in which members reside. For example, there was no school in the Kakadu National Park area, and during the wet season Aboriginal children could often not get into Jabiru; the Association set up and staffed two schools of its own. Health facilities for those living some distance from Jabiru were poor, so Gagudju hired a doctor who spends two days a week visiting camps and outstations. Housing was inadequate, so the Association built and now maintains a substantial number of houses. Again, all of the expenditure involved in these activities occurs locally, for instance on wages, building materials, and fuel; and a substantial proportion of the cash involved continues to circulate in the region, because wages are spent locally, which helps to support the retail sector, and so on.
Forty-nine per cent of expenditures was invested in economic assets. For example the Association bought the Cooinda Motel in Kakadu National Park in 1980 for $370 000. At that stage facilities were fairly basic; since then over $3 million has been invested in building 80 airconditioned rooms, a restaurant, a serviced camp site and other facilities. Though Altman reports that its financial performance to date has been poor, Cooinda may earn Gagudju substantial income in the future, and it could certainly be disposed of at a substantial capital gain. Gagudju bought the Border Store on the East Alligator River; initially this operated at a loss, but in 1984/85 it contributed $61 000 to the Association's income. It operated a hostel in Jabiru which contributed $150 000 to income in the same year. It also established a contracting company based in Jabiru, but this operated at a loss and was wound up. All of Gagudju's investments have been in the NT, creating jobs in the North.

Thus while not all of its investments have been financially successful, the Gagudju Association has raised the social and economic status of its members, making them one of the few Aboriginal groups in Australia which have ownership of significant economic assets. In the process, it has provided a significant impetus to economic activity in the NT.

The history of the Kunwinjku Association, which received 'up-front', rental and royalty payments from the Nabarlek mine, is very different. Initially, these payments were not made to an incorporated association, but were distributed by the NLC to groups or individuals representing, or claiming to represent, traditional owners of the Nabarlek project area and of land and communities affected by the project. Of the $1.45 million distributed between March 1979 and February 1982, cash payments to individuals absorbed 54.5%, while 25.6% was spent on purchasing vehicles. Details are not available regarding the remaining 20%, but most of it was apparently distributed as cash payments. It appears that no money was invested in economic assets, that very little was used to fund community facilities or services, and that payments were made exclusively to adults (Kesteven 1983).

In early 1982 an incorporated association was established to receive moneys generated by the Nabarlek project. It is difficult to trace the early history of the Kunwinjku Association, since most of its records disappeared when its first manager, under threat of criminal investigation for his conduct of Association business, left the NT. However, it is possible to trace the expenditure of mining revenues at least in general terms (9). Between January 1982 and June 1986, these revenues totalled $8,346,034, of which $7,567,530 was expended. Of this amount, $2.2 million or 29% was spent on vehicles. Access to vehicles is of course extremely important to residents of remote regions of Australia's North, and particularly to Aboriginal people attempting to establish 'outstations' or 'homeland centres'. Expenditure of $2.2 million on vehicles could consequently generate important social and economic benefits for those involved. However, what occurred was that vehicles were often not maintained; were frequently driven without due care; were at times impounded by the Liquor Commissioner when drivers were accused of liquor-related offences; or were sold for a fraction of their original price in order to provide the owner with cash. In other words, their life expectancy was very short. This partly reflected the fact that the same individuals or family groups obtained a succession of vehicles during these years; there was little incentive to retain vehicles and spend money on maintaining them when a new replacement could be obtained within a short period of time. In sum, expensive vehicles which would normally be treated as 'durable' goods were treated as 'consumables', resulting in substantial economic waste.

Resources were also wasted as a result of investment decisions which were taken without adequate expert advice and which consequently absorbed the Association's funds while generating little or no return. During 1982-1986, just over $1 million or 13% of total
expenditure was absorbed in providing for writing down of investments in, or for bad debts owed to, the Association by enterprises in which it invested and which subsequently operated at a loss or went into liquidation.

A further 30% of expenditures ($2.3 million) was absorbed by general and administrative, committee and travel expenses. Clearly any organisation must incur administrative costs, but it is obvious from an auditor's report on the Association's affairs completed in April 1984 that during 1982-83 in particular a substantial proportion of the sums involved benefited the Association's employees and officials rather than its members (10). In 1982/83, for example, $162 000 was spent on airfares, while in 1985/86 the Association was able to conduct its business while spending only $48 000 on airfares. Similar comparisons could be made in other specific areas of expenditure. Mention should also be made of the amount spent on committee expenses, $653 000 or 8.6% of the total. This reflected the large size of the committee (over twenty members), and the substantial fees which its members paid themselves (up to $15 000 per annum). Again, it should be noted that the Association was apparently able to conduct its business in the absence of such expenditure, since committee expenses amounted to only $35 000 in 1985/86, compared with $314 000 in 1983/84.

Some $670 000 was distributed in what was referred to as 'clan payments'. However not all of this sum actually reached members of the Association, since the term 'clan payments' was defined to include 'items the committee feel are justified'. The auditor's report mentioned earlier makes it clear that many of these payments were in fact made for the benefit of individual committee members or Association employees. The author has found no indication that any of the cash which was distributed was utilised either to purchase economic assets or to develop community facilities.

This pattern of expenditure meant that little remained to invest in ways which might generate either immediate social or economic benefits or a source of ongoing income for the Association's general membership. Spending on 'community oriented' items was small and indeed in some cases totally insignificant. 'Community facilities' absorbed $374 000 or 4.9% of the total, and even this was heavily oriented to maintenance of existing facilities and purchase of consumer goods (especially videos) rather than to enhancement of community infrastructure. Expenses associated with ceremonial and cultural activities absorbed only 0.9% of the total, expenditure on education just 0.3%; the combined expenditure share of these items, 1.2%, compares with the 8.6% devoted to committee expenses and the 4.7% spent on airfares.

After seven years of operations at Nabarlek and less than two years before its closure, the traditional owners of the project area and other local Aborigines affected by mining had little to show from the $10 million supposedly expended for their benefit. All that remained was $480 000 in an NLC trust account, and the Kunwinjku Association's fixed assets which amounted to some $300 000 but which included loans and investments whose realised value may well be negligible.

Utilisation of mining payments in the manner described above clearly has very important implications not only for the individuals and communities concerned, but also for the Territory economy. Their expenditure on imported consumer goods and services rather than on development of social infrastructure and economic assets obviously implies a much smaller contribution to local economic growth. It is consequently important to try and explain the divergence between experiences of the two Associations.

It could of course be argued that the groups involved are simply exercising a basic economic right to dispose of their resources as they see it, a right supposedly enjoyed by
all non-Aborigines in Australia and one which must surely be central to any notion of Aboriginal 'self-determination'. However matters are not so simple. Most importantly, it is very clear that many individuals entitled to membership of the Kunwinjku Association, and including some individuals strongly linked to land affected by mining, have had very little influence over the way in which mining payments have been utilised and are very dissatisfied with the way in which they have been spent (11).

A variety of factors have shaped the evolution of the Gagudju and Kunwinjku Associations. These include historical circumstances, such as the differing contact experiences of the groups involved and the consequent differences in their capacities to deal effectively with European society and to obtain and utilise relevant expertise. In particular, it is clear that Gagudju has been much better able to recruit, direct and control non-Aboriginal employees than has Kunwinjku.

The history of the two associations is also important. Gagudju emerged from the Alligator Rivers Stage I Land Claim, conducted as part of the Ranger Uranium Environmental Inquiry (the 'Fox Inquiry'), and it consisted of individuals claiming rights of ownership over certain contiguous areas of land. This both clarified rights of membership, and meant that members were bound together through their common association with a particular area of land and often through ties of kinship. This does not imply that Gagudju does not suffer from internal divisions, but it does mean that members share a sufficiently strong sense of community so that they are prepared to vote year after year to spend the bulk of their revenues on economic assets and social services rather than distribute or spend them for the benefit of particular individuals or family groups. It also means that it is difficult for outsiders to gain control over Association activities and resources.

In Kunwinjku's case, membership was defined on the basis of residence, not land ownership; the area involved, Western Arnhem Land, was larger and had a bigger population than was the case with Gagudju, and a population which included significant numbers of people whose primary affiliation was with land not affected by the Nabarlek project. This resulted in a failure to clearly define membership rights; comprehensive membership lists were never completed, and considerable uncertainty surrounded the rights of particular individuals or groups to benefit from the Association's activities. It also meant that members shared no strong feelings of community; this encouraged individuals and family groups to maximise their personal gains from Association revenues, on the assumption that if they failed to do so some unrelated individuals or groups most certainly would. In this situation, knowledge of European organisations and bureaucratic procedures was just as important in extracting benefits as was affiliation with affected land, particularly given the uncertainty regarding membership rights.

The timing of the formation of the two Associations was also significant. Gagudju was operating in 1979, two years before mining commenced at Ranger, allowing it to establish an organisational framework and sort out 'teething problems' before it received large quantities of cash. Indeed funds were scarce in the Association's early years, and while this caused frustrations for its members and employees it did mean that extravagant or wasteful practices were unlikely to develop during this formative period. The Kunwinjku Association did not commence operations until early 1982. By this time Nabarlek had been producing yellowcake for 18 months, and the Association immediately received large sums of cash which the NLC had held in trust while awaiting the formation of an incorporated association. This both denied the Association an opportunity to establish itself and gain some experience before handling such sums and, as we have seen, encouraged extravagance and waste.
Also relevant were specific aspects of the respective mining agreements and of the Associations' constitutions. The Nabarlek agreement provided for larger 'up-front' and rental payments, and for their distribution to a smaller group of people, than did the Ranger agreement. As a result, individuals associated with Nabarlek received quite substantial sums of cash at an early stage in the project's life. This created an expectation that such payments should continue either in cash form or in the form of vehicles.

As regards the constitutions of the two Associations, a key issue involves provisions governing operations of the committee or committees which control their day-to-day affairs. Under Gagudju's constitution, the executive committee has considerable influence over the use of financial resources, but the relevant provisions are simple and clear, and in practice use of mining payments has been decided by consensus at AGMs or at other largescale meetings of association members. Kunwinjku's administrative arrangements were much more complex, with the result that few people fully understood the relevant procedures, or knew how to try and influence them. The net result was that committee members had very considerable latitude in determining expenditure, and at least in some cases the result was that mining payments were spent for the benefit of members and their family groups rather than for traditional owners or for the Association's membership as a whole.

The histories of the Gagudju and Kunwinjku Associations clearly have very important policy implications, most obviously for Aboriginal people whose land is exploited for mining and for the Land Councils, but also for the NT and Commonwealth governments. Further comparative research on royalty associations would expand the base of knowledge available to those who must make decisions about the distribution and utilisation of mineral revenues.

As noted above, payments to Aboriginal interests have the potential to generate substantial benefits for the Territory, depending on how they are used. An NT government concerned to maximise the mining industry's contribution to economic development should clearly do everything it can to ensure that such payments are expended so as to maximise their local economic impact. There are many practical ways in which this could be done. For instance, a basic difficulty facing the Kunwinjku Association was, as we have seen, a lack of trustworthy people with skills relating to financial and investment matters. The NT government could play a positive role in circumstances of this sort by assisting recipients of mining moneys to organise themselves and to use their income efficiently, and the returns in terms of benefits to the Territory economy could be very substantial indeed.

However the NT government has opposed mining company payments to Aboriginal interests in principle, and has consequently not been amenable to providing assistance of this sort, a failure which appears to reflect, once more, a deficiency in policy analysis. Even if it is determined to maintain its opposition in principle, it should recognise that substantial payments will continue to be made to Aborigines for the foreseeable future, and that failure to help Aboriginal people make the best use of these payments can only serve to reduce the mining industry's contribution to Territory development.

**Conclusion**

Research undertaken during the 1980s has considerably enhanced our understanding of certain aspects of mining's role in northern economic development. In particular, we have a clear knowledge of the way in which the industry's locational, technical, economic and ownership characteristics affects its potential for creating employment and incomes, both directly and in other sectors of the economy. It is also apparent that mining's potential to
act as a catalyst for development by providing infrastructure varies considerably from case to case, depending on location and regional resource endowments. In addition, the importance of payments to Aboriginal interests in generating economic benefits for the north is very clear.

In other areas, our knowledge is less complete. For example, research has not been maintained over sufficiently long periods of time to reach definitive conclusions regarding the capacity of mining towns to sustain diversified economic activity. Little work has been done on assessing the economic significance of grants made to Aboriginal communities by the ABTA. Our knowledge of Aboriginal royalty associations, while sufficient to indicate important policy implications, is limited in time and space, and more work is required before we will have a full understanding of the dynamic of these organisations and of their wider economic significance.

However the area in which our knowledge is weakest relates to the public policy processes which create the policy, legislative and regulatory context within which mining occurs. It is clear that government policies (for example in relation to taxation, public investment and payments to Aboriginal interests) have a major impact on the extent and nature of mining's contribution to northern development. It also seems that the quality of policy analysis has at times been poor. But little systematic research has been conducted into the way in which policy is developed and implemented, into the nature of policy analysis, or into the role played by mining interests in the policy process. Research in these areas needs to be accorded a high priority in the 1990s so that we can effectively use the knowledge gained to date to maximise mining's contribution to northern development.

End Notes

* This paper draws on published and unpublished research data collected by the author over the period 1984-1988. Research funds for this work were provided by the North Australia Research Unit and by the Centre for Resource Studies, Queen's University, Kingston, Ontario.

(1) Turnover in tourist activity may now be greater than in mining, but 'tourism' encompasses activities in a number of different industry sectors, including air and land transport, retail and wholesale trade, entertainment, restaurants and hotels, and personal services.

(2) Derived from ABS, No 8402.0, various years, No 8202.0, various years.

(3) For a detailed discussion of wage levels in NT mining, see O'Faircheallaigh 1986b, 51, 61-2, and 1986b, Chapter 1. Wage data are drawn from ABS, No. 6302.0, various issues, and No 8402.0, 1985/86.

(4) As for note (2).

(5) ABS, No 8402.0, 1983/84, No 8202.0, 1983/84.

(6) ABS, No 8405.0, 1985/85; Australian Yearbook 1986.

(7) 'Royalties to be reduced', Drill, December 1986.

(8) For a detailed discussion of the NT government's investments in Tennant Creek and its hinterland, see O'Faircheallaigh 1986c, 52.

(10) Ernst and Whinney (Chartered Accountants), Letters to Kunwinjku Association, 2 March 1984, 13 April 1984, Kunwinjku Association Files, 'Audit File'.

(11) This statement is based on Kesteven 1983, on unpublished research materials collected by the Social Impact of Uranium Project and held at the Australian Institute of Aboriginal Studies in Canberra, and on interviews held by the author at Oenpelli in May-June 1987.

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CHAPTER FIVE
THE PAST, PRESENT AND FUTURE EXTENT OF TIDAL INFLUENCE IN NORTHERN TERRITORY COASTAL WETLANDS

Colin Woodroffe & Monica Mulrennan

Introduction

The tidal and freshwater wetlands along the southern coast of van Diemen Gulf, Northern Territory, represent one of the single largest areas of wetland in Australia (Finlayson et al 1988). They are particularly extensive in this area because of the broad, nearly horizontal surfaces of the seasonal floodplains flanking the rivers which drain into the gulf (figure 1). The tidal wetlands, dominated by mangrove forests, are subject to inundation by salt water, while the freshwater wetlands, though not presently receiving salt water, have developed over the top of, or adjacent to, tidally-influenced mangrove forests. There is evidence of rapid recent ecological change.

These wetlands, particularly the freshwater wetlands, represent an important but fragile resource. They are productive and rich in wildlife, representing an irreplaceable wildfowl breeding habitat; sustain a well-established commercial fishing industry and rapidly growing recreational fisheries; support grazing by cattle and an increasingly managed buffalo population; and feature prominently in an active tourist industry (Whitehead et al 1990).

The wetlands are fragile. They are threatened by feral animals (buffalo, pigs); by exotic weeds (Mimosa pigra, Salvinia molesta); and by saline intrusion. The latter, the invasion of tidal waters into freshwater wetlands, will be exacerbated if the level of the sea rises as is widely anticipated as a result of global warming.

This paper examines the past extent of tidal influence, and reviews the development of the present tidal systems in the region. It describes the pattern of saline intrusion recently observed in several of the freshwater wetland areas, and assesses the likely causes of this trend. It then suggests the probable scenarios in terms of future tidal influence in relation to sea-level change.

Regional setting

The southern shore of van Diemen Gulf is an area of the wet-dry tropics. The region receives 1300-1400 mm of precipitation annually; rainfall is pronouncedly monsoonal with most falling in the wet season, December-March. Several of the rivers of the area (ie Mary, South Alligator, East Alligator) rise on the sandstone Arnhemland plateau. For much of their course the rivers flow over the lateritic lowlands associated with a late Tertiary erosional surface termed the Koolpinyah land surface. The river floodplains and the coastal plains are Holocene in age.

Tidal range in the gulf is around 6 m at springs, reaching a maximum range of 7.8 m in Darwin Harbour. The low gradient of the plains and the large tidal range result in tidal influence penetrating more than 100 km up several of the river systems in the dry season, with river water close to sea water salinity at the tidal limit at the end of the dry season.
Figure 1: Major rivers draining into southern van Diemen Gulf: their catchments and the extent of coastal and deltaic-estuarine plains.
During the wet season the saline water is flushed out and the estuaries are dominated by freshwater though tidally-reversing, with a salt wedge at the river mouth (Woodroffe et al 1986). The form of the tidal channel varies with distance from the coast, and has been divided into four segments, the broadly tapering estuarine funnel, the sinuous meandering segment, the cuspat e meandering segment (in which meanders have pointed or cuspat e inner bends), and the upstream segment (Chappell & Woodroffe 1985).

Quaternary sea-level fluctuations and coastal wetlands

During the Quaternary (the last 2 million years, commonly termed the Ice Ages) the volume of the world’s oceans has fluctuated as water has been incorporated into polar and high-latitude ice sheets, and then as these have subsequently melted. The pattern of fluctuations has been reconstructed from oxygen isotope analysis of deep-sea cores (Shackleton & Opdyke 1973), and reconstruction of sea-level changes over the most recent interglacial-glacial-postglacial cycle has been possible (figure 2a) where the deep-sea oxygen isotope record has been calibrated against dated shorelines represented by fossil reefs on rapidly uplifting coasts (Chappell & Shackleton 1986). The amplitude of glacial-interglacial change has been of the order of 100-120 m (Fairbanks 1989).

Figure 2a (upper): pattern of sea-level change over the last 240,000 years (after Chappell & Shackleton 1986). Figure 2b (lower): schematic cross-section across van Diemen Gulf and the Arafura Sea showing offshore topography and sediments (based on Jongsma, 1974).
The shoreline in Northern Australia has undergone rapid lateral translation as well as vertical movements coincident with variations in ocean volume. Studies of the floor of the Timor and Arafura Seas have identified a number of features indicative of past shorelines (Van Andel et al 1967; Veevers 1969, 1971; Jongsmas 1974). Radiocarbon dates of 17 000-18 000 years BP (Before Present) on intertidal sediments including beachrock, indicating the time of the glacial maximum, have been determined on material from 150-165 m below sea level in Northern Australia (Jongsma 1970; Veeh & Veevers 1970).

Whatever the precise depth reached by the sea at the peak of the last glaciation, the inner continental shelf, which is shown schematically in figure 2b exhibits evidence of past shorelines. Former cliff lines, notches, terraces or scars have been identified at least eight different depths in the range 200-120 m in the Arafura Sea (Jongsma 1974).

We have no evidence, however, of how widespread mangroves were on this coast during the Pleistocene. The sea-level curve of Chappell and Shackleton (1986) indicates that since the last interglacial, at which time the sea was at a level close to its present, and we must assume that the coastline that existed resembled that which we see at present, there have been a series of stadial and interstadial oscillations; for much of the time the sea was between 40 and 80 m below present. It may be from this time that the extensive mud deposits on the inner shelf in 60-100 m water depth were deposited, shown in the schematic cross-section in figure 2b.

During the last 18 000 years the sea-level curve comprises two distinct periods; firstly, it rose rapidly from 120-150 m below present to close to present level (the postglacial marine transgression); then for the last 6000 years there has been a period of relative stability, with less than 1 m change during that time (though the details of this period appear to change from place to place around the Australian coastline, Nakada & Lambeck 1989).

There is evidence for some differences in sea-floor topography between the Timor and the Arafura Seas. The Timor Sea floor appears to comprise an erosional morphology, and the widespread recovery of carbonate 'kunkar' nodules formed during a more arid climate, has led to the suggestion that these record a subaerially exposed erosional surface drowned during the post-glacial marine transgression (Van Andel & Veevers 1965, 1967). In the Arafura Sea there is clearly a similar erosional surface across which the courses of the rivers, which drained to the lower shoreline, can be traced. However, the sediment cover, especially near the present coast, is believed to consist of an upper Holocene veneer, revealed in several seismic traverses and recovered in gravity cores. North of Melville Island, Holocene sediments are estimated to have been deposited at an average rate of 2 m/1000 years, 20 km north of the shoreline, but at only 10 cm/1000 years, 100 km north of Melville Island.

How likely are there to have been widespread mangrove forests associated with former late Quaternary shorelines? Extensive muddy deposits on the continental shelf at around 80 m may have been associated with a strandline at around that depth in the Arafura Sea (Jongsma 1974), and high quartz zones in the Timor Sea in shallow water may also mark shorelines (Van Andel & Veevers 1967). The Bonaparte Depression formed an almost enclosed embayment at the peak of the glaciation which may have had mangroves associated with it.

However, there seem to be several reasons to suppose that mangrove forests (and coastal wetlands) were not extensive during the postglacial marine transgression. Firstly, the topography of the shelf (except around 80 m) was generally not of shallow enough gradient for intertidal areas to have been particularly extensive and seemingly the average
rate of sea-level rise was rapid, often averaging 10-15 mm/year. At this rate of rise, mangrove forests would not have developed to maturity before the level of the sea rose. The rate of sea-level rise would exceed the expected life history of some mangrove species. For instance, Sonneratia alba forms an impressive tree at the seaward margin of Top End mangrove swamps on the open shore, but surveys reveal that it grows in a narrow elevational range within 1 m of mean sea level (Woodroffe & Bardsley 1988). If the sea rises at 15 mm/year it will achieve a rise of 1 m in less than 70 years. Though we do not know the ages of the fast-growing Sonneratia, many of the present trees may be more than 70 years old. This effect will have been even more pronounced on microtidal coasts under conditions of rapidly rising sea level.

Mid-Holocene evolution of wetlands

The approximate location of the shoreline 18 000 years and 10 000 years ago is shown in figure 3a, based upon the 150 m and 30 m isobath respectively. At the peak of the glaciation it was more than 200 km north of its present location. The present coastal and estuarine plains of the South Alligator River, as well as those of the adjacent rivers, are underlain by extensive muds laid down beneath mangrove forests (Woodroffe et al 1986, 1989). Radiocarbon dates on mangrove remains within the muds may be used to indicate the pattern of sea-level change during the mid-Holocene in the area (Woodroffe et al 1987). Figure 3b, based on Woodroffe et al (1987), indicates the broad envelope enclosing these dates. The floor of the prior valley is near-horizontal beneath the plains of the South Alligator system, at around 12 m below AHD (Australian Height Datum - approximates mean sea level). This was inundated by the sea at about 8000 years BP. The sea continued to rise rapidly until at least 6800 years BP when it was within 5 m of present. There is a particularly organically-rich layer of mangrove mud 2-5 m below the plains surface, radiocarbon-dated 6800-6500 years BP (figure 3b). Stratigraphic and radiometric results confirm the synchrony of this 'big swamp phase' throughout the deltaic-estuarine systems of the Top End around 6000 years BP as a result of stabilisation of sea level (Woodroffe et al 1985).

In many parts of eastern and western Australia there is evidence for sea level having been above present by 1-2 m between 6000 and 3000 years BP (McLean et al 1978; Chappell 1982; Chappell et al 1982, 1983; Searle & Woods 1986). In the South Alligator and adjacent systems age-height data from the mangrove muds (Woodroffe et al 1986, 1987) suggest no such fall of sea level in the last 6000 years.

If correct, this is an important observation because it implies that unlike much of the Australian coastline the low-lying coasts of van Diemen Gulf have not evolved in part under conditions of slightly higher sea level, and do not therefore contain geomorphological remnants of depositional conditions under submergence which might be used to hypothesise how they would respond under future conditions of higher sea level. The evidence needs to be examined in more detail.

Firstly, it must be emphasised that radiocarbon dating of fragments of mangrove wood in areas of macrotidal range can rarely allow specific inferences about mean sea level. Even where material is collected from tree stumps in their growth position (as have been several of the samples dated in this study, and represented in figure 3b), it is often the case that the mangrove species can itself grow across a considerable elevational range within the tidal range. Many of the best dated samples are of Avicennia (see Woodroffe et al 1987), which grows both at the seawardmost and landwardmost margins of the mangrove forests, across an elevational range of 3-4 m. Furthermore species demonstrate variations in the
Figure 3: A: The approximate shorelines 18,000 and 10,000 years BP (based upon 150 m and 30 m isobaths respectively), and B: Details of sea-level envelope reconstructed for the last 8000 years based on radiocarbon dates on mangrove remains from the South Alligator plains (after Woodroffe et al., 1988).
elevational range that they occupy at different points along a tidal river (Woodroffe et al 1986); for instance Sonneratia lanceolata grows only at elevations below 1 m above mean sea level in the middle reaches of the tidal river which is as far downstream as it is found, but occupies the entire vertical range from mean sea level to high spring tide level at the tidal limit. An accurate interpretation of the elevation of past mean sea level, even based upon specific identification of an in situ mangrove stump, must also be based on presumptions about the past form of the estuary and the variations in elevations of the mangrove species along the estuary at that time.

Secondly, it must be recognised that studies using mangrove remains in eastern Australia have, in several cases, indicated that the sea level has been little different from present over the mid and late Holocene, even where other evidence implies emergence (ie Cook & Mayo 1977; Belpario 1979). The clearest indication of this disparity comes from similar studies in Princess Charlotte Bay, where Chappell and Grindrod (1984) demonstrate a near-horizontal mangrove zone within the stratigraphy of a prograded chenier plain, in sharp contrast to evidence from coral microatolls on nearby islands, indicating a relative fall in sea level of over 1 m during the last 6000 years. Chappell and Grindrod (1984) infer compaction of mangrove sediments to explain the anomaly; an alternative explanation might be that there had been a change in tidal range, as microatolls reflect low water levels, whereas the top of the mangrove zone reflects high water levels. Changes in tidal amplitude will be discussed further below. In the case of the South Alligator River, Woodroffe et al (1987) concluded that compaction had been minimal based upon a comparison of dates on basal samples (ie resting upon an uncompactible substrate) and non-basal samples (which might have experienced displacement through compaction of underlying muds).

There are several other lines of evidence which imply that the sea has not been significantly higher than present during the Holocene in the region. Firstly, shell middens, from which shells have been radiometrically dated back to at least 4000 years BP, overlying freshwater clays themselves overlying the mangrove mud, are found across the floodplains (Woodroffe et al 1988). These are not buried, but lie on the surface of the plains. Secondly, there is no evidence of tidal water having been recorded in Kapalga Billabong, a low-lying billabong separated from the plains by a low sill which would have been overtopped had the sea been significantly higher than present. Thirdly, a comparison of the nature of sediments from the Alligator Rivers Region with emergent Holocene mangrove sediments from Malaysia reveals significant differences. Mangrove wood, several metres above the present mangrove zone, was recorded by Geyh et al (1979) from Malacca. Mangrove sediments also above the present tidal mangrove zone are known from Perak (Bosch 1986); where inspection has shown them to be highly oxidised, comprising a firm, white silty clay (personal observation). This further stage of oxidation would be consistent with emergence of the sediments caused by a relative fall in sea level in the Malaysian region and is considerably more advanced than what we have found on the Alligator Rivers. Finally, preliminary investigation of Holocene progradational beach-ridge plains in the Cobourg Peninsula suggest a sea level close to present, and certainly less than 1 m above present (Bryant and Woodroffe, unpublished results).

Geophysical modelling of the flexural response of the lithosphere to hydro-isostatic loading as a result of Holocene sea level rise, predicts that there should be emergence of 2.2-2.9 m in the Alligator River Region (Nakada & Lambeck 1989). The fact that this emergence is not seen implies gradual subsidence of the area.
Changing environments since the big swamp phase

The 6000-year shoreline is marked by a prominent sandy ridge, forming the divide between coastal plain and deltaic-estuarine plain (figure 1). The ridge does not contain any shell, but its age has been determined on the basis of a thermoluminescence (TL) date of 7500±800 years BP on sand 50 cm below the surface of the ridge on Swim Creek Station, and a radiocarbon date of 4950±90 yrs BP from mangrove fragments within muds which are overlain by the ridge, on the South Alligator coastal plain, and 4990±330 years BP from shell fragments beneath a similar ridge on the Adelaide River plains (figure 4). Despite the spread between these ages we are reasonably confident from the ridge's location and configuration that it marks the open gulf shoreline at, or shortly after, the time of sea-level stabilisation, towards the end of the 'big swamp' phase.

The areas embayed behind this shoreline, termed deltaic-estuarine plain in figure 1, were dominated by mangrove forests during the big swamp phase. The changing ecology of the forests of the South Alligator plains has been determined from pollen analysis of cores and pits throughout the estuary (Chappell & Grindrod 1985; Russell-Smith 1985; Woodroffe et al 1985; Grindrod 1988). Continued sedimentation was accompanied by successional change from Rhizophoraceous forest to final stands of Avicennia, subsequently replaced by non-halophytic vegetation of grasses and sedges (Poaceae and Cyperaceae). Vertical accretion of sediments in the 'big swamp' mangrove forest gradually eliminated those forests and dating indicates that most had disappeared by 4000 years BP. Freshwater clays accumulated thereafter.

The details of change appear remarkably consistent from cores throughout the deltaic-estuarine plain of the South Alligator River, and are also reflected in the detailed palynological reconstructions from 50 cores from the Magela Plain, a part of the deltaic-estuarine plain of the East Alligator River (Clark & Guppy 1988). Clark and Guppy (1988) have suggested that the demise of the Rhizophoraceous forests is marked by a transition phase, with increases in Avicennia, Ceriops/Bruguiera (the pollen grains of which are indistinguishable), and in some cases Sonneratia and Campsiestemon, representing perhaps a network of channels within the broad mangrove area. Given the complex mosaic of mangrove species within present mangrove forests, the widespread similarity of pollen spectra from cores is perhaps surprising, and suggests mixing of pollen along the length of the estuary.

There have been three dominant sedimentation patterns since the big swamp phase: i) coastal progradation resulting in extensive coastal plains; ii) vertical accretion of floodplains and the development of freshwater wetlands; and iii) channel migration and abandonment, resulting in lateral-accretion, channel-margin deposits and palaeochannels. The nature of each process, and its relative significance have differed from one river system to another and have influenced the extent and nature of tidal influence through the late Holocene. The trends are examined below.

Sedimentation since the big swamp phase

a) Coastal plain progradation

The coastal plain has built out since the big swamp phase, prograding from the 6000-year shoreline. The rate of progradation, examined in detail on the South Alligator plains (Woodroffe et al 1986, 1989), appears to have been greatest between 5000 and 3000 years BP. Since about 3000 years BP a sandy chenier ridge has formed east of the mouth of the
Figure 4: Coastal plain and chenier ridges along the southern shore of van Diemen Gulf
South Alligator River, but little net progradation of the coastline appears to have occurred. Radiocarbon dating of shell fragments from beneath the coastal plains of the Adelaide and Mary Rivers indicate that these have undergone a similar chronology with rapid progradation from 5000-3000 years BP, and decelerated build out punctuated by one or more periods of chenier formation since around 3000 years BP.

The major rivers, the South and East Alligator Rivers, with catchments of more than 10,000 sq km, appear to have maintained a large estuarine funnel throughout the progradation of the marginal coastal plains. Extensive estuarine palaeochannel systems on the Adelaide and Mary River plains indicate that the location of these estuarine channels has switched. In the case of the Adelaide River a palaeochannel, showing an exponentially-decreasing width with distance from the coast and typical estuarine meanders, confirming that it was dominated by tidal processes, can be traced east of the present river course (figure 4). This palaeochannel, which formerly drained into Chambers Bay, is now largely infilled, and the course of the Adelaide River has avulsed to occupy what is probably a former fluvial course, through the bedrock-constrained Narrows, into Adam Bay. A radiocarbon date from wood within the channel fill of the palaeochannel of 2310±80 years BP indicates that abandonment and infill of this former estuary is likely to have been within the most recent period of chenier formation, and plugging of the former estuary by coastal sedimentation may have resulted in the estuarine channel avulsion.

On the Mary River plains there has been a similar pattern of sedimentation. Several palaeochannels, which from their planform and dimensions must have been estuarine, occur on the coastal plain. A radiocarbon date on shell from infill near the former mouth of one of these palaeochannels of 1960±200 years BP, similarly suggests their infill during the most recent period of chenier formation. In the case of the Mary River, infill of the former estuarine channels appears to have been almost complete, and in the absence of an alternative route to the sea (such as the Adelaide River has found), the fluvial channels of the Mary River ceased for a period to reach the sea, and instead wet season floods inundated the coastal plains and subsequently evaporated from the plains. Over the last 50 years tidal creeks have again been cutting back from the coast and fluvial and tidal channels are connected (see below).

Despite the apparent continuity in sedimentation at the eastern margin of the Mary River plains, represented by the Point Stuart chenier sequence (Clarke et al 1979), it is now clear that these do not represent a complete sequence through the mid and late Holocene, but comprise a concentration of ridges, many formed by storm activity in the last 2000 years (Lees 1987). The Point Stuart sequence would appear to consist of a landwardmost ridge sequence, contemporaneous with the '6000-year' shoreline, and a series of ridges deposited within the last 3400 years, which can be traced westwards into the complex of shore-parallel chenier ridges bordering Chambers Bay, from which we also have a series of radiocarbon dates, from about 3400 years BP through to present (figure 4).

The pattern of coastal sedimentation has thus been broadly similar along the southern van Diemen Gulf, but its impact on the extent of tidal systems has been vastly different. The largest rivers have maintained their courses to the sea (as have the smaller tidal systems to the east of the region, ie the Wildman and West Alligator Rivers). On the other hand, sediment buildup appears to have diverted the course of the Adelaide River, which found an alternative route to the sea, but to have impounded the Mary River, temporarily excluding tidal influence from the entire plains and permitting the spread of freshwater wetlands.
At present our understanding of the chronology of palaeochannel occupation and abandonment is rudimentary. There are several former estuarine channels identifiable on the Mary River plains, and it is possible that any one palaeochannel may have been occupied more than once. We are pursuing a rigorous dating program to endeavour to determine whether there have been several periods of tidal network extension in the past, similar to what is seen at present, or whether the complex of channels dates from just one period of coastal impoundment.

b) Floodplain accretion

The present surface of the deltaic-estuarine plains has evolved since the demise of the mangrove forests at the end of the big swamp phase and the accumulation of freshwater clays. The South Alligator plains are convex in form, declining in elevation away from the river, to heights close to the upland margin which are often below the water levels reached by the tide in the major estuarine channel. Inundation is presently prevented by the broad muddy 'levée' flanking the river (Woodroffe et al 1986). Preliminary survey results from the Mary River plains suggest a similar topography, with much of the plain below the level presently reached by high tides at the coast (Conservation Commission of the Northern Territory, unpublished results).

Along the valley there is also a gradual gradient. Along the tidal channel length of the South Alligator River the highest parts of the floodplain reach 3.5 m AHD within the estuarine funnel and sinuous meandering segments of the river, rising to 3.8 m AHD in the cuspatate meandering segment, and to 4.1 m AHD in the upstream segment. The upper level at which mangroves grow also varies along the length of the tidal river; the landwardmost mangrove zone in the coastal fringe reaches 2.5 m AHD with isolated individuals to 2.8 m AHD; mangroves reach 3.2 m AHD in the sinuous meandering segment, 3.4 m AHD 50 km from the mouth of the river, and a maximum of 3.7 m AHD in the cuspatate meandering segment, before declining to 3.2 m AHD in the upstream segment. The maximum dry season tidal levels thus reach only just below the banks of the river channel. The majority of the floodplain lies below these levels, but inundation is prevented by the broad levée of mud deposits flanking the river. Only in the upstream segment does a major part of the floodplain rise above the level reached by the tide.

Pollen analysis of several cores along the South Alligator River indicates that the upper limit to vertical accretion under mangroves at the end of the big swamp phase (interpreted from the uppermost occurrence of abundant mangrove pollen in cores) varies very little along the deltaic-estuarine plain, and is 2.0-2.2 m AHD. This implies that on the South Alligator a wedge-shaped freshwater floodplain has accumulated in the last 4000 years with a maximum thickness of about 1 m near the mouth and 2 m in the upstream segment, though with considerably thinner freshwater clays away from the valley axis.

The palaeo-high-tide level appears to have been near horizontal (at around 2.0-2.2 m AHD) throughout the South Alligator big swamp mangrove forest (Woodroffe et al 1986). This level is below the maximum elevation reached by mangroves in any part of the present estuary, and also differs from the present limit to mangrove growth which shows a gradient upstream, being around 1 m higher in the cuspatate segment than at the coast. Woodroffe et al (1986) have suggested that the development of a gradient in high tide level along the river in place of the former horizontal surface may have resulted from a change in tidal amplitude as the tidal river has evolved, with frictional and convergence characteristics altering as channel morphology has changed. Changes in tidal range have been recorded as a result of sea-level rise in relation to embayment topography in other
macrotidal systems (ie Bay of Fundy, Scott & Greenberg 1983). Emergent mangrove deposits, also of 'big swamp' age (c. 6500-6000 years BP) have been described above present tidal levels in the upstream segment of the Ord River (Wright et al 1972), indicating an upstream decrease in tidal range since their establishment. Such evidence supports late Holocene changes of tidal range along these macrotidal estuaries, although the pattern and direction of these changes seems to have varied between the systems.

The data from other tidal systems in the Top End, while not as complete in geographical coverage as that from the South Alligator River, imply diverging patterns of development for different rivers. The Adelaide River floodplain appears to be much more horizontal than that of the South Alligator; tidal amplitude in the Adelaide is dampened, presumably by the effect of the Narrows. The Magela Plain, tributary to the cuspatate segment of the East Alligator River, can be regarded as broadly similar to the upstream segment of the South Alligator River. Detailed studies described by Clark and Guppy (1988), but part of a wide-ranging study on the plains, indicate that this plain is rather higher (4.0-4.6 m AHD) than the equivalent location on the South Alligator System. In addition the elevation at which the top of the mangrove pollen is found in cores is also higher (3.1-4.0 m AHD) than that found on the South Alligator plains.

