Ministerial Responsibility for Administrative Actions: Some Observations of a Public Service Practitioner

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Failures in public administration can bring costs and injustice in their wake. They can affront the public sense of propriety and good order. If they are sufficiently egregious or their impacts sufficiently widely felt, the public demands blood — someone must be brought to account — but whose blood?

Opposition parties and the leader writers in the press can be relied on to call for the Minister’s resignation ‘in accordance with the Westminster Convention of Ministerial Responsibility’. Equally certainly in modern times, Ministers do not resign unless they have been personally implicated in the administrative failure or impropriety, or in covering it up, and they have lost the confidence of their Prime Minister.

This paper will address changes in the view of Ministerial Responsibility in the light of more sophisticated understandings of the complexity of public sector organisations, the accountability of public servants (particularly Secretaries), changes in average tenure of Secretaries, and the development of Ministerial Offices. It provides some suggestions for good practice in relations between departments and Ministerial Offices in the interests of protecting the accountability chain.

Individual/Collective Responsibility: Dealing with the Former

Traditionally, the Westminster Convention on Ministerial Responsibility had two parts:

1. Collective responsibility — every Minister shares responsibility for every decision taken by Cabinet; Ministers are obliged to guard the confidentiality of business between Ministers in Cabinet; and Ministers must retain the confidence of the Parliament;
2. Individual responsibility — Ministers are individually responsible to the Parliament for actions taken under their authority, including in particular the actions taken by the department for which they are responsible.

Our concern is with the latter part of the Convention - the individual responsibility of Ministers for the actions of those under their authority. This now includes not just the departments of state, but also executive agencies, statutory

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authorities to the extent that the Parliament has not specifically legislated to restrict the Minister’s authority, and staff employed in the Minister’s office. More particularly we are concerned with the corollary accountabilities. That is, those of public servants, including to their Minister and in their relations with their Ministerial Office.

The crudest assertion of the convention of Ministerial Responsibility is that Ministers have a strict, vicarious ‘liability’ to the Parliament for the actions of those under their authority, and that, in the event of failure by one of those under their authority, the appropriate way to purge that liability is by resignation.

It can be seen that this proposition conflates two elements of the Convention. The first is the notion of responsibility for all acts by those under the Minister’s authority. The second is that responsibility requires resignation in the event of an egregious administrative failure even when the Minister otherwise continues to retain the confidence of the House. Neither of these propositions has been historically unquestioned, and the second has certainly not been the basis for Ministerial behaviour in recent years, if ever.

Is there a single traditional view of the scope of individual Ministerial Responsibility? The uncertainty about the precision of the first proposition can be readily illustrated by a quick survey of descriptions in the literature (emphases added):

- ‘The legal responsibility of every Minister for every act of the Crown in which he takes part.’ (Dicey, 1885, as cited in Marshall, 1989)
- ‘The Minister is alone responsible for everything done in his department.’ (Lowell, 1908:192)
- ‘The act of every civil servant is by convention regarded as the act of his Minister.’ (Jennings, 1959:208)
- ‘Individual Ministers also assume a responsibility for their actions and the actions of their departments. In strictly legal terms, such responsibilities are carried by the executive — the Governor-General and the Executive Council — but the practice today is that the Cabinet is dominant.’ (Jaensch and Teichmann, 1979:44)
- ‘The convention of individual Ministerial Responsibility is so imprecise as to provide only the broadest guide to executive conduct.’ (Aitken and Jinks, 1982:89)
- ‘The constitutional doctrine of Ministerial Responsibility is that every member of the Cabinet who does not resign is absolutely responsible for all that is done at Cabinet meetings ... But the individual Minister is responsible for all the acts of his own Department.’ (Bird, 1983:220)
- ‘Conventions of Ministerial Responsibility are open to interpretation by politicians. Its operation varies depending on circumstances and expediency. There is not, and cannot be, a set of clear principles to be objectively applied. Yet Ministerial Responsibility lies at the heart of the Australian system of government because it provides a direct link between the executive, the parliament and thence the people.’ (Davis et al, 1993:79)
• ‘Under the Australian system of representative government, Ministers are responsible to Parliament. This does not involve Ministers in individual liability for every action of public servants or even personal staff. It does however imply that Ministers accept two major responsibilities: first for the overall administration of their portfolios, both in terms of policy and management; and secondly for carriage in the Parliament of their accountability obligations to that institution.’ (Howard, 1998:1)

• It may be improper to think of Ministerial Responsibility for errors as ‘vicarious’ — the responsibility remains direct, provided ‘the leaders may be said to have contributed to the outcome, for instance through setting a general policy direction or allocating a level of resources that made such mistakes more likely to occur.’ (Mulgan, 2002:123)

The earliest of these quotes (Dicey) places emphasis on the responsibility of Ministers for the acts in which ‘(the Minister) takes part’. The latter (Howard and Mulgan) place emphasis on the systemic accountability of Ministers, that is, accountability for the overall administration of their portfolios through policy and management, and on direct accountability for the Minister’s own actions. Those in between talk in terms of responsibility for all actions whether taken with the Minister’s knowledge or not.

Why has the emphasis on accountability for all the actions of departments diminished? What are the implications of the growth of Ministerial private offices? What are the corollary implications for the obligations of Secretaries? We will return to these — but first we will examine the second part of the ‘hard line’ assertion of Ministerial Responsibility: that resignation is the normal and appropriate way to purge administrative failure.