The height data imply substantial morphological differences between floodplains. We must presume that the tidal range and characteristics are broadly uniform throughout van Diemen Gulf, and thus that similar conditions prevail at the mouths of the Adelaide, South Alligator and East Alligator Rivers. However, these river systems contrast at about 80 km from their mouths where we have data from the Arnhem Highway crossing of the Adelaide and South Alligator Rivers, and using the Magela Plain data for the East Alligator. Plains on the Adelaide reach little more than 1.5 m AHD at this distance; those on the South Alligator are at 3.5 m AHD; while the Magela Plain is at an elevation of up to 4.5 m AHD. Each floodplain is in a delicate balance with the tidal level which is reached at this point (only just below the height of the floodplain; a similar height relative to Magela Plain, c4.0 m AHD, is indicated by pollen in cores from there, Clark & Guppy 1988). Nevertheless the apparent height differences between plains are striking, and if these are true differences, and not the artefact of inadequate survey data, they indicate the magnitude of disparity which can be brought about by altered tidal hydrodynamics along individual estuarine channels. More detailed survey will be essential for effective management of these areas.

c) Channel migration and abandonment

There are numerous palaeochannels on the deltaic-estuarine plains of Top End rivers, indicating former channel positions. On the South Alligator plains all palaeochannels are sinuous in form, even in the presently cuspatate meandering segment of the channel, and occasionally these can form nested sequences. Laminated sand and mud, deposited in a channel margin environment, is encountered in drillholes within meander bends, and these deposits have enabled the mapping of the broad meander tract of the tidal river, which comprises about 6% of the entire floodplain (Woodroffe et al 1986; Chappell et al in press). This river appears to have been at its most sinuous 4000 years ago, and radiometric dates, as well as comparison of sequential aerial photographs, indicate a maximum rate of channel migration of the order of 1 m/year.

By contrast the Adelaide River, though presently dominated by a series of exquisitely sinuous meanders, shows few meander cutoffs on its deltaic-estuarine plain (as distinct from estuarine palaeochannels on the coastal plain, see figure 4). Drilling has not revealed laminated sand and mud channel-margin deposits, as on the South Alligator, presumably
because there has not been a supply of sand, making discrimination of a meander tract much harder. On the Daly River, with a much larger catchment, and an abundant sand supply, there are extensive scroll plains marking the former meander locations of what is evidently an actively migrating river channel. Rates of meander migration of up to 40 m/year have been inferred, and 15% of the floodplain has been reworked by the river (Chappell et al in press).

The extent to which a tidal channel migrates, the rate at which it migrates and the proportion of its floodplain it reworks are closely interrelated, and dependent upon fluvio-tidal parameters, in particular the interplay of tidal flows in the dry season, with river-dominated floods in the wet season (Chappell & Woodroffe 1985; Chappell et al in press). There is evidently a tendency for rivers to rework their own palaeochannels. This can be seen both from the patterns of scroll bars on the Daly plains, and the pattern of tidal creek extension in the Mary River system, described below. Channel abandonment following meander cutoff evidently has implications for the extent of tidal influence across the plains. Previously active tidal creeks draining into the meander cutoff will cease to be tidal, and whole areas of previously saline water communities will revert to freshwater communities. The locus of tidal influence thus shifts to the new channel location. There are likely to be further effects felt upstream, as the tidal system will be shortened by meander cutoff, with consequent adjustments to tidal hydrodynamics; minor adjustments to tidal amplitude and the equilibrium channel geometry could be expected.

Recent patterns of salt water Intrusion

Recent changes to the estuarine environments of the Top End include some change in the form and position of the coastline, but involve dramatic extension of tidal creeks and consequent intrusion of salt water into many of the low-lying freshwater wetlands of the plains (Fig 5). Our examination of sequential aerial photographs taken over the last 50 years indicates that the rate and pattern of salt water intrusion has varied substantially between rivers. For example, the Adelaide River has experienced only minor modification of billabongs, swamps and rainforest pockets while the Alligator and Mary Rivers have been subjected to widespread ecological changes across the plains. The extent of the salt water intrusion problem on the Mary River plains can be appreciated by the fact that about 17 000 ha of land are presently adversely affected, including 6000 ha of Melaleuca forest and 11 000 ha of grazing land (Conservation Commission of the Northern Territory, unpublished results). The causes of this salt water intrusion are difficult to decipher, and possible explanations are examined below.

An historical rise of global sea level has been invoked to explain widespread coastal erosion in many parts of the world (Bird 1985). Sea-level rise of several centimetres in the last 100 years or so has been demonstrated from tide gauges in several countries, mostly in the northern hemisphere. Even when isostatic adjustments to shifting ice-water volumes are taken into consideration, there appears to have been a net rise of 2-3 mm/year over recent decades (Peltier & Tushingham 1989). Data are scanty in Australia, although Thom (1974), Thom and Roy (1985) and Bryant et al (1988) concluded that the standard gauge at Fort Denison, Sydney, shows an average rate of sea-level rise of only 0.5 mm/yr during the last 100 years.

Aubrey and Emery (1986), in their analyses of Australian sea-level trends, inferred a tectonically induced decreasing trend (0.4 mm/year) in sea level between 1957 and 1976 at Darwin. Bryant et al (1988) are critical of this interpretation suggesting that such trends
Figure 5: Tidal creek patterns on the Mary River plains reconstructed from aerial photographs, 1943, 1963, 1989 (after Knighton et al, in press).

- **T** Tommecut Creek
- **S** Sampan Creek
- **SCB** Shady Camp
- **DFF** Palaeochannel Boundary

Legend:
- **N** North
- Scale: 0km, 2, 4, 6, 8, 10
are a reflection of more frequent ENSO events and decreasing trade winds in recent years and that the falling sea-level trend derived for Darwin may be an artefact of the short length of record rather than an accurate record of sea-level change. Records from Darwin since 1966, collated by the National Tidal Facility, Flinders Institute for Atmospheric and Marine Sciences, suggest a gradual rise of 0.28 mm/year. Our examination of these Darwin records for 1966 to 1989 reveals a rising trend in mean sea level (figure 6a) while maximum sea-level trends show an even greater rise between 1970 and 1990 (figure 6b). The interpretation of average trends and inference of regional trends from such records requires some caution. It is apparent, however, that given the minimal relief of the Top End estuarine plains, sea-level rise need not be substantial to cause extensive inundation of the system by salt water.

In addition to establishing whether the area has experienced a rising or falling sea-level trend, it is appropriate to consider the timescale over which changes in sea level can occur. It is possible that the recent changes to the coastal wetlands of the Top End were triggered by an elevated sea level related to a single, isolated storm event. The wet season storm surge effect caused by the coincidence of low pressure atmospheric systems, prolonged landward winds, wind generated currents and high water discharges from rivers (Stark 1978) is particularly pronounced in shallow semi-enclosed basins such as van Diemen Gulf. The effect of one such abnormal storm event could be sufficient to breach the chenier ridges, levées and/or the upper floodplain protecting the low-lying freshwater segments of the plains and thus allow salt water access to the area. In the case of the Mary River, tidal creeks were limited in their landward extent, prior to the 1940s, by sub-parallel chenier ridges marking former shorelines. Two main creeks, Sampan and Tommycut Creeks, breached this barrier by 1943 and have since then extended the tidal network inland for over 30 km (figure 5).

Changes of tidal amplitude throughout these rivers were discussed above in relation to the evolution of the South Alligator River from the 'big swamp' phase, through a sinuous river to the present sinuous/cuspat condition. Internal morphological changes within the river systems may continue to have repercussions in terms of more recent changes in tidal range or changes in mean tidal surface slope.

**Figure 6:** A: Mean sea level in Darwin, 1966-1989. B: Maximum sea level in Darwin, 1970-1990

![Graphs showing mean and maximum sea level changes in Darwin](image)

Source: Tidal records for Darwin supplied by the Tidal Laboratory, FIAMS, Flinders University, South Australia, copyright reserved
Fluctuations in the rainfall regime of the Top End have also been examined in relation to their possible control over environmental changes to the estuarine systems of the Top End. Analyses of the rainfall for Darwin and the surrounding region by Taylor and Tulloch (1985) suggest a short-term trend (1870-1983) which is highly variable in intensity and amount. There were three extreme events in the period 1978-1983 with a total of eight during 1968-1983. The occurrence of several minima in the years up to the 1930s and several maxima in the 1970s and 1980s suggests secular changes or time trends in rainfall. Similarly, Cook and Russell's (1983) analyses for short-term trends show a long period of below average rains from the 1920s to the late 1960s and then a period of above average rains.

High variability in rainfall intensity and amount may have geomorphic and biological consequences reflected in the development of channels which influence the ability of floods to flush out the saline water during the wet season. Salt water incursion is probably more rapid where creeks allow drainage of areas of the plains that were previously impounded and remain separated well into the dry season. In this regard variations in the magnitude of the wet season as well as variations in the timing of its onset could be of significance. The below average rains of the past three wet seasons (1988-1990) are considered to have contributed to a significant increase in the salinity of the plains by local pastoralists. However, decreased rainfall over this period may also have been reflected in slightly lower sea levels within van Diemen Gulf and hence in a reduced potential for salt water incursion. The low resolution of the available rainfall and tidal records does not permit accurate assessment of local conditions.

Within the Northern Territory, it is widely held that the reversion to saline conditions is directly attributable to the impact of feral buffalo (*Bubalus bubalis*) (Fogarty 1982; Russell-Smith 1985). Buffalo numbers increased dramatically following their introduction into the Northern Territory in 1843 and an estimated 341,400 (1.53 per sq km) animals were present in the area in 1985 (Bayliss and Yeomans 1989). Buffalo form wet-season swim channels through wetland areas in their effort to reach adjacent dry ground; these channels may then allow salt water access to the freshwater wetlands during the subsequent dry season.

Our attempts to relate the regional pattern of tidal creek extension to the variable distribution and relative abundance of feral buffalo have been inconclusive. Comparison between the aerial photographs of the Top End rivers indicates that salt water intrusion has been extensive on the Mary River and the Alligator Rivers but has caused only minor changes along the Adelaide River. These observations accord with and extend the findings of Fogarty (1982) who noted extensive salt water intrusion on the Alligator and Mary Rivers, while the wetlands of the Adelaide, Finniss and Reynolds Rivers had not been extensively modified. Apart from the identification of certain swim channels (ie those intercepting tributary channels at 90° angles) it is difficult to establish the relative roles of buffalo and natural changes in causing salt water intrusion. Fogarty suggests that heavy buffalo activity (eg 35 per sq km on the Mary River in May 1981 (Graham et al 1982)) has likely hastened and in some cases initiated channel development and hence salt water intrusion. Stocker (1970) describes the breakdown of low shoreline banks and levees as a direct result of trampling, and also of heavy grazing by buffalo. Nevertheless, detailed studies on the network characteristics of the expanding creek systems, particularly those of Sampan and Tommymcut Creeks in the Mary system (see figure 5), indicate an extremely regular pattern of creeks, similar in their characteristics to river channel networks, following a gradual pattern of first order creek extensions, and density infill (Knighton et al in press). This regularity implies that, although buffalo may have played an important role in localised instances, the overall network growth is occurring in an organised
fashion, and cannot have been entirely the result of external factors such as buffalo damage or dynamiting and breaching of chenier ridges by local fishermen.

No single reason for the relatively recent phenomenon of salt water intrusion can be determined at present. It seems likely that a combination of several factors, some of them interrelated, have tipped the balance reverting the system from a predominantly freshwater environment to one dominated by salt water conditions. While the causative factors are uncertain, it is clear that, because of the large tidal range (5-6 m) and the fact that large areas of these low-lying plains are lower than the highest levels reached by the tide, the potential for salt water intrusion onto vast areas of the lower coastal plain and palaeochannels of the Top End rivers is extremely high. From a geomorphological viewpoint, salt water intrusion simply represents the re-invasion of the low-lying, previously saline parts of the coastal and deltaic-estuarine plains by salt water. Secondary salinisation may result in part from evaporative rise of salt from the saline muds which underlie the thin floodplain veneer of clays although the predominant mechanism of salt water intrusion is by tidal creek extension.

**Implications of future sea-level rise**

The extent of the salt water intrusion problem and its implications for management take on a whole new dimension in the context of the likely impact of predicted sea-level rise as a result of global warming in response to the 'greenhouse' effect (Gornitz et al 1982). Early estimates suggested that a rise in mean sea level of between 0.5 m and 3.00 m would occur within the next 100 years (Hoffman et al 1983; NRC 1983). Only a small change, a rise of the order of 1.0 m, would inundate these very low-gradient plains and they would revert to mangrove, samphire and saltflat (Chappell 1988). More recent estimates of the likely sea-level rise are much more conservative, and it now seems likely that the global sea level will have risen by about 18 cm (8-29 cm) by the year 2030 (Warwick & Oerlemans 1990).

The effects that sea-level rise is likely to have upon the coastal wetlands of the Northern Territory have been reviewed by Chappell (1988, 1990). It is clear that the impact will depend upon the actual rate at which the sea rises, and the corresponding rates and patterns of sedimentation. Examination of past responses to sea-level fluctuations can give us only some guidance as to what will happen in the future.

Holocene sedimentation records two modes of response. During the early Holocene the sea was rising rapidly, 10-15 mm/year (more rapidly than the most recent estimates suggest that we will experience in the near future), and poorly developed mangrove forests presumably transgressed rapidly landward, reworking a body of muddy sediments within the nearshore and coastal compartments. During mid and late Holocene there has been overall sediment buildup, but with subtle sedimentary adjustments excluding tidal influence from large areas, and then in some instances subsequently reintroducing it. The former period was widespread with each river system responding in a similar way, whereas during the latter period each tidal river system seems to have undergone its individual history of responses. The present situation lies within this period of delicate balance characterised by gradual change. Anthropogenic effects, including the impact of exotic plants and animals, increasingly mask the natural rates of change.

Future response to a gradually rising sea level is unlikely to correspond to either of these extremes. The rate of sea-level rise, at least over the next few decades, will almost certainly not be as catastrophic as experienced at the height of the postglacial marine transgression. Even if it were, the present Holocene coastal sediment bodies, accumulated
over 6000 years of relative stability, must differ in complexity from the presumably smaller and less complex sediment bodies which transgressed with the shoreline during the postglacial marine transgression, and how a rapidly rising sea would rework this sediment is unclear. However, it also seems unlikely that sea level will remain unchanged, despite the fact that we see no evidence that it has deviated significantly from this level over the last 6000 years in this region.

Already there are large areas of the present freshwater plains well below the elevation reached by the highest tides. The morphology of the plains has developed, with broad low muddy 'levées' flanking the river channels, such that the plains are generally not inundated. The system appears to exist in a precarious equilibrium. To what extent this equilibrium will continue to evolve will depend upon the rate of levée build-up in comparison with the rate of sea-level rise. Initially we would anticipate that tidal creeks would continue to be contained within their banks, in some cases entrained by levée-like features. Rather than broad-scale tidal inundation of the plains surface, which will remain infrequent until the sea has risen substantially, rapid tidal creek extension, and salinisation of wetlands, such as is presently happening in the Mary River system, seem a more likely scenario. While past sea-level rise seems to have been only a minor contributing factor, if indeed it has had any impact, on saline intrusion in the Mary River system, similar patterns of salinisation might become much more widespread where creeks are dominated by strong tidal processes and where there are extensive low-gradient plains. The rapidity of extension on the Mary indicates that this need not be a slow process of tidal incursion.

At present, management intervention along the coastal and estuarine plains of the Top End involves exclusion of feral buffalo, controlled stocking, designation of conservation areas and close monitoring of local pastoral farming practices. Tidal creek extension has necessitated structural measures to control salt water intrusion, initially in the Alligator Rivers Region by the Australian National Parks and Wildlife Service, and more recently on the Mary River by the Land Conservation Unit of the Conservation Commission of the Northern Territory. The construction of small earthen dams across several extending tidal creeks appears to have successfully checked salt water intrusion into parts of the freshwater wetlands of the Mary River system.

Simple control measures of this type should provide protection in the initial stages of any future sea-level rise. There is still considerable scepticism within the scientific community as to the impact that any greenhouse-induced environmental change will have, whether the sea will rise or not, and at what rate global rise will be expressed locally. However, given that there are already problems of salt water intrusion on several tidal systems in the Top End, probably not as yet caused by sea-level rise, it would seem inevitable that this problem will continue to demand attention, and perhaps exacerbate, in the next couple of decades.

Our studies of the mid and late Holocene development of a series of the estuarine systems in the Top End have demonstrated that although there has been a broad set of boundary conditions which appear to apply to all systems, each has undergone a particularly individual pattern of evolution over recent millenia, and much more research will be needed to decipher the fundamental patterns and processes dominant in each system, in order to successfully manage individual wetland areas in the Top End.

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CHAPTER SIX
TECHNIQUES USED IN REGIONAL ECONOMIC ANALYSIS
IN THE NORTHERN TERRITORY: A REVIEW

Jayatileke Bandara

Introduction

Like national economies, regional economies show wide differences in terms of the endowment of natural resources, geography, climate, population, etc. Not much can be done to improve the characteristics of regional economies with regard to natural resources, geography or climate. However, it is possible to influence the way in which the region's economies are managed and regional economic strategies are set. In this context, regional economic analysis techniques play an important role.

Over the years there has been concern about the regional economic development strategies in Australia since different regional economies exhibit wide differences. Among regions in Australia, the Northern Territory (NT) has its own strongly variant characteristics when compared with other regions. The NT economy has grown very rapidly in recent years, particularly since self-government in 1978. The NT economy is geographically isolated from the rest of Australia and its proximity to the rapidly growing economies of South East Asia plays an important role in economic development. It has a very small and widely dispersed population with a relatively high proportion of young people. It is rich in natural resources and dominated by a few key industries such as mining and tourism. The economy is still constrained by a relatively narrow industry base and has high cost structures as a result of deficiencies in transport links and isolation from other major Australian centres of population and economic activity. A wide range of policy issues which are important to the Territory's interests are somewhat different from those confronting the other Australian regions. Therefore, economic development strategies of the NT economy play a key role in regional economic development. In setting the economic development strategies in the NT economy, the choice of regional economic analysis techniques play a leading role.

The purpose of this chapter is to offer a review and an evaluation of the techniques which have been used in regional economic analysis in the NT economy. In addition it draws together a number of matters relevant to the development of regional economic strategies.

The remainder of the chapter is in four sections. The next section examines various regional economic analysis techniques which have been used in various regions in Australia in general, and relates how these techniques have been used in the NT economy. In section three, widely used input-output techniques and their limitations are considered. Section four is devoted to considering recent developments in CGE (Computable General Equilibrium) modelling as a further step. The final section summarizes the main points, highlights the policy implications of the existing techniques and suggests areas of future research.
An overview of the available regional economic analysis techniques

Following Street (1987, 26-7) the techniques which have been used in regional economic analysis in Australia can be categorized into three interlinked groups as follows:

(1) General techniques which are used to analyse economic issues in a regional economy. These include the following:

a) Input-output analysis  
b) Economic base models  
c) Shift and share analysis  
d) Keynesian income multipliers  
e) Computable General Equilibrium Models (CGE)  
f) Econometric models

(2) Techniques which analyse the effects of changes in various policies, industrial structure and macroeconomic variables on the regional economy. These include:

a) Impact assessment  
b) Gravity type models  
c) Population and migration projections  
d) Econometric projections

(3) 'Implementation' techniques which combine the above two categories with specific characteristics of a proposed change in the economic development, such as a new business or business closure. These include:

a) Feasibility assessment  
b) Cost-benefits analysis  
c) Demand calculations  
d) Business plans  
e) Strategic scheduling

As Street (1987) further noted, the techniques grouped under the above three categories are sequentially interrelated. Techniques in group one are general and techniques in group two use them as inputs for impact assessments. For example, the input-output analysis in the first category has been used for impact assessments in the second category. Therefore, those two categories are interrelated and usage of input-output techniques in impact assessments can not be considered in isolation without considering the input-output technique in category one. Techniques in group three use previous two categories for individual projects or development proposals.

Table 1 summarises the techniques of all three categories and illustrates the usage of them in the NT region for economic analysis. Studies shown in table 1 cover a range of techniques which have frequently been used in economic analysis of this region and studies in categories two and three are not an extensive list, rather they provide examples for the use of the techniques in those two categories. Some of the studies shown in table 1 have employed one or more regional economic techniques. Therefore, classification is an imperfect one as many overlaps between categories are evident. Nevertheless, each study is included in one of the three categories in table 1. Although we discuss the usage of various techniques in category one in regional economic policy analysis in the NT region separately in the following section, one or more regional economic analysis techniques can be used as a package in practice.
Table 1: Regional economic analysis techniques and their usage in the Northern Territory

<table>
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<th>TECHNIQUE</th>
<th>MEASURES</th>
<th>USAGE IN THE NT ECONOMY</th>
<th>STUDY NAME</th>
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<tr>
<td>(a) Input-output</td>
<td>Output, income of employment multipliers; Linkages</td>
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<tr>
<td>(c) Shift Analysis</td>
<td>Industry Sector Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Keynesian income</td>
<td>Income Multipliers</td>
<td></td>
<td></td>
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<tr>
<td>multipliers</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(e) GGE Models</td>
<td>Effects of various policy variables on the industrial structure,</td>
<td>(1) Meagher and Parmenter (1990)</td>
<td>ORANI-NT: A multisectoral Model of the Northern Territory Economy</td>
</tr>
<tr>
<td></td>
<td>employment and macroeconomic variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Econometric Models</td>
<td>Macroeconomic Performance and forecasting</td>
<td></td>
<td></td>
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<tr>
<td>GROUP (II)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Impact Assessment</td>
<td>Economic impacts of changes to one or more sectors of a regional economy</td>
<td>(1) Mules (1981)</td>
<td>- The Impacts of Reduced Expenditure by the Northern Territory Government - An Input-Output Study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) Pearse (1985)</td>
<td>- The Tourist Industry of Central Australia: A Regional Application of Input-Output Analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4) Stanley (1988)</td>
<td>- ORANI-NT of the Northern Territory Government Budget, August 1987</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(6) Taylor (1990)</td>
<td>- Immigration and its Impact in the Northern Territory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7) MacDonald (1990b)</td>
<td>- Impact of the 1989 Pilots’ Dispute on the Northern Territory economy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(8) Knappman, Lea and Stanley (1990)</td>
<td>- The economic and social significance of current and potential recreation and tourism in Kakadu and the conservation zone</td>
</tr>
<tr>
<td>(b) Gravity type models</td>
<td>Distribution and regional boundaries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Source</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) Population and migration projections</td>
<td>Scenarios for future population by age, sex, workplace, household, etc.</td>
<td>(1) Taylor (1989)</td>
<td>Migration and Population Change in the Northern Territory. Northern Territory Population Changes (various issues)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) The Northern Territory Treasury</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) O’Fairchealgaigh (1987)</td>
<td></td>
</tr>
<tr>
<td>GROUP (III)</td>
<td>Economic viability of new projects or businesses</td>
<td>(1) Department of Industries and Development (1989)</td>
<td>Import Substitution Study</td>
</tr>
<tr>
<td>(a) Feasibility Assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Cost-benefits Analysis</td>
<td>Evaluation of advantages and disadvantages of a specific project</td>
<td>(1) Robins (1988)</td>
<td>Darwin’s Trade Development Zone (its appeal and its success)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) Hill (1984)</td>
<td>Independent Economic Inquiry into Transport Services to the Northern Territory</td>
</tr>
<tr>
<td>(c) Demand Calculations</td>
<td>Estimators of current and future demands for housing, community services, etc.</td>
<td>(1) Department of Mines and Energy (1983)</td>
<td>The Transport Requirements of the Territory Minerals and Energy Projects to the year 2000. The potential role of transportation requirements of the Northern Territory's Rural Sector (in the early 1990s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) Department of Primary Production (1983)</td>
<td></td>
</tr>
<tr>
<td>(d) Business Plans</td>
<td>Marketing, organisational and financial plans for business</td>
<td>(1) Fergus Simpson (1988)</td>
<td>Reviews of Trade Development Zone authority Marketing and Promotional Activities</td>
</tr>
<tr>
<td>(e) Strategic Scheduling</td>
<td>Timetabling of economic development activities</td>
<td>(1) Street Ryan and Associates (1990)</td>
<td>Human Resource Strategies for the Darwin Trade Development Zone</td>
</tr>
</tbody>
</table>

Table 1 exhibits that only two techniques in category one have been mainly used as general techniques in regional economic analysis in the NT economy. They are the input-output analysis and the regional CGE modelling. These two have been used as inputs in category two, in particular, in impact assessments. Some other techniques in category two and three have also been used in the NT region, as shown in Table 1. In this chapter, our major concern is on the general economic analysis techniques (group one) since they play a leading role in the preparation of overall development strategies in the region. However, as noted, it is unavoidable not to discuss the techniques in categories two and three when techniques in category one are discussed since they are interrelated. In the remainder of this section, we provide a brief introduction to each technique in category one before discussing the input-output studies and the regional CGE modelling in detail.
(a) Input-output analysis

Input-output analysis is a popular technique in regional economic analysis. The most useful contribution of regional input-output tables is that they provide an extremely comprehensive and extensive description of interindustry linkages in a particular region. Simply, a regional input-output table provides a 'snapshot' of the regional economy; it focuses a detailed view on the regional economy at one moment in time. A regional input-output table disaggregates the economy into various industries. The behaviour of each industry is important to the understanding of the structures of the regional economy. Each industry depends on another industry and the input-output table provides more details of the transactions that take place between industries in the regional economy. The rows of input-output table reflect how the output of each industry is distributed among other industries as intermediate goods and how final demand is allocated among capital creation, private consumption, government consumption and exports. The columns of the input-output table indicate the usage of inputs by each industry as intermediate inputs and primary inputs (such as labour and capital). From this point of view an input-output table provides a comprehensive accounting framework or an information base for a regional economy. Various multipliers (output, income, employment) estimated from an input-output tables give numerical estimates of the direct and 'flow-on' effects of an increase in output. These numbers indicate the interindustry linkages of a regional economy.

The most commonly used technique in regional economic analysis in Australia is the input-output analysis and it has been used widely in the NT economy, too. Therefore, we will discuss this method in the next section in detail.

(b) Economic base models

Economic base models are another technique which can be used in regional economic analysis. The main feature of these models is that they divide the economy into basic and non-basic activities. These models examine the relationship between basic and non-basic employment. According to economic base theory, all growth in a regional economy is driven by the basic activities which consists of industries such as agriculture, manufacturing of mining. When employment increases in the basic activities, it is asserted that this will induce increased employment in the non-basic activities such as trade, services and transportation. Therefore, the increase in total employment in a particular region will be some multiple of the initial increase in the employment of basic activities. The estimation of this multiplier can be identified as the simplest applications of economic base theory.

Although economic base models have been used in many Australian regional economic studies, there is no evidence of using this technique in the economic analysis in the NT region to the knowledge of the present author.

(c) Shift and share analysis

Shift and share analysis is also a commonly used method in regional economic analysis. This method investigates the contribution to total employment by each industry in a region, and the changes occurring over time. Shift and share analysis attempts to identify the changing contribution of each industry and compare them with other regions or the nation. This method can be used to address a wide range of issues in regional economics.
It can be used to evaluate the efficiency of regional policy instruments or can be applied to investigate the influence of industrial structure on differential regional employment growth.

The shift and share analysis has also been used in regional economic analysis in various regions of Australia over the years. However, once again, the usage of this method in the NT region cannot be found in its history of regional economic analysis.

(d)  Keynesian income multipliers

This method involves the calculation of an aggregate multiplier to estimate the effects of an inflow of money into a regional economy. Since the data requirement for this method is minimal it can be identified as one of the least data-intensive techniques in regional economic analysis. It is hard to find examples for the usage of this method in the regional economic analysis in the NT economy.

(e)  Econometric models

Another method of regional economic analysis is econometrics. The structure of a regional economy can be described using a simultaneous equations system, and the system used to obtain forecasts for aggregate variables such as employment, income and output. This method is a sophisticated one. However, it needs time series data for various variables. In regional economies unavailability of time series data limits the usage of econometrics in economic analysis.

Therefore, the econometric modelling is not a popular technique among regional policy analysts in Australia. However, the techniques of econometrics (such as applied regression analysis) have been used in isolation. Even in the NT economy, there is some evidence for the usage of econometrics techniques in some studies (eg Dayananda 1988). However, they have not been used extensively.

(f)  Computable general equilibrium (CGE) models

Economy wide regional CGE models are another technique in regional economic analysis.

The CGE modelling approach is an empirical counterpart of the well-known 'general equilibrium' analysis. In CGE models, under the various specifications of behaviour of the economic agents in an economy, a system of equations can be derived and solved simultaneously to find a general equilibrium which is just a solution of the behavioural equations.

Regional CGE models can be used to analyse a wide range of economic issues such as the effects on the regional economies of changes in the federal government's macroeconomic policy and the effects of changes in the economic policy of the regional government. CGE modelling at the national level as well as the regional level has been quite popular and successful in Australia since the construction of the ORANI model (ORANI is a Multisectoral Model of the Australian Economy, see Dixon et al, 1982). The model builders of ORANI model and their associates have used the CGE modelling technique to analyse a wide range of issues in various regions such as Tasmania (ORANI-TAS) and Western Australia (ORANI-WA). There is also a regional CGE model (known as
ORANI-NT, see Meagher and Parmenter, 1990) for the NT economy and it has been used recently to analyse some issues in the NT economy. More details of this model and the applications to the NT economy will be discussed in section four of this chapter.

The use of Input-output analysis In the Northern Territory economy

The use of input-output technique in analysing various regional economic issues has gained much popularity among regional economists in Australia, especially after the pioneering work of Jensen et al (1977) and West (1979) and West et al (1980). In fact, this technique has become the most widely used regional economic analysis technique in Australia over the last decade or so. In recent years a large number of regional input-output tables have been compiled for various states and territories as well as for small regions in Australia in order to undertake various impact studies and develop regional development strategies. All these input-output model builders belong to the School of GRIT (Generation of Regional Input-Output Tables). The GRIT method compiles either single-region tables or a set of tables.

As Hewings and Jensen (1986, 314) noted 'this technique is a multiphase technique based on the calculation of preliminary tables by a combination of mechanical non-survey techniques, and the insertion of prior information of 'superior data', where this term applies to data which is considered by the analysts as preferable to mechanically produced entries in the table. The technique is 'variables inference' in that the analyst has the opportunity to insert superior data at several stages.' (See Hewings & Jensen (1986) for a survey). In Australia, over forty GRIT regional and interregional input-output tables have been produced from the official GRIT procedure (Hewings & Jensen 1986, 315). This number is sufficient to emphasise the popularity of the GRIT techniques and regional input-output tables among the Australian regional economists.

Following the above trend, a large number of input-output tables for the NT economy or its region have been compiled by Jensen and his associates or their followers as shown in table 2. There are a number of reasons for the popularity of input-output techniques in regional policy analysis when compared with other available techniques. Firstly, the other alternative techniques such as simple Keynesian multiplier models and economic base models are highly aggregative. Secondly, the other techniques such as econometric models require a strong data base and statistical stability in estimated relationships though they give insight into the structure of regional economics. Thirdly, input-output models provide a detailed analysis of interdependent production relationships and disaggregated output, income and employment multipliers. Finally, these models are simple and easy to convince regional policy makers by using their results.

As shown in table 2, input-output models have become the most widely used regional economic analysis technique in the NT economy. Table 2 provides details of these input-output studies and their main characteristics (this list of studies includes techniques classified under group one and two in table 1). At a glance, some common features of these studies can be observed. Firstly, all the input-output tables in these studies have basically been produced following the GRIT technique. Secondly, in all these studies output, income and employment multipliers have been calculated in order to identify the structural interdependence in the regional economy. Thirdly, almost all the input-output projects have been financed by the various Northern Territory government departments in order to obtain information for their policy decision making process. Finally, all these input-output projects have been undertaken by specialists outside the NT economy.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Sponsored Institution</th>
<th>Purpose of Study</th>
<th>Base year of the I-O Table</th>
<th>No. of Industries in the I-O Table</th>
<th>Availability of I-O Tables for Small Regions</th>
<th>Measurem ents</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West, Wilkinson and Jensen (1980)</td>
<td>The Northern Territory Department of the Chief Minister</td>
<td>(i) To portray the NT economy and its regions in I-O Tables (ii) To provide some theoretical discussion on the GRIT procedure</td>
<td>1976/77</td>
<td>16 and 11</td>
<td>(i) Top End region (ii) Katherine Berkeley region (iii) Alice Springs region</td>
<td>(i) Output multipliers (ii) Income multipliers (iii) Employment multipliers</td>
<td>Follows the standard GRIT technique</td>
</tr>
<tr>
<td>Mules and Morrison (1981)</td>
<td>The Northern Territory Department of the Chief Minister</td>
<td>(i) To increase the level of accuracy of the previous I-O table for the NT and its associated multipliers</td>
<td>1976/77</td>
<td>16 and 11</td>
<td>For Top End</td>
<td>(i) Output multipliers (ii) Income multipliers (iii) Employment multipliers</td>
<td>Follows the standard GRIT technique</td>
</tr>
<tr>
<td>Mules (1981)</td>
<td>The Northern Territory Department of the Chief Minister</td>
<td>To examine the effects of reduced expenditure by the Northern Territory Government.</td>
<td>1976/77</td>
<td>16</td>
<td></td>
<td></td>
<td>The above table was used.</td>
</tr>
<tr>
<td>Morrison and West (1983)</td>
<td>The Northern Territory Department of Chief Ministers office</td>
<td>(i) Provide updated input I-O tables and multipliers</td>
<td>1980/81</td>
<td>17 and 12</td>
<td>For Top End</td>
<td>(i) Output multipliers (ii) Income multipliers (iii) Employment multipliers</td>
<td>Follows the standard GRIT technique</td>
</tr>
<tr>
<td>Source</td>
<td>Method Description</td>
<td>Year</td>
<td>Multiplier</td>
<td>Note</td>
<td></td>
<td></td>
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<tr>
<td>Bandara and Jafurry (1990)</td>
<td>(i) Compile a disaggregated I-O Table for the NT economy and calculate various multipliers</td>
<td>1980/81</td>
<td>39</td>
<td>A disaggregated version of this I-O database is used to implement the ORANI-NT model.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harlton (1990)</td>
<td>(i) To examine the effects of agricultural industries on the NT economy</td>
<td>1985/86</td>
<td>20</td>
<td>Not completed and an unpublished table</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MacDonald (1990a)</td>
<td>(i) Update the I-O tables for the NT economy to 1987/88</td>
<td>1987/88</td>
<td>36 and 10</td>
<td>In this study, a special consideration is given to the NT government fiscal policy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MacDonald (1990b)</td>
<td>(i) To examine the impact on the Northern Territory economy in 1989 Pilots dispute</td>
<td>1987/88</td>
<td>36</td>
<td>The above table was used for this study</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Compilation of input-output tables for the NT economy in relation to different base years from 1976-77 has provided a good information base of the NT economy. As noted previously, these tables reflect the economic structure of the regions and different tables over the years indicate the structural changes in the economy. Although the first input-output tables are aggregate tables (with a small number of industries as shown in table 2), they have provided valuable information relating to interindustry transactions and employment. As shown in table 2, the most recent tables (for example, Bandara & Jaforullah 1990 and McDonald 1990a) are more disaggregated tables and they provide much detail on the structure of the NT economy. Various NT government departments see these tables as valuable inputs for their development strategies and hence they have continued to sponsor input-output research projects.

Numerical values of output, income and employment multipliers shown in various input-output studies have been used by policy makers, NT politicians and other researchers to prepare various development programs (such as the Trade Development Zone (TDZ)) and to analyse various issues.

Apart from these services, input-output tables have served as inputs to various impact studies. For example, Mules (1981) used the 1976-77 input-output table for the NT economy to examine the impact of reduced expenditure by the NT government. In this study, the economy-wide effects were investigated. Similarly, Pearse (1983) and McDonald (1990b) used input-output tables to analyse the impact of the tourism industry. The tourism industry plays a leading role in the development of the NT region as a whole as well as its small regions and hence the analysis of the impact of this industry on the NT economy is important in setting development strategies.

The study of Pearse (1983) evaluated the contribution of the tourist industry to the Central Australian (Alice Springs) region's economic structure in 1979-80 and its potential contribution in 1987-88. This study emphasised the importance of the tourist industry in Central Australia in terms of employment generation and sectoral 'forward' and 'backward' linkages. MacDonald (1990b) examined the full impact of the 1989 pilots' dispute on the NT economy with the aid of the newly developed input-output table for the NT economy for 1987-88. The results of this study show that the 1989 pilots' dispute has produced negative results in the NT economy in terms of output, employment and income. Actual loss was calculated using input-output techniques on the basis of various assumptions.

Although input-output analysis is used to address various economic issues in the NT economy and is capable of capturing major elements of interdependence in the structure of the regional economy, it has a number of shortcomings. These include extreme demand orientation and its unsatisfactory treatment of interstate and international trade. The input-output models tend to be demand derived and do not accommodate supply constraints or substitution possibilities. The fixed coefficient technology is the most important assumption of the input-output models. This indicates that fixed minimum amounts of all intermediate inputs and primary factor inputs are required in order to produce a unit of output in each industry. Therefore, the use of all these inputs expands in direct proportion to the level of output. The assumed fixed coefficient technology does not allow an industry to prevent a shortage of one input by changing its input structure. This also rules out any possibility of individual industries altering their input mixes to changes in relative prices. Industry output levels are simple linear functions of exogenously given final demand. Therefore in input-output models an exogenous assignment of values to the elements of final demands is sufficient to determine industry output levels and hence levels of primary factor employment. This assignment can be made completely independently of the primary factor constraints. The lack of any relationship between primary factor constraints and the final demand is a major weakness of these models. This
implies that the regional input-output models are really only appropriate to project output and employment levels in circumstances in which the demand side is completely dominant.

A further important shortcoming is the unsatisfactory treatment of international and interstate trade. In these models exports, together with local final demand for domestic output, are exogenous and imports are treated as non-competing. Neither exports nor imports depend on relative prices. Therefore, the crucial issue of the response of trade flows to changes in relative prices is not accommodated in these models.