A Note on Ministerial Resignations

Originally, Ministers of the Crown could be punished by an act of attainder, or by impeachment. Today, the only avenue is loss of office. If the requirement is ‘the liability of Ministers to lose their offices if they cannot retain the confidence of the House of Commons’ (Dicey, 1885, as cited in Marshall, 1989), then the decision falls on party lines rather than according to a strict convention. ‘It’s never been the ministerial principle that you resign if something goes wrong in your department’ (Howard, 2001).

Numerous commentators have examined political scandals where the convention has been invoked, and have concluded that strict liability is rarely applied. Neither Westminster nor Canberra has witnessed a significant number of resignations related to responsibility for departmental actions — indeed, there are fewer examples in Australia than in Britain (Marshall, 1989; Page, 1990). There is ‘no succession of clear cases on which to found a convention about individual answerability of Ministers to the Commons in the resigning sense’ (Marshall, 1989:5).
Resignations of British and Australian Ministers have been attributable largely to personal transgressions rather than departmental failures. Even Sir Thomas Dugdale (Crichel Downs) and Lord Carrington (failure to anticipate invasion of the Falklands) were not accepting blame for the faults of others, but for systemic failures under the Minister’s authority (Butler, 1996).

Ministerial Responsibility comes into play well before the ‘sacrificial’ duty to resign - these have been called the ‘informatory’ and ‘explanatory’ responsibilities to report to Parliament and the public, and the ‘amendatory’ responsibility to impose remedies when mistakes have been exposed (Woodhouse, 1994). Failure to explain accurately by covering up or misleading the House, or failure to correct problems when they are known personally by Ministers, are far more likely to encourage calls for resignation than is a simple vicarious liability for actions by the public service of which the Minister had no knowledge or which were not a symptom of overall systemic failures of which the Minister should have been aware.

But even then, the academic observers say, political calculation, not parliamentary ethics, determines who is sacked or forced to resign. Ministers go when they become an embarrassment to their government or a political liability.

An examination of the list of Australian Ministerial resignations since 1972 demonstrates that resignations have seldom been motivated by departmental failure (see Box below — the list excludes resignations due to retirement or appointment to other positions). It must be emphasised that in many of these cases the Minister concerned stood aside and then rejoined the Ministry after clearing his or her name, or after a suitable period had passed to expunge the breach.

It is instructive that not one of these resignations over the past 30 years was because of a failure in the Minister’s department in which the Minister was not personally involved. Fine though the reputation and performance of the Australian Public Service is, not even its most enthusiastic fan would argue that it has been without flaws or failures over this time. Indeed there was even one Inquiry — Review of Commonwealth Administration (Reid, 1983) — entirely prompted by a series of administrative failures. None of the Ministers oversighting the agencies in which those failures took place was obliged to resign.

In short, the second proposition, that resignation is the accepted way in which to purge vicarious responsibility for administrative failure is, and probably always has been, far too ‘absolute’. As Weller and Grattan (1981:202-03) put it:

The test of Ministerial Responsibility is not, and never should be, the number of Ministers who have resigned. That is too crude, expecting far too dramatic a gesture. It is more the regular involvement of Ministers in the activities of the departments, their answerability, however limited, to parliament and the awareness of Ministers of the implications of what is being done. Further, when Ministers fail they are held responsible by the Prime Minister; they may be reshuffled into lesser jobs, have their departments split or be relieved of functions.
## Box: Australian Ministerial Resignations Since 1972

<table>
<thead>
<tr>
<th>Ministry</th>
<th>Minister</th>
<th>Date</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Whitlam Ministry</strong></td>
<td>Clyde Cameron</td>
<td>6 Jun 1975</td>
<td>Refused reshuffle offer</td>
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<tr>
<td></td>
<td>Jim Cairns</td>
<td>6 Jun 1975</td>
<td>Alleged Ministerial irregularities (overseas loans)</td>
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<td></td>
<td>Jim Cairns</td>
<td>2 Jul 1975</td>
<td>Misleading Parliament</td>
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<td></td>
<td>Rex Connor</td>
<td>14 Oct 1975</td>
<td>Misleading Parliament</td>
</tr>
<tr>
<td><strong>Fraser Ministry</strong></td>
<td>Victor Garland</td>
<td>6 Feb 1976</td>
<td>Alleged Electoral irregularities</td>
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<tr>
<td></td>
<td>Robert Ellicott</td>
<td>6 Sep 1977</td>
<td>Cabinet Decision protest</td>
</tr>
<tr>
<td></td>
<td>Philip Lynch</td>
<td>19 Nov 1977</td>
<td>Alleged irregularity in relation to land deals</td>
</tr>
<tr>
<td></td>
<td>Reg Withers</td>
<td>7 Aug 1978</td>
<td>Dismissed following Royal Commission (electoral redistribution allegations)</td>
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<tr>
<td></td>
<td>Eric Robinson</td>
<td>23 Feb 1979</td>
<td>Dispute with PM</td>
</tr>
<tr>
<td></td>
<td>Ian Sinclair</td>
<td>27 Sep 1979</td>
<td>Alleged criminal offences</td>
</tr>
<tr>
<td></td>
<td>Andrew Peacock</td>
<td>16 Apr 1981</td>
<td>Dispute with PM</td>
</tr>
<tr>
<td></td>
<td>Michael MacKellar</td>
<td>20 Apr 1982</td>
<td>Alleged Ministerial impropriety (Colour TV affair)</td>
</tr>
<tr>
<td></td>
<td>John Moore</td>
<td>20 Apr 1982</td>
<td>Alleged Ministerial impropriety (Colour TV affair)</td>
</tr>
<tr>
<td><strong>Hawke Ministry</strong></td>
<td>Mick Young</td>
<td>14 Jul 1983</td>
<td>Alleged Ministerial impropriety (Coombe-Ivanov affair)</td>
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<tr>
<td></td>
<td>John Brown</td>
<td>18 Dec 1987</td>
<td>Misleading Parliament</td>
</tr>
<tr>
<td></td>
<td>Gary Punch</td>
<td>28 Mar 1989</td>
<td>Policy Protest (Sydney Airport)</td>
</tr>
<tr>
<td></td>
<td>Paul Keating</td>
<td>3 Jun 1991</td>
<td>Dispute with PM</td>
</tr>
<tr>
<td><strong>Keating Ministry</strong></td>
<td>Graham Richardson</td>
<td>18 May 1992</td>
<td>Alleged Ministerial impropriety (Marshall Islands affair)</td>
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<tr>
<td></td>
<td>Alan Griffiths</td>
<td>22 Jan 1994</td>
<td>Alleged Ministerial impropriety (Sandwich Shop affair)</td>
</tr>
<tr>
<td></td>
<td>Ros Kelly</td>
<td>27 Feb 1994</td>
<td>Alleged Ministerial impropriety (Sports Rorts affair)</td>
</tr>
<tr>
<td><strong>Howard Ministry</strong></td>
<td>Jim Short</td>
<td>14 Oct 1996</td>
<td>Alleged Ministerial impropriety (conflict of interest concerning bank licences)</td>
</tr>
<tr>
<td></td>
<td>Brian Gibson</td>
<td>15 Oct 1996</td>
<td>Alleged Ministerial impropriety (conflict of interest concerning bank licences)</td>
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<tr>
<td></td>
<td>Bob Woods</td>
<td>3 Feb 1997</td>
<td>Alleged improprieties (expense claims)</td>
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<td></td>
<td>Geoff Prosser</td>
<td>11 Jul 1997</td>
<td>Alleged Ministerial impropriety (conflict of interest)</td>
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<tr>
<td></td>
<td>David Jull</td>
<td>24 Sept 1997</td>
<td>Alleged Ministerial impropriety (Travel Rorts affair)</td>
</tr>
<tr>
<td></td>
<td>John Sharp</td>
<td>24 Sept 1997</td>
<td>Alleged Ministerial impropriety (Travel Rorts affair)</td>
</tr>
<tr>
<td></td>
<td>Peter McGauran</td>
<td>26 Sept 1997</td>
<td>Alleged Ministerial impropriety (Travel Rorts affair)</td>
</tr>
</tbody>
</table>

Source: Tiffin (1999:164); Australian Politics (2002).
The Australian Public Service and Accountability

One of the reasons that strict vicarious accountability for Ministers for the actions of their public servants is no longer emphasised in the public administration literature is that the growth of executive government has led to a very reasonable recognition of the reality of the proper limits of Ministerial knowledge and action. Departments and agencies are now so big, and their activities so numerous and diverse, that Ministers cannot be expected to be intimately aware of all that is done under their authority.

In some senses, the developments in the convention reflect an earlier development in common law.

Vicarious liability is a familiar feature of most systems of primitive law, and early English law was no exception…. The early medieval idea of holding a master responsible for all his servant’s wrongs gave way, with the passing of the feudal system, to the principle that his liability be limited to the particular acts he had ordered or afterwards ratified. (Fleming, 1998:409)

Of course, the modern principle of the employer’s liability for all torts committed by the servant in the course of his employment has marked a move away from the direction which political liability has taken. The law of tort represents a compromise between ‘the social interest in furnishing an innocent tort victim with recourse against a financially responsible defendant; on the other, a hesitation to foist any undue burden on business enterprise’ (Fleming, 1998:410). The modern principle of Ministerial accountability has resolved the tension between the hesitation to expose Ministers to liability for what they cannot be expected to know or control, and the Parliament and the public’s right to hold accountable someone who is in a position to know and control, by increasing the accountability of individual public servants from the Secretary down.

No longer does the public service do good deeds (or bad) behind the cloak of anonymity. There is now a wealth of means by which the public service is accountable to the public and to the Parliament for its actions, while it continues to be formally responsible to the Parliament through its Minister.

Those mechanisms of accountability (as distinct from responsibility) vary. Some are provided for in legislation; others simply flow from a society that is more educated, more pluralistic and better informed. They include the loss of anonymity which has come with Freedom of Information legislation, the capacity for affronted citizens to seek more easily judicial or quasi-judicial review of decisions, the role of the Ombudsman in investigating departmental actions, the growth of the NGO movement and the increasing strength of professional lobbies. All of these have greatly changed the balance of power between individual citizens, businesses and the bureaucracy over the past twenty years — many would argue a necessary counterbalance to the growth of the scope of bureaucratic decision making and its impact on the lives of ordinary people and businesses.
At the same time the Parliament, particularly in the Senate and through the Joint Committee on Public Accounts, has asserted its power to demand information from individual public servants and to examine their actions. Not surprisingly this has reflected changes in the balance of power in the Senate. Since it has become the exception rather than the rule that the Government controls the numbers in the Senate, it has stretched its wings as a house of examination. No doubt at times these examinations are aimed at scoring Ministerial rather than bureaucratic scalps, and some might see them as driven by the pursuit of short-term political advantage rather than a dispassionate interest in good governance, but that is the nature of Parliamentary politics. There is no doubt that the net result has been a huge increase in the transparency of the actions of the public service.