In input-output models it is generally assumed that there are no supply side constraints in an economy. Labour and capital are available with perfect elasticity of supply. This implies that the supply curve is flat and the price of the factor is fixed. Therefore, quantity traded is determined purely by demand. This assumption is inappropriate in regions like the NT because they have various supply constraints such as scarcity of skilled labour. Also, as noted earlier, the assumptions of fixed coefficient technology and all exogenously given levels of final demands do not allow the input structures of individual industries to respond to changes in relative prices. These assumptions are also not appropriate in regional modelling.

Despite the fact that there are some limitations of the input-output technique in regional policy analysis, it seems that the policy makers in the NT government still have great faith in input-output modelling because of its simplicity and the availability of regional data for compilation of input-output tables when compared with the data requirements of other techniques. The various NT government departments are still continuing in funding input-output projects in order to address various policy issues in the regional economy since the input-output technique has become the major quantitative method of analysing economic structure and undertaking various impact studies.

However, in the second half of the 1980s, some policy makers in the NT government sought assistance from more advanced techniques in the regional economic analysis. This is the reason for the development of a regional CGE model (ORANI-NT) for the NT economy. The experience of this model is discussed in the next section.

The use of CGE modelling techniques in the NT economy

As noted in the previous section, the input-output technique has some limitations in regional policy analysis despite its popularity among regional policy analysts. The regional CGE modelling can be treated as a natural emanation of the regional input-output modelling with the inclusion of an endogenous regional output and price system, substitutability in production and demands, the optimisation behaviour of individual agents and a complete treatment of income flows in an economy. It is obvious that the CGE modelling is an advanced technique of economy-wide regional policy modelling compared with the input-output method. In this section an attempt is made to evaluate the experience of regional CGE modelling in the NT economy.

There are two approaches in regional economic modelling known as 'top-down' and 'bottom-up'. The behaviour of economic agents and the environment within which they operate is applied at the national level in the first approach while the second one applies all the basic theory at the regional level. The choice between these two depends on the range of policy issues to which regional economic models might be addressed (see for details, Higgs et al 1988 and Meagher & Parmenter 1990). Both these approaches are very useful in analysing policy issues in the NT economy. For example, the effects of changes
in federal government policy such as macroeconomic policy and industrial protection policy on employment, industrial output, and the government budget in the NT economy can be examined by using the first approach. The effects of changes to NT government expenditure and major resource developments in the local area in the NT economy and in the rest of Australia can be examined by using the second.

The study of Bonnell et al (1985) can be identified as the origin of the applications of CGE models in the NT region. Following the top-down approach, this study has examined the implications of Australian macroeconomic policy for employment in the NT by using the ORANI model of the Australian economy. However, this type of top-down CGE application has very limited capability for addressing issues which are basically concerned at the regional level. Some of these issues are changes in the regional government economic policy, changes in the federal government's regional policy and major private sector developments within the region. To analyse the effects of such changes, the bottom-up approach is useful. The ORANI-NT model was developed to fill this gap.

This model was developed in 1986 by a research team from the Institute of Applied Economic and Social Research (IAESR) at the University of Melbourne and it was funded by the North Australia Research Unit (NARU) with special finance from the NT government (see Meagher & Parmenter 1990 for the details on the ORANI-NT model). The main purpose of the development of ORANI-NT model was to address a wide range of policy issues in the NT economy. (See Seyfort 1988 for a detailed discussion on the various issues which can be addressed by this type of model). The model can be used to address both bottom-up and top-down issues. As pointed out by the model builders (see Meagher & Parmenter 1990, 158), the ORANI-NT model is much better than the available top-down alternatives (mainly using the ORANI national model) and it has some important advantages over simple input-output models by recognizing the role of relative prices, the inclusion of substitutability in production and demands and the considerations of supply side constraints as a stand-alone model of the NT regional economy. This indicates that the ORANI-NT model has attempted to overcome the limitations of input-output techniques which are identified in the previous section. The ability and the flexibility to improve this model when additional ideas and data become available are another usefulness for policy analysts in the NT region.

Over the last few years the ORANI-NT model has been used to address some policy issues in the NT economy. These applications are shown in table 3. The first two experiments with this model have been used to demonstrate the capability of addressing top-down as well as bottom-up questions. In fact, the model builders have used these two applications to test the model and train local policy analysts in regional CGE modelling. Dayananda (1988) has used the model to analyse the impact of a 10 percent reduction in residential buildings and other constructions on the NT economy. Most recently, Knapman, Lea & Stanley (1990) have used the model to investigate the regional economic impact of the tourism industry in Kakadu and the Conservation Zone (CZ) on the NT economy. The main simulations and their results of these studies are presented in a summary form in table 3.

Despite the fact that the ORANI-NT model has been developed to address a wide range of policy issues in the NT economy and that this has been demonstrated by the above applications, the present policy analysts in the NT have almost abandoned it. Rather than applying the ORANI-NT model and improving it, regional policy analysts in the NT government have gone back to simple input-output models (eg McDonald 1990a, 1990b). They provide several reasons for this reversal. Firstly, the complexity of the mathematical structure of the model has become an obstacle for the policy makers. In this context, policy analysts see that input-output models are simple to understand.
### Table 3: Applications of ORANI-NT model in the NT economy: a summary of policy simulations and the results

<table>
<thead>
<tr>
<th>AUTHOR(S)</th>
<th>BASE YEAR OF THE MODEL</th>
<th>POLICY SIMULATIONS</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Meagher and Parmenter (1990)</td>
<td>1977/78</td>
<td>The Effects of a ten percent across-the-board cut in Rates of Protection against Australian Imports. (The top-down approach)</td>
<td>A cut in rates of protections generate favourable results on macroeconomic variables through increase in real disposable income and a fall in a real wage rate. The effects of the cuts in protection on industries in the NT are mainly indirect, rather than direct consequences of increased competition from imports. Many industries output are stimulated by the cut in protections.</td>
</tr>
<tr>
<td>2 Meagher and Parmenter (1990) and Stanley (1988)</td>
<td>1977/78</td>
<td>The effect changes in the 1987 NT government expenditure (The bottom-up approach)</td>
<td>Employment, GDP and disposable income fall as is to be expected. The reduction in demand leads to a reduction in prices and imports. Output levels of export industries (international) increase and nontradeable industries decrease.</td>
</tr>
<tr>
<td>3 Dayananda (1988)</td>
<td>1977/78</td>
<td>The effects of a 10 percent reduction in residential buildings and other constructions on the NT economy.</td>
<td>This simulation produces negative results on many macroeconomic variables including employment, GDP, disposable income and imports. Except for a few industries (export industries) the effects on industry output and employment are negative.</td>
</tr>
<tr>
<td>4</td>
<td>Knapman, Stanley and Lea (1990)</td>
<td>1980/81</td>
<td>Regional economic impact of tourism industry on the NT economy using four simulation. (A) To answer question 'how much is tourism in Kakadu/CZ currently worth to the NT economy'. This was done by supposing that expenditures in the various industries were increased by the difference between that they would be without Kakadu/CZ tourism and what they are now. (B) A 10 percent decrease in tourists visiting Kakadu. (C) A 10 percent increase in tourists to Kakadu/CZ. (D) A 10 percent increase in capital works in Kakadu/CZ area.</td>
</tr>
</tbody>
</table>

However, it seems that they have forgotten the limitations of the input-output technique. Secondly, they argue that the input-output database of the model (the original data base is 1977-78) is outdated so that the recent structural changes are not reflected in that data base. However, there is regular updating facilities with the model. Necessary software and guidance are available. Recently, the data base has been updated to 1980-81 (see Bandara & Jafourllah 1990). On the other hand, it must be noted that the problems encountered in dealing with data are not limited to CGE modelling. Input-output models also suffer from these problems to some extent. Some of the input-output tables for the NT economy have been produced simply by using the RAS technique. Thirdly, the data requirements of the model are heavy compared with simple input-output models. The critics argue that these data are not available for the NT region. However, there are primary sources to create these data and it is possible to gather these data by searching the literature. Finally, they highlight a practical limitation. The major criticism in this regard is that the calculated results from the ORANI-NT model are difficult to explain to policy makers compared with the results calculated from the input-output model. In particular, they cannot understand where the results come from in this model. However, 'back-of-the-envelope' calculations (see Dixon et al 1982) can be used to explain the results obtained from the model.

On the basis of the above reasons, policy makers in the NT region are reluctant to use the ORANI-NT model to analyse various policy issues in the NT region. At present, this model is sitting unused on both the Northern Territory University computer and Northern Territory Treasury computer. Rather than neglecting this model, it is strongly advisable to encourage its use at least as a complementary technique with other regional policy analysis techniques.
Conclusion

In this chapter an overview of the regional economic analysis techniques used in various studies in relation to the NT economy has been presented and their main characteristics discussed. From the author's experience, this review concerned a wide range of techniques which have frequently been used in the NT region. However, the focus was mainly on the general techniques (categorised under group one in section two). In this final section, important points are highlighted.

As noted earlier, the input-output technique has been the popular method among regional analysts and policy makers in the NT region. The input-output studies have been primarily of a data base nature, collecting information on the structure of the regional economy and providing values for various multipliers. Sometimes these studies have been used as inputs in policy making areas. However, these input-output studies have not attempted to develop strategies to enhance the economic development in the region.

As noted in this chapter, regional CGE modelling has been introduced in the late 1980s as an advanced technique in addressing a wide range of policy issues in the region. The experience shows little evidence of an explicit understanding of the use of regional CGE modelling by the local analysts and the policy makers. They are not yet ready to use these advanced techniques compared with simple input-output techniques.

The experience of using economic analysis techniques in this region shows that the policy makers tend to rely on one particular general technique at a time. Careful consideration should be given to this trend. It is advisable to use a package of techniques as complementary tools in analysing various issues rather than rely on one particular technique from time to time.

It is evident that the understanding of the analytic techniques among local analysts and policy makers is limited. Many of the NT regional economic studies have been undertaken by the outside experts and the local participation in regional policy analysis has been very low. Therefore, improving the understanding of regional economic analysis techniques among local analysts and greater local participation in using these techniques should play a leading role in the future economic development in the region. Despite the availability of resources, including computer facilities, from the author's experience, availability of skilled manpower has become the main constraint in economic analysis in this region. In many responsible NT government departments the capacity to undertake economic analysis research work has been limited by the shortage of experts. Therefore, research divisions, if available, are not in a position to undertake and maintain sophisticated research projects. This does not necessarily mean that the NT government departments should employ regional economists. It does mean that they must be able to maintain and improve 'tailor made' techniques (such as the ORANI-NT model) developed by various groups of experts hired from the outside.

The shortage of local skills has meant that updating and maintaining a regional economic model has become a problem. The experience has shown that updating input-output tables and maintaining the ORANI-NT model here have become problems despite the enthusiasm of NT government departments to foster these research projects. It is evident that NT government departments have spent thousands of dollars on various research projects over the years. Therefore, they have some tailor made techniques to use in economic analysis but they have failed to obtain maximum benefits from them. They need to foster trained staff to get the benefits from their outlay of funds.
Future research should be directed towards how to overcome these problems. In fact, research divisions of NT government departments must play an important role as research and information centres in the region, with the assistance of the office of the Australian Bureau of Statistics (ABS) in Darwin.

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CHAPTER SEVEN  
SUSTAINABLE DEVELOPMENT IN THE  
NORTHERN TERRITORY: A RESEARCH AGENDA  

Ian Moffatt

Introduction

Sustainable development is one of the current areas of interest in both research and policy orientated studies in Australia. This awakening of interest in sustainable development is due, in part, to the impact that the Brundtland Report (WCED 1989) has had on the Federal Government. It could also be argued that this interest in sustainable development is a logical extension of the Australian Government's commitment to attempt to put into practice some of the recommendations of the World Conservation Strategy (IUCN 1980; Selman 1987). The World Conservation Strategy suggested three aims, namely: to maintain essential ecological processes and life support systems, to preserve genetic diversity, and to ensure sustainable utilisation of species and ecosystems.

It may be recalled that the latter document suggested that every nation should produce its own national and regional 'blueprints' to encourage environmental conservation with economic development. Australia, like several other countries, has responded positively to this request by outlining the types of strategies suitable for the diverse areas of the nation. Unfortunately, most countries' national responses have floundered when attempts to formulate sub-national conservation strategies have been made. Canada is, perhaps, the exception to this generalisation (Jacobs & Munro 1987; Jacobs & Sadler 1989). It appears that we can all think globally about environmental problems but are unwilling or unable to act locally (Commonwealth of Australia CDP 1990; Hare 1990). Clearly, if sustainable development is to progress from political rhetoric into practical application, then there is a need to develop the tools to get on with the job. The purpose of this chapter is to outline a research agenda which it is anticipated can help promote sustainable development at the sub-national scale using Australia's Northern Territory as a detailed case study.

Some theoretical approaches to sustainable development

There is a rapidly growing body of literature on the concept of sustainable development but despite the vast number of reports and scientific papers which address the theme very few have made any major significant theoretical or practical advances in promoting the idea of sustainable development into a useful operational tool (Moffatt & Slessor 1989; Moffatt 1991a, 1991b, 1991c). Fortunately, three different approaches to the problem of sustainable development can be discerned in the literature namely neo-classical economics, the circuits of capital associated with the work of neo-Marxists and radical political economists, and a resource accounting approach via simulation techniques. These three different theoretical approaches to the problem of sustainable development are outlined below.
In the case of sustainable development it is abundantly clear from the recent literature that economic and ecological affairs have to be brought together — the question is not why the two systems should be integrated but how to achieve it. One attempted solution to this problem is, as one would expect, to use the methodological framework and tools of the neo-classical economists. Since the mid-1970s several resource economists have attempted to introduce the use of resources and their impact on the environment into neo-classical economics. The early work of Kneese, for example, showed some awareness of the problems involved in attempting to incorporate environmental and resource issues into orthodox economics (Kneese 1977; Pearce 1980). More recently, several texts have shown that in general it is possible to use the conceptual apparatus of neo-classical economics to discuss some of the issues raised by environmentalists, ecologists and others in these matters.

Perhaps the clearest exposition of the neo-classical approach to promoting the conditions necessary for achieving sustainable development has been presented by Pearce et al (1980, 1989, 1990; see also Pezzey 1980). Essentially they argue that there are costs and benefits associated with changing the natural capital stock. If it is reduced, it will be for some purpose such as clearing tropical forests for agricultural purposes or creating space for, say, housing estates. Each destructive act has some benefits in terms of gains from the use to which the land is put. Similarly, environmental destruction has costs since a great many people use the natural environment for subsistence, recreation, scientific study and wildlife observation. In addition to these market associated costs and benefits are the 'non-use' values attached by people to preserving or conserving the environment as it is for its own sake. These 'non-use' values need to added to the use values to get the total economic value of the conserved resources or environment (Pearce et al 1989, 1990). It should be noted that typically modern economists tend to ignore the fact that some indigenous peoples of the world use the resources of the environment in ways which are potentially sustainable and do NOT solely rely on market mechanisms for their livelihood. Paradoxically, a large and growing proportion of the world's population is forced to use the world's resources in an essentially unsustainable manner as those people are deprived of their original access to traditional resources to maintain themselves because multinational corporations and developed countries have and are exploiting the resource base for their own paths of economic growth (De La Court 1990).

The way in which the neo-classical economists represent evaluation of environmental costs and benefits is given in figure 1 and is explained by Pearce et al (1990, 5) thus:

the stock of natural assets is shown on the horizontal axis and costs and benefits are shown on the vertical axis. The cost curve shows that as the stock of natural capital (Kn) increases, there are increasing costs in the form of forgone benefits from NOT conserving the environment. The benefit curve captures the benefits to users and non-users of natural environments. Economic analysis would identify Kn* as the optimum stock of the environment. 

If the existing stock is to the right of Kn*, then it will be beneficial in net terms to reduce the stock — i.e to engage in environmental degradation and destruction. If the existing stock is to the left of Kn*, then improvements in environmental quality are called for. If our view of the meaning of sustainable development is correct, it appears to be inconsistent with the idea of maintaining optimum stocks of natural assets or, at least, it will only be consistent if we are to the left of the optimum depicted in figure 1 (since sustainability is consistent with increasing environmental assets) or coincident with it.
This particular theoretical framework is only being developed but it is clear that there are several weaknesses inherent in it. First, as Pearce and his co-workers are at pains to point out, the definition of natural capital stock (Kn) needs to be clarified and articulated. Failure to provide this definition may result in attempts to fit the new wine of environmental concern into the old bottles of neo-classical economics. There may be some merit in attempting this but for the environmentalists and some economists this is not necessarily the best way to proceed. In particular the measurement of natural capital stock must be identified and presumably a monetary measure will eventually be used but this does raise problems in making an economic evaluation of nature. A major weakness in the neo-classical economic paradigm is the attempt to put a price or value on non-market goods in an attempt to embrace them into its calculus. Hence, we find attempts such as contingent evaluation and cost-benefit analyses being applied to resource and environmental issues where it is clear to all but the neo-classical economists that markets do not exist in these areas of human affairs and are inappropriate mechanisms for many socio-economic transactions. The attempt to create markets to include it in the accounting system of pro-market economists is fraught with difficulties such as using contingent evaluation for 'pricing' foregone uses of the environment. These ingenious economic games are perhaps a sign of the bankruptcy of this approach to many environmental problems.
Not all environmentalists or economists are totally convinced by these attempts to reconcile the worlds of humankind and nature into the straight jacket of neo-classical dogma (Georgescu-Roegen 1973, 1975; Daly, 1973, 1987). Many environmentalists and other researchers working in the field realise that for some people the environment provides the wherewithal for their subsistence and culture. These 'traditional resource managers' include aboriginal groups in North America, Northern Europe and North Australia (Smith 1990; Jull & Roberts 1991). A second weakness in the neo-classical approach is its dismissal, or ignorance, of traditional ways of utilising resources in which money plays a subservient role in the social formation. In many parts of the world aboriginal peoples put less emphasis on money as the raison d'être for social life — although as the tentacles of the global economy spread and embrace the remoter parts of the continents, even traditional aboriginal cultures are having to face up to the reality of the global forces which are surrounding them and threatening their existence. It is this failure to admit that non-markets co-exist with market mechanisms that makes the neo-classical approach to resource issues one-sided.

An alternative approach to thinking about the interrelationships between economic and ecological phenomenon is to use resource accounting as the basis of theorising about these interactions. Essentially resource accounting attempts to link some aspects of the natural world to the theatre of human affairs by using energy as the main measure. The work of the ecologist Odum (1971) can be cited as an illustration of the ways in which ecology and economics can be blended to produce a system for discussing environmental management of resource issues. Essentially, this approach attempts to combine economics and ecological systems by focussing on energetic values of the system of interest and then attempting to simulate the behaviour of the system. In figure 2 the way in which the ecological and economic systems interact to produce a state of total value which would then need to be sustained rather than go into decline is illustrated. By employing resource accounting methods and using energy as a numeraire rather than relying on the fickle market prices, it is assumed that a more useful and commensurate measure of both the economic and ecological system interactions can be achieved. The basic idea underlying this ecological approach to sustainable development is the belief that economics is, or ought to be, subservient to ecological conditions — as Bacon once remarked we can only use nature by obeying her rules.

**Figure 2: A model of ecological and economic interactions**

![Diagram of ecological and economic interactions]

Source: Odum 1975
Despite the huge effort by several researchers to promote this idea of resource accounting to capture the essential links between the world of nature and humankind, there are several weaknesses in relying on energy accounting as the only way of describing environmental and economic problems. First, the current world system emphasises economic criteria as a prime concern for public policy including the debate on sustainable development. The resource accounting approach underscores this aspect of the real world and unless major structural changes are made to the world economy, ecological-energetic approaches may not receive the support they deserve. Next, many simulation models outlined by ecologists often represent models which have yet to be calibrated and tested with real world data (Jorgensen 1979). Unless empirical evidence is provided for this approach, then few people will be able to assess its relevance compared with other simplified models of economic-ecological interactions. Thirdly, the need to develop a common measure for ecological and economic resource allocation still eludes ecologists and economists. The use of energy as a surrogate measure for money does not appeal to all economists. Obviously the calorific properties of a barrel of oil are the same today as last year's barrel, but the price would no doubt be very different. Clearly, it is sensible to use a non-varying measure of the worlds of nature and economics together but unless there is an isomorphic transformation between price and energy equivalence then the measure is consistent but economically unrevealing. It could, of course, be argued that the current convention of describing economic development by use of the Gross National Product (GNP) fails to acknowledge and register the input of resources into economic growth and underscores the impact of such resource use on the environment. Until, these twin omissions are incorporated into the national accounts then economists, politicians and the general public could be misled by the conventions we choose to measure economic success (Ahmad, Serafy & Lutz 1988). Finally, the use of resource accounting tends to underscore the social relationships which make up a large proportion of the intercourse in human affairs. Like the neo-classical approach to environmental problems the political aspects of energy-ecology interactions are notably absent.

Whilst the resource accounting system has some merits in so far as it attempts to unite the world of ecology with the economic sphere, it tends to ignore the socio-political conditions facing many people in northern or peripheral regions. Not all economists fail to acknowledge the richness and diversity of socio-economic affairs (Santos 1979; Harvey 1982, 1985; Coombs et al 1989; De la Court 1990). In a recent lecture Coombs argued that modern theorists should acknowledge that there are major and growing disparities between and within the populations of diverse countries. He suggested that for many inhabitants, especially aboriginal peoples, the quest for increased capital accumulation has resulted in an increase in those who have become relatively less able to satisfy their basic needs and who experience daily reductions in a dignified and satisfying life. The two cultures of Disraeli's Sybil for nineteenth century Britain are being recreated on a global scale. Numerous scholars have noted that this pattern of underdevelopment is occurring in many areas of the world. But few scholars can agree on either the causal mechanisms which lead to this impoverishment of both humankind and nature or on the appropriate way to change this situation (Rostow 1960; Frank 1978; Knox & Agnew 1989). One neglected but useful framework for exploring the linkages between poverty and sustainable development is the concept of the 'shared space' or the two circuits of capital proposed by Santos (1979).

Santos's work attempts to explain the co-existence of market economies and non-market economies occupying the same space in urban areas of the Third World. His explanation of this phenomenon introduces the concept of the two circuits of capital which permeate the urban economy. The upper circuit is plugged into the global capitalist economy and the lower circuit is connected to the upper one but is generally concerned with subsistence rather than capital accumulation. His ideas are clearly illustrated in figure 3 in which the upper and lower circuits are clearly shown.
Figure 3: The two circuits of capital

Source: Santos 1979, 19

The upper circuit consists of banking, modern urban industry, export trade and service provision as well as trucking and wholesaling. The lower circuit is essentially made up of non-capital-intensive forms of manufacturing, non-modern services generally provided at the retail level and small scale trade. Whilst the upper circuit uses an imitative, imported, high level and capital intensive technology, the lower circuit is characterised by labour intensive activities and often indigenous or locally adapted use of technology which demonstrates the considerable innovative potential in this circuit. Each circuit is defined by the totality of activities undertaken in a given context and the section of the population linked to each circuit has distinctive patterns of consumption and employment (Santos 1979). Details of the two circuits of capital are presented in table 1.
Table 1: Characteristics of the two circuits of the urban economy in underdeveloped countries

<table>
<thead>
<tr>
<th></th>
<th>Upper circuit</th>
<th>Lower circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>capital-intensive</td>
<td>labour-intensive</td>
</tr>
<tr>
<td>Organisation</td>
<td>bureaucratic</td>
<td>primitive</td>
</tr>
<tr>
<td>Capital</td>
<td>abundant</td>
<td>limited</td>
</tr>
<tr>
<td>Labour</td>
<td>limited</td>
<td>abundant</td>
</tr>
<tr>
<td>Regular wages</td>
<td>prevalent</td>
<td>exceptionally</td>
</tr>
<tr>
<td>Inventories</td>
<td>large quantities and/or</td>
<td>small quantities</td>
</tr>
<tr>
<td></td>
<td>high quality</td>
<td>poor quality</td>
</tr>
<tr>
<td>Prices</td>
<td>generally fixed</td>
<td>negotiable between</td>
</tr>
<tr>
<td></td>
<td></td>
<td>buyer and seller (haggling)</td>
</tr>
<tr>
<td>Credit</td>
<td>from banks, institutional</td>
<td>personal, non-institutional</td>
</tr>
<tr>
<td>Profit margin</td>
<td>small per unit; but with large turnover, considerable in aggregate (exception=luxuries)</td>
<td>large per unit; but small turnover</td>
</tr>
<tr>
<td>Relations with</td>
<td>impersonal and/or on paper</td>
<td>direct, personalised</td>
</tr>
<tr>
<td>customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed costs</td>
<td>substantial</td>
<td>negligible</td>
</tr>
<tr>
<td>Advertisement</td>
<td>necessary</td>
<td>none</td>
</tr>
<tr>
<td>Re-use of goods</td>
<td>none (waste)</td>
<td>frequent</td>
</tr>
<tr>
<td>Overhead capital</td>
<td>essential</td>
<td>non essential</td>
</tr>
<tr>
<td>Government aid</td>
<td>extensive</td>
<td>none or almost none</td>
</tr>
<tr>
<td>Direct dependence on</td>
<td>great; externally orientated</td>
<td>small or none</td>
</tr>
<tr>
<td>foreign countries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Santos 1979, 22

Despite the intuitive appeal of Santos work it is clear that he does not address the relationship between capital accumulation in the two circuits and their dependency on the natural resource and environment of any specific area. In this sense his work has more weaknesses than the bulk of neo-classical economists working on sustainable development. Nevertheless, it is clear that some reconceptualisation of this idea of the two circuits and an attempt to integrate these concepts with the resource accounting or neo-classical frameworks could perhaps form a sound theoretical basis for productive research into modelling sustainable development.

Whilst Santos's work was developed in the context of Third World urbanisation, it may be suitably altered to apply to development in so-called peripheral regions. Obviously, the Northern Territory in Australia is not a Third World economy but it does have specific problems associated with its apparent remoteness and the nature of these sparselands (Holmes 1988). Significant parts of the community and space economy in the Northern Territory could probably be classified as belonging to the lower circuit. Further detailed research on the identification and interaction of the two circuits is required. In particular it would appear that some form of synthesis can be made from this brief examination of these three theoretical frameworks. The precise form of this new theoretical framework has yet to be articulated but the following aspects do appear to be emerging as useful ways of exploring sustainable development in the Northern Territory.
In the context of North Australia it is clear that the culture and aspirations of aboriginal peoples ought to be recognised. The ideas of Santos appear relevant here as he explicitly describes the twin circuits of capital in a form not too dissimilar to the situation in the Northern Territory where the lower circuit is populated by a majority of Aboriginal people, although other ethnic groups do compose this stratum. The flow of materials, information and people within and around the two circuits may be linked by use of resource accounting methods such as dynamic simulation modelling. In this way the work of ecologists such as Odum and others may be important as a guide to the ways in which the world of humanity and nature can be combined. Finally, the assessment of optimum economic benefits on the use of resources and the environment, having regard for the efficiency of resource use, environmental considerations and an equitable distribution of the return on the resources, may be achieved by use of a framework similar to the one proposed by neo-classical economists. Clearly, this fusion of theoretical ideas is speculative and will form one aspect of the proposed research agenda into sustainable development in the Northern Territory. Some of the substantive issues involved in promoting sustainable development in the Northern Territory are considered next.

**Substantive problems in sustainable development**

One of the key factors of production and of sustainable development is the use and abuse of land (Chisholm & Dumsday 1987). In the Northern Territory the land covers 1 364 000 sq km. Over 40% of this land belongs to Aboriginal groups and a further 10% of the land is under claim. In very broad descriptive terms the land use of the northern Territory can be provisionally sub-divided into five classes: a coastal margin including mangrove swamps; the urban section of the Darwin Statistical Division and several smaller settlements such as Alice Springs; the distinctive tablelands of Arnhem Land and the Barkly region; the extensive rangelands used for cattle; and the desert areas such as the Tanami and Simpson.

One of the major problems in focussing on 'land use' as a basis for sustainable development is the fact that there is often a desire to minimise conflicts between diverse resource using activities including enhancing economic growth, optimising production and bequeathing an environmental estate for the benefit of future generations. These different ways to utilise the land can often result in potential and actual conflict about the best way to use the land. The compatibility or its lack can be appreciated in figure 4 which represents a compatibility matrix for competing land use activities in the Northern Territory.

The interest groups associated with land use conflicts have been identified in several studies (Cloke & Park 1985). These conflicts are associated with activities such as forestry, pastoralism, mining, water supply, recreation and urban land use. Each one of these activities is singularly important but often there is a need to try and resolve the disputes between and within the potential user groups for a more rational and equitable use if the vast resource base of the Northern Territory, at least, is to be utilised in a sustainable way.

Unlike the research carried out in countryside management, it is clear that little recognition of aboriginal land use has been considered by most European and North American writers. In the context of Northern Australia, this traditional use of the land and its resources must be given due weight as it represents a distinctive way of life for over 25% of the population in the Northern Territory. For neo-classical economists the concept 'land' represents the portion of the Earth's surface available for exploitation given the current level of technology available to the society. Seen from this perspective land is a thing or a commodity which, like other commodities, can be bought and sold on
the market. Land is, however, more complex than this in that it incorporates both ecological and social relationships which tend to be ignored or underscored in orthodox economic literature. In orthodox literature land is used by a broad but homogenous group of people who generally accept the idea that land is just a commodity. For many of the aboriginal groups, however, land is not a commodity but part of their cultural inheritance which they use as stewards for future generations. These contemporary groups perceive themselves to be as much an integral part of the ecosystems which they inhabit as the plants and animals on which they live: 'We belong to it, we belong to the land and we look at it like that land is our mother ... there is no way we are going to leave it' (Rees 1987, 6). As Stanner (1969) noted:

no English words are good enough to give a sense of the links between an Aboriginal group and its homeland ... When we took what they call 'land' we took what to them meant hearth, home, the source and focus of life, and everlastingness, of spirit.

Obviously, the social relationships embedded in the concept of the land are much more profound than the superficial description and commodification of land beloved by neoclassical economists or measured by resource accountants (Young 1988). It would appear that the ways in which contemporary Aboriginal and non-Aboriginal groups use the land requires much more careful study and appreciation than given in the recent Federal Government Report on ecologically sustainable development or its recent statement on coastal protection and management (Ecologically Sustainable Development 1990; House of Rep. Standing Comm. on Environment, Recreation & Arts 1991).
Another major problem in examining the land use of an area as vast as the Northern Territory is the scale of analysis. At the small scale, atlases present simple classifications of land use types such as pasture, forests or deserts (Cameron 1982) whilst the more detailed large scale studies examine the land systems around, say, the Darwin region (Wood, Fogarty & Day 1985). The small scale studies are too broad to be useful for research but are a fine introduction for school children interested in the natural and human elements which make up the Northern Territory, whereas the detailed land systems studies do not cover the entire area and are therefore unable to provide the areal coverage required to examine the changing pattern of sustainable development and land use of the entire area. It would appear that the use of modern information technology, such as geographical information systems and computer modelling, may allow researchers to examine different uses of the land at the appropriate scales of study. This, however, raises several technical problems which also need to be addressed.

**Technical issues in sustainable development**

One way of approaching the problem of developing a regional model of sustainable development is to try and integrate a dynamic simulation model of sustainable development with a geographical information system (GIS) and a decision support system (DSS). A dynamic model focuses on the way in which the various state variables of the system of interest change during simulated time on a computer model. Population changes, for example, can be simulated in order to provide some indication of the possible total numbers of people in Australia or a region within Australia. Whether or not the population is too large for sustainable development is, at present, an open question — although one which has been discussed at length by various people (Day & Rowland 1988). One of the major advantages of using dynamic models of development, rather than relying on static input/output models such as the well documented ORANING model is that they can give an indication of possible future population changes or any other state variable of concern to the model builder (Bandara & Jafurullah 1990; Meagher & Parmenter 1990). Despite the advantages of dynamic modelling over the use of static or quasi-static models for regional or national predictions, most dynamic models suffer a serious drawback. One of the major weaknesses in purely dynamic models is that they are incapable of specifying the locational considerations of the changes in the state variables. In a recent review of model building, Bennett (1981) suggests that one of the main areas of theoretical development would lie in attempting to integrate dynamic and spatial models into a coherent framework. The rest of this section describes one way of attempting to link dynamic and spatial components together.

**Dynamic models**

A dynamic model is any simplification of a real world system which attempts to show the way in which the system changes or develops through time. The word change implies the growth or decline of one or more parts of the system of interest whilst the word development is concerned with the ways in which the system evolves. During the course of system evolution many parts of the system may change. For example, the evolution or metamorphosis of a caterpillar into a butterfly is a good example of evolutionary change whilst the growth of, say, a branch is merely a quantitative change.

Dynamic models attempt to capture the essential behaviour of a system as it changes during simulated time. Simulated time may be run at the same speed as the conventional clock and is termed real time simulation. Often however the temporal dimension is either accelerated or reduced to capture the processes which give a particular system its
dynamic. The classic case of dynamic simulation modelling was to predict tomorrow's weather on a computer which took over 24 hours to run! Obviously, with today's computers such problems have now been overcome, although new problems related to the capacity and speed of computers arise when attempting to make realistic regional climatic patterns from atmospheric global circulation models (Henderson-Sellers & Blong 1989; Moffatt 1991c). When some processes are very fast, the researcher often needs to slow down the temporal element in the model to focus on the processes at work, such as the study of turbulent flow in water or gases.

One of the current areas of interest in dynamic modelling complex systems is the study of chaotic dynamics and dissipative structures which occur in the world of nature and humankind. The full details of these interesting phenomena need not detain us here (see Moffatt 1991a) but they do raise profound questions concerning the limits to modelling, understanding and controlling complex systems. With regard to the latter, Bennett and Chorley suggest that 'it may be that it is merely the inadequacies of current systems conceptions and control techniques that separate a Kafkaesque hell from a Marxist heaven; on the other, it is much more likely that all but the most broadly humane and delicate controls over environmental systems may be disastrous' (1978, 553).

**Geographical information systems**

Since the publication of Lord Chorley's Report, numerous British environmental scientists and geographers have shown great interest in the use of geographical information systems (GIS). Similarly, in Australia GIS and image analysis have been developed for a variety of environmental management studies such as coastal management of the Great Barrier Reef. Essentially a GIS is a way of storing, manipulating and retrieving locationally referenced data using a computer system (Burroughs 1986). Whilst there are many GIS on the market, they all attempt to do eight broadly similar tasks such as data storage, retrieval, transformations, searching, analysis, measurement, recombination and modelling. In figure 5, for example, the representation of an eight-level GIS is shown. Four data sets are derived from maps, one from a census, another from a field survey and two are derived from Landsat satellite images. These data sets can be manipulated in various ways to reveal new information about the problem under investigation.

**Figure 5: A representation of an eight level geographical information system**

![Diagram of a geographical information system]

Source: Moffatt 1990, 213
One of the major problems in using a GIS is collecting the relevant data. In the case of sustainable development it is clear that it is essential that both environmental and socio-economic information is required. Fortunately, some of the relevant data is available in this format in the form of provisional environmental regions of Australia (Laut et al 1980). These regions attempted to capture the ecological and socio-economic characteristics of Australian land. In the Northern Territory, eight provisional environmental regions were identified (figure 6 & table 2) of which five were over 100 000 sq km and one is in excess of 500 000 sq km. These environmental regions include biophysical data but are based on political statistical sub-divisions of Australia. The environmental regions also form the focus of the geographical sub-divisions of the advanced model of sustainable development. This data, when transferred to digital form, could be applied as a baseline set of information for examining the spatial aspects of development in the Northern Territory. Obviously, further data concerning the recent changes in the socio-economic statistics and ecology of the Northern Territory would be required. One useful way of advancing this research is to cooperate with other research groups and agencies in the region; with goodwill it should not be too difficult to make progress. In order to produce forecasts or scenarios for various trajectories of sustainable development in the Northern Territory, it will be necessary to cast the output from a dynamic simulation model into locationally specific coordinates so that the patterns of change in, say, land use can be transferred to the GIS. Future patterns of sustainable or unsustainable resource use will of course need to be compared with the actual pattern of observed data when the latter is recorded and made available. Such empirical testing of the dynamic model's predictions would be required for both fundamental research into sustainable development and policy orientated studies.

**Decision support systems**

Decision support systems (DSS) are designed to help policy and decision makers choose which policy to pursue. The main advantage of decision support systems is to allow decision makers to contemplate some of the consequences of implementing their decision prior to putting it into actual practice. Another advantage of DSS is that they are supposed to be easy to use by providing the essential information in an intelligible and clear manner. Presumably decision makers, such as environmental managers or planners, do not need to be directly concerned with the inner workings of a mathematical model but would like to know the output and reliability of the information they are given. As Jeffers (1988) notes, 'techniques suited to the simulation of ecological processes for the purpose of understanding the processes may be quite inappropriate when applied to problems of direct management, and vice versa'. It is at this stage in the development of an advanced model of sustainable development that a decision support system would be useful for environmental managers, other decision makers and interested lay people.

There are at least two types of DSS: intelligent and unintelligent systems. The latter DSS simply gives an answer to a query without explaining the type of reasoning behind the answer. An automated enquiry into a data base for answering a simple enquiry such as when the next train for a specific destination is due to arrive at a specific platform would be an example of an unintelligent system. In more complex operations, such as those concerned with land management or fire management, intelligent DSS are often used. The Automated Land Evaluation System (ALES) program, for example, takes the decision maker through a decision tree in order that he/she can ascertain the reasoning behind the answer given by the system (Rossiter 1990). Similarly, the GEM2 system, used for fire management in Savanna landscapes, uses some aspects of artificial intelligence such as backward chaining to produce the reasoning behind a particular solution to a problem (Davis & Nanninga 1985).

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Figure 6: Provisional environmental regions of northern Australia

Source: Laut, Firth & Paine 1980
Table 2: Description of provisional environmental regions of northern Australia

Region 61 — Description:

Region 61 consists of the urban section of the Darwin Statistical Division. It includes coastal and estuarine lands. The built up areas have urban light industrial and port developments. In 1976 Darwin was the domicile for 39 200 persons or 84% of the Territory’s population.

Region 62 — Description:

This region extends from Melville Island in the north almost to the mouth of the Victoria River along the coast and includes the coast and includes the catchments of the Daly and Fitzmaurice Rivers. It consists mainly of plainslands and low undulating lands, much of the former being estuarine in nature and the river alluvials seasonally inundated. The higher lands are over a variety of sedimentary rocks with some areas of granite and duricrusts. The region has a natural cover of open eucalypt forest, and eucalypt and acacia woodlands. There has been discontinuous irrigated agriculture along the central section of the Daly River, and non-ferrous mining and refining (concentrates) at Rum Jungle.