The other change that has been of great significance is the way in which departmental Secretaries are now held directly and personally responsible for the performance of their Departments with their pay and their position being at risk if they fail to live up to expectations. This is a responsibility to the Minister and the Prime Minister, and in that sense provides an avenue for the Minister and Prime Minister to address what might be perceived as administrative failures - to sheet home the responsibility at a level below that of the Minister and arguably at a level where knowledge of and the capacity to address administrative issues more properly resides. Wisely used it provides an additional mechanism for Ministers to meet their responsibilities to the Parliament to address issues of systemic importance in the administration of government policy and programs.

All of these changes in Ministerial and agency head accountabilities have occurred in the period in which I have been in the Service (36 years) and many of them since I was first appointed to department head level in 1984. This is quite a radical rate of change in a system that had, in terms of formal accountabilities, changed little in the first seventy years of the Federation. It was no accident that these changes followed the development of the perception (shared, in my experience, by both sides of politics and so cleverly exploited in Yes Minister) that in the years from the sixties there had been a weakening in the chain of accountability from public service to Cabinet: that more power and responsibility rested with department heads, and, as a corollary, the Minister could not be aware of all work of subordinate officials (Kemp 1988:110).

In short, the exposure to the public and parliamentary gaze, and personal accountability, of officials emerged at least in part as a response to what was seen as a lacuna in the chain of accountability once it was accepted that it was unreasonable and impractical to hold Ministers personally accountable for all the actions of their officials.

A Cautionary Note

There can be no quarrel with the increased accountability that Secretaries face to government, the public and through the media. Certainly it seems to be a bipartisan attitude, give or take some differences of emphasis on issues like...
performance pay. However we should think carefully of the consequences that could emerge if (in a parody of the ‘hard line’ notion of Ministerial Responsibility) Secretaries were to be regarded as absolutely vicariously liable for all the mistakes of their departments.

The increasing practical personal accountability of Secretaries for the administrative performance of their departments places some emphasis on the conditions in which they can be expected to understand the workings of the department fully, and change them for the better. Like Ministers they cannot be expected to know all that is done under their leadership in large agencies. Similarly, changing cultures and performance in large organisations can take years rather than months. While there is much in common across departments at the higher levels of management, there are still considerable differences in the administrative style, culture and critical issues faced by departments reflecting the inevitable differences in their missions, sizes, geographic spread and skills base. Much of what makes a department run well or badly is specific to that department. One factor that is relevant to effective managerial performance by the Secretary is therefore time in position in any given department.

Over the past decade or more there has been a tendency for time in position (as well as tenure as a Secretary) to decrease. Weller (2001:40) has reported that, in relation to patterns of service for department heads over the last fifty years,

the most striking changes are the dramatic decline in the average age of departure and the average length of service. In the 1950s and 1960s an appointee could expect to serve around ten years (as a Secretary) and leave at the age of 60 or thereabouts … over 70 per cent served at least five years, and 37 of the 81 pre-1972 appointments served for over ten years. By contrast only five of the 28 Fraser appointments did … . Only one of the Hawke/Keating appointees has served 10 years.

Of course, if Weller looked at time spent as head of each department (given that some of the longer serving heads lead several departments), the average time would decline further. This is particularly relevant because (with the exception of the Treasury and the Department of Foreign Affairs and Trade) it is unusual for Secretaries to be appointed from a position in the department they head, that is a typical Secretary appointment is a ‘cross posting’ from a senior position in another department (sometimes a central coordinating agency) or from outside the service.

I have used departmental annual reports and the material reported by Weller (2001) to formulate some statistics on time spent as head of each department for Secretaries who have served as head of one or more departments since 1990 (Table 1 and Figure 1). This, after all, is what departments experience (although Secretaries might be more aware of their total time at that level across a number of departments). Including those who are still serving, the mean time spent as head of an individual department is four years, and the mode three years. Excluding those who are still serving (that is, only looking at completed terms), the mean
increases to 4.3 years and the mode to four. Of course the terms of current incumbents are shorter, with the mode being just one year, and the mean 3.1 years.

**Table 1: All Secretaries Holding Office from 1990 — 2002: Tenure by Department**

<table>
<thead>
<tr>
<th></th>
<th>Completed Terms 1990-2002</th>
<th>Incumbents (2002)</th>
<th>TOTAL Completed + Incumbents*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Appointments</td>
<td>56</td>
<td>17</td>
<td>73</td>
</tr>
<tr>
<td>Sum (years)</td>
<td>242</td>
<td>53</td>
<td>295</td>
</tr>
<tr>
<td>Mean</td>
<td>3.8</td>
<td>2.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Mode</td>
<td>11.5</td>
<td>6.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Median</td>
<td>3.5</td>
<td>2.5</td>
<td>3.5</td>
</tr>
</tbody>
</table>

* The number of appointments exceeds the number of Secretaries during this period because some Secretaries served in more than one department over the period 1990-2002.


**Figure 1: All Secretaries Holding Office from 1990 — 2002: Tenure by Department**


It is difficult to be clear on whether this experience is systematically different from the private sector, where it has been conventionally argued there is closer scrutiny of Chief Executive Officer (CEO) performance and a greater accountability for the organisations’ outcomes. An examination of the literature on CEO turnover in the private sector suggests that there has also been a reduction...
in typical tenures, but surprisingly that the mean private sector CEO tenures might have been longer than for department heads over the past decade. Suchard et al. (2001:13) report on a sample of 93 of the top 150 listed firms in Australia as at 1996 (approximately the middle of our data set). They report a mean term as CEO of 5.98 years (but with a high standard deviation which suggests significant skewing), and a median of 4 years. However, one significant difference is that the median total period of employment in the organisation prior to appointment of the departing CEO was 20 years, while that for the replacement as CEO was 18 years. This is in contrast with Secretary appointees who typically have much less experience of the organisation they are to lead when appointed (although this is usually balanced by senior experience in one or more other agencies).

A recent survey published by Lucier et al. (2002:42) suggests that for private sector CEO’s in the world’s top 2500 organisations leaving their position on a normal rotation, their time in job had on average ranged from 10.8 years in 1998 to nine years in 2001. Those leaving for performance related reasons had served on average between seven years (1995) and 4.6 years (2001). It would be fair to note that with falling stock markets in the last two years, rotations have shortened.

Similarly Professor Fred Hilmer, in commenting on change management at the top, has often pointed to the example of Jack Welch at General Electric where it was six years before he had results that the market had confidence in (see for example, Hilmer quoted in McKew, 2001:44).

Of course, it is a truism that the management needs of the private and public sectors differ. Public sector organisations differ in that they have a unique ‘duarchy’ at the top — a Secretary who is nominally a CEO for the purposes of the management and leadership of the organisation, but a CEO under a Minister who has overall constitutional and strategic responsibility. This is a relationship very different from that between a CEO and the chair of a board for a public company. Similarly Ministers and departments are judged in a very different way from companies. And Secretary positions — in part because of the unremitting transparency and accountability — are very hard work. To my personal knowledge, not all Secretaries offered a full five year appointment or reappointment have been prepared to take the full term. So we should expect differences in tenure.

Nevertheless, balancing the requirements for accountability in the short run and good performance by departments in the long term should give some weight to providing incentive for Secretaries to pursue long term organisational renewal, as well as managing the core short term risks as they emerge.

**Ministerial Offices**

A new, or rather increasingly important, link in the accountability chain is the enhanced role of Ministerial Offices¹. Since the 1984 public service reforms,

¹ This section draws on material published or in preparation by the Australian Public Service Commission particularly Podger (2002).
Ministers have been able to appoint political advisers to their private offices. We have effectively developed a Canberra model of the European cabinet system to support Ministers. This has many advantages. It has, for example, reduced pressures that otherwise might have emerged to politicise appointments to the senior Public Service. Similarly, it has ensured that Ministers have access to advice that is aware of political sensitivities and sympathetic to and knowledgeable about their party position. Where relationships are professional between the Office and the department and each recognises the other’s role and skills, the result for Ministers is a greatly enhanced level of support. However, members of Ministers’ offices are not accountable to the Parliament in the same way as public servants — indeed the relationship with the Minister and Parliament is much closer to that which might have existed in the pre-Northcote-Trevelyan civil service. Minister’s staff effectively serve at pleasure, and can be (and in some cases have been) held accountable for a poor outcome for the Minister and dismissed as a result.

However, there have been a number of cases — inappropriate Ministerial travel payments, road funding, and the children overboard incident — where commentators have focussed on the relationship between departmental and office roles in supporting the Minister.

Good practices in relationships between departments and Offices can ensure that the accountability chain is kept strong and effective. They are based on sound common sense, and are designed to protect some core principles:

- It is to Ministers, through their Secretary, that departmental officers are responsible (subject to any other requirements set out in legislation)
- In all circumstances, public servants are required under the Public Service Act to be accountable, to comply with the law, and to be apolitical, impartial and professional
- Proper responsiveness to the Government includes the obligations of frankness, honesty and comprehensiveness, and accuracy (subject of course to timeliness).

Written advice on matters of significance, including where it is provided in electronic form, should be formally addressed to the Minister, leaving it to the Office to manage the workflow to the Minister. Recommendations should be clearly addressed to the Minister not to Advisers, and should be provided in a form where the Minister is able readily to indicate the nature of the decision provided. In those rare circumstances where a departmental officer has a concern that a response to advice, or a request has the full authority of the Minister, then that question should be raised with the Ministerial Adviser first, and if doubts persist, with the Minister’s Chief of Staff. In the ultimate, the Secretary should raise the matter with the Minister if concerns continue. Similarly the Secretary must raise important matters with the Minister personally if he or she is unsure that the advice has reached the Minister.
Again, it is good practice for Secretaries normally to be involved personally in discussions with the Minister (or in the formal written advice loop for those Ministers who would rather deal on paper) on major policy issues. In some circumstances this might not be possible, or on particular issues other arrangements might be made (it is not always possible to judge whether policy choices will turn out to be of major significance, and Secretaries should not aim to be an exclusive source of advice). But if this is so, it is important that the appropriate senior staff and the Secretary are kept informed. Departmental officers have a duty to keep their Secretary informed of issues that are likely to be of particular sensitivity or significance. As a matter of normal courtesy and teamwork, the Chief of Staff and the Secretary would similarly keep each other informed.