Region 63 — Description:

Region 63 includes most of the coastallands of the Northern Territory, Arnhem Land and the catchments of the Roper, McArthur and other gulf streams and is related to Region 54 in Queensland. Whilst most of its lands are plains or undulating there are small areas of hill lands with numerous escarpments and gorges which give its landscape a distinctive character. Along its coastal margins, there are considerable areas of tidal lands with associated estuarine vegetation. Elsewhere the landscape has a natural cover of eucalypt forests and woodlands, most of which are undisturbed or modified by extensive livestock grazing. The Arnhem Land, Groote Eylandt and Beswick Aboriginal Reserves, Kakadu National Park and Murganella Wildlife Sanctuary together make up over half the area of the region and limit development to metalliferous mining such as at Gove, Angurugu, Jabiru and McArthur River.

Region 64 — Description:

Region 64 consists of the Barkly Tablelands and the catchments of inland flowing streams to the south of the Barkly. It is related to Region 58 in Queensland. It is a region of plainslands over mixed sedimentary rocks with extensive areas of alluvial plains. Its natural vegetative cover of astrebla grassland and low open eucalypt woodland are used for extensive livestock grazing.

Region 65 - Description:

This region which only consists of the eastern sub-division of 8036 (Murchison) is related to the much larger Region 60 of Queensland. It consists of alluvial and erosional plains with a mixed cover of eucalypt and acacia woodland, acacia shrubland and astrebla tussock grassland. Only the south-eastern portion is used for extensive livestock grazing.

Region 66 — Description:

Region 66 consists of three contiguous sub-LGAs in the Victoria River District (8041) which includes the catchment of the Victoria River, and the western sub-LGA of the Murchison District (8036). It is related to Region 81 of Western Australia. This region is predominantly plainslands but has some hill lands in the south-west. In the south-east, the plains are frequently overlain by sand ridges. It is formed in a variety of sedimentary rocks with small areas of volcanics, granites and duricrusts. It has a natural vegetative cover predominantly of low open eucalypt woodland with some acacia shrubland and tussock grassland. In the north, it is used for extensive livestock grazing, elsewhere the vegetation is unmodified.
Table 2 (continued)

Region 67 — Description:

Region 67, the largest in the Northern Territory, consists of most of the arid southern third of the Territory and is related to Region 82 in Western Australia and Region 99 in South Australia. Most of the region is plainslands, much with overlying sand ridges, but it includes the major central Australian Ranges with the exception of the Petermanns (Region 68). The erosional plainslands are mainly on sedimentary rocks, whilst the ranges include a variety of sedimentary and metamorphic rocks with small areas of granites and volcanics. The most common form of vegetative cover is an open acacia shrubland but there are small areas of open eucalypt and mixed woodland. The south-central section of this region is used for cattle grazing and the more attractive sections of the range are a major part of the base for the tourist industry centred on Alice Springs.

Region 68 — Description:

Region 68 is a small region for this part of Australia but is related to Region 83 of Western Australia and 97 of South Australia. It is dominated by plains overlain with dune ridges but includes the low Petermann Ranges and Ayers Rock and Mt Olga, the latter two being singularly spectacular and forming part of the Alice Springs tourist base. The region has a cover of low casuarina woodland.

In the case of the advanced model of sustainable development it is anticipated that a quasi-intelligent decision support system will be integrated in the system so that some of the reasons why a particular trajectory of development is either sustainable or not can be ascertained (Moffatt 1987). This aspect of the advanced model will either be designed and built by the author or a commercially available system will be bolted onto the other two modules. The way in which the advanced model of sustainable development will integrate the dynamic model, the geographical information system and the decision support system is illustrated in figure 7.

Figure 7: The components of an advanced model of sustainable development for the Northern Territory
An obvious way of combining dynamic models with geographical information systems is as follows. First, using the data stored in the relational data base for the GIS for a given time; this information is then used to initialise the state variables for the first iteration of the dynamic simulation. After running the dynamic model for a set period, say five years, the output of the major state variables is then passed to some newly created table in the relational data base. This table must, of course, be set up to show the date and the names of the state variables involved. Once this information is stored in the data base some of the information is then sent to a set of sub-routines so that the spatial allocation of the relevant state variables can then be calculated. Once the calculations have been completed the GIS can portray the pattern of the state variables as a map. These new data are now stored in the GIS relational data base as one or more overlays and are then fed back to the dynamic model which now proceeds to predict the next five year period of the simulation (figure 7). The process is then continued throughout the length of the simulation. Unlike some of the current applications of GIS uses, the integration of a process based model allows investigators to have some indication of the causal processes underlying the spatial patterning of land use across the Northern Territory rather than merely portraying possible mapped patterns devoid of any underlying causal connections. In theory this approach to integrating dynamic and spatial distributions of sustainable development is deceptively simple — but in practice several major problems have to be resolved.

One of the major problems in attempting to fuse dynamic and spatial models into a coherent framework is the lack of an allocation mechanism. In many early urban and regional planning models (see for example Moffatt 1985) sets of sub-routines were derived to allocate differing land use classes into spatial sub-divisions of an area as in the classic Lowry model and its recent variants (Lowry 1964). At a technical level this type of mechanism could be used but it does presuppose a large degree of strategic land use planning which may not be appropriate in mixed market economies. Nevertheless, several researchers in Britain, Australasia and North America have suggested the need for multiple land use methodologies rather than single-purpose sectoral planning (Cloke & Park 1985; Cocklin 1988). Similarly, Odum argued seventeen years ago that 'controlled management of the human population together with the resources and the life support system on which it depends as a single integrated unit now becomes the greatest, and certainly the most difficult challenge ever faced by human society' (Odum 1971). Whilst these ideas of integrated management for sustainable development have been called for by various writers, the solution has not, as yet, been achieved (Crittenden & Lea 1989; James 1991). Perhaps the development of the advanced model of sustainable development could go some way towards rectifying this lamentable situation.

In several areas of Australia it could be argued that monolithic planning mechanisms imply the tacit acceptance of a single cultural heritage. Whatever this cultural heritage consists of it fails to acknowledge the existence of Aboriginal people with their distinctive and varied land practices (Coombs et al 1989). Recognition of their land-ethnic raises another problem in attempting to develop models of sustainable development for the Northern Territory which has both Aboriginal and non-Aboriginal groups wishing to use the same land for different purposes. For many Aboriginal peoples their land use has been sustainable for many thousands of years, but under the impetus of so-called economic development their traditional sustainable use of the environment and its resource base is becoming threatened. Clearly, any attempt to develop a model of sustainable development will have to address this problem at least if it is to contribute to the economic welfare of all groups of people in the area without impoverishing any one group. Whether or not this form of development with equity can be achieved within a model of sustainable development and put into practice depends on more than formal modelling. What is required is a meaningful dialogue between the different groups of people in the North to determine the type of sustainable development they want. The solution to these land resource and environmental issues will inevitably be brought about
by political debate and action. This action could take the form of constitutional change in order to give some further legal basis to the rights of indigenous peoples and to those wishing to use the resources to transform the current global economic system onto a sustainable trajectory. One way of achieving these aims is to become involved in strategic land use planning and environmental management.

Environmental management and planning principles

It is often difficult to define the terms 'environmental management' and 'planning'. According to Knop (1975, 43) environmental management is the 'process of balancing socio-economic, technological and ecological forces in the development and allocation of resources in order to fulfil the needs and aspirations of present and future generations. In doing so, environmental management should work to preserve the maximum evolutionary potential of the biosphere'. In some ways the definition of environmental management is a sub-set of land use planning philosophy and practice. Planning can be defined as 'any formal, structured process by which someone makes choices about the use of resources and their allocation among legitimate, competing uses, in order to achieve their stated objectives over some specified period in the future' (Rees 1987, 10).

Making choices implies the existence of alternatives as well as the fact that in most planning practice different goals are sought by various individuals or groups. In land use planning in Northern Canada, for example, it has been noted that to be successful planning must try to accommodate the diverse views of different communities including differences within the communities as well as attempting to reconcile often conflicting claims on the use of resources in the environment. These circumstances impose major problems for strategic land use planning as the planners have to try and weigh up the 'costs and benefits' associated with different land use proposals. Even worse, the planner has the rather unenviable task of promoting one preferred course of action from an array of valid alternatives which may be mutually exclusive (Rees 1987, 11).

These particular definitions of environmental management and planning are broadly in line with the goals expressed in the World Conservation Strategy and in the more recent Brundtland Report (IUCN 1989; WCED 1989). In both of these reports Australia has played a key role in attempting to promote economic development and environmental conservation. This role is still being encouraged by the current Prime Minister who wrote that 'we have taken too much from the Earth and given back too little. When the Earth is spoiled, humanity and all living things are diminished. The announcements in this statement (Our Country Our Future) won't put an end to that. But they'll help. With the right mix of political commitment and community support we can ensure that our country is simply the best in the world' (Hawke 1989). Whilst these are encouraging words it is important that politicians, scientists and the community pool their resources to produce a sustainable future for Australia rather than one which ultimately will lead to an impoverished land for the future generations.

One of the difficulties in planning and environmental management lies in attempting to produce land use plans which are acceptable to the vast majority of people in an area whilst giving due cognisance to the fact that no one group should be worse off than before the plan. In the case of northern regions which have a large Aboriginal population, such as the Northern Territory, it is clear that land use planning and environmental management must explicitly recognise the cultural differences in the use of resources and the environment required by Aboriginal and non-Aboriginal groups. Perhaps one way of recognising these cultural differences in the use of this shared space is to learn from the experiences of the native Indians in Northwest Territory, Canada, who proposed the eight principles to underlie land use planning (table 3). In the case of the Northern Territory it would be interesting to see if these principles of land use
planning and environmental management could be put into practice in order to promote sustainable development in a just, participatory way.

**Table 3: Eight principles of land use planning to achieve sustainable development and recognise aboriginal and non-aboriginal rights**

1. Man is a functional part of a dynamic biophysical environment and land use cannot be planned and managed without reference to the human community. Accordingly, social, cultural and economic endeavours of the human community must be central to land use planning and implementation.

2. The primary purpose for land use planning in the Northwest Territories (NWT) must be to protect and promote the existing and future well-being of the permanent residents and communities of the NWT taking into account the interests of all Canadians. Special attention shall be devoted to protecting and promoting the existing and future well-being of the aboriginal peoples and their land interests as they define them.

3. The planning process must ensure land use plans reflect the priorities and values of the residents of the planning regions.

4. The plans will provide for the conservation, development and utilisation of land, resources, inland waters and the offshore.

5. To be effective the public planning process must provide an opportunity for the active and informed participation and support of the residents affected by the plan. Such participation will be promoted through means including: ready access to all relevant information, widespread dissemination of relevant materials, appropriate and realistic schedules, recruitment and training of local residents to participate in comprehensive land use planning.

6. The planning process must be systematic and must be integrated with all other planning processes and operations.

7. It is acknowledged that an effective land planning process requires the active participation of the Government of Canada, the Government of the Northwest Territories, and regional and territorial organisations representing aboriginal people.

8. It is recognised that the funding and other resources shall be made available for the system and be provided equitably to allow each of the major participants referred to in paragraph 7 to participate effectively.

**Source:** Fenge & Rees 1987, 122

To some people these principles may appear radical insofar as they give a greater degree of self-determination to the people directly involved in any proposed changes to land use in an area. This 'radical' view has however been applied in Northern Canada and may be applicable to North Australia. In a sense the acceptance of any new form of land use change may require economic, social, political and even constitutional change. These major changes often require some vision of how the 'new order' would eventually replace the current practices of land regulation and use. To some people such changes may be disconcerting but for others they offer a sign of hope for a better way of living in
harmony with each other and the environment (Starke 1990; Young 1990). Perhaps the research into an advanced model of sustainable development can contribute in some way to this process of change.

In most research endeavours there is a vision and a method; the vision guides the researcher into making discoveries about the world and describing it with new words, whilst the methods employed in articulating this vision depend on developing and successfully applying techniques to engage the world of nature in a meaningful dialogue. In the area of sustainable development there have been many attempts to visualise the world as a dynamic self-organising system. By this we mean a planet which evolves yet maintains a steady state in a condition far from thermodynamic equilibrium. In particular, several scholars have argued that the impact of the last two hundred years of industrialisation and modernisation have resulted in a path of development which is damaging the life-support systems of the planet and is therefore unsustainable. The vision which is common to many people is that the current world system must be altered at least if we are to pass on to future generations a planet fit for human life. This vision of a better use of the world and its resource base has resulted in a call for sustainable development (WCED 1989).

Fortunately, this call has been taken up by several government and non-government organisations as a way of promoting the vision of a better life on Earth. But the ways in which this vision can be brought into reality have not as yet been developed. As a Government report notes (Ecol Sust Dev 1990, 40):

the crux of the issue in implementing ecologically sustainable development is the establishing mechanisms that ensure an integration of economic and environmental considerations both now and in the future. Reaching that integration can only be a co-operative process.

The earlier sections of this chapter indicate that it is possible to develop an advanced model of sustainable development for application in the NT and elsewhere in Australia by combining some of the insights from the research of Santos, Coombs, Pearce and Odum and integrating them into a dynamic spatial system framework. This advanced model is illustrated in figure 7 and is currently being developed by the author at the North Australian Research Unit. When the model is fully operational it is anticipated that environmentalists, economists and policy makers will be able to explore various simulations of possible patterns of sustainable development and then let the electorate decide between alternative uses or combinations of uses of the environmental resources of Australia. For some people this approach may appear both too technical and idealistic. Clearly there are both fundamental questions which need to be addressed with regard to the term sustainable development and technicalities to overcome but most important there is a need to retain the vision of a just, participatory and sustainable world. The latter is essential in a time of shortsighted greed and when callous indifference to humanity and nature is seen as the price to pay for our one-dimensional existence (Marcuse 1968).

Concluding comment

This chapter has described a research agenda for developing an advanced model of sustainable development for use in the Northern Territory of Australia and, perhaps, elsewhere. Whilst many people are discussing the concept of sustainable development, it is clear that very few people are producing the conceptual and operational frameworks required to move the idea of sustainable development into action. One way to advance the debate is to produce a pilot model of sustainable development and explore its usefulness in a real world context. Obviously any model which attempts to integrate the
world of nature and humankind will be fraught with difficulties and it is worthwhile outlining some of these difficulties which still remain to be resolved before the model can be used for promoting sustainable development in Northern Territory.

At the theoretical level it is clear that at present no one has resolved the fundamental problem of developing a calculus to unite the world of humankind and nature into a consistent and analytically tractable schemata. The recent work of Pearce (1990) and Pearce et al (1989, 1990) has attempted to achieve this by use of constant natural capital stock — but as they point out 'there is no easy interpretation of the idea of a constant capital stock. Some combination of an equal value rule with indicators of physical stocks to allow for critical minimum stocks (which, in turn, might qualify as "sustainability indicators") appears appropriate, but the issues have yet to resolved' (Pearce et al 1990, 11). Similarly, the attempts to use resource accounting or Santos's work on the two circuits of capital need considerable reconceptualisation before they can be put into an operational context for contributing to the development of sustainable development strategies for the Northern Territory. Clearly, the theoretical solution to the problem of making an isomorphic transformation between ecological and economic value still remains to be resolved.

Often, in cases where analytical solutions to complex problems remain unresolved it is useful to use simulation techniques. In the case of the debate on sustainable development it is possible to develop dynamic simulation models which do attempt to produce scenarios of development in the Northern Territory. Whilst preliminary models of sustainable development have been produced, it is clear that environmental managers and others interested in sustainable development or resource use need to examine the spatial implications of their work. By combining the dynamic simulation model with a geographical information system it may be possible to produce scenarios showing, with various degrees of confidence, different trajectories of sustainable development in the Northern Territory. Even if such an advanced model can be developed, then past experience has shown that decision makers and other interested people find it difficult to interpret the results of computer generated output. One way of overcoming this problem is to use a 'user-friendly' front-end to the model so that the results of the individual decisions on a model of the real environment is examined before the decision is put into practice. If this type of advanced model of sustainable development can be achieved, and current research at NARU is investigating this possibility, then perhaps we will have a tool to aid strategic land use planning and careful environmental management for current and future generations. The alternatives to this approach to sustainable development are muddling through or desecrating the environment for current and future generations. Clearly, in the Australian democracy the political choice is ours but the Territory has two problems: either the politicians proceed to encourage sustainable development or they leave the area for the white ants (Williams 1978).

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CHAPTER EIGHT
POLITICAL HISTORY OF THE NORTH

P Loveday*

The written political history of the Australian north is fragmentary and it exhibits a limited number of themes or interpretations. The themes, borrowed from other authors, are similar to some found in writing on the north in Canada and Alaska. This paper provides an extensive, but not exhaustive, assessment of the literature on the political history of the Australian north.

The time frame for this discussion is principally since the second world war. The north: I leave this poorly defined but basically it would be the area to the north of a line drawn from North-west Cape to Townsville, with a loop to the south to include central Australia. This is similar to the definition given by Courtenay (1982, 44). From some points of view this may be unsatisfactory but other possible lines such as the tropic of Capricorn are no better. Nonetheless geographical, climatic and resource endowments suggest that a north with something like these boundaries is a distinct regional entity, no matter what its internal diversity.

General histories, to begin with them, usually include material on political as well as other aspects of a particular place and time. For reasons to be discussed later there is no general history of the north as a regional whole. Instead we have state and Territory histories and politics texts. For Western Australia, Frank Crowley’s Australia’s Western Third (1960) was the principal work for a long time until Stannage’s New History of Western Australia (1981) came out. A series on the government of the Australian states was produced in the late 1970s but a volume was never prepared for Western Australia. For the Northern Territory, Powell’s (1982) and Donovan’s (1984) histories are the main ones, complemented by Heatley’s The Government of the Northern Territory (1979). Cilento and Lack’s centenary history of Queensland (1959) was for many years the only one. Johnston’s The Call of the Land (1982) and Ross Fitzgerald’s From 1915 to the Early 1980s (1984) are much less celebratory. Hughes (1980) has provided the politics text, The Government of Queensland. Geoff Bolton, whose doctoral thesis was on the pastoral industry in the Kimberley district in the north of Western Australia, has written the history of north Queensland (1972). In addition for Western Australia and Queensland, governmental year books provide historical outlines which include material on political history. These texts, with one or two exceptions, do not take us very far. Crowley’s and Stannage’s books contain very little on the north of Western Australia; Bolton’s deals with political history only incidentally and devotes only a couple of pages to the subject in the conclusion. Hughes says very little about the north of Queensland although the section on regionalism is worth noting; Cilento and Lack’s volume has only a few pages on politics after the first world war and none of it with reference to north Queensland. There is a substantial political component in one of the few historical essays comparing recent events in the norths of Canada and Australia (Loveday, Hodgins & Grant 1989).

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Studies of elections usually include narrative accounts of recent political and administrative events and could therefore be drawn on to help construct a political history, at least for the Northern Territory (see for example Jaensch and Loveday 1981). The political chronicle in the *Australian Journal of Politics and History* and the administrative chronicle in the *Australian Journal of Public Administration* are two other invaluable sources for more recent political history. Historical material with some political relevance can usually be found in the various texts on northern development, such as Kerr's *Australia's North-West* (1967, 1975) and Courtenay's *Northern Australia* (1982).

Political history has some obvious components or topics. It should deal with parties, elections and the sequence of governments; the development of institutions such as constitutions, legislatures, electoral and administrative systems; the major issues of the time and how they develop and are settled. The presentation of the story on these matters is essentially narrative and descriptive and at a fairly general level. The events and topics to be dealt with are usually identified as important for the historian by the people who took leading parts in them, by later commentaries and by conventional judgments that such things as constitutional changes are the stuff of political history. The historian will then compress and summarise, normally making a few judgments along the way about people or events and almost certainly trying to identify some long term trends, without destroying the basic narrative character of the text. This is how Powell, for example, proceeds in his *Far Country* (1982) in dealing with constitutional change in the Northern Territory and with political issues in the field of Aboriginal affairs in his last chapter.

There is however another way of tackling the subject: to look for some distinctive tendency in events, preferably a tendency that links many things together and gives us a theme which we can pursue consistently when writing about a number of different topics in the past. The 'frontier hypothesis' has been proposed as one such theme. In 1947, Fred Alexander wrote *Moving Frontiers*, subtitled 'an American theme and its application to Australian history', in order to see how significant the frontier hypothesis, put forward by American historian Frederick Jackson Turner in 1893, might be as an organising principle for the Australian historian and as a guide to the directions research might take. Of course he was thinking of Australian history as a whole, not of northern history, but it is worth asking whether what he said could be applied to the history of the north.

Alexander thought that although Australia had no expanding frontier in the American sense, it had undergone frontier experiences. The early pastoral expansion of sheepmen in New South Wales 'rapidly revolutionised the penal settlement' and, as in America, fostered political as well as economic individualism (1969, 27); the mining and agricultural frontiers followed, each adding to the impulse towards political democracy. Alexander judges that the Australian frontier has been more consolidating than sectional, to refer to another of the political consequences discussed by Turner (1969, 30), an argument taken up by Russel Ward. Alexander also notes the differences: the political and territorial limits to the expansion of the Australian frontier and the fact that urban industrialisation 'challenged' frontier influence even before the frontier was closed.

A few years later in 1958 Russel Ward wrote the influential *The Australian Legend* linking what he referred to as the myth of the Australian national character to the development of a distinctive bush and outback ethos in the nineteenth century. In other words the ethos was linked with what Alexander called the frontier and notwithstanding Ward's disclaimers (1978, 7-12) the general bearing was to link the bush or the outback — or rather the life of nineteenth century people in the outback — with a distinctive ethos and thence with the things which were central, as Alexander saw it (1947, 6), in Turner's original discussion of the American frontier: its consolidating, national influence, its democratic tendencies and its cultural influence. I quote one brief passage:
From the beginning, then, outback manners and mores, working upwards from the lowest strata of society and outwards from the interior, subtly influenced those of the whole population... Towards the end of the nineteenth century ... Australians generally became actively conscious, not to say self conscious, of the distinctive 'bush' ethos, and of its value as an expression and symbol of nationalism (Ward 1978, 34).

Ward, too, was writing of Australia as a whole and northern applications would have to be worked out carefully and critically. Perhaps the urbanites of northern towns like Darwin and Kununurra, Katherine and Normanton; the tour operators and park rangers all cherish the bush ethos, but would we really want to say that the mining companies, the owners of the big pastoral leases and the owners of the big hotels were also under its spell? Or that they really have not mattered in the opening up and shaping of the north?

The frontier concept is applied not only to first settlement but to later developments as well. A book published in Queensland in 1959 exemplifies the line of argument from frontier forward to the consolidation of white urban civilisation in the tropics. The book, *Triumph in the Tropics* (Cilento & Lack 1959) begins with discovery, exploration, occupation and separation from the older colony of New South Wales. Part 2 deals with Queensland's expanding frontiers. Like Turner in America, the authors, Cilento and Lack, identify not one frontier but several — mining, forests, maritime, pastoral and agricultural. Not surprisingly, this is where the Aborigines are fitted in along with law and order. Part 3, under the word development, deals with civic, economic and political growth.

Another text from around this time may be noted: J Macdonald Holmes's *Australia's Open North* (1963) which also depends on the frontier hypothesis in an argument for regional political autonomy and a new political structure for the whole of northern Australia.

The frontier hypothesis was in Geoff Bolton's mind when he wrote *A Thousand Miles Away, a History of North Queensland to 1920* (1972). He comments, following Turner's argument, that if 'North Queensland was an Australian frontier, it was not a frontier which seriously modified or altered the national character' (1972, 323). Like north Queensland, the Kimberley in the north east corner of Western Australia is too far away from the rest of the country to have much effect on national character, but its history, as presented by Beattie and de Lacy Lowe (1980, 103-146), is a story of exploration and settlement on the frontier followed by slow development. CLA Abbott's *Australia's Frontier Province* (1950) may be noted here for similar use of the themes of the frontier and development but without the self-congratulatory tones of the Queensland volume. Elements of a similar story about the Northern Territory and the role of politicians and historians in perpetuating it are discussed by Reece and Coltheart (1981, 1-15). The book *Struggle for the North* (Kelly 1966) and the Australian Institute of Political Science's conference volume in 1966, entitled *Northern Australia, Task for a Nation* both hint at the frontier idea and the need for development in the words task and struggle and argue for more governmental intervention to assist in resource development.

It is at this point that something goes wrong when the frontier hypothesis is translated to the Australian context. It is all too easy to overlook or underemphasise the part played by government in the opening up of the frontier and in subsequent development and it is correspondingly easy to emphasise the rugged individualism, self-sufficiency and independence of the men, and occasionally the women, on the frontier in interpreting the history. The political component in the history is attenuated as a result. Another consequence is that the indigenous inhabitants are overlooked and treated as contributing little or nothing to development; they are relegated to the margins of history and may even be seen as standing in the way of development.
The frontier hypothesis is not adequate on its own to take us through many decades of history. Once the frontier stage has passed something different is needed as a theme if we are to show how we progressed from the frontier to where we are now. The word development provides the complementary follow-up theme if we are to tell a story about the growth of towns, of social and physical infrastructures, of communications, of production of goods and services, of the legal, banking, trading and property systems, of the political and administrative institutions. It may also lead on to a story about the relations of the incoming white society and the indigenous inhabitants, although this is most likely to be a story, not about their part in the progress of white society, but of their domination and marginalisation in it. Such a theme, the most common one mentioned in relation to the Australian north, would be development. It not only seems to make sense of the unceasing flow of events in the north, but it also seems to link together the various kinds of history: social, political, economic, constitutional and so on. Even if there is no other common thread, the thread of development can be traced through all of them, enabling us to select the topics to write about, the things to pass over lightly, the things to analyse and emphasise, the things to be identified as 'turning points'.

Development, although widely used as a theme in the story of the north, is more often than not a headline with little theoretical depth or explanatory power. In economic matters it usually means 'more' of something: mines, people, tourists, cattle; or something better, such as better roads or airports; or something new that produces income or goods and services which we did not have before (cf Courtenay 1982, 276-7). In political terms it is equated with attaining increasing degrees of selfgovernment and autonomy and the necessary institutions for selfgovernment, along with steady movement towards electoral democracy and the formation of a modern party system with responsible government. For Aborigines it means becoming accustomed to and taking part in nonAboriginal political institutions. It is a venerable tradition in British history to see this as progress and in political science texts of American origin it was once in vogue to describe the process, at least in developing third world countries, as political development.

In much of the literature the popular idea is taken for granted, namely that development is a replication in the north of a path of progress marked out down south. The question whether this is the appropriate path, given the differences between north and south, is not often examined nor is the question whether some other course of development might be possible, for example a course defined by the economically dependent status of the north. This possibility is suggested by the political science literature.

In recent political science texts on state politics in Australia, writers emphasise that development is the great theme in state politics. Galligan (1986, 251) says, for example, that the two great themes in state politics are development and management: development of the state's resources including the provision of economic and social infrastructure and the management of its establishment. In boom periods development predominates, while in recession...efficient management...'. Another book chiefly about state politics is entitled *The Politics of Development in Australia* (Head 1986). 'Developing the north' was the title of a paper by Paul Everingham, the first of the Northern Territory's chief ministers, at a conference in 1981 (Everingham 1982). Galligan reminds us that in 1930 Hancock laid great emphasis on the role of government in ameliorating the 'harsh impact of adverse effects from a volatile world market' and in counteracting the effects of 'Australia's inhospitable conditions, vast size and sparse population' (1986, 249). There is then a political history to be told and not just the tales of rugged individuals and their efforts to survive and prosper in a harsh frontier environment.
Galligan also notes that there has been renewed interest in political economy in works on state politics which is not surprising given the importance of development to them (1986, ix). One result has been to bring new theoretical approaches to bear in the analysis, potentially as important for the writing of history as for the writing of political science.

One of these is staples theory. Referring to Canadian staples theory, Stevenson wrote in 1976 that

Australia’s massive mineral developments in the late 1960s and early 1970s...provide what is surely a classic instance of the sort of basic economic shift...occurring several times in Canadian history...one might expect to see in recent Australian experience the same sort of...shifts in the balance of power, with resulting difficulties for federalism, that Canada experienced several decades earlier. Regions rich in newly discovered resources should be gaining economic, and eventually political, power at the expense of the less fortunate regions (1976, 3).

A few years later, FJ Harman argued that in Western Australia the then ruling Liberals and premier Charles Court based their economic development strategy on a

staged theory of growth [like] ...so-called modernization theories... These theories reduce to a thesis that economies move through a series of stages, and can be encouraged to do so at a faster rate by specific state interventions... For development which is initiated by the large-scale export of a natural resource, the optimistic visions of Canadian staples theory provide a useful example of staged growth. A staple is a raw material exported in unprocessed form.

Quoting one Canadian commentator on the mechanism, Harman continues:

the production of a staple induces linkages between the staple industry and other industries in the domestic economy ... Eventually, these industries, all spawned by the staple industry, cut their umbilical cord to the mother industry, become independent, [and] ... over time ... become the important ones and the relative significance of the staple industry diminishes (FJ Harman 1982, 335).

The political implications are discussed in other texts, Head (1986, 24), for example, doubting that there has been a historic realignment of power from the core states to the peripheral states. ML Alexander (1983, 57-8, 65-71) notes the recent convergence of staples or dependency theory and Marxist analyses in relation to Australia but does not say anything specifically about the northern peripheral areas. Courtenay (1982, 45-9) sees the north as peripheral in two ways: to the world economy and to the south-eastern Australian 'core' but he does not explore the political implications.

Gerritsen (1988, 149) summarises another political aspect of the argument, which begins with Stevenson (1976), as follows:

in Australia there had developed two different blocs of states based on the differing impacts of the mining sector. These were the resource-rich peripheral states of Queensland, Western Australia (and the Northern Territory, added by Gerritsen 1984; 1985) and the core states of New South Wales, Victoria and South Australia... The Marxists adapted this model, emphasising the role of transnational capital (Crough and
Wheelwright 1982a; Stilwell 1983) rather than the mining industry... The regionalists saw the states in each camp acting politically in concert and exhibiting similar internal dynamics in their political systems... Opposed to the 'naturally' Labor (or 'liberal' Liberal) core states, with their concern for the environment and social issues, Queensland and Western Australia (and the Northern Territory) were seen as being 'less liberal' (Stilwell 1980, 30); as giving priority to economic development; as more attuned to the interests of multi-national corporations; and less sympathetic to the demands of Aborigines, women and social welfare recipients (Gerritsen 1988 for the references he cites).

Gerritsen, whose outline I have cited, then develops a criticism of this core-periphery typology based on an analysis of state budgets. Crough and Wheelwright, whom he cites, also argued at about the same time for a progress, in which the role of the state was 'important', from 'dependence to...dependent development, through various forms of state capitalism' at the initiative of transnational corporate capital (1982b, 85).

This argument about the different character of different groups of states seems to have taken us a long way from the north and its political history. The staples approach may well be questioned — for example, the cattle and mining industries do not show the linkages required to foster the growth of local autonomous industries — but it does have some merits. Australia's north lies across the three peripheral states and it is in this north that the largest part of the resource development of the sixties and seventies took place. It is also one area where the myth of the frontier, and perhaps a little of its substance, has lingered longest. Second the argument connects the political history to the kinds of economic development taking place in the north. This economic context is essential for an understanding not only of issues and policies but of the ensemble of parties and interest groups. Third the analysis is based not on the headline word development which can be interpreted in a variety of ways but on a theory of how development might take place in a non-developed economy. Whether that theory is right or wrong is a separate question. To have a theory about development is to have guidance about what is to go into the history of it; choice need not be random or subjective or echo the politicians of the day.

One of the difficulties of a single tendency approach or a single theory is that it is made to do too much work; the more things it is supposed to link together the more vague and imprecise it must become and so too the linkages between different elements in the historical story. This is why 'development' is such a convenient theme; as long as it is imprecise it can be used as the headline to link together almost anything the historian cares to include in the narrative. On the other hand, the price of precision is to leave things out of the story because they cannot be clearly linked with the tendency. It seems preferable therefore to try a number of speculations or hypotheses about the north, speculations founded, of course, on observations drawn from the general literature. These speculations may enable us to test the adequacy of the existing literature.

The north has a number of special features, special by comparison with the south (see Courtenay 1982, 43-74) and the question is whether these features have any obvious consequences for politics and for political history in the north.

Some things seem obvious. We could expect the organisation of political parties and the conduct of elections to be affected by the small population, dispersed over vast distances and including a high proportion of Aboriginal citizens who have had the vote for barely a quarter of a century. For example, special measures have been necessary to ensure that no voter is deprived of a vote by reason of distance from a polling place and that Aborigines understand how to vote and can do so without being intimidated or improperly influenced.
To take another example: a party branch structure will be difficult to establish and maintain if the primary social organisations so important elsewhere, such as trade unions, church congregations and personal membership pressure groups, are weak or non-existent. Similar organisations do not exist in Aboriginal society and Aborigines have not had the traditions of family or parental commitment over two or three generations to one or other party to make them into 'party identifiers'. These aspects of parties and elections have been dealt with in the literature as we shall see, principally for the Northern Territory. This is so too for social class.

Given the importance of social class in the shaping of voting patterns and political perceptions, the question is worth asking whether the class system found elsewhere in Australia is replicated in the north and, if not, what the implications of that might be for politics in the north.

Another speculation might be to ask whether the chauvinism which is so evident in the north, directed against Canberra and other metropolitan centres, especially at election time, is sustained by the myth of the frontier and to ask the political question whose interests are served by the myth and the chauvinism. It may be possible, by putting that question, to see what importance is to be attached to this distinctive part of northern political culture even if the notion of a political culture is rather vague. Political culture in Queensland as a whole rather than in the north has attracted one or two writers, notably Smith (1985) and, at a more popular level, Charlton (1983) but it cannot be assumed that the political culture of the north, if there is such a thing, is much the same as Queensland's.

Geography and climate are different from what are found down south and they have implications for the northern economy but no direct effects on political life. The resource mix, which is also different, is of the greatest importance since it shapes the economic activities of the north. The cattle industry for example is much more salient in the mix of economic activities than it is down south and farming of various kinds — wheat, sheep, dairy — is much less salient. Mining is a principal activity but manufacturing is miniscule. These patterns are unlikely to change; the north is not travelling a path of economic development similar to that of the south only 50 to 100 years behind. Instead it is on a different path and the question is whether this entails a different politics and a different political history.

It is a reasonable speculation that if the mix of economic activities is different, the ensemble of interest or pressure groups will also be different. Cattlemen will constitute an important group politically as well as economically; farmers will be much less important. The mining lobby will be stronger than the manufacturing lobby. Industrial unions will be weaker than they are down south and they will not therefore be as significant a component of the strength of the Labor party in the north.

If the mix of economic activities is different it may well be that the 'issue mix' is different too. Questions familiar in the south will arise in the political community (government, parties, media, administration, interest groups) such as questions about conservation and the environment, about communications and other infrastructure of development, about rates and kinds of development, about the exploitation of non-renewable resources, about rates of taxation, the role of multi-nationals, the impact of development on indigenous peoples, about the role of government in regulating and promoting development. If the 'mix' in the north is different, if some issues are more or less salient in the mix than they are down south, governments and politicians will not necessarily be able to follow the same strategies as their southern counterparts in negotiating conflict and they may well find that they have correspondingly different bases of support and opposition. The strange (by Australian experience) alliances of left and right populism in Queensland in recent
times have been described by Mullins (1986). This in turn may well have implications for relations between a state government and the national government. For example, Scott and others (Galligan 1986, 68) comment that 'because the sectional interests predominant in Queensland are generally opposed to high levels of tariff protection, restrictions on international capital movements, strong trade unions, and restrictions on land-use stemming from conservation measures or Aboriginal land rights, there is enormous scope for federal-state confrontation'.

Finally there is the fact of federalism. A political history with a twentieth century emphasis would present a rounded account of the role of the federal government in the north. At present, the material for much of this account exists but it is dispersed in the different histories of the states and the Territory. To bring it all together would entail a study not only of the federal administrative machinery but of its interactions with its state counterparts.

The north is not a single entity politically. State boundaries divide it into three parts and yet there are factors which might well give politics and political history in these three parts a distinctive character. A further point may be made. Although the Northern Territory is a political entity, the norths of Queensland and Western Australia are not; they are parts of larger units which have their political foci in southern cities. The implication of this is that any attempt to organise a movement across the north or to reach some kind of northern inter-governmental accommodation in settling major issues of the region will be difficult if not impossible.

Another implication, even if trite, is that there is no one set of political institutions for the north. In Australia the creation of political institutions — a constitution, legislature, electoral system, administrative departments — has preceded and been the basis for political development. The history of political development in the Northern Territory exemplifies the point exactly. The political development of the norths of Western Australia and Queensland is likely to be retarded by comparison and, if it occurs at all, it will be as an adjunct of political systems focussed in southern cities.

The literature mirrors this division. There is no political history of the north as a whole and it is challenging to consider what it might be over and above an aggregation of separate sections on the Northern Territory and the norths of Queensland and Western Australia. Some topics are worth considering in more detail to see what has already been written on them.

Two consequences of this division must be specifically noted. On the one hand there have been arguments for the unification or coordination of the north, politically or administratively, across state boundaries and on the other hand there have been regional separation or new state movements.

**Coordination of northern development**

Before the second world war an attempt was made in the 1920s to coordinate development in the north across the state boundaries using an administrative mechanism, the North Australia Commission (Heatley 1979, 28-9; Powell 1982, 169). The Commission achieved little and in 1931 it was wound up. The second and last attempt was made in 1945 with the setting up of the Northern Australia Development Committee, which with an associated policy committee included governmental representatives from Queensland and Western Australia (Heatley 1979, 31). It was backed by a committee of officials, chaired by HC Coombs, who commented that 'without an effective Authority with
financial resources not much could be achieved...and the committee faded into disuse' (Coombs 1981, 71). Moves of this kind, which depended on the Commonwealth's direct administrative control of the Northern Territory, are no longer possible since self-government was granted to the Northern Territory in 1978.

Regionalism

I noted above that Hughes's The Government of Queensland touches on the north in connection with regional decentralisation of administration. Harris (1984, 31-2) also mentions regionalism of administration in north Queensland. Some of the political aspects are brought out in historical works like Doran's account of separatism in Townsville in the nineties (1981) and Moles's biography of Townsville's Tom Aikens (1979). Coaldrake (1973) has a study of the history and politics of moves to establish a new state in north Queensland. Crowley's history of Western Australia (1960, 224) mentions the creation of a department of the North-West in 1920 but provides very little else on the north in that state. Regionalism has been of some political importance in each part of the north and it has been seen principally as a matter of how to devolve administrative activities to regional administrative centres while retaining firm central control. Inevitably, the question of consultation and influence then arises — how do regional administrative authorities relate to institutions of local government; how do local people get a say in what affects them? Harris (1978, 138) has noted in this connection that if regionalism means adding a fourth tier of government with some of the functions of state and local government then local government in Queensland has been most antagonistic to it. Heatley (1982) has provided an account of regionalism in the Kimberley area which identifies the political aspects of it. He sees regional decentralisation in Western Australia as

a means of muting regional demands for more responsive, more sensitive and more expeditious administrative processes and blunting separatist sentiments...in electoral terms, a commitment, however vague, to decentralisation, or regionalism, is valuable in attracting extrametropolitan support...[and] a state regionalisation policy [was] a defence against an externally [federally] imposed regional system...Finally, and perhaps most importantly, regional programs have been promoted as a means for more efficient state-wide administration (1982, 80).

Something similar is implied in Hughes's account of regionalism in Queensland. In the Northern Territory, the phrase 'the Berrimah line' is popular shorthand for the cut-off point, just outside Darwin, beyond which regional, especially southern, dissatisfaction with administration from Darwin is expressed. As with regionalism in Queensland and Western Australia little has been written about it in either its administrative or its political manifestations and yet it is a topic of importance in the political history of the north.

Constitutional and political development

Constitutional and political development have been major topics in the political history of the Northern Territory and there is an extensive literature on them. Heatley (1979) and Jaensch (1979) have both written about constitutional change. The reports of the James committee (1974; 1975) should be noted as sources and the selection of constitutional documents made by Heatley and Nicholson (1989). Jaensch's electoral history of the NT legislative council (1990) places the constitutional struggle in its electoral context.
Heatley's *Almost Australians* (1990) is a more detailed and up to date treatment of the politics of moves towards selfgovernment in the Territory. Arguments about constitutional development and statehood were canvassed in detail at a conference in 1986, papers from which, along with constitutional documents, were published in 1988 (Loveday & McNab 1988).

In the Territory, the development of the party system, the legislature and the electoral system were interwoven with constitutional change. The governmental system itself — the shape and power of the executive, the administrative departments and the public service — evolved at the same time. Inevitably texts on any one of these topics make reference to the others. Some of them may be noted. Walker's history (1984) of the NT legislative council is an important source for the politics of constitutional change. So too are the basic texts by Powell (1982), Heatley (1979) and Jaensch and Loveday (1979). Very little has been written on administrative arrangements in and for the north or about policy making on northern issues. There are a few items for the Northern Territory. Nelson (1954, 164-7) and Casey (1949, 31) both criticise the 'antiquated and muddled' administration of the Northern Territory by the Commonwealth, echoing criticism made in 1937 in the Payne-Fletcher Report. Apart from the administrative chronicle already noted, Heatley (1979) has a chapter on administrative arrangements at the time selfgovernment began. Mollah (1982) outlines the role of government in promoting three large scale failed agricultural projects in the Territory. Weller and Sanders (1982) in a study of ministers and their departments in the Territory discuss cabinet, the role of the chief minister and ministers' relations with parliament, party, the media and the electorate. This essay and another by Sanders (1985) on the role of the department of the chief minister since selfgovernment are two of the very few pieces on administration in the Territory since Heatley's account in 1979. Cyclone Tracy provided the circumstances of another story of administrative conflict concerning the north and its relations with Canberra in a crisis: Stretton's *Soldier in a Storm* (1978). Wiltshire (1985) has a telling general account, of relevance to the north, of the Queensland public service during Bjelke-Petersen's premiership.

For the Territory, there is a comprehensive set of election studies which constitute a major part of the Territory's political history and include a substantial amount of background information on constitutional and administrative development and on the contemporary condition of the party system. The study of legislative council elections (Jaensch 1990) rounds off earlier studies of the first and second elections to the legislative assembly (Heatley 1978; Jaensch & Loveday 1979) and of subsequent elections to the assembly since selfgovernment in 1978 (Jaensch & Loveday 1981; Loveday and Jaensch 1984; Jaensch & Loveday 1987).

It is an important feature of these studies that they provide information about the voting of Aborigines who constitute about 20 per cent of the electorate. Several other works also deal with Aborigines and the electoral system (Australian Electoral Office 1982; Loveday & Jaensch 1985; Loveday, Randall, Sanders & Jaensch 1988) and with one Aborigines-only election (Loveday & Jaensch 1982). In a wide-ranging discussion, Gibbins (1988) examines Aboriginal political development in a variety of institutional settings with particular reference to statehood for the Northern Territory.

Material on the political parties and politics in the Territory can be found not only in the election studies but in a few other texts as well. Galligan's *Australian State Politics* (1986) includes a discussion, by Jaensch and Gerritsen, of the special features of the Territory political system and its political economy which set it apart from the six states. The chapters on Queensland and Western Australia in this volume do not deal with the north of either state, but in *Comparative State Policies* (Galligan 1988) the focus shifts to
administration and policy and although 'the north' is not of particular concern to the authors, what they say in essays on minerals and energy policy and on the theories underlying typologies of the states is of considerable relevance to the interpretation of northern political and administrative history. A good deal of material relevant to the north on the subject of uranium is to be found in the annotated bibliography by O'Faircheallaigh, Webb & Wade-Marshall (1989). Head's *Politics of Development in Australia* (1986) includes chapters on Queensland, Western Australia and the Northern Territory. Harman and Head's *State, Capital and Resources* (1982) is focussed much more on the north and on policies connected with northern development than other similar texts. The book includes a chapter by Heatley on parties and development in the Northern Territory. Two other recent works (Parkin & Warhurst 1983; Costar & Woodward 1985) contain chapters by Jaensch (1983, 1985) on the political parties in the Territory.

Parties and elections in Western Australia and Queensland are normally discussed only on a statewide basis with little or no reference to the north and any special features of parties and elections there. Work by Bolger and Rumley (1979; 1982) on the political role of Aborigines in the north of Western Australia should be noted and also a more recent study of campaigning and the Aboriginal vote in the Kimberley area in 1986 (Loveday, Jaensch & Sanders 1986).

None of these studies deals with national (federal) elections in the north as a whole. The works on mobile polling (Loveday & Jaensch 1985) and on the Aboriginal Electoral Information Service (Loveday, Randall, Sanders & Jaensch 1988) deal with federal electoral administration. The comparative discussion of electoral administration for indigenes in Australia and Canada has a strong north Australian element (Loveday & Jaensch 1987).

The sociology of northern electorates is virtually untouched although some work, exploring the implications of class and mobility, among other things, for voting patterns, has been done in Jaensch and Loveday's study of urban electorates in the Northern Territory (1983) and in electoral atlases (Jaensch & Wade-Marshall 1984; Jaensch 1987) for the Northern Territory. Taylor's *Social Atlas of Darwin* (1989) should also be noted in this connection.

**Local government**

It is arguable that, for northern citizens, local government may be more salient than it is for southern citizens. It is an important arena within which people gain political experience and get the chance to go further in party political life; it is closer to most citizens of small remote townships than most other forms of government even if the range of things which it can do is limited.

For the Northern Territory there is a handful of works on local government including studies of Darwin (Heatley 1986), Katherine (Lea 1987), Tennant Creek (Lea 1989) and Jabiru (Lea & Zehner 1986). The story of Alice Springs (Donovan 1988) was commissioned as a general history of the town and lacks the political and administrative focus of the other works. A little work on elections in small towns has been published (Jaensch 1989) along with a very detailed study, including historical background, of the special Territory community government legislation (Wolfe 1989). A conference volume on small towns in northern Australia (Loveday & Webb 1989) included several papers on local government and politics in small towns in the Northern Territory and Western Australia. Rumley's paper (1986) on Aborigines and local government in Western Australia is based on work done in the Pilbara and Gascoyne-Murchison areas; H and
D Rumley (1988) carried out a similar study in the East Kimberley for the East Kimberley project.

Interest groups

I refer principally to the organised interest groups, sometimes called pressure groups, rather than to the non-organised aggregations of people to whom interests are often imputed. In 1979 Heatley noted that, even though the population of the Territory was small and scattered, 'the range of group activities...is similar to that found elsewhere in Australia' (1979, 176). He identified organisations for cattlemen, farmers, the mining sector, industry and commerce, employees (a 'low proportion' of whom are organised) and religious interests but he felt that a comprehensive study of them all was too large a task for his general text. There would be no difficulty in greatly extending Heatley's list now a decade later as the conventional glance at the yellow pages of the NT phone book or at Who's What Where in the Northern Territory (Department of the Chief Minister 1990) will show. There are tourist promotion associations, professional organisations, sporting, welfare, conservation, cultural and educational, animal welfare, local government, ex-service and migrant organisations. Similar comments could be made about organised interest groups in the north of Queensland and Western Australia, although it should be noted that since the state-wide groups focus their activities on the state capitals these northern groups are more localised in range and interests than their northern counterparts in the Territory.

These are not all of equal importance in politics and some have little or no role at all. But the list of important ones for the Territory would include the NT Cattlemens Association, the Master Builders Association, one or two of the larger trade unions, the NT Chamber of Mines, the NT Confederation of Industry and Commerce, the Real Estate Institute, the Aboriginal land councils (which are not exactly comparable with most other pressure groups, Altman and Dillon 1988) and a few others.

Deciding which interest groups are 'important' in politics is not easy. A more or less subjective judgment can be made by reference to the frequency with which a particular group or organisation is active in one political arena or another, by reference to its organisational strength (number of members, funds, coverage of the relevant group and so on), by reference to the salience of the economic or other activities from which it is derived and by reference to its success in influencing the course of events or the policy of governments. In this connection, it should be noted that for many of the more important groups the administrative arena, which is a much less public arena than, say, the electoral and legislative arenas, is the most relevant.

From this point of view it must be said that we do not have very much information at all about northern interest groups and much of what we do have is in a fragmentary form, presented in the course of studies focussed on other things such as land rights, the cattle industry and so on. A list of works can therefore be only exemplary, rather than comprehensive. Heatley (1980, 37) discussed the 'motivations, the strategies, and the effectiveness of pressure groups in their response to the formulation and implementation of land rights policies' in the Northern Territory. Cribb's account (1983) of strikes at Mt Isa in the sixties is one Queensland study of interest. Libby's study (1989) of the mining industry's campaign in 1984-6, focussed in Western Australia, against proposed national Aboriginal land rights legislation, likewise deals with a number of different interest groups (see also Vachon and Toyne 1983, Vincent 1983). Eames (1983) discusses the Central Land Council within a political context. Kelly's work on the beef industry (1971) mentions the Northern Territory Pastoral Lessees Association but this industry, like a few
others in the north, does not depend exclusively on its group organisation to make its views known to government. Altman (1988, 89-90) mentions tourism promotion associations, Aboriginal incorporated bodies and the environmental lobby in a study of Aborigines, tourism and development. The Northern Australian Development Council, a small promotional interest group, has been described by Zelenka (1988). A variety of groups are mentioned in studies of Territory elections, the principal conclusion being that in this arena they appear to be relatively unimportant. The general conclusion is that a systematic study of the full range of interest groups in the north is overdue.

Aborigines

A good deal of information about the Aboriginal component of northern political history is available in general texts on Aboriginal affairs from a national point of view (a bibliography of some aspects of the subject is in Loveday 1983). Charles Rowley’s three volume Aboriginal Policy and Practice (1970-71) and his A Matter of Justice (1978) are basic works. Tatz, in his Race Politics in Australia (1979) and in ‘Aborigines and Politics’ (1980) is critical of the conventional assumption that Aborigines are slowly undergoing ‘political development’ towards incorporation in the dominant white system. Lippmann deals with Labor and Liberal-National party policies in the seventies in a chapter in Patience and Head’s From Whitlam to Fraser (1979) and her Generations of Resistance (1981) provides a history, with the emphasis on recent times, of Aboriginal struggles to obtain justice in a number of fields: land, health, employment, housing, education, law, elections, media. It includes information about a number of Aboriginal organisations but, as in Tatz’s work, the focus is national, not on the north. Several other works with a national focus include a chapter by Rowley, in which he comments on the new organisations for Aboriginal affairs developed after the 1967 referendum (1980), Broome’s Aboriginal Australians (1982), Yarwood and Knowling’s Race Relations in Australia (1982) and Weaver’s Struggles of the Nation-State to Define Aboriginal Ethnicity: Canada and Australia (1984b). Three of the main actors have written, from a national point of view, about their roles in post-war Aboriginal affairs, Hasluck in Shades of Darkness (1988), Coombs in Kulinma (1978) and Whitlam in his The Whitlam Government (1985). Weller (1989), drawing on cabinet and other documents, has a few pages on Malcolm Fraser’s negotiations with Queensland regarding Aurukun and Mornington. Hasluck’s Native Welfare in Australia (1953) and a paper by Evans (1981) are two other useful sources. More northerm in outlook are general histories such as Powell’s Far Country; Heatley’s Government of the Northern Territory and Fitzgerald’s history of Queensland, all of which have sections on Aboriginal affairs. Jeremy Long’s Aboriginal Settlements (1970) refers to policies applied in the north as well as in the east and includes an appendix on the Northern Territory.

There are a few texts which offer analysis and interpretation of Aboriginal affairs in terms of a theory of internal colonialism. Rowley used the term initially but not with the rigour which later writers like Hartwig (1978) thought necessary. The theory appears to have been principally applied to the interpretation of the situation of more remote and northern Aborigines although Howard applies it to Aborigines generally contending that ‘it was their incorporation into the Australian colonial order and the colonial economic order that transformed Aborigines into an underdeveloped people’ (Howard 1982b, 83). Beckett (1982) applied it to the history of the Torres St Islanders in the pearling industry in earlier times and Drakakis-Smith (1983; 1984) has applied it generally but with particular reference to Aborigines in non-urban contexts, arguing that there is ‘within the economy of the small settlements of Aboriginal Australia a mutual dependency between black and white. But within this interdependent relationship it is the dominant white capitalist mode of production that reaps the benefit’ (1984, 134).
Several special components of politics and political history must also be noted. First, there is the politics and history of the administration of Aboriginal affairs in the north. A good deal has been written on this topic, but usually from a national perspective and most of it is to be found in the more general literature mentioned above. For Queensland, Fitzgerald (1984), for the Northern Territory, Heatley (1979) and for Western Australia, Long (1980) may be noted as sources for policy and administrative arrangements. The bibliography of uranium in Australia (O’Faircheallaigh et al 1989) includes a section on uranium and Aborigines. Ryan (1985) gives an excellent account of the administration of Aboriginal and Torres Strait Islander affairs in Queensland in the Bjelke-Petersen years (1968—83) which is principally about the north. Singe (1979, 131-6) outlines the Torres Strait border problem in the 1970s and the implications for the Islanders. Papers by Sanders (1984; 1988) on Aboriginal town camping and local government and on the community development employment projects scheme are both concerned with special but politically important aspects of the administration of Aboriginal affairs, especially in north Australia. A limited amount of information can be obtained from official reports from the administering departments. It is the political history of how whites and governments tried to deal with Aboriginal society and nearly all of it is told by whites from a white point of view. A good history remains to be written of the administrative arrangements for Aboriginal affairs across the north and of relations between state and federal administrative arms.

Second, there is Aboriginal involvement in non-Aboriginal society and politics and this subject is inevitably linked with the first. For the Northern Territory, a substantial start has been made in the various studies of elections and related matters, already listed. A little has been noted for the north in Western Australia but nothing seems to have been written on this matter for north Queensland. The proliferation of Aboriginal organisations for handling administrative matters between black and white has not been matched by a literature about these organisations, whether they are local level service delivery bodies like health, housing, legal, welfare and medical service groups, resource centres or progress associations, coordinating, consultative or representative bodies, funding bodies, media organisations, business enterprises and so on. Even though it is not easy to regard many of these as pressure groups (see Weaver 1983), most of them play a part in administrative politics of one kind or another, even if it is only in the battle to obtain funds, and some play a part on the wider and more public political scene. A few items may be noted: Eggleston (1977) and Lyons (1984) on legal services; comments on service and resource organisations in the Miller Report (1985), O’Brien’s Directory of organisations in Western Australia (1982) and O’Faircheallaigh’s discussion (1988) of two Northern Territory Aboriginal royalty associations. Bandler has written a personal history of the struggles of the Federal Council for the Advancement of Aborigines and Torres Strait Islanders (1989); administration and policy in Aboriginal housing in remote Australia are discussed in Heppell (1979); Heppell and Wigley (1981) have given an account of how Tangentyere in Alice Springs came to be formed; Altman (1983) and Toohey (1984) provide information on the land councils; Weaver (1984a) has written an as-yet unpublished paper on the role of Aborigines in the management of parks in the Northern Territory; Sullivan (1987) discusses Aboriginal representative organisations including the Kimberley Land Council, in one of the working papers of the East Kimberley project; Cowlishaw (1983) discusses ways in which public servants were ‘still engaged in forcing Aborigines to accept a particular place in European society’ in her study of a Northern Territory cattle station; Gilbert’s Living Black (1977) includes autobiographical material from Aborigines who worked as public servants, were involved in politics or who had firm views about political action in or in opposition to non-Aboriginal politics.
Third, there is the politics and history of Aboriginal society itself and its communities, and in this field there are the journals *Aboriginal History* and *Australian Aboriginal Studies*. These communities are of great variety, in both rural and urban settings. Rural communities include outstations (Gray 1977; Morice 1978; Meehan and Jones 1980; Coombs, Dexter and Hiatt, 1982; Loveday 1982a), small communities on cattle stations, and settlements of several hundred people of both government and mission origin; urban communities include temporary camps near or in towns, permanent town camps and communities (not all of them in the urban area but close to it) and people dispersed throughout the urban residential area. Some communities have title to the land they live on; others do not but instead have leasehold land or are simply tolerated by the landholder. People in all of these communities are highly mobile. In all communities there is a mix, but seldom a blending, of traditional Aboriginal culture, sometimes very attenuated, and the dominant white culture. Like everything else local politics is deeply affected by this mixing, and often clash, of two cultures.

Anthropologists have had difficulty with the notion that there might be politics in traditional Aboriginal society and have usually argued that if there is politics at all it is a facet of law and religion. Sources on this point are noted in a short bibliographical piece on the politics of Aboriginal society (Loveday 1983, 1) and in a discussion by RM and CH Berndt in their *The World of the First Australians* (1988).

What the mix and clash of two cultures might mean is indicated by Nancy Williams in her *Two Laws* (1987), a study based on Yirrkala in the north east of the Northern Territory. As the title indicates, she deals with problems experienced by people who have to live by two laws, their own and the general Australian law. Williams clearly identifies both religious and political authority, the latter subordinate to the former, and goes on to say that

> Yolngu regard men in both categories as being responsible for making and executing political decisions which affect the whole community as well as dealing with matters affecting their own clan or lineage,...The role of political authority also requires intervention in disputes, direction of the process of dispute settlement, and active protection of all those who are junior and acknowledge their authority as leaders (1987, 45-6).

She goes on to talk about authority and the village council, with particular reference to the management of disputes of different kinds.

The politics arises not only in the management and settlement of disputes of the kind dealt with by Nancy Williams but when matters affecting the whole community arise. These include not only dispute settlement, but such things as the allocation of goods and services, especially collective goods and services, rules of the community (formal and informal), who has jurisdiction (decisions about who makes rules, settles disputes etc).

This is the scene of the most complicated interaction between Aborigines and non-Aborigines, between traditional and non-traditional ways, and the account of this interaction over time is one of the central things in the Aboriginal component of northern political history.

As far as the village councils are concerned, there is some work which complements that of Williams. Young's *Tribal Communities in Rural Areas* (1981) includes some material on councils and local politics in three Northern Territory communities; Bern (1977) has written about another, Ngukurr on the Roper River, and Bagshaw (1982) has analysed the politics of an outstation community. A thesis by Armstrong (1967) gives some detail on
the contemporary politics and administration of Maningrida in Arnhem Land. Gerritsen (1982a, 1982b) offers an interpretation of local Aboriginal politics, including council politics, in terms of factions and a typology of leaders and followers. Some polemic has developed on the subject as indicated not only by items in the volume on outstations (Loveday 1982a) but also in Tatz's criticism (1979, 12), in a paper by Bern (1989), a report by Turner (1986) and in a paper by Mowbray (1989). My own contribution on local government in Aboriginal communities from the 1950s to the 1970s is an exploratory piece for the Northern Territory as a whole (Loveday 1989). Wolfe's study (1987) of Pine Creek and its town camps includes some political material. A little information about past politics in mission communities can be gleaned from Leske's account of Hermannsburg (1977) and from Cole's histories of Roper River mission (1969), Groote Eylandt mission (1971), Oenpelli (1975) and Numbulwar (1982).

For Western Australia there is a limited amount of northern material. Tonkinson has written on Jigalong (1977, 1978, 1980, 1982). Some aspects of the politics of this clash are reported in articles in the journal Aboriginal History, charting development over time (see also Tonkinson 1981). Sackett (1978) discusses leadership and local council politics in Wiluna; Kolig (1973) has discussed Aboriginal group politics and leadership in Fitzroy Crossing in the early 1970s; in more recent work, Sullivan (1987) describes single service agencies, resource agencies, the community council and the Kimberley Land Council all in the Kimberley region; Shaw (1974) and Willis (1980) describe various Aboriginal organisations and their roles in local politics in Kununurra while Rumley (1986) describes Aborigines and local government in the Pilbara and Gascoyne-Murchison and (1989) community relations and politics in Halls Creek. Hawke and Gallagher's Noonkanbah (1989) provides a detailed account of the politics of the clash over drilling for oil at the community of Noonkanbah and a useful assessment of the significance of the clash in the sequence of major confrontations in recent times between two laws and two peoples.

There appears to be less material for north Queensland. Burger's biography of Neville Bonner (1979) covers a wide range of contexts but includes some information on local community politics. Sutton and Rigsby argue that Aboriginal people on Cape York Peninsula have politics and that 'politics for them crucially involves control of land and resources' (1982, 155). Koepping (1977) gives a brief description of the demoralisation of the Aboriginal council at Cherbourg in the 1970s and three theses which discuss communities and their politics round out the list: Craig's on Yarrabah (1979a, also in 1979b), Buckley's on Aurukun (1980) and Trigger's on Doomadgee (1986). Some material on administration and local politics is to be found in Rosser's (1985) biographies of Aborigines in Queensland.

In summary, there is a paucity of work on community politics, especially work which analyses changes over time. Most of the publications deal with communities in rural areas and only one or two discuss Aboriginal community politics in 'mixed' Aboriginal-non-Aboriginal towns like Kununurra, Katherine, Elliott, Camooweal, Normanton or Halls Creek and yet, as a rough estimate, probably a half of all the Aboriginal people in the north live in or near such towns. This neglect, not only in respect of politics, has been noted by Langton (1981) who comments that 'few anthropologists in Australia have studied Aboriginal life in urban contexts and those who have, have failed to challenge the insidious ideology of tribal and detribalised Aborigines — the "real" Aborigines and the rest of us'.

One topic remains: the strike or walk-off as a political protest. Doolan (1977) has given an account of how various Aboriginal groups, following the Gurindji precedent of 1966, walked off Victoria River Downs cattle station in 1972. The Pilbara Aboriginal social movement, growing out of a strike in 1946 (Brown 1976), is described by Wilson (1980;

Conclusion

A large part of politics, the part often described as formal, official or institutional, is played out in arenas defined by constitutional and other legal arrangements. These arrangements, by means of rules laid down for action within the arenas they define, are very powerful determinants of action and of the nonofficial political structures within them. The actors include not only the officials such as ministers, members of parliament and administrators but also many nonofficial people such as the leaders and members of political parties and interest groups. The result is that at one level the political history of the north is divided into three parts corresponding to the three state-level jurisdictions with an interwoven federal component, corresponding to the federal jurisdiction, also territorial, overlying all three. Only one other regionally identifiable part of Australia is in a similar position: the Murray Valley. This fragmentation of northern political history is inescapable as long as the subject is approached through formal institutions.

It is not just a matter of how the subject is approached. An alternative approach will not do away with the realities of institutional political arrangements and the vested interests of various kinds, however irrational they may seem from the perspective of a geographically defined region, which grow up to take advantage of them.

The distinctness of the region in political terms is more likely to be identified if one or two complementary approaches are adopted. With so little writing to draw on, it is necessary to speculate about the implications of a more sociological approach. There may well be a northern political culture but, assuming that most of the white population has been derived from within Australia, it is likely that it will be a variant of what is to be found elsewhere, for example a variant that gives much greater importance to 'pioneering spirit' or to 'rugged individualism' and to associated individualistic and authoritarian political ideologies. If political behaviour and class and status relationships are different in the north from elsewhere in the country, they too are likely to be variants. For instance, there may well be a smaller proportion of people who are Labor 'identifiers' than in the rest of Australia, a smaller proportion who could be regarded as upper class and few, if any, who could be regarded as a political elite. The question is not only whether the north is different in these respects but also whether, despite its own geographical and climatic diversities, the social differences are more or less uniformly exhibited by the population of the north. The impression of many people in the north, not all of them northern chauvinists, is that northerners are different and that the differences do matter in politics. Again, as I suggested earlier, there is good reason to say that, although the issues in northern politics are ones familiar down south, the 'issue mix' is different. Questions about the administration of Aboriginal affairs, for example, are much more salient than they are down south; the tensions between policies to promote mining, to protect the environment and to develop parks and tourism are much sharper; attitudes towards the federal government are more antagonistic than they are in southern capitals.

These comments entail some extension of the range of work for the political historian. The task then is not only to find sources which will give some insight into questions which, in contemporary political science and sociology, would be tackled with techniques not available to the historian, it is also to balance and interweave the formal and the nonformal features of the region to highlight its uniqueness, past and present.
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CHAPTER NINE
POLITICAL RESEARCH IN THE NORTH:
AN AGENDA FOR NARU

Dean Jaensch

Introduction

The focus of this paper is research in the politics of the North, and I propose to report current research, evaluate past work, and look ahead imaginatively to identify new lines of research.

Much of the work of the North Australia Research Unit since it was set up in the 1970s has been on northern politics, and the Unit has produced a respectable and respected corpus of research, publications and scholarship. Rather than list the various publications and research reports for assessment (see Appendix 1), it is better to discuss the fields and topics of recent and current research.

In the previous chapter Loveday provided 'an assessment of the literature on the political history of the north'. He mentioned some 'obvious components or topics' in relation to political history:

- parties, elections and the sequence of governments;
- the development of institutions such as constitutions, legislatures, electoral and administrative systems;
- the major issues of the time and how they developed and are settled.

From this, we can devise a checklist of political research in the Northern Territory which has been done, and which needs to be done. By 'done', I mean researched, reported, and published; the quality of that research I leave to others to judge. At this point, I am referring to the 'North' as the Northern Territory; the focus will be broadened in a later section.

Many of the 'components or topics' of politics and political history are canvassed in general studies of the Territory's political history, and in regional and local political histories. In fact, the Northern Territory has been well-served by its political historians, especially in comparison with the norths of the two adjoining states, and by NARU which has conducted its own research into Northern Territory politics, and has fostered the work of others by support and publications. This support should continue. The following is a selected checklist of topics for assessing work on the Northern Territory's 'politics'.

<table>
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<tr>
<th>Institutions</th>
<th>Political Sociology</th>
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<td>Constitution</td>
<td>Political society</td>
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<td>Federalism</td>
<td>Political culture</td>
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<td>Parliament</td>
<td>Political behaviour</td>
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<td>Cabinet</td>
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<td>Public Service</td>
<td><strong>Electoral Sociology</strong></td>
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<td>Judiciary</td>
<td>Elections</td>
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<td>Local Government</td>
<td>Electoral behaviour</td>
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<tr>
<td>Election systems; laws</td>
<td>Aboriginal electoral behaviour</td>
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Substructures
  Party and party system
  Pressure groups
  Trades unions
  Mass media

Issues
  Industrial relations
  Law and Order
  Environment/Development
  Politics of Aborigines

There is an extensive literature about the constitutional development of the Northern Territory and the political development that it stimulated. One feature of both the development and the literature needs emphasis: the Northern Territory showed a unique (for Australia) interweaving of constitutional and institutional developments with the concomitant development of components of the modern political system such as political parties and pressure groups. Obviously any political system is characterised by an inter-relationship of institutions and substructures — the referendum process involved in amending the Australian Constitution is a prime example. What makes the Territory important is that constitutional structures and processes, the governmental system — executive, parliament and public service, electoral systems and laws — and political parties and pressure groups, evolved and developed at the same time. In 1973, for example, the Northern Territory had a 'partial' legislature, an embryonic party system, a small public service, and little real authority over its own affairs. In 1974, the granting of representative democracy caused the parties and the party system to react. By 1983, self-government, with some restrictions, had been granted; a dominant party system, while still in a state of flux, had emerged; the Territory's public service had become a major component of the polity; a legislature had been established; and for most intents and purposes, the Territory was a full member of the Australian federation.

Discussions of these political developments can be found in general political histories such as Heatley (1979) and Powell (1982), and in more specific studies such as Jaensch and Loveday (1981) and Heatley (1989). In fact, the constitutional and political development of the Northern Territory has now been chronicled from the colonial Australian period to the present, with Warhurst's study (1990) the most recent addition.

The political society of the Northern Territory has also been a focus of research — at least, for the urban society. The 1982 survey of urban residents was one of the most intense studies carried out in Australia (Jaensch & Loveday 1983). Elections, electoral sociology, electoral behaviour and Aboriginal electoral behaviour have been specific foci, and the Northern Territory is the best served of the Australian states and territories in this area. Every election since the legislature was established in 1974 has been the subject of specific research projects, three of which included surveys. Aboriginal politics and the politics of Aborigines have been continuing foci of research at NARU for over a decade. The corpus of research publications includes specific studies — electoral, social, economic, demographic — and constant references in general studies.

Overall, the products of the efforts from, and through, NARU in political research and publication provide range and breadth which are simply not matched in the states. In the decade of the 1980s, for example, NARU publications alone, in the narrowest definition of 'politics', included 20 monographs.

To an 'outsider', however, a brief look at the publication list since 1977 in the political field, suggests a rather narrow focus — election studies. This would be a narrow interpretation. The research has produced a unique set of publications: the Northern Territory is the only political unit in Australia in which there is a study of every election since the inauguration of representative democracy — in the case of the NT, since 1947. Further, the Territory, especially in the 1970s and 1980s, provided the unique opportunity to research the politics and electoral politics of a political system in a state of transition from a situation of policy-making and administration from Canberra with only
a limited legislature, through full representative democracy and approaching full self-government, to the present where the Territory is seeking Statehood.

Further, the electoral studies have encompassed a range of research materials, and included a range of foci, including demographic, economic and sociological, not only as components of the NT relevant to the elections, but as valuable research projects in these sub-disciplines. As well, the electoral studies included themes which have not been attempted before, especially in relation to Aborigines and the electoral process. These themes include surveys of Aborigines, studies of administration of elections in Aboriginal areas, and studies of National Aboriginal Conference elections. Finally, the elections were the focal points for the development of the polity, and the research included such issues as mobilisation, socialisation, the impact of political parties, and political and social change within a political system in a process of genesis and development. These studies are therefore important, if only because the Northern Territory offered a unique situation.

Where should NARU go in terms of NT politics?

The obvious answer, all other things being equal, is in all, and more, of the topics noted above. Politics is a constantly developing area, and new themes within established research continually emerge. But there are obvious limits to, and constraints on, the issue of translating 'what could', to 'what should' be done.

Funding is one constraint; the limited finances require NARU to select research projects to get value for money. But how to judge value? One judgement is to select topics, fields, themes which have been inadequately researched, or have not been researched at all. The list should also include those topics, fields and themes where there is a reasonable expectation, if not firm evidence, that there has been significant change.

I will start with a list of topics, fields and themes which, in the immediate future, are unlikely to show such change as to merit a substantive research project, but would merit a short, low cost, updating study.

Updating research efforts

Two themes of constitutional development require a 'watching brief'. The politics of Commonwealth-NT relations, analysed by Warhurst (1990), will remain in a state of flux for the immediate future. The second theme — the development of self-government and the possibility of Statehood for the Northern Territory — is probably limited to the former, and both may be affected by recent developments in the attitudes of both major parties to federalism.

The Northern Territory's constitutional situation in 1990 is in limbo: neither a Territory in the sense of pre-1974, or pre-1978 self-government, nor a State within the formal constitutional structure. Commonwealth-NT relations, especially financial relations, merit attention. But the federal environment itself may be in a process of change. In July 1990, RJ Hawke proposed, in very general terms, another attempt to restructure the federal system. In the past, the Liberal and National parties have been at the forefront of resistance to virtually any changes, but the 1990 mood of the Liberal party suggests a new approach. Partly through the impact of the 'green vote' in the 1990 election, the Liberal leadership has indicated a new consensus in regard to federal reform. Any progress in this could have an effect in and on the Northern Territory. Any real trend to 'new federalism' may impact on the constitutional position of the Territory. In the 1980s,
the NT government instigated a major push for Statehood (see Loveday & McNab 1988), and while this has lost impetus, the questions of discussion of powers and federal representation are still debated. The Hawke initiative and Liberal reaction may well have an important effect on the NT's effort to increase the scope of self-government.

The institutions of government and parliament are unlikely to change in the 1990s. The election of a Labor government would justify a second edition of The Team at the Top, but would probably not seriously modify the general structures and processes. The reports in the 'Political Chronicle' (Australian Journal of Politics and History) and 'Political Review' (Australian Journal of Public Administration) update what is happening, and sometimes analyse why.

The election systems and laws of the Northern Territory are unlikely to change radically. The political parties are of constant interest, and the daily events and changes occupy the media's journalists. But it is unlikely that the party system will undergo radical change in the 1990s. The National party has three possible futures: merge; disappear; remain as a minority irritant. The last is the most likely. This area needs to be watched, recorded and analysed, but preferably as one theme within wider research projects.

The political sociology of the Territory is constantly under the research rubric of NARU. It should continue to be so. But I do not feel that a major study such as the 1982 Territorians or Mobile Australians? (Jaensch & Loveday 1983) can be justified in the 1990s. To my knowledge, the 'urban society' as discovered in 1982 is still there. But this is not to exclude mini-research projects as part of a wider focus, as suggested in the case of political parties.

Electoral studies

As noted above, much of the political research conducted through or by NARU has been within a field broadly defined as electoral studies. As this paper proposes that this field should remain as a research interest, at least through if not by NARU, and that it should be extended to encompass the north, then the field needs some brief explanation.

Electoral studies encompass a range of topics. To some, the arithmetic collation and analysis of election results defines the field. Certainly analysing results is part of the exercise; it is far from the whole field. Electoral studies rest on the assumption that elections provide a lens through which a range of components of the polity tend to focus their activities. Electoral studies therefore includes analyses of political parties, pressure groups, electoral sociology, elections, and voting behaviour, as well as the arithmetic analysis of election returns.

NARU's NT election studies have encompassed all of these components. Some components have been inadequately researched and reported: Aboriginal electoral sociology and voting behaviour, and the impact of political parties among Aborigines are examples of such. Placing the findings of electoral studies research in the NT within a comparative study, across the north, or across the states, is another.

NARU's agenda for the 1990s may well not place electoral studies as a top priority, given the amount of research completed, and the competition for funds. However, given the corpus of research which is available, NARU should at least encourage outside researchers to continue an emphasis through NARU. To this end, it will be necessary for NARU to retain a reputation of having a serious interest in the field, and to offer potential researchers the best possible data base, extending the area of interest of electoral studies to encompass the north as a region (see below).
An electoral data archive

Every NT election since 1974 has been the focus of a NARU research project. I do not believe that the next two or three elections call for such substantive research. This is not to say there will not be developments of interest and importance, but these will probably not merit a full project. However, I propose that NARU should initiate a limited archive collection of material relating to electoral politics in the 1990s. Given the limited research assistance available, this needs to be restricted to material necessary for a basic study and, more important, to a comparative study of the 1980s and 1990s. The archive should include material on election systems, including redistributions; on the election results, and as much on the political parties as can easily be obtained. Future researchers will have access to newspapers in other collections, hence the NARU collection should include material only of the period of the election campaign.

This suggestion is a change of policy for NARU; I would argue a justified one. As the NT is the only political unit in Australia where there is a detailed continuous study of elections since the inauguration of the Legislative Council in 1947 (Jaensch 1989), some effort should be made to continue the research, if on a more restricted basis. This is made more necessary as the 1990s will probably bring further changes in the party system, in electoral politics and, possibly, in the party in government. As noted above, the party system in the Territory is still in a state of flux. Further, if the Labor party does achieve government, then a more detailed electoral study would be justified. I suggest that this limited electoral archive include both NT and federal elections.

New research topics — NT

There are topics and themes which should be taken on by NARU as major research topics. The study of pressure groups in the Northern Territory is one such project. Most studies of the politics of the Territory refer to activities of pressure groups — the building industry, pastoralists, developers, trades unions, for example, are of considerable interest; some are of major importance. This area of study needs attention.

The nature of the Territory’s economy, society, and politics offers some interest groups fertile environment; for others, it causes major problems. The existing literature makes mention of examples of both. Organisations such as the Master Builders Association, development interests, and the pastoral industry play a major role in the economy of the Territory, and suggestions have been made that they exercise an undue influence in politics as well. In comparison, the trade union movement is weaker than, and significantly different from, elsewhere in Australia. The embryonic industrial development has resulted in a union base dominated by white collar and public sector unions.

One approach to this area could be encouraged by NARU: that of discrete studies, perhaps as theses, of the nature, impact, and especially the influence of groups in specific sectors, notably tourism, mining, building and construction, and the pastoral sectors. A study of trade unions and the trade union movement needs to be carried out, with special attention on the public sector base in the Territory and what effects this has. Given the relatively small population of the Territory, the dominant economic position of some sectors of the economy needs to be examined in terms of potential and actual political impact.