It flows from all of this that Ministerial staff do not have any executive power or other legal authority to direct APS employees, but in a professional and cooperative arrangement they can provide early advice about the Minister’s policy leanings. This can be taken into account in advice provided by the department, but of course it does not overtake the obligation for comprehensiveness, accuracy and timeliness. At the heart of a good working relationship is a mutual respect for the different roles of the private Office and the department. One is there to serve the Minister’s political priorities and needs, the other to deliver the Government’s programs and provide policy advice in accordance with the values and obligations set out in the Public Service and Financial Management Acts, and any other relevant legislation. It can be a very rewarding relationship, and if these simple principles of good practice are followed, the accountability chain is not broken.

Conclusion

Individual Ministerial Responsibility is not a myth. Every Minister I have worked for has felt it powerfully and personally. But it is a much more pervasive and subtle concept than the leader writers in the press would often like to have us believe. Ministerial Responsibility is a much more positive concept — it is about responsibility to the Prime Minister and Cabinet for strategic political leadership of the portfolio, about responsibility for providing policy guidance to their department, about explaining policy to the people and Parliament, and about ensuring the department’s systemic ability to do its job and demanding action if it is failing. It is not about being accountable for every individual departmental failure, irrespective of Ministerial knowledge or involvement.

This more dynamic view of Ministerial Responsibility has evolved over the last 30 years in parallel with the evolution of the accountability of the Public Service. The corollary of focusing Ministerial Responsibility on strategic and systemic performance has been focusing accountability for departmental actions — operational and policy - much more sharply on Secretaries and individual public servants. Over the period that the focus on Secretaries’ performance has increased, their tenure in post has significantly reduced. Time in office now might be less than is typical in similarly sized and complex private sector organisations.
The reasons for these changes in tenure are complex and reasons for turnover are varied, but accountability for performance is no doubt one of them. There is also no doubt that there are advantages for ‘joined-up government’ in the broad experience across agencies that many department heads now have. However, careful thought also needs to be given to providing Secretaries with the incentive and scope to manage for organisations that are excellent in the long haul as well as low risk in the short.

Ministerial Offices, on the scale on which they now exist, add a new element to the responsibility/accountability chain. A number of events over recent years (Ministerial travel, road funding and the children overboard affair) have focussed attention on the role that they play. It is not appropriate for a serving Secretary to comment on how the private Office should account for its actions, but there is much that simple good practice on the part of the Public Service can do to ensure that the accountability chain is not tarnished or weakened.

References


Howard, J. (2001), The Australian, 14 February.


Public Service and Merit Protection Commission (2001), *Serving the Nation: 100 Years of Public Service*, Canberra.


I would like to thank Andrew Bray, Stephen Powell and Nicola Rivers for their assistance in researching and editing this article. I am also grateful for valuable comments provided by two anonymous referees.
Institutional Design for Biodiversity Conservation

Harry Clarke

In this paper we examine when it is that private institutions can be relied on to conserve biodiversity and when, alternatively, public institutions are preferable. Circumstances are also described where regulated private provision or ‘club good’ institutions are appropriate and where public biodiversity resources should be corporatised by employing private managers who respond to commercial incentives subject to regulation.

Institutional choices partly determine incentives to conserve. Property-right arrangements are an important facet of institutional design. Private property results when residual claimant rights to the use of biodiversity property reside with private individuals. If residual claimant rights accrue to the public sector, the property is public. On public land, a further aspect of institutional design concerns how managers are encouraged to respond to commercial incentives.

Biodiversity measures the ‘variety of life’. Specific biological definitions focus on genetic, population, species or ecosystem diversities. For the most part this paper concentrates on species biodiversity. The general concept of biodiversity reflects a wide set of natural resource attributes whose relative importance is subject to disagreement and uncertainty at any given time, and for which social valuations are likely to change through time. Land will have various plant and animal populations living on it and is subject to more-or-less passive use by biodiversity observers and other recreational users. Land also provides existence, option and other non-use values. Thus an important component of biodiversity consumption involves individuals passively observing biodiversity or realising non-use values from knowing that biodiversity is conserved. The production of biodiversity refers to those costly resource uses that assist in biodiversity preservation or prevent its decline. Land can also be used commercially for production or urban use. In this paper activities producing biodiversity benefits are defined to be conservation while activities providing alternative products are other production. Both dedicated conservation provision (for example, pristine forests with wildlife) and the dedicated provision of ‘other production’ are a priori possible. So, too, are mixed systems where biodiversity is protected on private agricultural or urban land.

There are several reasons for pursuing conservation on private as well as public land.

- Much land is privately owned or subject to leasehold contract. In Australia 60 per cent of land is private (Aretino et al., 2001). Often this land is
biodiversity rich or provides crucial habitat or relic populations. Given complementarities between biodiversity and the production and consumption of other outputs, the delivery of ‘other production’ need not entirely exclude conservation outputs.

- Public land for conserving biodiversity occupies large areas and is subject to high aggregate management costs. These costs limit the pursuit of conservation by the public sector. In some cases if land can be jointly used for conservation and other commercial uses, conservation objectives can be advanced at lower cost than would occur with specialised pursuit of biodiversity conservation alone.