One component of the Territory’s electoral sociology should become a major research project. The political attitudes, political behaviour, and voting behaviour of non-Aboriginal citizens of the Northern Territory have been a past focus: election-based surveys have been conducted, election studies and analysis have been constant, and the
1982 survey was an intense study. These need to be complemented by a focus on the political behaviour of the Aboriginal voters in the Northern Territory. This will be difficult and expensive. It will involve NARU in obtaining the confidence of Aboriginal people and communities, in employing Aborigines and interpreters, and in studying not only the electoral behaviour of Aboriginal voters, but the various components of Aboriginal politics and political behaviour. If NARU can establish a joint research relationship, or at least a cooperative relationship, with the Centre for Aboriginal and Islander Studies at the NT University, then this research could be more cost efficient, more product efficient, and produce better research.

NARU should focus research efforts on specific institutions which have either not yet been studied, or which merit further research. The structures and processes of the judicial system needs exploration, linked with the general political issue of law and order in the Northern Territory. Local government, including developments in Aboriginal communities, also merits further research. There are general histories of councils (for example, Heatley 1986), and references within local histories (for example, Lea 1987, 1989; Wolfe 1989), but the general and comparative study remains to be done.

One research focus, to date, has been virtually untouched. The structures and processes of the Northern Territory public service, the nature of responsible government within the executive component of government, and the theory and practice of administration in the NT, should occupy at least some of NARU's attention. This has a number of subthemes which merit research, for different reasons.

First, the tension between the free enterprise rhetoric and ideology of the politically dominant economic interests and their acceptance of the need for governmental intervention, both for the promotion of 'development' and for managing relations with the federal government and other states is more marked in the Territory than elsewhere in Australia. Notwithstanding the rhetoric, the Territory has the largest public sector, the highest public sector employment, and one of the most pervasive governments in Australia — on a comparative per capita basis. This public sector has been and will continue to be under pressure to perform and conform to the ideology of free enterprise.

The public service of the NT is under immense pressure. Its general level of funding has been cut, and the conditions of service have been eroded. Increasingly, traditional public sector functions have been contracted out to private enterprise. At the same time, it has been faced with a continuing demand for performance ideals and methods which are drawn from the private sector; an increasing proportion of its managerial sector is drawn from outside the service; 'political' appointments at senior level have increased; and the morale within the public sector has declined. These factors provide a situation which is occurring in the states, but given the size and relative importance of the public sector in the NT, they may have more impact. Hence the second reason for research in and on the public sector — the simultaneous development of constitution, government, parliament and public service and political parties — and the fact that the NT public service has developed over sixteen years within a political environment monopolised by one political party, the Country Liberal party. This as at least two potential effects. One is the question of the extent to which 'neutrality', the central core of the Westminster model of a career public service, has been eroded simply through almost two decades of one party government. More specific is the question of the extent to which the CLP government has entrenched 'its own' at the equivalent of the Senior Executive Service in the NT; that is, the extent to which the public service has become, and been, politicised, and the effects of this trend.

A second theme, almost untouched by political researchers, is the nature of policymaking and administration in the Territory. Some research has been carried out on specific themes and cases: for example on service delivery (Loveday 1982a, 1982b;
Mollah 1984), on relations within the executive branch (Weller & Sanders 1982), and in regard to Aboriginal communities (Loveday 1986; Ellanna et al. 1989; Loveday & Webb 1989). But the nature, processes and impact of policy-making and administration within the Territory's executive government remains virtually untouched.

Two issues, especially, merit research projects within NARU. The environment/development issue has become a key focus of Australian politics. While the intensity of the debate in the Northern Territory has not (yet) reached the levels of New South Wales, Queensland and Tasmania, it is clearly a major political issue. The 'green vote' in a recent by-election suggests it could become electorally important, and the continuing debates over national park control, Kakadu and mining exploration, uranium, and the strains on the finances of the NT government (probably to worsen under Hawke's 'new federalism') indicate that this issue merits research.

There are, in fact, two related fields of research. One field is part of NARU's recent and forthcoming development: the politics of the environment — economic, social and political. Environmental politics, especially electoral politics, is a related theme, but with different foci. The impact of 'green' candidates and parties has increased in recent elections. In the 1989 Tasmanian election five 'green' candidates were elected and currently hold the balance of power in the 35-member Legislative Assembly. In the 1990 Federal election, 'green' candidates won a remarkable 12.3% of the votes, and their preferences were the basis of the Hawke Labor party's return to office. It is possible that this electoral impact will continue during the 1990s, and the NT will be affected.

**NARU and the north**

Some research has been carried out on specific political topics outside the Northern Territory (for example, Loveday, Jaensch & Sanders 1986), but one difficulty has been attracting researchers who want to, and have the ability to carry out this broader research work. One reason for this, of course, is that while basic research has been carried out in the Northern Territory, and new work can build on this, there is no comparable base of regionally defined statistics for the north of Western Australia or the north of Queensland, let alone northern Australia as a whole. I refer, here, not only to electoral and related statistics, but to social and economic data in general, and to non-statistical information as well — for example, about the activities of the public services in the northern region.

This region of interest encompasses the area defined by Loveday (1991, 1) as:

> the area to the north of a line drawn from North-West Cape to Townsville, with a loop to the South to include Central Australia.

In terms of federal electoral geography, this region includes the northern section of the electorate of Kalgoorlie, the Northern Territory, and the electorates of Leichhardt, Herbert; and the northern part of the electorate of Kennedy. This is a problem in terms of analyses based on federal electorates, but is less of a problem in state contexts. These include the electorates of Kimberley and Pilbara in Western Australia, the 25 Northern Territory electorates, and ten electorates (pre-redistribution) in Queensland (the provincial city electorates of Barron River, Cairns, Townsville, Townsville East; Country Zone electorates of Hinchinbrook, Mourilyan, Mulgrave; West and Far North electorates of Cook, Flinders and Mt Isa). As Loveday (1991, 1) notes, the boundaries of the region are not completely satisfactory, but 'geographic, climatic and resource endowments suggest that a north with something like these boundaries is a distinct regional entity, no matter what its internal diversity'.

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The major research focus for NARU should be the politics of the region — thematic and comparative.

Any comparative research will face the problem of comparing a discrete polity — the Northern Territory — with segments of the Queensland and Western Australian polities. Hence some standard topics of political science will need caveats. Comparisons of party systems, local government, policy-making and administration, for example, need to take account of three discrete institutional systems. But some standard topics can and should be studied and compared. Electoral behaviour, the nature of political parties, the nature and impact of pressure groups, the nature and effects of different election laws and systems, are some examples of comparative analysis which should be carried out. The Labor party, for example, has markedly different patterns of support and success across the three sub-regions. One research project, then, is to compare Labor's success and failure in similar populations/electorates across the north. The intervention and success rate of the National party is a further theme.

Studies have identified a number of distinctive components of the Northern Territory polity: the nature and impact of parties in small and dispersed populations, aspects of Aboriginal electoral participation, and themes of voting behaviour. Little research has been carried out on these topics in the north of Queensland and Western Australia. A comparative study should be a NARU project for the 1990s.

Specific issues should be a focus. The greening of Australian politics is one prime example. Is the environment/development debate emerging in the north to the extent that it has in the southern states? The north contains a number of existing or potential foci for the debate, from the Great Barrier Reef and oil exploration, through Kakadu and mining exploration, to Broome and the impact of tourism development. The politics of the environment across the north is a key research topic.

A data bank for the north

A first task, however, is to increase the scope of the documentary sources on northern Australia already held in the NARU library. It will be necessary to carry out basic research in the northern sections of Western Australia and Queensland to establish a data base at least equivalent to that held for the Northern Territory. Obviously, some topics are not relevant or not applicable. Some institutions in Western Australia and Queensland cannot be studied simply from a northern perspective: constitutions, parliaments, cabinets, for example, have only peripheral impact to a study of the region as a whole. But the data base for north Queensland and northern Western Australia needs to encompass the political sociology and electoral sociology of the north of the two states. Census data, available from the ABS at CD (Collection District) level, should be translated to election districts, to provide a similar data base to that available for the Northern Territory. Recent Queensland and Western Australian election data should be collated and analysed, as should the election laws and systems. Research should be conducted into the nature, development and roles of political parties in the areas; into pressure groups, including trades unions, with a specific focus on groups which are relatively discrete in the area. This, of course, raises again the problem of research that pressure groups, for example, will play out their activities within a Queensland and Western Australian context as well as in the context of the north.

Politics of the north — thematic and comparative

Once the basic data for Queensland and Western Australian north have been collated, the focus should become the thematic and comparative study of the north. That is, the initial approach should be to replicate for the state components of the north the research already
available for the Northern Territory, as a data base for developing the political research focus of NARU to the region as a whole. This proposal is not that NARU should use its limited resources to obtain and archive complete sets of data equivalent to those held for the Northern Territory. On the other hand, some data can be defined as basic to virtually all projects in politics in the north. I suggest census data at regional, and federal/state electorate levels; election results, both federal and state; and basic data on the political economics of the region (and sub-regions) would establish such a data base.

Case study

As an example of the regional approach on which I suggest NARU should now concentrate, the following paragraphs are a report of a preliminary investigation of elections across the north.

Table 1 sets out the patterns of party support in federal elections in the north 1975 to 1987. The data allow a comparison of three Queensland and the Northern Territory electorates. One pattern is that of remarkable stability over time in each electorate in Labor support. A second pattern of an equivalent stability of National and Liberal votes combined masks important differences between the electorates in party contests and in stability.

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<td>Herbert</td>
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<td>Leichhardt</td>
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Table 2 sets outs comparative Labor support data for two types of electorates, one of which crosses the three sub-regions. The provincial city comparison is limited to Queensland and the Northern Territory; the comparison of patterns in rural electorates with a high proportion of Aboriginal voters crosses the three sub-regions.

The data in table 2 pose questions which merit further research. First, are the comparisons valid? Does the placement of Alice Springs, Cairns and Townsville together constitute a reasonable comparative base? Do the electorates of Cook, Kimberley and MacDonnell have sufficient similar socioeconomic profiles to justify comparing electoral patterns across them? That is, the basic data bank for the three sections of the north is a prerequisite for comparative research.

Table 2: Voting patterns, ALP, the north: selected areas
% of formal votes

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<tr>
<td>Darwin</td>
<td>37</td>
<td>35</td>
<td>35</td>
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<tr>
<td>Alice Springs</td>
<td>26</td>
<td>25</td>
<td>25</td>
<td>-</td>
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<tr>
<td>Barron River</td>
<td>45</td>
<td>47</td>
<td>46</td>
<td>55</td>
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<tr>
<td>Cairns</td>
<td>59</td>
<td>51</td>
<td>56</td>
<td>63</td>
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<tr>
<td>Mt Isa</td>
<td>45</td>
<td>52</td>
<td>46</td>
<td>60</td>
</tr>
<tr>
<td>Townsville</td>
<td>42</td>
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<tr>
<th>Rural/Aboriginal</th>
<th>1980</th>
<th>1983</th>
<th>1986/7</th>
<th>1989</th>
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<tr>
<td>Flinders</td>
<td>44</td>
<td>41</td>
<td>39</td>
<td>45</td>
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<tr>
<td>Cook</td>
<td>60</td>
<td>64</td>
<td>67</td>
<td>43</td>
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<tr>
<td>Pilbara</td>
<td>45</td>
<td>59</td>
<td>65</td>
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<tr>
<td>Kimberley</td>
<td>56</td>
<td>66</td>
<td>67</td>
<td>70</td>
</tr>
<tr>
<td>McDonnell</td>
<td>58</td>
<td>54</td>
<td>73</td>
<td>-</td>
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<tr>
<td>Arnhem</td>
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<td>42</td>
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<tr>
<td>Victoria River</td>
<td>53</td>
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<td>-</td>
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<tr>
<td>Arafura</td>
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<td>51</td>
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Assuming that the base is justifiable, then the data suggest further directions for research. For example, if Labor wins a stable majority in Cairns, why is Labor support unstable in Townsville and Mt Isa, and why is Labor support so low in Alice Springs? The answers may relate to specific local factors, but clearly research is needed. In the rural/Aboriginal electorates, the patterns of Labor support in Cook, Kimberley and Victoria River show distinct variations in stability and in levels, over time and between the electorates. If these contain similar characteristics of the population, then why the different patterns?

**Possible projects**

The thematic and comparative approach to the politics of the north should be the focus. The checklist above sets a general agenda for this, but I would propose some specific projects, and one exclusion. The major problem with any attempt to study the politics of the north is the institutional division of the region. The only occasion when all areas are 'under one political umbrella' is at a national election, and then, in Western Australia, the north is only part of one federal electorate. Hence, modifying Loveday's comment
(1991, 16): ‘The fragmentation of northern [politics] ... is inescapable as long as the subject is approached through formal institutions’. The focus, then, should be on themes and topics which define the north, and can be researched and analysed with the region.

The proposal for a thematic and/or comparative approach needs a brief explanation. A thematic approach is suggested by the characteristics which are common to the north. As such, it is possible and justifiable to study some questions across the region. The politics of the mining industry, the theme of development versus environment, the politics of Aboriginal policies, the political sociology of Aboriginal communities, the electoral involvement of Aborigines, the politics of policy-making and administration in small towns, and similar questions, can be analysed across the north.

A comparative approach to the politics of the north starts from the parallel existence of similar characteristics across the region, but recognises the existence of discrete political environments. The socio-economic and sociopolitical context is similar across the north, but there are three distinct institutional components. The comparative approach is based on a recognition of both. For example, electoral behaviours in the north should be based on the existence of similar characteristics but different political environments. The voting patterns across the north, across electorates such as the Kimberley (WA), Macdonnell and Stuart (NT) and Cook and Flinders (Q) will involve a study of similar populations but three distinct party systems. A comparative study of party and party systems would be based on parties which exist and compete across the north but within three distinct institutional bases — electoral laws and systems, party structures, and parties themselves. Studies of Aboriginal electoral involvement and behaviour involve both theoretic and comparative research as a result of the existence of three sets of laws and policies across the north.

This suggestion of a combination of thematic and comparative research across the north clarifies to some extent the nature and content of the 'data base' research summary in the north of Queensland and Western Australia. I emphasise that this data base proposal is not to propose research for its own sake. It is to propose a data base which may both encourage potential researchers to inaugurate projects across the north, and offer the availability of basic material.

One major research project should follow on the 1982 study of the Northern Territory (Jaensch & Loveday 1983). The 1982 survey focussed on demographic, sociological and political characteristics of the NT urban population. A further survey, in the mid-late 1990s, conducted in the urban areas of the north, would have two valuable results. It would provide the data for a comparison of NT urban societies over more than a decade. As well, it would provide a study of the urban societies of the region as a whole, and a basis for comparison across the subsets. For example, to take up one theme of the 1982 study, the theme of party identification is an important one. The Territory sample showed characteristics which were different from the rest of Australia's urban voters. One suggested reason for this was the embryonic nature of the party system in the Territory. A new sample survey would establish whether 'party' has become more entrenched in the Territory, and whether patterns of party identification are similar in the sub-regions where 'party' has been established for almost a century. Such an urban survey will test:

The impression of many people in the north, not all of them northern chauvinists, ...that northerners are different and that the differences do matter in politics (Loveday 1991, 16).

The 1982 survey confirmed both impressions for the Northern Territory. A new survey would test this, and test the northerners across the region. I would propose this study as a priority for NARU.
NARU should also consider extending the survey of Aboriginal people, suggested above for the Northern Territory, to the north as a whole. The politics of, and politics in, Aboriginal society and societies need research across the region. The Aboriginal survey is an exercise which many have proposed, but no-one has yet carried out at this level. Its findings would have valuable import to research throughout Australia.

Research through NARU has made a start in this area, focussing on electoral behaviour. Surveys of self-identifying Aboriginal electors were conducted at the 1983 and 1987 Northern Territory elections (Loveday & Jaensch 1984; Jaensch & Loveday 1987), and a survey was conducted in relation to the 1981 National Aboriginal Conference elections among Aborigines in Darwin and Alice Springs (Loveday & Jaensch 1982). The three surveys were methodologically limited, and the limitations need to be addressed before a fullscale survey is undertaken, in the NT and across the north. The issues of sampling, confidence of the Aborigines, methodology, and language will not be easily resolved, and any such project will be costly.

But it should be a priority, in both a thematic and comparative sense. The three surveys conducted in the 1980s established a number of tentative conclusions which should be tested further.

- the Aboriginal vote is by no means 'solid' across the Territory or through time.

- only a small proportion of Aboriginal voters will vote for a non-party Aboriginal candidate in competition with non-Aboriginal party candidates.

- stable and consistent party voting seems then to be fairly well established amongst Aboriginal electors of the Top End at least. In this regard they are little different from NT electors generally.

- survey provides some evidence that they take an active interest in elections and vote discriminatingly (Loveday & Jaensch 1984, 56-66; Loveday, Randall, Sanders & Jaensch 1988, Ch 4, App 6).

- Aboriginal voters do not constitute a block vote for Labor (Jaensch & Loveday 1987, 166).

These suggest the importance of a comparative study across the north.

Overall, the prime focus of NARU and the north in terms of political research should be on thematic and comparative studies. This is not to say that the politics of the Northern Territory has nothing remaining of interest and importance. It is to say that studies of the Territory should be placed within the north as a whole; the focus should be the region in the 1990s. This could well start with two specific projects: the establishment of a limited 'data base' for the north of Queensland and Western Australia, as outlined above, as a first stage in the comparative approach, and a major survey of the north, based on but extending the foci in the 1982 NT study.

References


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CHAPTER TEN
GOING NOWHERE: CONSTITUTIONAL DEVELOPMENT
IN THE NORTHERN TERRITORY, 1986-90

Alistair Heatley

One of the major research foci of the North Australia Research Unit (NARU) has been the political development of the Northern Territory. As part of that focus, the Unit has recently published several studies on the Territory's constitutional situation. In 1988, in collaboration with the NT Law Society, it reproduced the proceedings of a conference held in Darwin in October 1986 on the issues of and prospects for Territory statehood under the title of Australia's Seventh State (Loveday & McNab 1988). That was followed in the same year by Federalism in the Northern Territory: Statehood and Aboriginal Political Development, an analysis of the likely impact of statehood on Aboriginal interests and aspirations, authored by Roger Gibbins, an eminent Canadian scholar and NARU Visiting Fellow (Gibbins 1988). My own Almost Australians: the Politics of Northern Territory Self-Government came out in 1990 (Heatley 1990). In addition, aspects of constitutional development have been covered in NARU's election studies, cross-national comparisons and in collections of conference papers. It seems appropriate to include in this volume a piece which is concerned with the same focus.

Almost Australians examined in detail the political process 'which enveloped and determined the course of recent constitutional development in the Territory' (Heatley 1990, 1). Although later events to 1989 were briefly covered in its Epilogue, the monograph concluded its comprehensive analysis in 1985. This essay will assess developments since then. Between 1986 and 1990, two broad periods of activity can be defined. The first, incorporating the latter part of Ian Tuxworth's Chief Ministership (he assumed office in October 1984) and that of his successor, Steve Hatton (May 1986 to July 1988), was basically concerned with the pursuit of statehood. Under the leadership of Marshall Perron (July 1988 onwards), the second involved the more limited immediate objective of 'full self-government'. Tracing the various aims and strategies of the Northern Territory Government (NTG) and analysing the responses to them are the prime aims of the assessment.

Government policy, 1986-90

By the end of 1985, the Territory had been 'self-governing' for seven and a half years. The new polity, the first created in Australia since federation in 1901, had been established by Commonwealth statute, under S. 122 of the Constitution, in July 1978. Devolution of State-type functions had occurred progressively since 1977 and, by 1983, most had been transferred to Territory executive control. Most significant of the powers withheld were ownership and control of uranium and the administration of Aboriginal land, major national parks (Kakadu and Uluru) and industrial relations. For various reasons they had been retained by the Commonwealth. Under the Northern Territory (Self-Government) Act, the federal government maintained several restrictions over the legislative competence of the Territory's unicameral parliament, especially the right to disallow any laws within six months. Moreover, S. 122 — the "Territories' power" — enabled the Commonwealth to make any law for the Territory if it so desired. Other sections of the
Act also contained provisions which treated the Territory differently from the States. Although in many ways the Territory had come to be treated as a quasi- (or de facto) state, constitutionally it was a subordinate polity with essentially delegated powers. Unlike the States, it lacked an entrenched constitution; the enabling legislation and the associated regulations which set out the scope of legislative authority were instruments which could be amended or repealed by the Commonwealth. While the Territory had representation in the federal upper house since 1975, it had only two Senators as against twelve for each State. (For a comprehensive analysis of the constitutional status of the Territory, see Nicholson 1985.)

While Paul Everingham was Chief Minister of the self-governing Territory, statehood, although often alluded to as an ultimate constitutional end, was not actively pursued. The consolidation and extension of self-government was always his first priority; full functional parity with the existing States and integration of the Territory into prevailing intergovernmental structures and processes were the central concerns of his administration in constitutional matters. Only in one area — the financial relationship with the Commonwealth — did he argue for special treatment for the Territory. During his term, the funding arrangements for self-government, negotiated in 1978 and included in a Memorandum of Understanding, remained substantially intact. Despite his success up to 1983 in convincing the Fraser federal government to transfer additional state-type powers to his government, he was never able to persuade Fraser or his Labor successor from March 1983 to hand over the group of functions (uranium, Aboriginal land, major national parks), which had proved very vexatious in intergovernmental relations, or to amend the self-government Act to remove offending sections.

Everingham's departure to federal politics in late 1984 virtually coincided with a changed Commonwealth attitude to funding of the Territory. The Memorandum of Understanding, which had given the NTG liberal financial resources (and which underpinned what was widely seen as the resounding success of the early years of self-government) came under increasing criticism from the Hawke administration. During 1985, the Memorandum was progressively unwound (see Heatley 1990, 154-60) and, at the Premiers' Conference in May, the Commonwealth's intention of treating the Territory, for funding purposes, as if it were a state by 1988 was announced. Whatever were Tuxworth's more private motives and ambitions, the changing financial arrangements were the public trigger for the initiation of a formal bid for statehood in August. Developments during 1985, including the pre-planning from February and the vigorous intra- and inter-party debate about the timing and nature of the bid, have been covered in Almost Australians (Heatley 1990, 160-5); in many respects, that early debate prefigured the arguments which were to dominate the statehood campaign in the following three years.

Tuxworth's involvement with the campaign was cut short by his resignation as Chief Minister in May 1986. His departure closely followed that of Jim Robertson, the Special Minister for Constitutional Development, a new position created in August 1985 as part of the institutional framework of the statehood program. Robertson quit the Assembly in late March. In his short tenure of the position, he had proved quite ineffectual and erratic; he was always overshadowed by Tuxworth and played only a peripheral role in the major controversies involved in the early stage of the debate on statehood. Most prominent among them was the question of representation in the federal parliament, particularly in the Senate. Conflict on that issue and on Tuxworth's aggressive and domineering approach also surfaced in the deliberations of the Select Committee on Constitutional Development. Set up in August 1985, the bipartisan committee (three members each from the government and the Opposition) was to be the prime vehicle for public involvement. It was empowered to inquire into and report on constitutional issues (including representation), the framework and principles of a new state constitution, the method of
ratification of that constitution and the broad strategy for achieving statehood. Other than some political infighting and an invitation for public submissions, the committee had achieved nothing by the time of Tuxworth's demise.

The new Chief Minister, Steve Hatton, had no hesitation in continuing the official quest for statehood. Not only was the Country Liberal Party (CLP) firmly committed to the ideal but Hatton himself was also a strong and long-time advocate of the statehood objective. In his Address-in-Reply speech in June, Hatton underlined his administration's commitment:

*Statehood is essential if we are to take our place as equal Australians. Statehood alone will ensure that we have the same rights, privileges, responsibilities and entitlements as other Australians. We have a right to the same degree of self-determination enjoyed by other Australians as a matter of course* (Parliamentary Record, 11, 18 June 1986).

He did, however, differ from his predecessor's approach in one important matter. Tuxworth, despite considerable criticism, had usually in public set the target-date for statehood as 1988, Australia's bicentennial year. Hatton, recognising the unreality of such a short timespan, disavowed any fixed timetable, promising only to work 'steadily and consistently' towards the achievement of the statehood goal (PR, 11, 18 June 1986).

In the early months of his government, Hatton set two priorities. The first was to refine and elaborate the Territory's case for statehood, a basic requirement which he believed had been done inadequately under Tuxworth. To that end, he drew together several senior public servants and ministerial aides into a task force (the Statehood Executive Group) dedicated to preparing a solid presentation of the government's claim. Secondly, mindful of the need to convince Territorians of the benefits of constitutional advance, he set out, with the assistance of an interstate firm inherited from Tuxworth, to devise a public relations strategy capable of securing popular support.

After an intensive period of preparation, Hatton was able to deliver a ministerial statement to the Assembly in August; also tabled were supporting papers on constitutional disadvantages, land matters and the financial implications of statehood. They were subsequently published together as a booklet (Northern Territory Government 1986b). Hatton's re-launch, seen in the local media as 'a reasoned, analytical and potent statement' (*NT News*, 29 August 1986) followed in most areas the approach initiated by Tuxworth. It laid out three basic objectives: the attainment of constitutional equality; parity in parliamentary representation; and equitable and secure financial arrangements.

Recognising that the issue of representation was 'one of the thorniest problems ... and one which already provoked considerable, and often heated, debate' (NTG 1986b, 4) he took care to spell out the broad Territory position. There was to be no 'unrealistic' claim to five members in the House of Representatives (the entitlement of Tasmania as an original State) and the Territory would abide by the population quota system. But equality in the Senate was fundamental. Immediate parity with the States was the first priority but 'if we are forced to concede immediate equality, we will insist on eventual equality based upon an unadorned and legally-binding formula which includes a reasonable initial representation and a short time-frame to achieve equal numbers (NTG 1986b, 5).

Although not detailed, Hatton's preferred formula was four Senators on the grant of statehood, four more six years (or two elections) later and a full complement after twelve years (or another two elections). Any scheme based on population size would be rejected outright as offensively discriminatory. Although he was privately not supportive of the
approach taken by Hatton, Everingham, in the interests of party unity on the statehood issue, did not publicly express opposition to the phasing strategy.

One other area where Hatton differed from Tuxworth was the process of formulating a new state constitution. A three-stage mechanism was set out, each stage involving extensive public participation. The first step, as with Tuxworth's design, involved the preparation of a draft document by the Select Committee. Then, as the second, the draft would be considered and ratified by a convention 'representing a broad cross-section of community interests and opinions' (NTG 1986b, 7). In his scheme, Tuxworth had proposed a similar forum (a conference) but had not specifically included the equivalent function (PR 8, 20 August 1985, 1052); there was little doubt, however, that some sort of ratification procedure would have been on the agenda. The third stage constituted the substantial difference. Hatton, departing from the view held by both Everingham and Tuxworth that approval by the Assembly should be the only legitimating authority, added the requirement for a referendum. No details of the procedures, including the size of majority needed for approval, were presented. Behind Hatton's decision was his belief that the Commonwealth would require an expression of community support as a precondition to considering the Territory's claims. For obvious reasons, however, he would not support a referendum, and certainly not an early one, solely on the question of the desirability of statehood.

On the sensitive issue of financial implications, Hatton bluntly asserted that 'there will be NO — I repeat NO financial cost to Territorians' (NTG 1986b, 5). As the Territory was to be funded on a state-like basis from 1988, the financial situation with or without statehood would be the same. But a grant of statehood would give the Territory greater revenue resources and reduce its level of fiscal dependence on the Commonwealth. Hatton reasoned that there were 'far greater financial risks in remaining a mere Territory than in acquiring Statehood' (NTG 1986b, 7).

In his statement, Hatton foreshadowed the later provision of additional material on the salient issues of statehood. During 1987, he was able to table three options papers, prepared by the Statehood Executive Group, relating to land matters, national parks and mineral and energy resources (Northern Territory Government 1986a, 1987a, 1987b). All reiterated the government's basic position of constitutional equality but they also canvassed various control and management regimes; reaction was sought from a range of interest groups and the Commonwealth. Two further papers — on industrial relations options and on financial implications — were scheduled. The first, written by Sir John Moore, the former President of the Australian Conciliation and Arbitration Commission and submitted only in August 1988 (Moore 1988), was never tabled in the Assembly. The second was never completed. Although several drafts were prepared, Hatton was not satisfied that they met his requirements for establishing the case that statehood would entail no financial costs. Treasury advisers found it very difficult to reach that politically desirable conclusion, a situation which often led to strained relations with the Chief Minister.

Further material was produced for the consideration of the Select Committee. In its response to an information paper on the options for a grant of statehood (Legislative Assembly 1987c), the Committee endorsed the use of the S. 121 method (reliance on an act of the Commonwealth) rather than S. 128 (resort to a national referendum). Two discussion papers — one on the form of the new constitution and the other on representation in a constitutional convention (Legislative Assembly 1987a, 1987b) — were also published for public comment. In the first, there were many aspects commanding unanimous support but, where there were divided opinions, options were included. Discussion on possible areas of constitutional entrenchment — such as local
government, Aboriginal rights and civil liberties — was included but no recommendations for entrenchment were made. Nor was there any position taken on the form of convention representation — elected, nominated or mixed. Chaired by the Chief Minister and including the Leader of the Opposition, the Committee was a forum of lively debate but, unlike the Tuxworth experience, its deliberations and decisions did, for the most part, preserve the spirit of bipartisanship. In April 1987, the terms of reference of the Committee were amended to include a role 'in promoting the awareness of statehood issues to the Northern Territory and Australian populations'. Hatton hoped that, through an expanded role, the Committee could operate as a useful adjunct in popularising the statehood concept. The ALP, however, declined to give the function a broad interpretation: 'we could not take on ... the promotion of statehood itself. We are not a promotional unit; we are not in the PR game.' (PR 1, 28 April 1987, 17). In its activities during the Hatton period — consideration of papers, calling for submissions and convening meetings throughout the Territory (which commenced in early 1988) — the Committee did operate within the narrow frame of reference.

Following his August Assembly statement, Hatton sanctioned a comprehensive publicity and education campaign to build awareness and support within the Territory for statehood. A range of public relations exercises was initiated — newspaper columns, brochures, media talk-back sessions and exhibits in the Territory show circuit. Promotional material such as a stylised logo, stickers, a song and an associated video presentation were prepared. Altogether, the cost in the 1986-7 financial year for the public relations campaign was $305 000, a figure which attracted some parliamentary and public criticism. Most of the money was spent in the latter part of 1986; in 1987, the promotional activities were heavily curtailed. One consequence was the termination in May 1987 of the contract of the interstate public relations consultants — the Adelaide-based company, Michels Warren. Hatton, usually accompanied by ALP parliamentarians, also travelled widely visiting Territory urban and rural communities to try to muster enthusiasm for the statehood concept. Another highlight was the Law Society conference in October 1986 which brought together lawyers, politicians and academics to discuss the salient issues. It generated some controversy and media interest.

In explaining the abrupt change of pace in public promotion in 1987, Hatton cited two reasons. The first was the Assembly election in March. He contended that 'statehood, because of its overarching significance and its bipartisan support, was not an appropriate issue to immerse in a partisan electoral arena' (PR 4, 24 September 1987, 1555). Translated into political terms, it was evident that Hatton feared that the statehood question would be detrimental to the CLP. Similar considerations operated during the federal election campaign in mid-year. The second was Hatton's admission that promotion was too far ahead of the development of the substantive case for statehood and the work of the Select Committee. In that reasoning, the Chief Minister was undoubtedly accurate. Except for another Ministerial Statement in September and an occasional media reference, statehood virtually disappeared from the public political agenda.

Alongside the intra-Territory activities, Hatton, as he had indicated in his August statement, undertook extensive interstate commitments. After a period of sometimes heated communications, a meeting with Prime Minister Hawke was arranged in October. Although predictably Hawke offered no official opinion on the government's attitude, except to consider a formal Territory bid in due course, he did agree to limited inter-governmental discussions at officer level on aspects of the statehood issue. In fact, some interchange did occur on the early options papers and an inter-departmental committee was established to give the Commonwealth's response. Inevitably, its deliberations were ponderous and little of substance eventually emerged. Much of Hatton's energies were directed at convincing the non-Labor side of politics to extend support. Although he was
able to claim that support from every State Liberal leader, from John Howard, then Leader of the Opposition in Canberra, and from Sir Joh Bjelke-Petersen in Queensland, it was at the level of principle only. No firm commitments on timing or on the form of statehood (including the vexed question of Senate representation) were made.

As with Tuxworth before him, Hatton pursued the statehood objective with much rhetoric and periodic energy and urgency. In practice, however, his campaign was pursued with mixed consistency, direction and purpose and the promotional aspects were fitful and superficial. Election exigencies aside, other factors and issues arising from the political and economic problems of the period often shunted statehood to the sidelines. Hatton's contribution to the preparation of the Territory's basic claim was certainly far more substantial than Tuxworth's but their achievement was the same. Although he could claim in September 1987 that 'statehood commands a higher profile as a matter of public interest' than it did in 1986, he also admitted that popular support remained meagre. Not only did he have difficulty in translating his conviction about the need for and the advantages of statehood to Territorians but he also was beset by doubts and at best a lack of enthusiasm among many of his Cabinet colleagues, CLP parliamentarians and party-members and senior public servants.

It was generally well-known within government circles that, of Hatton's Cabinet colleagues, Marshall Perron was the one most sceptical of the statehood campaign. As a political pragmatist, he saw little point in pursuing an objective which had no chance of success within the prevailing political climate. Like most CLP members, he supported the ultimate attainment of statehood but saw it at best as a long-term aim. As far back as 1978, he held the view that 'personally, I sometimes wonder whether the Northern Territory will ever get statehood' (PR 6, 15 June 1978, 1587) and there was little in his subsequent public utterances to suggest that he had changed his opinion by 1988. Along with Everingham, whom he served as deputy leader from 1977 to 1984, he believed that the winning of functional parity with the States was the proper immediate strategy to be followed. In a statement to the Assembly on the directions to be taken by his government, he set out his thoughts on constitutional development:

I share the view ... that statehood ... is essential and we must continue to work with statehood as our goal. I do not underestimate the difficulties nor do I underestimate the importance of the consultative process. The select committee ... will continue its work. I believe that is the most important process in the statehood process at present. There will be progressive consultation with the Commonwealth and, as necessary, with the states. It is not reasonable to set a timetable for statehood and I do not intend to do so. Achieving statehood on acceptable term and conditions is far more important than working to any particular timetable (PR 9, 16 August 1988, 3453).

Perron's sentiments represented a return to the pre-1985 position and a repudiation of the strategies of his two predecessors.

Under Perron, the focus of the government's constitutional development policy has been on the intermediate objective of removing those special features of the Territory's position which were different from the States. That involved the transfer of the outstanding state-type functions and residual Commonwealth interests, the repeal of all federal legislation specific to the Territory and the deletion of all general legislative restrictions and the special powers of the Administrator. Included also were the re-incorporation of the Ashmore/Cartier islands, separated in 1978, within the Territory, the inclusion of the Territory government as a party to the Gove/Nabalco mining agreement and the grant of
additional federal parliamentary representation (two extra Senators and another member in the House of Representatives. Perron set out the package in a statement in February 1989 (PR 12, 14 February 1989, 538591) and, after obtaining a commitment from the Prime Minister that a submission would be considered, a document was compiled and published in June (NTG 1989). A target date for the program was set for July 1990 although 'a later date may need to be determined for particularly complex issues .' (NTG 1989, 5). That deadline slipped past without any action being taken by the Commonwealth. From time to time, as in the CLP's election campaign in 1990 and in the Territory's submission to the Special Premiers' conference on federal affairs in late 1990, parts of the program, especially the transfer of Aboriginal land rights' administration and national parks, have been re-asserted by the Territory government but no further concerted claim has been made. The directions set by Perron in 1988 still stand. In the Administrator's address opening the new session of the Assembly after the election, support for full statehood remained the ultimate aim 'but the transfer to the Territory of the state-type powers still retained by the Commonwealth is (the) government's first priority' (PR I, 4 December 1990, 7).

Although Perron suggested at one point in 1990 that the activities of the Select Committee (redesignated as a Sessional Committee in November 1989) should be dramatically scaled down as a cost-saving measure, it has continued its task of community consultation and promotion (for accounts of its recent activities and publications, see its annual report, Legislative Assembly 1990). But, as its Chairman frankly admitted, 'the committee has a long way to go in successfully fulfilling its tasks' (PR 19, 10 May 1990, 9682). The Chief Minister and the Leader of the Opposition are no longer full members (Hatton has remained Chairman, first as a back-bencher and later as a minister) and their withdrawal was interpreted as an effective down-grading of the status and significance of the committee. Without a concomitant commitment by the government to pursue statehood actively, the committee has been relegated to a distinctly marginal and uncomfortable position, almost only a monument to past policy.

Responses

The course of constitutional policy was in part determined by personal preference but, as with the initiation of the statehood campaign in 1985, it was also influenced at every stage by external political factors, including reactions from a range of affected actors. In this second section, those responses, together with their policy impacts, will be assessed. Prime consideration will be given to intra-Territory attitudes; for ease of analysis, three areas will be treated separately — the general community, political parties and major pressure groups and, because of their special significance, Aboriginal organisations. Interstate responses, particularly that of the Commonwealth government, will then be covered.

The general Territory community

In the process of constitutional development of the Territory, up to and including self-government, the preferences and ambitions of a small political elite had always been the driving-force (see Heatley 1979, 31-45). Public interest in and support for constitutional advancement had been notable for its absence. Commenting on community attitudes in 1973-4, the Joint Committee on the Northern Territory reported that 'the electorate was largely apathetic to the move towards self-government' (Parliament of the Commonwealth of Australia 1974, 9). Scepticism about, and often direct opposition to,
self-government was the broad community response to the policy of the CLP up to 1978. In the 1977 election, the reverses of the CLP in urban areas were in large part caused by the party's stance on constitutional development. If a referendum had been held on the issue, it seemed certain that the majority opinion would have been against any form of devolution of authority to local control. Fear of change, lack of information, conservative disposition and alarm about the consequences, especially the financial costs, were among the salient factors for public concern (for an analysis of the self-government issue in the 1977 election, see Heatley 1978, 51-5). They were again evident in the response to statehood in the 1980s.

In the early 1980s, with statehood not on the political agenda, there was predictably very little public interest in the question. Surveys of political attitudes before 1985 (Jaensch & Loveday 1983; Loveday & Jaensch 1984) showed that within the urban electorate statehood was not seen as significant. A mere 0.3% of the 1982 respondents and 2.1% in 1983 noted statehood as one 'of the most important problems that the NT Government should do something about'.

As part of the statehood campaign, the Territory government commissioned two public opinion polls, the first in November 1985 and the second in March 1988. Again, they canvassed Territory attitudes only in the urban, and largely non-Aboriginal, electorate (Roy Morgan Research Centre 1985, 1988). Both were discouraging for the government; in the area of 'important issues (problems)', they showed that statehood had gained only a little more prominence than it had in the early 1980s. In 1985, out of nineteen issues, 'becoming a State' was ranked fourteenth, being mentioned by only 20% of respondents. It was the most important issue for a bare 4%. The equivalent ranking and percentages in the 1988 poll were thirteenth, 18% and again 4%. Noteworthy was the finding that 'remaining a Territory' ranked higher (twelfth, being mentioned by 21%). Although the latter result followed a period of relative inaction, the figures represented a dismal return on the time, effort and cost expended in promotional activities in 1986-7. Throughout the 1980s, therefore, statehood was a matter of relatively low priority. When pressed on the question of support for statehood, 38% of respondents in 1985 thought it was 'a good thing'; in 1988, there was a marginal decline to 36%. Conversely, there was an increase (from 35 to 40%) in those perceiving statehood to be 'a bad thing'. (The balance were those who considered that constitutional status 'wouldn't matter' or who had no opinion.) A survey conducted by NARU in March 1987 produced an even less supportive response: 56% opposed to Territory statehood (Jaensch & Loveday 1987, 188).

All three surveys found similar concerns about statehood. Predominant was the financial issue; rises in taxes and charges, less Commonwealth funding and a higher cost of living were widely anticipated. The level of that concern and the experience of the earlier self-government episode explains the particular emphasis that Hatton gave to the financial implications of statehood. Other significant areas related to the lack of maturity of the local political system (and politicians) and the Territory's economic underdevelopment. Predictably, the extent of concern varied with voting allegiance. CLP supporters generally were more supportive of statehood and less concerned with the perceived problems while Labor voters exhibited opposite tendencies. Despite the overall depressing findings, however, one section in the Morgan polls, on the timing of statehood, did indicate that the large majority of urban Territorians expected its eventual attainment. Only 11% in 1985 and 13% in 1988 contended that the Territory should never become a State.

The 1988 survey was undoubtedly one factor in convincing the new Chief Minister to drop the statehood campaign. Perron realised that Territorians, urban as well as Aboriginal, were not yet prepared to support the objective and had been unswayed by government efforts to persuade them of the purported benefits of statehood. But there were elements
in the Morgan and NARU surveys which indicated that, notwithstanding a softening between 1985 and 1988, there was a higher degree of urban community approval for the transfer of the outstanding state-type powers. In all contentious areas, more respondents favoured Territory control over continued Commonwealth control. There was also a large majority who opposed the Commonwealth's ability to override laws in the Territory. If the poll findings were accurate, Perron could expect that his change of emphasis — away from statehood to functional and legislative parity — would be better received by urban Territorians.

Another index of community indifference to Statehood was the lack of public enthusiasm in the work of the Select (Sessional) Committee. With a nice touch of understatement, the Chairman acknowledged that the 'response (has) not (been) overwhelming' and that it 'has not been smooth sailing when it comes to promoting the complex and diverse issues ...' (PR 19, 10 May 1990, 9680-1). From all accounts, opposition to, rather than support for, statehood has been the dominant theme in public participation.

**Parties and pressure groups**

As the government party and the one initiating and promoting the statehood policy, the CLP, at the organisational level, has been the most consistent supporter of statehood. At the same time, however, differences of opinion over form, strategy and timing have been common. The most public and acrimonious disagreement occurred in late 1985 over the question of federal representation (see Heatley 1990, 164) and that issue, albeit for the most part in private discussion, continued to be divisive. Various sections of the CLP also were critical of the emphasis and direction set by Hatton; some members were dissatisfied with the level of commitment, particularly after 1986, while others questioned the realism of the statehood push throughout. For example, Paul Everingham, from his vantage-point in Canberra, remained unconvinced of the worth of the statehood campaign. His view, on the eve of his retirement from federal politics in early 1987, held that statehood at best was 'a 2001 proposition' (*NT News*, 1 February 1987). Perron's change of direction in 1988-9 angered the CLP statehood activists. John Hare, then the General Secretary and one of the leading proponents for early statehood, publicly chided the Chief Minister for moving statehood off the policy agenda (media transcripts, February 1989). Overall, however, Perron's decision accorded with the majority instinct of the party and the judgement of CLP voters. In the 1988 Morgan poll, less than half (47%) thought statehood 'a good thing' for the Territory.

Only 27% of Labor voters in the same survey supported statehood. That level of support was certainly higher than in the ALP branches. Although the ALP, in its 1987 conference, did agree that statehood was a desired end and did include in its platform a target-date of 2001, it generally opposed the CLP's position, arguing that the pursuit of statehood was premature. The ALP's stance served a double purpose. Its acceptance in principle of statehood as an ultimate objective deflected criticism that the party was not sympathetic to the Territory's future constitutional development while, at the same time, its position was attuned to the majority community opinion of opposition to statehood. For that reason, ALP spokesmen during 1986-7, knowing that the inevitable negative result would mean the end of the government's campaign, often demanded a referendum on the desirability of statehood (see, for example, Collins in *NT News*, 4 February 1987). Moreover, the decision to postpone consideration of statehood enabled the ALP to avoid, for the time being, resolution of several crucial issues. While the general ALP position supported equality of status for a new Territory state, the question of functional parity was potentially divisive. Important sections of the ALP and many of its support groups were basically antagonistic to the transfer to Territory control of the outstanding functions. Aboriginal land, industrial relations, major national parks and uranium were all areas of
particular sensitivity and bound to precipitate inter-party differences when the matters were raised in the statehood context. At the more pragmatic political level, the ALP was loathe to give any support to a policy which would allow the CLP government greater power; many Labor members despaired of their party's ability to attain office in the foreseeable future and, for that reason, saw no sense in augmenting the authority of their party opponents.

The ALP parliamentary wing and Labor's federal members (Senator Ted Robertson to July 1987 and Senator Bob Collins thereafter and Warren Snowdon, MHR from July 1987) followed the general party line. There were, however, discernible differences in individual commitment to the statehood objective. Collins, for example, both as Leader of the Opposition and as a Senator, was consistently more supportive of eventual statehood than either Robertson or Snowdon but even he was disdainful of the CLP motives and ambitions. In the Assembly, Terry Smith (Collins's successor as Leader until October 1990) and his Deputy, Brian Ede (Leader after Smith's resignation), both for long periods on the constitutional development committee, were conspicuous in defending the ALP's long-term allegiance to the statehood ideal and preserving, despite deep reservations at times, the bipartisan approach to the committee's activities. Still, in their response to the CLP's handling of the statehood and associated issues, ALP spokesmen were usually highly critical of what they saw as undue haste, inept performance and transparent politicising. A constant theme in their critique was the charge that the CLP government was too immature and divisive to be 'fit to lead a new state' (PR 4, 24 September 1987, 1562; see also the ALP response to Perron's statement, PR 12, 14 February 1989, 5392-427). A typical ALP reaction came from Snowdon in mid-1988:

_I have to say that, while I can see the possibility of the Territory one day becoming a State, this is still a long way down the track, and I share with many Territorians some scepticism about the haste of the CLP's approach... we continue to see scarce taxpayers(') dollars being wasted as the CLP Government tries to push and drag us into accepting that statehood is good and that the sooner we get it the better. The CLP is continuing to try to make statehood a 'popular' cause so it can use it as a political issue and distract Territorians from the mess they have made of Government here... What the CLP is attempting to do is orchestrate statehood to suit its own agenda_ (Sunday Territorian, 10 July 1988).

Between 1987 and 1990, a third party — the Territory Nationals — was represented in the Assembly. Led by Ian Tuxworth, expelled from the CLP in late 1986, it presented itself as an alternative conservative grouping to the CLP. Although, as Chief Minister, he had been the initiator of the CLP's statehood policy, as the Nationals' spokesman in the 1987 election, he had campaigned for a five year deferral of the statehood question, arguing that the Territory population was not ready to support it. During the Assembly term, Tuxworth was another ready critic of the CLP's handling of the constitutional development issue, particularly the Nationals' exclusion from participation in the parliamentary committee. But he still considered himself to be 'a great supporter and advocate of statehood and it can not come quickly enough as far as I am concerned' (PR 9, 18 August 1988, 3664). When Perron had signalled his retreat from the statehood campaign, Tuxworth moved quickly to try to position the Nationals as the party most interested in promoting statehood. In February/March 1989, he advocated a unified approach and an intensified program of community education (Sunday Territorian, 19 February and 19 March 1989). Little of substance eventuated and after mid-1989 Tuxworth's and the Nationals' interest was sporadic and cursory. Although Tuxworth still contended in 1990 that statehood was still 'the single most important issue for the Territory' (NT News, 31 May 1990), it did not feature significantly in the Nationals' election campaign later that year.
Pressure group response, other than that from Aboriginal organisations, was limited and usually addressed to specific elements of constitutional development. Examples were the local government lobby's advocacy of entrenchment of that level of administration in a new state constitution and the industrial relations community's plea for the retention of the prevailing system. Submissions to the parliamentary committee and to the Moore consultancy on industrial relations fell broadly into that self-interested category. Consistent with the general community reaction, no major group gave enthusiastic or unequivocal support for statehood; even those, like those associated with the mining, pastoral and business sectors, who normally had a closer affinity to the CLP, expressed reservations about the government's approach.

Probably the most explicit rejection of statehood came from the Northern Territory Trades and Labor Council (Interim Submission, 14 June 1988). In its view, the Territory did not have either the population or the tax-base necessary to become a state. It also rejected the transfer of industrial relations and the control of Aboriginal land rights to the Territory government, the latter because 'of the racist (sic) views of the government'. A similar union view was also presented in a personal oral testimony to the parliamentary committee by the Secretary of a public service association who suggested in addition a repudiation of self-government and a return of the Territory to federal government administration (NT News, 11 August 1988).

**Aboriginal groups**

Even before self-government, the question of Aboriginal land rights had been a divisive political subject in Territory politics; after self-government, it has consistently been high on the agenda of political conflict, both locally and inter-governmentally. With its range of associated disputes and its diversity of actors — parties, governments and pressure groups — land rights was a highly complex and contentious issue (see Heatley 1980, 1986). As the claims both of statehood and of full functional parity included the transfer of the federal land rights legislation to Territory control and involved matters relating to mining and energy and to national parks, it also became central to the debate on constitutional development.

The major protagonists were the CLP government and the Aboriginal Land Councils (especially the Northern Land Council [NLC] and the Central Land Council [CLC]). By the mid-1980s, the councils, fortified by a strong statutory base, ample funding, dedicated staff and well-honed political skills, had established themselves as the prime articulators of Aboriginal political interests. Their activities, originally concerned with land matters, had widened considerably; some commentators have described them as 'para-governmental' bodies (Altman 1983; Altman & Dillon 1987; Gibbins 1988). They had forged close links with pan-Aboriginal groups, with the ALP at all levels, with the media, with sections of the Commonwealth bureaucracy and with Aboriginal support groups. Their relationships with the Territory government had always been strained and the tensions and conflicts engendered over constitutional matters was a continuation of that tradition. To the councils, statehood was another strategy by the Territory government not only to weaken or extinguish land rights but also to cripple the power of the existing councils.

Recognising from the beginning that support from the land councils was improbable, the government at no time during the statehood campaign between 1985 and 1988 consulted with them directly. Rather, it relied upon consultants (for example ex-Senator Neville Bonner and ex-ALP MLA, Jack Doolan in early 1986), official infrastructure and communications, the activities and publications of the parliamentary committee and
occasional visits by the Chief Minister to try to garner support. Despite intensive planning at officer level, the government efforts were largely uncoordinated, sporadic and ineffective.

Reaction from the land councils to the Tuxworth launch of statehood in 1985 was predictable. The Chairman of the NLC, Galarruwuy Yunupingu, accused the government of ignoring Aboriginal opinion as well as being untrustworthy and argued strongly against the transfer of land rights control from the Commonwealth (transcript, 23 August 1985). That set the broad pattern for land council responses in subsequent years. Similar views were put by a solicitor employed by the CLC in an article published in mid-1986 (Andrews 1986).

In his statement in August 1986, Hatton acknowledged such Aboriginal concerns and tried to allay them by referring to 'appropriate guarantees of Aboriginal ownership' (NTG 1986b, 6, 25). They were expanded in an options paper put out in November 1986 (NTG 1986a). Trenchant criticism from the land councils soon followed (Land Rights News 2:1, November 1986, 3-4 and NLC 1987). Arguing for the retention of Commonwealth authority over land rights and against any change to the existing legislation, particularly the form of inalienable tenure and the 'veto' provisions on mining which they saw at risk, the land councils contended that statehood was 'a new threat to land rights'.

Getting power over Aboriginal land is seen by the NT Government as the key to Statehood... The campaign for Statehood on the NT Government's terms is a campaign to further entrench the interests of carpet-baggers... The Commonwealth Government, representing as it does the people of Australia, has an obligation to see that the power to make laws affecting the Aboriginal people is not given to a government which has shown itself to be hostile to Aboriginal interests and which sees the resources of Aboriginal land as a ticket to maintain the privileged position of well-to-do colonists (Land Rights News 2:1 November 1986, 3).

During the early months of 1987, land council leaders continued their strong pitch against statehood in the media but it tapered off as the government's campaign was wound down. Hatton belatedly responded to the criticism in September when he dismissed the councils' position as being based on 'distortion and calculated omission'. In his view,

what the ... paper does is to misinterpret or simply ignore the general principles and the options put forward ... as well as to continue the council's usual jaundiced assault on the government's past performance on, and approach to, land rights (PR 4, 24 September 1987, 1555).

Perron's claim for functional equality in February 1989 (and his later submission to the Commonwealth) rekindled the councils' opposition. Again, it could be argued that the reaction chose not to address the details of the government position on land rights. In his presentation of the case for transfer, Perron stated that the government was prepared to enter into particular arrangements in relation to Aboriginal land rights which recognise the interests of Aboriginal people and the legitimate concerns of the Commonwealth and which ensure an appropriate degree of protection for Aboriginal interests (NTG 1989, 39).

Its preferred course was the repeal of the federal legislation and its replacement by a local enactment, presumably with the capacity to amend it. Given, however, that the Commonwealth would not accept that option, the government 'would be willing to enact
the existing Commonwealth legislation without change ... (which) would be a
demonstration of its good faith ...' (NTG 1989, 39). Moreover, while he insisted on land
being placed under Territory title, he conceded that the Commonwealth might retain
reservation and disallowance powers over subsequent amendments.

In April the land councils launched another campaign against statehood. As a vehicle for
reiterating the by now familiar arguments, two thousand pamphlets were distributed to
Aboriginal communities by the NLC. But a more significant development was a
conference convened by the councils in Alice Springs in June on 'the future of government
for Aborigines in central and northern Australia'. Papers to and discussion at the
conference on the question of statehood were dominated by the types of arguments which
had characterised the land council response since 1985 (see for example, the contribution
of Patrick Dodson, Director of the CLC, Dodson 1989). There was, however, some
interesting debate on options for Aboriginal self-government, including a suggestion for a
'black state' in Australia, introduced (Jull 1989). A statement for further discussion, issued
at the end of the deliberations, was in two parts. The first addressed wider issues such as
the Barunga Statement (an agreement reached by Prime Minister Hawke with Aboriginal
tribal elders on desirable policy objectives), an Aboriginal treaty, autonomous Aboriginal
local and regional governments, a 'special trust relationship (fiduciary) between the
Commonwealth and Aboriginal nations', guaranteed levels of funding, the protection of
Aboriginal indigenous and civil rights and promotional and organisational matters. In the
second, the statehood issue was addressed. As the positions taken represent the latest
development in land council thinking on statehood, they deserve quoting in full. The
principles expressed in the Barunga Statement must be included in any Northern Territory
Constitution.

a) We call on the Commonwealth Government to refuse to enter into any discussion
about statehood until:

i) There is a review of the Northern Territory Self Government Act 1978 to assess
the manner in which the Northern Territory Government has treated the rights
of Aboriginal residents of the Northern Territory.

ii) The Federal Government has set up such a review independent of the Northern
Territory Government and the Aboriginal people, through their nominated
body, have been given the right to participate as an equal partner in such a
review.

b) We are dissatisfied with consultations to date and will inform the Federal
Government.

c) We call upon the Australian Labor Party to withdraw from the Northern Territory
Legislative Assembly Select Committee on Constitutional Development until the
Committee demonstrates an approach which satisfies Aboriginal issues(.)

d) We call for the establishment of an independent Aboriginal committee on
constitutional development to be funded by the Commonwealth Government(.)

e) In the event of any referendum on the question of statehood we urge that it be a
prerequisite for voters to have had one grandparent born in the Northern Territory
and/or to have a minimum of 10 years residency in the Territory.

f) There must be a guarantee that any new Northern Territory constitution recognises
the special trust relationship (fiduciary) between the Aboriginal people and the
Commonwealth Government.

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g) Should the Northern Territory become a state, current Commonwealth legislation in existence that benefits the Aboriginal people remain in place and future Commonwealth legislation affecting Aboriginal interests be subject to Aboriginal negotiation and consent.

Taken together, the conditions were tantamount to an outright rejection of statehood. They were certainly not acceptable to the government which rejected both their basis and their terms. Although very little face-to-face consultation had indeed occurred, Perron deemed it time to end discussion on the issue with peak Aboriginal organisations and deal directly with communities (radio transcript, 26 June 1989). For its part, the ALP declined to withdraw its representation on the parliamentary committee but it also contended that the conference’s proposals ‘show how far the Government has lost the confidence of the Aboriginal community’ (Smith in NT News, 26 June 1989). Selected non-Aboriginal reaction to the vote limitation scheme, which would disenfranchise a large proportion of non-Aboriginal electorate, was generally dismissive.

Since mid-1989, as once again the general issue of constitutional development slipped from the political agenda, Aboriginal groups have accorded it little attention. Where particular elements, such as the renewed claim for land rights’ transfer in the 1990 election and at the Special Premiers’ Conference, resurface, the land councils are galvanised into opposition. The only on-going activity is the work of the parliamentary committee in Aboriginal communities. There, as the committee itself admits, interest in and knowledge of constitutional matters are not high. In most communities, the influence of peak Aboriginal groups is paramount and it is probable that their views on constitutional development prevail.

Interstate responses

As S. 121 of the Australian Constitution (admission or establishment of new states by Act of the Commonwealth parliament) is the method preferred in the Territory and presumably by the Commonwealth for the transition of the Northern Territory to statehood, the approval of the wider Australian electorate will not be directly involved. Only in the improbable event that the S. 128 method (alteration of the Constitution by referendum) is utilised would its preference be crucial. Other than anecdotal evidence which is notoriously unreliable, comparatively little is known about the general climate of opinion on Territory statehood. There are, however, two Morgan polls (Roy Morgan Research Centre 1985, 1988) which do give some impressionistic information of Australian attitudes. In 1985, 55% of the sample considered statehood for the Territory ‘a good thing’, 8% ‘a bad thing’, 29% thought it ‘wouldn’t matter’ and 8% had no opinion. Equivalent proportions in a similar 1988 survey were: 44, 9, 39 and 8. Even with the decline in positive support in 1988, the reasons for which must be entirely speculative, the level of national approval was greater than in the Territory.

Of far more significance was the stance of the Commonwealth government. If the S. 121 method was to be used, then the Territory government had to convince Canberra to introduce enabling legislation. Although both Tuxworth and Hatton at times argued in public that the strength of the Territory’s claim should alone be sufficient to sway the Commonwealth, it was generally conceded that, with the ALP in office, federal support for statehood would not be forthcoming. As with the process of self-government, the Territory government accepted the fact that the attainment of statehood would be determined overwhelmingly by political factors and that statehood was only a possibility when the Liberal/National Party Coalition returned to power in Canberra. The dashing of the hopes for a Coalition victory in 1987 was one reason for Hatton’s decision to reduce the intensity of the statehood campaign and for Perron’s subsequent change of strategy.
The official Labor reaction to the Territory's statehood ambitions was entirely formal and non-committal (see, for example, Bowen 1988). The Commonwealth government simply agreed to accept a comprehensive Territory submission, either on statehood or further functional transfers and consider it in due course. Prime Minister Hawke, however, on a number of occasions publicly expressed his scepticism of the need and support for statehood. For example, in March 1989, he commented: 'I must say quite honestly if I was a Territorian I don't know that I'd be jumping up and down wanting statehood tomorrow. And I don't see any evidence of that' (radio transcript, 31 March 1989, see also his comments reported in NT News, 3 September 1987). At the unofficial level, there was, in federal ALP circles, strong opposition to and scorn about the Territory's pretensions. For a host of reasons — parliamentary representation and the sensitivity in the ALP to most of the issues involved in further constitutional development for the Territory chief among them — the Hawke government was fundamentally antagonistic to the Territory's claims. Statehood or functional transfers were simply not on the ALP's agenda. One diverting ALP response to statehood came from an outspoken back-bencher, Graeme Campbell. He advocated carving up the Territory and distributing parts of it to neighbouring States (comments reported in NT News, 26 and 27 October 1986). In that way, he argued that the unwarranted bid for Territory statehood could be circumvented.

For its part, the Coalition, and the National Party component in particular, was more sympathetic to the Territory's claims. Not only did it share the CLP government's political and ideological complexion but it was also more federalist in orientation than the ALP and it did not have the same aversion to transferring matters like uranium, land rights or national parks to the Territory. But although support was proffered, particularly during election periods, for functional transfers, it was usually couched in broad and loosely defined terms and hedged around with provisos and conditions. On statehood, there were plenty of statements about support in principle but little of real or lasting substance. A good example of the Coalition's approach can be seen in contrasting statements in 1990. Before the federal election, Senator Bishop, the Coalition's federal affairs spokeswoman, contended that a future Coalition government would move expeditiously to devolve to Territory authority full state-type powers over uranium mining, Aboriginal land rights and national parks in the lead-up to full statehood (NT News, 19 January 1990). After the election, Peter Reith, Deputy Leader of the Opposition, failed to give any guarantees of an early transfer of powers when the Coalition was returned to office (NT News, 11 August 1990). Both, however, gave no firm commitment to or timetable for statehood; all they would confirm was that it was somehow on the Coalition agenda.

Irrespective of party allegiance, federal parliamentarians share to varying degrees reservations about the Territory's readiness for statehood. Leaving aside the more partisan divergences on associated issues like land rights and uranium, there is general concern about the effects of Territory statehood on the complex processes of federalism and intergovernmental relations in Australia. An example sometimes cited is the effect of seventh state on the political arithmetic of constitutional referendums and of the Loan Council. The most universal objection is the claim by the Territory for equal representation in the Senate. Tuxworth's and Hatton's preference for the phasing-in of eventual parity was a strategy designed to counter that objection but it is also unacceptable to most federal politicians. Typical of the mood was the comment in a report of the Joint Select Committee on Electoral Reform which stated that:

*it is concerned by suggestions that the Territory should obtain equal Senate representation with that of the original States and can see no justification whatsoever for a proposal which would result in gross over-representation of the Northern Territory* (Parliament of the Commonwealth of Australia 1986, 45).
Prominent also is the fear that Territory Senators would be able to hold the balance of power in the Senate.

Nor is the question of statehood on the agenda at the state level of politics. Hatton's lobbying efforts did succeed in winning support in principle from non-labor parties but the vexed questions of parliamentary representation and implications for the federal system remained unresolved. Little response was forthcoming from the state Labor parties which for political reasons were not targeted to the same degree. If the reaction of the South Australian Premier, John Bannon, was any guide, they regarded the matter as largely speculative and unrealistic and only to be discussed after the issue had been negotiated between the Territory and the Commonwealth. Like many other politicians, however, he foresaw difficulties in determining parliamentary representation for the new state (NT News, 17 October 1986).

Conclusion

Despite all the attention given by the Territory government after 1985 to constitutional development in its various forms, nothing of substance had been achieved. While the Territory has been thoroughly integrated into the complex processes of Australian federalism and for most purposes, funding included, is treated as a de facto state, its constitutional status has not been enhanced. The legislative and functional limitations, so vexatious to the CLP government, remain. Resistance, if not outright opposition, to statehood or claims of functional parity in and outside the Territory, so marked a feature of the 1985-91 period, has not been eroded. If anything, it has increased.

So long as the ALP retains office in Canberra, the prospects for further constitutional advancement are bleak. Even if there were a Labor administration in the Territory and it chose to press the issue with its federal counterpart, support would be unlikely. The only politically realistic scenario for reform in the short term would be a combination of conservative governments in Darwin and Canberra. But even then, given the difficulties of the parliamentary representation issue, the chances of federal approval for statehood, on the terms required by Territory politicians (CLP and Labor alike), would be remote. The reform agenda is certain to be confined to the issues of functional parity and the removal of legislative restrictions. As in the past, they, and particularly the question of control over land rights, will re-activate powerful opposition which may affect both the resolve of the Coalition to persevere with reform and form of the measures taken. Moreover, unless the Coalition controls the Senate, its capacity to repeal or amend the relevant legislation will be greatly impaired. Altogether, the future course of the Territory's bid for further constitutional development remains strewn with obstacles and uncertainties.

At the local level, the major parties' policy objective of ultimate and equivalent statehood will be sustained. Even for the CLP, however, allegiance to the objective has become largely ritualistic; under present and likely future circumstances, there will certainly not be a repeat of the abortive statehood campaign of 1985-7 and, while the ALP is in federal office, a resuscitation of the 1989 Perron initiative is not to be expected. The only on-going activity, and one of limited significance, is the work of the parliamentary committee. Its impact on community opinion on constitutional matters will continue to be marginal. Although there is no conclusive evidence about current attitudes, it must be assumed that, as in the recent past, the majority of Territorians still oppose early statehood. Although the year 2001, the centenary of Australian federalism, is now seen by many local politicians as an appropriate date for Territory statehood, its achievement even then will have to surmount most of the same hurdles which faced and thwarted it in the 1980s.
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CHAPTER ELEVEN
THE FUTURE OF FEDERALISM AND INDIGENOUS PEOPLES
IN AUSTRALIA AND CANADA*

Peter Jull

Introduction

Both Australia and Canada today are evaluating and revising the structures of federalism in their national life. These have seemed to be insufficient for the 21st Century, or at least in need of repairs (eg. Dufour 1989; Robertson 1989). There are many other similarities between the two countries — in economic structure, culture and society. Both were peopled from the late 18th Century by settlers who brought their political culture with them from the British Isles. Today both countries are struggling with national self-definition and self-renewal in which indigenous inhabitants of their respective continents play a part.

Processes of renewal are national, but they have special meaning for the northern hinterlands of Australia and Canada. In those northlands society is only now developing towards coherence and stability, with more possibilities open than in the more settled and regulated south. But northern territories are particularly affected by national government policy, politically, and national budget priorities, economically. They are 'unfinished business' constitutionally because they have not acquired the status of full Australian States or Canadian Provinces within the systems of executive federalism which dominate national policy-making. Meanwhile, they recreate the challenges of early national settlement with new and unfamiliar environments, indigenous cultures, trial and error development strategies, the immigrant quest for material expansion and the establishment of cohesive regional communities, again dominant elements. They also recreate the tension between colonies and 'mother country', with many attendant frustrations and frequent mutual incomprehension.

This parallel between national foundations and modern margins in Australia, Canada and elsewhere, eg, in the USA's State of Alaska and in Scandinavian Lapland, goes largely unnoticed within governments themselves. That makes northern territories particularly useful as a measuring device. For instance, while the rhetoric of Australian and Canadian foreign ministers at the United Nations in 1990 may be full of philosophical perspectives which would have been unlikely a century earlier, the actual social and economic relationships within northern territories may be all too similar to pioneer times. The cavalier and often unsuccessful exploitation of environment and resources, the marginalisation of indigenous peoples, high degrees of transience among workers and the general population, the boom-mongering of the socially dominant elite and the conflict with a distant national capital are evident and account for an overwhelming proportion of local and regional 'news' — hardly new at all, being an old pattern replayed.

* This was a conference paper distributed at the Centenary Constitutional Conference 1991, April 2-5, Sydney, New South Wales, Australia. The conference was sponsored by the Prime Minister of Australia and the Centre for Comparative Constitutional Studies, Melbourne.
Northern regions and territories are especially important for indigenous peoples who find there, in relatively intact homelands, opportunity for cultural and social survival denied them in the 19th Century by white settlers farther south. (In both Australia and Canada 'northern' is a relative term, including about 75% of Canada, ie, the northern regions of seven Provinces and the two existing Territories, and in Australia including the arid centre as much as the northernmost latitudes of the continent.)

Recent constitutional politics

Australia in 1988 had a half-hearted celebration of 200 years of British settlement. This provoked Aboriginal anger as well as considered Aboriginal attempts to use the event to put forward Aboriginal perspectives on Australian society. A high point was the commitment by the Prime Minister at a ceremony in the Northern Territory to a 'treaty' or something similar between white and black Australians. The Leader of the Opposition responded that he would 'tear up' such a treaty. An attempt to tackle fundamental constitutional change that year was set back by the abject failure of a referendum on four supposedly straightforward questions, despite initially strong public support for the proposals (Galligan & Nethercote 1989). These constitutional issues and Aboriginal need were apparently held hostage to an Opposition tactic denying political successes to an ebullient Prime Minister, even at the price of stirring society's racial anxieties. But in 1990 the Prime Minister and State Premiers, in a public tone of unique moderation and consensus-seeking, have launched what appears to be a two-track process: a reconsideration of practical intergovernmental relations with an initial focus of micro-economic reform, and a more profound constitutional review to be formally launched in April 1991. The two approaches are ultimately entwined, but initial practical progress may facilitate later consideration of issues of principle. The 'premier' (Chief Minister) of the Northern Territory, calling an election for 27 October 1990, said in a letter to NT voters that he was seeking a mandate — to end federal control of Aboriginal land rights in the NT; to end separate federal budgets, policies and programs for NT Aborigines; and to reject a national treaty with the Aborigines — to be taken to the first conference (Perron 1990). The premier was as good as his word and made his demands to the gathering (whose reaction is not recorded).

In Canada a package of constitutional documents released in June 1978 by the Trudeau government raised the possibility that rights for inclusion in a revised constitution might be negotiated with indigenous peoples (Jull 1981). In February 1979, the Prime Minister and Premiers agreed to meet with the indigenous leaders for a full discussion of indigenous constitutional concerns. After many exits andalarums the Constitution Act 1982, included a recognition of 'existing aboriginal rights' of the Indian, Métis and Inuit (Eskimo) peoples and required a conference between government leaders and indigenous leaders. Between April 1983 and March 1987, four nationally televised conferences were held, plus more numerous meetings of ministers and officials, with indigenous organisations. Because federal and provincial heads of government were meeting with indigenous leaders from the northern territories in this forum, they had to include the Northwest Territories and Yukon governments for the first time — an interesting reversal in which the marginalised indigens conferred legitimacy on white-dominated governments. The final conference ended in disappointment with the majority of governments unwilling to accept what they said was a too vague constitutional clause entrenching an 'aboriginal right' of self-government. A few weeks later the same governments, this time without the territories, accepted a package of vague clauses (the so-called Meech Lake accord) intended to strengthen Canadian unity by conciliating the Province of Québec which could now accept as a quid pro quo the 1982 Constitution which it had hitherto rejected. National debate on the meaning of these amendments
raged. The unfulfilled constitutional hopes of the indigenous peoples with their capable constitutional teams and the ruffled territorial governments which had been injured as well as insulted in the package of clauses accepted by provinces and Ottawa become an important rallying point for disaffection. In June 1990, after three years of bitter controversy, the vote of a single Indian in a single provincial legislature defeated the Meech Lake project.

In June 1990, as well, the Supreme Court of Canada, the highest court, authoritatively interpreted in Sparrow the 1982 constitutional clause on aboriginal rights as recognising wide rights of indigenous peoples in respect of lands, waters and resources, and as requiring the federal government to design policies and programs around these. In the same month the expiry of the Meech Lake package brought a return of serious consideration in Québec of independence from Canada. In late August, a minor dispute whereby a small Québec town, Oka, at the mouth of the Ottawa River, famous only for a fine cheese made there, wished to extend a golf course onto traditional Indian burial grounds. A mixed group of Mohawks, Algonkins and Nipissings had lived there for 300 years. They protested and soon barricades were thrown up. Québec took a hard line while the federal government refused to become involved. These events triggered a national Indian protest - and one long foreseeable - at the national government's apparent recent erosion of the status indigenous peoples had acquired over two decades. They were a virtual third order of government in the making, unrealised but represented by indigenous associations in every Province and Territory, federated nationally. When the national government which had first avoided the Oka case sent in troops, a new situation emerged. Meanwhile, the Prime Minister called upon the Indians to respect the law and White Man's land rights. A number of his party's officials had proceeded through the courts with great publicity for land deals in recent years, a fact not lost on the Indians. In late 1990 he named persons to wander the country discussing national unity and identity, but press and public reacted with some ridicule and then anger at an allegedly inadequate response and lack of leadership.

In Canada it is now clear to most people that the indigenous peoples are players, even essential players, in the national constitutional situation. Although the Prime Minister promised them a major policy inquiry by the end of 1990 as part of his post-Oka conciliation package, he has hesitated in that course, apparently preferring that indigenous people wait until governments have sorted out intergovernmental relationships. It was just that narrow view of the constitutional game and its players that had endangered and finally destroyed the Meech Lake reforms.

In Australia it is less accepted that the Aboriginal and Islander peoples have constitutional interests which they themselves should represent in negotiation with governments. On 31 October 1990, during the initial conference of the Australian federalism review, a striking cartoon in the Canberra Times showed an Aborigine entering the conference room; challenged by the Prime Minister, he says he is only looking for his seat for the meeting (printed with Coombs & Jull 1990). The lengthy communiqué of that first conference alludes to indigenous peoples as a subject for future discussion. A preceding survey of issues requiring review by a federal agency, the Economic Planning Advisory Council (EPAC), summarised a Northern Territory government response seeking phase-out of federal protection and programs for indigenous peoples (Special Premiers Conference 1990; EPAC 1990).
Pluralism and national tradition

There is a supposition often aired in Australia that a legal finding that Australia was allegedly unoccupied by any organised society before British settlement means that Australia today need not acknowledge the customs, laws or prior occupation of indigenous peoples. The Law Reform Commission and many academic studies confirm that Aboriginal and Islander society was organised in complex ways, complete with rights and duties, including modes of group decision-making (self-government) and clear delineations of boundaries (land title) no less developed than British systems later imposed (Law Reform Commission 1986). Furthermore, to base social and political attitudes towards peoples on a tenuous point of law, itself reliant on increasingly implausible premises, is mistaken. Some Australians attribute recent Canadian reforms to a stronger law for indigenous peoples, but they are misled: that law was virtually a dead letter until the Canadian public's growing understanding and the indigenous peoples' activism turned it to account.

Federalism, the system which provides two levels of government sovereign within their own jurisdiction, neither able to invade the other's powers, is designed to reconcile cultural, linguistic, religious or regional communities in a shared territory. This system has more obvious use in Canada than in Australia, given Canada's greater regional variety, and cultural communities such as the Indian and Inuit peoples predominating among permanent residents in the north, the québécois and acadien French, the English-speaking minority in Québec, et al. On the other hand, an innocent Canadian reading the Communiqué of the October 1990 Special Premiers' Conference might think Australia an utterly rational system in which something like a unified system was being streamlined (Special Premiers Conference 1990). The two principles which emerge from that document are maximum delivery of services by the States and a federal government supervising uniform standards. That would be a radical restructuring of Australia; the Australian federation is far from such a homogenisable whole, in fact.

The foundation documents of modern Canada are the Royal Proclamation of 1763 which provided for the governance of the vast territories won by England in the Seven Years War with France, and the Quebec Act of 1774 which established the right of québécois to their Catholic religion, French language, Canadien culture, property rights and continuing French civil law. This latter Act, the cornerstone of Canadian political culture in its spirit, was viewed by the American colonists as one of the 'Intolerable' Acts which led to the American Revolution. The idea of Catholic French, the old enemy, being assured rights which Catholics did not have in England itself was ahead of its time. Canada's leading English-language man of letters puts the situation thus:

*If we look at the three eighteenth-century events that defined the future of Canada (as of so much else in the modern world), the Quebec Act, the American Revolution, and the French Revolution, we see the whole range of a political spectrum that still confronts us. The Quebec Act came close to an Edmund Burke model: it was an inductive, pragmatic recognition of a de facto situation, and the situation was one of those profoundly illogical ones that Burke considered typical of human life generally. The two factors to be taken into account were: (a) the British have conquered the French (b) the British have done nothing of the kind. The only way out of this was a settlement that guaranteed some rights to both parties. The French Revolution, proceeding deductively from general principles, was what Burke condemned so bitterly as 'metaphysical', and was also the forerunner of the dialectical Marxist revolutions. The American Revolution came in the middle, a strong contrast to the Canadian settlement...*
keeping far more of the broadening-through-precedent British tradition
than the French one did (Frye 1982, 81).

Burke's House of Commons speech on the Quebec Act began with a silly denigration of the French, and then moved to a defence of French rights. He would maintain their culture, religion, property and society — the sort of settlement he would no doubt have wished for his native Ireland — and the Act did that. But the English colonists in America were not so kind to French Catholics, or their Indian friends, all of whom sometimes seemed a sort of devils to New England Puritans. Various attempts were made from the Thirteen Colonies to crush Canada in its infancy, their lack of success due as much to the fortunate incompetence of the invaders as to the courage or genius of the defenders.

The Royal Proclamation of 1763 is the basic document in Canadian (and American) aboriginal rights law. It provides for respect of the Indian (and Inuit) nations and treatment of these as significantly autonomous, with fair compensation for any lands surrendered and such surrender only to the Crown. Much of the spirit of this early approach was lost in the 19th Century with the appetite of settlers for land. An echo of the intent came in September 1979, when Prime Minister Clark, meeting with national Indian leaders, accepted the spirit of the Northwest Territories Dene leader's proposal that just as Canada had welcomed other regions of the country as self-governing Provinces, so the Northwest Territories should be welcomed as two distinct indigenous homelands, Dene in the western region, Denendeh, and Inuit in Nunavut to the east and north, with special constitutional arrangements such as each Canadian Province had negotiated on entry. (No action was taken before the government fell ten weeks later, however.)

Canada now is entering a phase — one might almost say an 'agony' — of reconsideration of the building blocks of national society. The dangers are great, but exhilarating. Australian diplomats in Ottawa will be following events closely and providing reports to Canberra. These may assist Australia's work on parallel matters. For many years Australian diplomats and visiting State and federal representatives have been interested in the evolution of Canadian territories and indigenous peoples autonomy as well.