- Conservation demands grow relative to GDP as society becomes wealthier if, as is supposed here, the environment is a luxury good. (This is plausible folklore and is provisionally accepted but note that Kriström and Riera (1996) provide evidence that the environment is a normal, non-luxury good).

- The intensity of conservation effort has increased over recent years as conservation biology shifts from typological to populational perspectives: conservation biologists point out that sub-species and population-based differentiations drive natural selection so they urge targeting of sub-species and local populations rather than species per se: see Meffe et al. (1997:67-68). The main scope for such increased effort is on private rather than public land partly because limits to public land supplies have often been irreversibly established. In Australia the National Strategy for the Conservation of Australia’s Biodiversity (Environment Australia, 2001) recognises a need to encourage conservation on private land as a key component of national conservation efforts.

Private landowners will often undertake conservation effort partly because of public regulations and incentives to conserve and partly because of their own conservationist values. In addition, there are reasons for seeking private involvement in managing biodiversity on public land using incentive contracts. Motivated by contracts that give them part of any increased return they realise from biodiversity management, private managers on public land may be motivated to:

- Achieve cost economies. For example, by improving labour management, making more disciplined use of capital, communications and road improvements and making more focused conservation efforts. In some cases pursuit of biodiversity goals can be integrated with generating ‘other production’, yielding cost efficiencies.

- Introduce innovatory practices into biodiversity management. Examples of such practices include the control of feral intruders, the use of improved fencing or the marketing of biodiversity to facilitate ecotourism. Finally, managers may be motivated to provide complementary consumables (camp
sites, board walks in wetlands and so on) to enhance provision of recreational use values.

Contracts that realise these objectives without unsought adverse effects are not simple to write. A key issue is ignorance of biodiversity production functions by both public and private managers. This acts as a barrier to writing mutually acceptable and enforceable contracts. In addition, there are information asymmetries in managing biodiversity that create moral hazard by managers. In particular, inappropriate cost cutting and the inappropriate provision of environmentally damaging complementary consumables can detract from the quality of conservation outcomes. These difficulties can limit the scope for using private incentives.

These concerns are addressed in this paper. In the next section unregulated private provision of biodiversity is examined. The key requirement for this structure to work well is that there exist nonattenuated property rights on biodiversity. Rivalry is not a necessary prerequisite for private provision if ‘club goods’ structures can be utilised and if there are motives for governments to foster such structures. Nor do externalities destroy the possibilities for private provision if such externalities can be addressed with corrective economic instruments. In the following section the alternative, extreme public provision institution is examined. This can be an optimal management structure when property rights are attenuated. The paper examines how such public biodiversity resources should be managed and, in particular, whether traditional public managers or corporatised management structures using incentive contracts should be used. This choice depends on moral hazard, whether non-contractible cost reductions reduce quality, and on the importance of innovation in management. The last section summarises the conclusions.

**Private Biodiversity Supplies**

The motive for private ownership is to reduce conservation costs and to improve conservation outcomes by creating incentives for innovation. Private owners have incentives to cost-cut and to pursue innovatory practices since, with appropriate contracts, they reap rewards from these efforts. Such incentives work provided competitive imperfections such as monopoly power and scale economies do not arise (we here assume the absence of these difficulties) and provided nonattenuated property rights prevail. Nonattenuated property rights are:

- **Complete.** Property rights on biodiversity (and other production) must be fully specified with ownership defined without uncertainty at negligible contracting cost.
- **Exclusive.** Rewards and penalties resulting from buying or selling biodiversity (or other production) must accrue directly to resource owners.
- **Transferable.** Property rights on all resources must gravitate by free exchange to their highest-valued use with negligible transactions costs.
- **Enforceable.** Property rights must be completely enforced at negligible policing cost.

In our analysis of the case for private ownership a distinction between dedicated and mixed modes of biodiversity provision is highlighted because biodiversity conservation is sometimes seen as necessarily substituting for production or consumption of other goods. Given property rights, whether biodiversity production should completely displace the production of other goods depends on the marginal rate of transformation between biodiversity and the other goods. Whether biodiversity substitutes for consumption of other goods depends, in turn, on marginal rates of substitution in consumption between outputs. Moreover, with strict complementarities in consumption (or production), even should conservation be a substitute for production (respectively, consumption) of other goods it will be socially desirable to diversify by providing a mix of biodiversity and other outputs.

![Figure 1](image-url)
Figure 1 describes four versions of a single consumer, single firm economy that uses land to produce ‘other production’ (gunk) and biodiversity (biod). Indifference curves I describe consumer preferences while PP shows transformation curve possibilities between outputs. Non-attenuated property rights are assumed and private producers are assumed to be well-informed about gunk and biodiversity production processes. In case (i) I are convex and PP concave so that joint production of both gunk and biodiversity (defined by the common tangency of PP and I) is socially efficient. Achievement of this equilibrium can be decentralised using competitive markets where producers rely on profit signals and consumers maximise utility. Case (ii) shows that, with certain concave I and concave PP (due, for example, to economies of scale in either type of production), efficiency can call for zero biodiversity production. While alternative concave tastes and convex technologies are consistent with interior biodiversity and other outputs, such equilibria, even if they arise, are not achievable in decentralised markets: planning is essential. Case (iii) shows that lack of consumption complementarity can be offset by strong enough production complementarities. Case (iv) illustrates a case where lack of production complementarity (no ‘jointness’) is offset by consumption complementarity. Equilibria in cases (iii) and (iv) are achievable using market incentives.