Federalism in Australia is a reality, though often maligned. At least one author, political scientist Campbell Sharman, has written a strong and sometimes controversial case for the regional social community as the heart of Australian political life and identity (for example, Sharman 1988). The federal system in Australia is very permanent; it would surely take invasion or economic collapse for the States to abandon their constitutional autonomy. Unfortunately, however, debate has sometimes proceeded on the one hand as if states were a capitalist snare and delusion to maintain exploiting classes in power, and on the other, as if the national government were an impostor in regional development. Each of these positions finesses the practical need for daily economic management and social programs, and genuine policy consideration suffers. Whatever one's ideological leanings, the unique lands and peoples in northern Australia and northern Canada provide ideal opportunities for applying principles of federalism to solve otherwise intractable political and social problems.

The ethno-politics of northern regions

In Australia and Canada today the nature and prospects of northern territories remain a source of social and political tension. The hard question of principle for national governments is how it is possible to leave impoverished and disempowered the original and permanent inhabitants of those territories. The white communities in the territories are often unsympathetic to indigenous rights and even ready to sweep them aside in the
name of economic development. The major argument used by northern whites in this debate is that they are asking for no more than is the lot of the dominant white community in southern States or Provinces. National governments and even national Opposition party allies of northern whites may fudge their responses, saying that small populations or lack of revenues in the north preclude constitutional progress. However, only the most innocent or the most insensitive will doubt the real issue: that modern First World nations, two of the supposedly standard-setting progressive liberal democracies, cannot be seen to be permanently disadvantaging non-white citizens living on traditional lands.

Meanwhile, the governments of the Northern Territory, Northwest Territories and Yukon today dispose of most powers that really matter. A white resident of Darwin, Yellowknife and Whitehorse has all the benefits of southern cities, and a good deal more than cities of the same size in the south would have. What is lacking is the right to grow rich through selling a large region's natural resources. In the NT there are even some who hope the Greenhouse Effect will make some of the more arid areas suitable for cultivation. 'Devolution' in Canada, 'self-government' in Australia, would seem to have given the northern whites all they could ask. When Canada promised Inuit that it would only devolve powers after consulting them and securing consent, the Mulroney government forgot such talks when the time came, most notably in negotiating the northern oil and gas accord. Indigenous northerners in both countries have had at best only a negative sanction, the power to say no to the plans of others rather than a positive choice of directions. Meanwhile, in Australia, the large 1967 constitutional referendum majority, understood at the time to mean that Canberra would take over Aboriginal affairs, has been interpreted over the years to mean much less. The indigenous peoples in both countries feel that the northern whites are gaining at their expense, while white politicians are elected on fears that indigenous peoples are gaining. Of course, Territory leaders might not find public revenues so easy if denied privileged access in Canberra and Ottawa; enslavement to world commodity prices might keep them on the economic margins. The Yukon's cold bath after the collapse of its mining in recent times has ended many hallowed myths for that population (Coates 1991). But the collective aspirations of peoples need not be rational to fuel their political movements.

The fact that both white and indigenous racial communities feel themselves aggrieved and marginalised, each one resentful of the other, is a cue for federal government action. It is significant that in the 'northern territories' of northern hemisphere countries, social and political progress and stability have only occurred where national governments have actively brokered or umpired socio-political relations between indigenous and settler populations (Jull 1985; Jull 1990d). The status quo has invited social problems and growing dissidence, and postponed economic and employment development, with 'political brush-fires' ceaselessly flaring.

If goals of autonomy and self-government were unrealistic, governments could easily reject them. But there is a trend in the OECD countries to recognise indigenous autonomy and self-government as the best ways to tackle persistent social problems and political grievances. This is no mere fashion but a result of long trial and error by governments. What they have found is that powerlessness is the root cause of problems in indigenous lives and communities today. The means they have chosen to redress this have varied, but the underlying dynamics have been the same (see for example Jull 1990b; Jull 1990d).

The potential of creative federalism has been noted, discreetly, by some thoughtful individuals in the Northern Territory. At least one minister with real commitment to constitutional development, a former 'premier', has a clear personal vision of a unique constitution for a unique NT society (S Hatton, personal communication, 1990). The most recent comprehensive constitutional statement of the NT government proposes a
compromise on Aboriginal land rights which would provide strong guarantees to Aborigines and oversight by the federal government, but with land legislation under the NT (NT Government 1989). The national Constitutional Commission which reported in 1988 advocated a negotiated NT Statehood constitution acceptable to the federal Parliament, as is already required by Section 121 of the Australian Constitution respecting new States (Constitutional Commission 1988, 429-34). This could provide for any number of special features. With NT revenue arrangements already being structured to conform to federal-State patterns, the main anomalous issues remaining are Aboriginal lands; services and self-government for Aborigines (now shared not always cooperatively between Canberra and Darwin); Kakadu and Uluru national/Aboriginal parks; and the NT's Parliamentary representation. The present federal government in the person of then Deputy Prime Minister Bowen told a Darwin conference on NT Statehood that appropriate solutions, ie, NT concessions, would have to be found before any grant of Statehood (Bowen 1988). Meanwhile, Aboriginal issues remain the Gordian knot of NT constitutional relations (Gibbins 1988; Warhurst 1990).

**Australian and Canadian practicalities today**

Canada's Provinces were assigned all the lands within their borders by the 1867 Constitution, with small areas set aside for indigenous peoples as 'reserves' at a time when the indigenous population was crashing. The Provinces generally have smiled broadly and said that their impoverished Indian citizens are, alas, federal responsibilities and that they, the Provinces, have no responsibility (although many individuals and programs at Provincial level have quietly responded to need before constitutional theology). There is irony in this stand-off because Indians forced from crowded or poor reserves into large cities lack job skills, producing social disorientation and needs which become a major social and financial cost for Provincial authorities. But the Provinces have generally preferred to suffer in silence than risk opening up a question which, by almost any test of need, would require substantial new funds. Whether such costs would be greater than those growing now in cities is presumably unknown. At any rate, the Provincial economies are based overwhelmingly on the use and occupation of formerly Indian lands. Meanwhile, the Indians are burgeoning populations confined to areas usually too small and marginal for reasonable livelihoods. The argument of solely federal responsibility is the moral equivalent of Australia's *terra nullius* doctrine, a convenient legal fiction misconstrued as a social doctrine. When Prime Minister Trudeau tried to open up all levels of indigenous programs and funding to constitutional review in the early 1980s, indigenous peoples were fearful of a diversion and the plan was dropped.

Canadians have accepted in principle that indigenous cultures must survive, and Canadian federal and Provincial governments have accepted that some autonomy and self-government are desirable means to achieve that end and to reduce persistent social problems. No such consensus appears to exist in Australia, although there appears to be sufficient agreement that peoples living on ancient territories should have opportunities to continue to do so. (Indigenous rights to territory may not yet be seen to take precedence over high-yield developments like mining, however.)

It may be argued that it is premature to act in Australia. A recognition of the difficulties is seen in the new approach of the federal government to consensus building for a national Aboriginal 'treaty' or instrument of some other name (Tickner 1990). But the domestic situation has its own momentum. Studies like Bennett's *Aborigines and Political Power* may be misleading by their emphasis on the rhythms of the white Australian political timetable as the context for change (Bennett 1989). An aggrieved minority has its own organic development and sets its own pace. There is no reason to expect that Aborigines
will quietly await an eventual turn of the White Man's wheel before pressing their demands for a new order. There is a predictable progression in ethno-political movements, and observable and predictable contents to their demands. Australia should not make the mistake of Canadian political leaders at the close of indigenous-government conferences in March 1987. They thought they could 'downsize the expectations' of indigenous peoples and continued to cut back government attention and funding in some key areas until the Oka crisis in 1990 ignited Indian response across the continent. The Canadian government has now rushed to prove by words and deeds that indigenous problems are on its problem- and grievance-solving agenda. (The exception is a restart of constitutional negotiations with indigenous peoples. However, the federal minister responsible, Senator Murray, has made clear from 1987 that suitable private progress could restart them. Not unreasonably, Ottawa will not risk a public process in which indigenous retributions occur without agreement likely.)

The question of urbanised indigenous peoples has not been addressed by Canadian or Australian authorities except in terms of (often minimal) social services. Canadians are used to Catholic and public school systems within their cities, and to special schools for children with special needs, so there is no reason why not a Cree school drawing on the Indian population across a city. Norway's Sami Language Act finally passed in November 1990, also draws on many important proposals for indigenous education (Jull 1988, chapter 5 and Appendix). Social and health services especially designed for indigenous peoples are also manageable and desirable, as proven by practical experience in, for example, Alice Springs. In Canada's capital, Ottawa, one's reflex choice of emergency services at either the Anglophone Protestant Civic or the Francophone Catholic General Hospital is cultural. Culturally sensitive social, health and educational services and facilities would produce better outcomes for the majority of indigenous users. Because both Australia and Canada see alleviation of social ills as their most basic concern for indigenous peoples, services could be pursued as rights through constitutional provisions, through federal-State/Province agreements, or through action by individual governments.

In Australia, and until recently in Canada, constitutional concerns have been seen as a narrow specialty of the law. Indigenous peoples see them as the broad subject they really are: basic values and arrangements for the conduct of society on a defined territory, a structure from which indigenous rights and culture, lands, livelihoods and choices about the future were conspicuously excluded when Australian and Canadian Constitutions were written. The Canadian decision to meet the indigenous leaders to discuss reform was in no small part an attempt to correct historical omission and to repair the ills flowing from it. A turning point in the discussion of indigenous constitutional interests in Canada was the acceptance by Prime Minister Trudeau in late April 1980, of an indigenous peoples' agenda for constitutional negotiation. This replaced the previous habit of trying to fit indigenous interests into the talks which governments and lawyers had been having for years. Indigenous peoples have very different concepts of a country's history, of the rule of a law which has seemed to deny their rights even while it protects white interests, of the best ways to reach agreements, and of the relationships among facts and concepts. They may not be comfortable with the usual intergovernmental relations forums and styles employed by Australian and Canadian governments. This unfamiliarity with an arcane process was a principal reason for the ultimate failure of the Canadian indigenous-government constitutional process. Eloquent spokesmanship was no substitute for thorough background staff work.

Intergovernmental process has more continuity than surprises despite changes of political parties in power because the officials remain the same. They remain able to talk to each other even when their 'political masters' are engaged in ritual combat. Like any club they also share terminology, a map of outstanding issues, a clear idea of the narrow differences.
on certain points, and a camaraderie in which opponents are more likely to laugh at themselves over drinks together than mount barricades. The introduction into this exclusive world of spokespersons of indigenous cultures with different perceptions and goals, and sharing no such relish of 'the system', is inevitably a serious mismatch.

Northern opportunities

The most clear cases for constitutional accommodation are Aborigines and Torres Strait Islanders in North Australia, and Inuit, Dene Indians, Métis and Algonquian-Cree peoples of northern Canada. Australia has used its international commitments to press indigenous rights against a State government's policies and now seeks intergovernmental procedures for avoiding similar resort to the External Affairs power in environmental matters (Special Premiers Conference 1990). Canada has been mooching along with regular environmental/indigenous affrays like Pacific coast logging and Northern Québec hydro-electric power issues pitting a federal government embarrassed internationally against development-minded Provinces.

All that is constitutional need not necessarily form a part of the document which is the national Constitution. This fact has already been sensibly envisioned by the Australian Prime Minister and Premiers in their work plan for intergovernmental relations reform (Special Premiers Conference 1990). Because they form an executive committee they can oversee necessary changes by subsidiary bodies and allocate tasks.

Two areas for obvious work in Australia are the Torres Strait Islands and the Northern Territory. In both regions indigenous tenure arrangements and the powers of public authorities are uncertain and may constrain economic development. Just such constraints on economic activity are the focus of the Australian Prime Minister and Premiers in their review.

Torres Strait is a remarkable opportunity for Australia. Instead of the long-running sore which has been the country's Aboriginal experience, here it is possible to achieve rapid and relatively inexpensive success. Australia needs a success for its international relations and public relations. The Islanders are still the occupants of their ancient homeland, except for those displaced from Thursday and nearby islands in the south-west of the region. Their society and culture remain vibrant and proud. Individual island councils function under Queensland law as does the Island Co-ordinating Council which serves those councils as regional forum. In other words, the Torres Strait Islanders already have a representative body with regional credibility, albeit with limited power and resources. Moreover, some islands traditionally used or occupied are outside the ICC's jurisdiction, as are the central communities of Thursday Island and Horn Island. Whereas neglect by public authorities has been the norm until recent times, now the proliferation of federal and Queensland agencies and departments with their cross-cutting mandates and rivalries, within levels of government as well as between them, has become a problem itself (Kehoe-Forutan 1990). There are now a number of excellent studies on regional issues, several collected within a single reference book (Babbage et al 1990).

What is needed in the Torres Strait is a regional authority responsive to the Islander community through which senior government programs are integrated and to which Islanders may look for effective regional government and development policies. Some Islander leaders are ready to include the non-Islander minority centred on Thursday Island, now under the Torres Shire, and serve their needs and aspirations as well. A claims settlement including the home reefs, uninhabited islands, other marine areas and the Islander communities on the Cape York Peninsula is required. A further element should be an ecologically 'sustainable development' strategy for the region and its related
ecosystems which include the Papuan coast and Fly River basin, elements which are already comprehended by the innovative Torres Strait Treaty between Australia and Papua New Guinea. That treaty is probably unique in its attention to needs of traditional inhabitants and involvement of sub-national governments. With the already useful innovations by individual federal and State government departments and agencies in the region, and the comprehensive structure of the Treaty, it seems that Australia has in place elements needed for effective outcomes. What is needed is a way to assemble these and relate them to a stronger, more integrated Torres Strait regional and local government system. The experienced and practical Islander leadership centred in the Island Coordinating Council provide governments with effective and authoritative negotiating partners.

The other instance for obvious work is the Northern Territory. It is estimated that Aboriginal land holdings will amount to 50% of the Northern Territory when claims are complete. They are now 35%. It should be clear that the ideal outcome for a Statehood constitution would be one built on the cultural duality of the region, and one which secures the land rights and cultural character of indigenous society. If Aboriginal people do not secure such constitutionalised commitments — or the continuing retention of these in federal law beyond the capacity of NT legislatures to tamper — they will pursue other means to secure themselves through separate federal-Aboriginal guarantees of one kind or another. The same scenario has been played out in Alaska, Canada and Norway. Such an outcome would fragment NT development hopes. It could also restrict Aboriginal powers and opportunities. A unified system with full planning, environment and development powers on a whole-region basis, one with Aboriginal rights and collective structures guaranteed, might be best for both peoples, as Alaska's unhappy experience shows. Such a unique State constitution would require some new thinking in Darwin.

Constitutional development requires consensus. The mutually respectful way in which Premiers and the Prime Minister have approached the current reform has surprised commentators. Such a tone has not often characterised NT government statements on the Aboriginal or constitutional future. However, in the documents of the NT legislature's constitutional committee there is more than a glimmer of hope. The concept that very special requirements for protection of Aboriginal land rights and recognition of the culturally and regionally unique features of the NT in an NT constitution seem to be gaining ground. These are steps in the right direction. As long as Aboriginals are subjected to statements dismissive of their rights and needs by government, they will not be willing to accept an NT takeover of their lands or special programs, nor will any government in Canberra be able to transfer these. The national and international uproar which would accompany such action would force a compromise. Meanwhile the NT government risks its credibility by appearing to have the interests of only half the territory at heart.

Canada is faced today with strikingly similar situations. The Inuit in the eastern half of the Northwest Territories, the region now known as Nunavut ('our land' in the Inuit language), have signed their land claims agreement-in-principle (TFN-DIAND 1990). Like the Torres Strait Islanders, the Inuit are a maritime people. Their claims settlement provides them with considerable powers in relation to offshore development and sea-life management, powers which are ongoing and are exercised through new statutory bodies in which Inuit have guaranteed strength. Their use of sea ice for travel, camping and hunting for much of the year is an unconventional marine activity for which the Canadian government in recent years has taken various national and international measures of protection. Although Inuit will own a minority of the total area of Nunavut, they will now have great power through statutory wildlife management, planning and development review bodies making decisions for the entire region, about one-sixth of all Canada.
Also, Nunavut is to be a new northern territory in which Inuit will be the overwhelming population majority. It will have all the powers of a Province to manage social, cultural and economic matters for Inuit benefit and, with the added Inuit claims settlement, will create a far stronger set of guarantees for Inuit than anyone now has in the northern territories. The Dene and Métis of the western Northwest Territories and Yukon are securing similar rights in respect of those Territories, as well. In short, a new approach to the government of Territories is occurring in Canada, one which greatly enhances indigenous rights while providing a political settlement which secures white business and development interests by removing uncertainty and putting means to participate (cash and development structures) into indigenous hands. In Canada as in Australia, indigenous people are interested in development as long as they benefit and their environment is not threatened; as in Australia, too, this position is often misunderstood by the mining industry and other traditionalists.

Creation of the Nunavut territorial government has been on the table for some years (NCF 1983, 1985). It has been thoroughly canvassed on all sides, and much preparatory work has been done. Ottawa has seemed ambivalent, professing few problems with the scheme while remaining apathetic about practical progress. Canada will never have a better chance to show the world that it is big enough to accommodate the first inhabitants. An encouraging step has been the federal government's acceptance as part of the 1990 claims signing that a timetable for work on creation of a Nunavut government proceed. This timetable was agreed by the NWT government and the Inuit towards the end of 1990. For most purposes of intergovernmental relations the northern territories are Provinces in all but name. The presence at the forums of federalism of an Inuit government will be a visible commitment to the accommodation of indigenous peoples which Canadians profess.

**Indigenous peoples and national constitutions**

Inuit lost two years of time and many years momentum for Nunavut by setting it aside while trying to negotiate rights of self-government through the constitutional process of 1982-1987. That latter process failed, *mirabile dictu*, because governments were unwilling to agree to imprecise notions of indigenous self-government (Jull 1987). A Nunavut ready for implementation might have reassured them, and indeed, Provincial governments have been intrigued by Nunavut because it appears to them more suited to Canadian political culture than some other indigenous government proposals. Opening the 1984 constitutional conference, Prime Minister Trudeau even recommended the Nunavut format as the best approach to indigenous government. The important lesson in this may be that Aboriginals and Islanders should not put all their eggs in one basket, nor hold up practical achievements within reach for more distant speculative hopes. Unfortunately there is no literature on the Canadian indigenous-governmental constitutional process itself. Instead there are various expressions of hurt and anger, some bloodless legal theorising, some deterministic set-pieces and various polemical statements by participants (a good compendium being CARC 1988). Intergovernmental relations are overwhelmingly process-dominated, and the lack of a relevant literature is itself a symptom of the nature of failure in the Canadian talks. The transcripts of the four conferences held in 1983, 1984, 1985 and 1987 are unpublished, but participating governments and indigenous organisations all have copies. These are the best sources of information on a pioneering process whereby a former colony renegotiated European settlement and development with the victims of that process. Its 'failure' was only relative. The entire indigenous peoples constitutional process beginning in 1978 and ending in 1987 saw the addition of significant clauses to the Canadian Constitution, ones which
government justice departments may see as the world turned upside down since the 1990 Sparrow decision.

In approaching constitutional and intergovernmental relations issues, very different outcomes are reached depending on whether treasury/finance officials, lawyers, cabinet office staff or others are involved. The Canadian experience has been that the best results are achieved by a mixed team with cabinet office staff coordinating. On the indigenous peoples' side it is most important that experienced intergovernmental relations personnel be available in their delegations. Of course, Australians may prefer a different forum than Premiers' conferences for negotiating these subjects. One of the most useful cautions was the 1979 opening statement of Canadian federal minister Jarvis to the first tripartite (federal-Provincial-indigenous) constitutional meeting (quoted in Jull 1981).

I have no doubt that many of the achievements from this process will be in the form of intangible benefits or 'spin-offs'. As much as we may eventually want to find new words for the Constitution, we are here as well to take account of the broad relationship of governments and native peoples and seek to improve it...Work has to be done together. Everyone knows that we are not dealing with subjects where someone can walk into a room and deliver a position and expect people to agree and go home. All of us, and I stress the word all, are going to need to explore each other's concerns and vocabularies. One of the reasons we will need to do this is because there exists no generally accepted language or experience for some of the work we must undertake. Such a process requires a commitment to meetings, however informal, to discussions, and to patience...The challenge for all of us is that here we may have to come to terms with perceptions of history, society, even law, which are new to many of us. It is clear that our past practices have not adequately permitted this, and I need hardly refer to some depressing social statistics to illustrate this point...Canadians are coming to realize that the problems of alienation are not simple but often rooted in long periods of unresolved grievances and thwarted aspirations. All governments have experienced the costs of failing to solve these difficulties; what we must do now is show that our Canadian federalism provides opportunity for all peoples to fulfil themselves. Our legal and political systems have always been flexible enough to accommodate such diversity. Our only guarantees of success, however, are open minds, understanding and goodwill.

Inevitably a desire grew among officials over time to finish an untidy project quickly, with scant regard for the indigenous needs which had driven governments to begin it.

Nobody imagines that Australian constitutional work with indigenous people will be easy. However, the commitment to a national treaty or 'instrument of reconciliation' of some kind — something which may only have meaning if it becomes a part of the Constitution — is an important start. Meanwhile, 'constitutional' actions in the Torres Strait and the Northern Territory recommend themselves as foundation stones for a new order. If Prime Minister and Premiers wished to set a national tone, and help break through generations of bitterness, it would be desirable to find some words for a constitutional commitment to a national indigenous peoples policy. For example, the Inuit used the following rough text to describe what they sought:

Collective recognition as distinct peoples, including the protection of traditional cultures and lifestyles, and aboriginal rights.

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Political rights to self-governing institutions of various kinds within the Canadian state.

Economic rights to land, resources and their benefits as a base for self-sufficiency and development of native communities and families, including protection of existing economic resources (quoted in Vallee et al 1984, 671).

With minor stylistic improvements Inuit offered this to government as a preamble for an indigenous peoples' section of the Constitution in late 1982. The federal government and one or more Provinces then promoted it. Unfortunately it was replaced by a more ambitious text which yielded no agreement. There could be much value for Australians in having umbrella clauses to set the tone for work with indigenous peoples. Also, the Canadian practice of political accords, used extensively during the constitutional talks, had value in maintaining momentum and focus in talks where early consensus on final wording was lacking. The Canadians also found that hard-line governments and hard-line indigenous factions could never be satisfied but could sometimes be swept along by a mainstream consensus or simply ignored. Another improvisation of the Canadians, pressed by the Inuit in achieving the 1981 package of constitutional amendments which emerged in the Constitution Act 1982, was a commitment to the holding of indigenous-government conferences. This provided a basis and important indigenous security for all the work that followed.

Until 1980-1981 when the Conservatives forced the televising of Parliamentary constitutional committee hearings, governments had managed to keep constitutional matters a closed door matter for experts. The unexpected interest in the 1980-1981 hearings, and the impact of briefs from articulate groups like the Japanese-Canadians and the Inuit, brought a new era. More than 75 amendments pressed by outsiders were ultimately accepted in the package which went to London and brought the Constitution home to Canada once and for all. Part of Prime Minister Mulroney's difficulty has been the leaving aside of indigenous peoples and others like the women's movement who had become part of a more or less public process. Much of the criticism of the 1987 Meech Lake package was precisely the fact that it was negotiated in an all-night session by heads of government with insufficient advice. But the opportunity for innovation remains. Indeed, the Prime Minister has gone so far as to say that 'The alternative to a fundamentally reformed Canada is no Canada.' (Globe and Mail, 22 December 1990, 1) Australians are necessarily part of any constitutional process because they must vote it into effect by referendum. The fiasco of the 1988 draft constitutional amendments in Australia may be a good reason for making constitutional change more accessible to the public at an earlier stage.

The argument is often heard in Australia that indigenous peoples' autonomy is threatening to national unity. In the northern hemisphere's circumpolar lands the opposite has been experienced, namely that persistent problems of disadvantage and cross-cultural relations which really are threatening to social peace are best addressed by indigenous empowerment (Jull 1990a, Jull 1990d).

Internationalism

An emerging phenomenon in indigenous affairs is internationalism. Despite disappointments confronting indigenous peoples at home, international sharing of experience and hopes, joint action for international conventions on indigenous rights, and the movement for ecologically sustainable development have excited many new prospects
and some concrete results. This looks likely to grow rapidly in coming years. For one thing, the conferences, world fairs, Olympics and other events for the 500-year anniversary of Columbus's first voyage in October 1992 will focus world attention on the treatment of indigenous peoples by Europeans. This will not be confined to Europe and the Americas, but will reach Australia as well. Another development is the boost given to the European human rights movement, already increasingly concerned with indigenous peoples globally, by the revolutions in eastern Europe. The first major outcome is likely to be a stricter code of mutual accountability for human rights, notably including minority rights, among European and North American governments as part of a renewed 'Helsinki process'. As one of the three OECD countries (along with Japan and New Zealand) not participating in this movement, Australia will nonetheless be held accountable as a developed industrial country. It would be preferable for Australia to solve problems with its own ingenuity than be goaded by foreign criticism.

The other main area of international attention to indigenous affairs is the environment. The definition of indigenous peoples implies their cultural, social and economic dependence on locales and ecosystems. Canadian Inuit have led work of the international Inuit body, the Inuit Circumpolar Conference, on a 150-page 'arctic policy', a compendium of policy guidelines for virtually every field of human endeavour from art to X-rays (Full 1990a). This is intended to help negotiate improvements in government policies. The 1990 Perth conference of IUCN, the World Conservation Union, dealt with a redraft of the World Conservation Strategy in which an extensive fourth chapter, 'Empowering communities', is devoted to indigenous needs (IUCN 1990). This will become the global baseline on 'sustainable development' for indigenous lands and waters. Recent studies in Australia and Canada have shown how serious are the threats to indigenous homelands and consequent well-being (Coombs et al 1990; CARC 1990). The internationalism of indigenous peoples in Australia and Canada today is motivated by the failure of national policies in the past, and the failure to include indigenous people in national decision-making.

An important dimension of global environment concern has been a redefinition of remote or undeveloped areas. In the past these seemed empty spaces to be filled, places awaiting only expanding modern human development. There are people today who regard Australia's lack of settlement in the centre of the continent as a failure, comparing it unfavourably with the USA. The Mississippi-Missouri basin and soils make such comparisons foolish, but amazingly the idea of 'filling in the map' persists for some. The call for a new view of wilderness and undeveloped regions is found in the Brundtland Report, the final document of the World Commission on Environment and Development (Brundtland et al 1987). The section on indigenous peoples pinpoints Australia and seeks the maintenance of traditional knowledge and use of ecosystems. Canadians in the early 1980s received a good lesson on this in hearings into an arctic gas project when Inuit from Canada and Greenland introduced information, eg, effects of noise from vessel traffic and ice-breaking on the sea mammals which provide Inuit food and livelihoods, of which the scientific community was ignorant. In North Australia the research today into Aboriginal fire management of the environment is a similar case. Meanwhile white experts such as television's 'Bush Tucker Man' mediate indigenous knowledge with the white public.

The argument here is not that every indigenous person is necessarily a natural conservationist, but that indigenous societies over time have acquired knowledge, laws, techniques and lifestyles which maintain a balance with productive environment on which they depend for food and everything else. Once the seamless web of the human-environmental relationship is broken, or additional pressures put on ecosystems, this may end. As Inuit leaders in Canada have pointed out, returning power to the indigenous people for wildlife management is the best way to ensure wildlife survival; but when
governments protect a species, e.g., whooping cranes, and show more interest in restoring fauna than in the well-being of human communities, environmental vandalism may become a blind political protest. In North America, a variety of recent government-indigenous co-management projects for species and now for whole territories have been or are being developed with good results (e.g., Freeman & Carbyn 1988).

The main point made by the Brundtland Report in these matters is that nation-states have a duty to maintain undeveloped and reasonably intact environments, as well as the indigenous societies which inhabit them. The two are inseparable. The report specifies that the indigenous people should be 'empowered' so that while taking advantage of, e.g., health and employment benefits of modern nation-states, they retain power over resource use and development. The manner in which they do this may also be important - that is, the type of systems which indigenous people employ may be counter-productive unless they are suitable (chapter 5, Jull 1986). In Alaska the assigning of aboriginal rights and land ownership to classic American capitalist corporations has had some unfortunate effects, including deeply dividing the indigenous communities (Berger 1985; Maas 1991). In Australia there are now valuable studies being made by social scientists of cultural preferences and capacities of Aboriginal communities for managing their own affairs and for mapping onto the sorts of development and community management schemes which governments proffer (see for example Byrnes 1988 and Tonkinson & Howard 1990).

Another report also highlights the resource base of indigenous societies (whether financial resources or access to traditionally used natural resources) and the obligation of developed countries to make special provision for unique territorially-based societies within their borders. This is the 1984 report of the Sami (Lapp) Rights Committee in Norway, a 'royal commission' in effect (Norwegian Sami Rights Committee 1985). It is often considered a 'state of the art' study of indigenous rights. Its authors and admirers have played a leading role in developing recent international standards for governmental treatment of indigenous peoples, a process which should lead to an international convention on the rights of such peoples around the world. (A survey of the Norwegian indigenous rights experience, including the recent constitutional amendment and new Sami 'parliament', is being published in Australia [Brantenberg 1991].)

Of course, indigenous peoples have their own agendas and their own international organisations. Some of these, like the Inuit Circumpolar Conference (uniting Canadian, Greenlandic, Alaskan and Siberian Inuit), Indigenous Survival International (uniting Indians and Inuit in Alaska, northern Canada and Greenland), the Nordic Sami Council (uniting Lapps of Norway, Sweden and Finland) and the World Council of Indigenous Peoples (uniting Australian, Canadian and many other countries' indigenous peoples, including Latin America's Indians) have been successful in focussing world public and governmental attention on outstanding problems and abuses. They have shown a growing capacity to function as effective participants in international forums. In some cases they have created a new style of international action which does not always appeal to those more comfortable with diplomatic conventions. To date their most effective work has been in international human rights and global environmental monitoring and education.

Conclusions

A main reason for the Canadians opening constitutional talks with indigenous peoples was that the fiction of 'two founding peoples, French and English', had become too ludicrous to bear. Canada's first comprehensive history of national Indian-white relations reminds us how Indians were vital to the fur economy for 300 years, and indispensable allies in war (Miller 1989). It is hard to imagine Canada's successful repulsion of American attack in
the American Revolutionary War and the War of 1812 without the Mohawks and Shawnees, among others.

Australia has a rich and growing scholarly literature on the Aboriginal dimension of white settlement (e.g., Reynolds 1982, 1987). Canada has now initiated a national social science and humanities research program on indigenous self-government and economy with priority funding (SSHRC 1990). Many useful books re-assessing indigenous peoples in the context of Australia's history and society appeared during the bicentenary of white settlement in 1988. Aborigines had much more interaction with whites than was formerly acknowledged, and in the northern half of the continent the indigenous Islanders and Aborigines played an important part in the development and success of the White Man's economy. In north Australia as in northern Canada, indigenous peoples and their homelands remain, and will remain, important and visible parts of the national fabric. In southern regions and cities their problems require a breakthrough in policies and recognition of their special needs.

The Canadian experience will continue to be relevant to Australia. What has been lacking recently in Canada has been political persistence and commitment of necessary funds, rather than a lack of public or political consensus on indigenous needs. The opportunities in the Nunavut homeland of Inuit and the Cree, Naskapi and Inuit regions of northern Québec for strong statements of commitment to indigenous progress through self-government, already preceded by years of work, should appeal to both Canadian and Québec governments. Meanwhile, many different forms of autonomy and self-government, including a broad approach to 'land claims', make Canada a laboratory which can be helpful to other countries.

Environment and indigenous rights are two interrelated problems in much of Australia and Canada. They are historical 'unfinished business' and urgent world priorities. They involve new ways of looking at the world around us and at our own history. They are not passing fancies but permanent additions to the meaning of our culture and civilisation. They must be recognised and addressed in fundamental ways. A renewed Constitution in time for the centenary of the Australian federation in 2001 A.D. is attainable, and a process marked with goodwill by Prime Minister and Premiers is already underway. Australia has an opportunity not only to solve some national problems but also set an example in the world as it did a century ago in social policy. Contrariwise, reforms begun with a strong historical sense would be visibly foolish if they leave out the continent and its indigenous cultures.

The process of an 'instrument of reconciliation' could form the basis of a constitutional measure (Tickner 1990). Certainly a 'psychological breakthrough' in indigenous policy is needed in Australia as a way to signal to Islanders, Aborigines and the general public that a new era in settler relations with indigenous peoples has begun. Constitutional amendments might take the form of commitments to conferences (as in Canada), a general statement of national policy or preamble to an indigenous rights section, or commitments to, eg, indigenous rights to autonomy and self-government. Other measures no less necessary have the attraction of immediacy and perhaps greater ease of achievement. These include the securing of Aboriginal and Torres Strait Islander northern and outback lands, economic resources (eg, Torres Strait reefs) and socio-economic opportunities, integrating these through local and/or regional self-governing arrangements. These issues will become more pressing with time, so why not address them with goodwill before they become critical?

The constant danger in constitution-making is that it may be left to the 'experts'. The general public, indigenous leaders and environmentalists should become interested and
involved as much as constitutional law and history professors. A constitution is a social document in which a people or peoples make arrangements for living together and sharing territory. It involves concessions and benefits all around. The drafting of legal text is the final stage (and no mean art form!), but it must be preceded by social and political consensus. The Constitution is the supreme cultural statement of any country; it is the ideal place for Australians to come to terms with millennia of natural history as well as the mere two hundred years of European habitation.

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CARC, 1990. Arctic pollution: how much is too much? Northern Perspectives 18, 3, Canadian Arctic Resources Committee, Ottawa.


Coombs HC et al, 1990. The Promise of the Land: Sustainable Use by Aboriginal Communities, Centre for Resource and Environment Studies, Australian National University, Canberra.


the American Revolutionary War and the War of 1812 without the Mohawks and Shawnees, among others.

Australia has a rich and growing scholarly literature on the Aboriginal dimension of white settlement (e.g., Reynolds 1982, 1987). Canada has now initiated a national social science and humanities research program on indigenous self-government and economy with priority funding (SSHRC 1990). Many useful books re-assessing indigenous peoples in the context of Australia’s history and society appeared during the bicentenary of white settlement in 1988. Aborigines had much more interaction with whites than was formerly acknowledged, and in the northern half of the continent the indigenous Islanders and Aborigines played an important part in the development and success of the White Man’s economy. In north Australia as in northern Canada, indigenous peoples and their homelands remain, and will remain, important and visible parts of the national fabric. In southern regions and cities their problems require a breakthrough in policies and recognition of their special needs.

The Canadian experience will continue to be relevant to Australia. What has been lacking recently in Canada has been political persistence and commitment of necessary funds, rather than a lack of public or political consensus on indigenous needs. The opportunities in the Nunavut homeland of Inuit and the Cree, Naskapi and Inuit regions of northern Québec for strong statements of commitment to indigenous progress through self-government, already preceded by years of work, should appeal to both Canadian and Québec governments. Meanwhile, many different forms of autonomy and self-government, including a broad approach to ‘land claims’, make Canada a laboratory which can be helpful to other countries.

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APPENDIX

A bibliography of NARU publications 1981-1990

During the decade 1981-1990 NARU has published 68 studies concerned with north Australia. This excludes journal articles, monographs and books written by researchers working at NARU but published by commercial companies such as Coombs's *Return to Scarcity* (CUP 1990).

1981:


1982:


Menghetti D. *Extraction Practices and Technology on the Charters Towers Goldfield*.

Birtles TG. *Trees to Burn: Settlement in the Atherton-Evelyn Rainforest, 1880-1900*.

Powell A. *Culture Contact and Changes in Land Occupation on the Cobourg Peninsula*.


224
1983:


1984:


1985:


1986:


1987:


1988:


1989:


1990:


The six-fold typology mentioned in the preface consists of the following: political studies; economic development; Aboriginal studies; social aspects; demography; and environmental issues. Obviously other classifications of the NARU publications could be used and it is also obvious that placing the diverse publications into mutually exclusive categories is debatable. It should be stressed that many of the publications consist of a selection of papers which again would need to be reclassified — this is not attempted here. Nevertheless, on the basis of this simple typology the following pattern emerges.

**NARU publications by research topic (1981-1990)**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political patterns</td>
<td>33%</td>
</tr>
<tr>
<td>Economic development</td>
<td>22%</td>
</tr>
<tr>
<td>Aboriginal studies</td>
<td>16%</td>
</tr>
<tr>
<td>Environmental</td>
<td>13%</td>
</tr>
<tr>
<td>Social aspects</td>
<td>12%</td>
</tr>
<tr>
<td>Demography</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
</tbody>
</table>

The distribution of the research topics has varied through time. In 1981 and in 1983 only three publications were issued including a guide to Northern Territory research resources (classified as Other). A peak of publication was achieved by 1985 with 11 papers being published. On average, however, between six and seven publications have been produced per year. As expected the pattern of research reflects both the changing research interests of the researchers as well as the different problems which emerge in the continuing development of north Australia.

Clearly, this brief overview of the breadth of research carried out and published by NARU can only give an indication of the continuing research into north Australia. It is anticipated that future research will continue to build on the strengths of this work and develop new approaches which will help to inform the interested lay-person, specialist and north Australia policy making bodies.

To date seven new works have been published by NARU in 1991. They are listed below.


In addition it is anticipated that the following four titles will be published by the end of the year:

Carment, D, *History and the Landscape in Central Australia*.


Moffatt I, *The Greenhouse Effect: Science, Policy and the Northern Territory, Australia*

North Australia has many problems resulting from its remoteness and environment. During the past decade researchers from various institutions including the Australian National University's North Australia Research Unit (NARU) have studied them in relation to development, environmental change, different cultural contexts and shifts in policy and politics.

What impact does mining and pastoralism have on the economy of North Australia? Can tourism be reconciled with conservation in the tropics? What role do models of the economy and sustainable development play in exploring policy making in the Northern Territory? What are the future prospects for political changes for Aboriginal and non-Aboriginal peoples living in North Australia? These questions and themes.

These essays reflect some of the research carried out by researchers at NARU over the past decade. The essays attempt to describe some of the past research and look forward imaginatively to new areas of research which could affect the northern half of Australia. The book provides up-to-date research findings on some important recurrent issues which affect the everyday lives of people living in Northern Australia.