Thus with nonattenuated property rights, the social optimality of mixed provision of biodiversity and other production is efficient because of complementarities between either the production or consumption of biodiversity and other goods. Joint provision is likely to be inefficient only if biodiversity and gunk are both production and consumption substitutes.

Evidence of complementarity between biodiversity consumption and other goods is seen in consumer demands for ecotourism, gardening, pet keeping and generally in what are strong community desires for conserved biodiversity. Wilson (1984) argues humans experience biophilia, a genetically-based need for exposure to life and lifelike processes. Others see such arguments as romantically idealising nature with Henry (1974), for example, recognising a ‘Japanese engineering and planning’ view of the world where conditioning switches preferences away from any need for nature. Generally the claims concerning production complementarities between biodiversity and other goods lie at the heart of conservation debates. The ‘green lobby’, and indeed broader political constituencies, see biodiversity conservation as essential for sustainable development. Thus in agriculture, biodiversity delivers pollination, waste recycling, nitrogen fixation and even, according to the Gaia hypothesis in Lovelock (1988), homeostatic equilibrium services. At the practical level, the conservation of biodiversity attributes such as tree cover, insectivorous birds, water and soil quality are increasingly seen as important issues. Again, some see claimed production complementarities as green romanticism. But even if it is doubtful whether a particular species loss, such as a bird species, destabilises an ecosystem, if all insectivorous bird species are extinguished then insect attack may become more common causing degradation and instability.
With production or consumption complementarities, joint provision of biodiversity and other goods is efficient with supplies reflecting social valuations of outputs. Moreover, with non-attenuated property rights, these social valuations are reflected in market prices.

**Marketability of biodiversity**

The above analysis assumes that property rights are non-attenuated. With complete and exclusive property rights, biodiversity is conserved by markets given plausible assumptions on complementarities in tastes and technologies. Clearly, however, the conditions under which property rights are non-attenuated are restrictive.

Completeness and exclusivity require that biodiversity be traded in markets. This is typically not so for endangered biodiversity subject to conservation effort. Trade in endangered species is usually illegal. In Australia, domestic sales for commercial reasons are prohibited with restrictions on exporting most native flora and fauna under the *Wildlife Protection (Regulation of Exports and Imports) Act 1982*. Some wildlife (kangaroos, brushtail possums, muttonbirds, wildflowers) is commercially exploited and some (crocodiles, clams, fish, prawns, crayfish) is captive bred or ranched for profit (Industry Commission, 1998: chapter 15) but these examples are a minor part of aggregate biodiversity and the species cited are generally so abundant they do not need to be subject to additional focused conservation effort.

The case for legitimising trade in biodiversity reflects the view that, by valuing biodiversity, landowners have improved incentives to conserve it. Such incentives work when biodiversity has a high use relative to non-use value. This is so if harvested species provide marketable protein, if wildflowers provide a usable input in home decoration, or if charismatic flora and fauna have *in situ* or *ex situ* ecotourism values. Then, ignoring ‘animal rights’ and other objections to exploiting use values, commercialisation policies in these cases remove a prohibition on trade that allows markets to work. Such policies do not ensure non-extinction, however. Indeed, if the discount rate is high relative to a population stock’s growth rate at low stock levels, and harvest costs at low stock levels are not excessively great, then extinction can promote economic efficiency: see Clark (1976). This is significant problem if external costs arise because of extinction.

Most conservation objectives however do not mainly involve pursuit of use value. Rather, there is pursuit of non-use values (existence, option values) for which property rights are non-enforceable because excludability does not obtain. An example might be the conservation of non-charismatic flora and fauna. Legalising trade in charismatic flora and fauna realises at best only easily achieved conservation objectives. In addition, with respect to endangered species, Clarke

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1 A referee points out that this statement must be qualified with respect to crocodiles. Both salt and freshwater crocodiles were hunted in the post-war period to one per cent of their original levels. Commercial harvesting of species encouraged landowners to sustain crocodile habitat and this became part of the conservation effort.
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(2000a) shows ‘second best’ issues limit possible gains from trade. Permitting trade in captive bred species can produce poor conservation outcomes if there are high costs of preventing species poaching in nature.

Externalities and nonrivalry

The case for using private property institutions for conservation is not limited by the presence of externalities or consumption nonrivalry. Externalities can be corrected by economic instruments (Pigovian taxes or subsidies) funded from the public purse. Providing a full subsidy to biodiversity suppliers supplying unpaid for social benefits enables markets to deliver efficiency, while schemes seeking economies by paying less than the full social value of biodiversity promote inefficiency. Full subsidies can reflect merit good and intergenerational objectives. Merit good arguments can be motivated by supposing policymakers make the judgment that the community undervalues or is incapable of valuing biodiversity.

Indeed, even non-price tools can surrogate for economic incentives if: (i) there are high costs of monitoring inappropriate biodiversity use; (ii) optimal ‘other’ production is close to zero so a ban is appropriate; and (iii) if emergencies arise where uncertainty about costs and benefits cannot be resolved in time to avert major losses of benefits.

Nor is consumption nonrivalry an inevitable difficulty given excludability. This is important since observing biodiversity as part of an amenity consumption experience is a nonrival activity. When demand is high, congestion and environmental damage arise from use but, short of this, pursuit of non-use values, such as observing wild species, is nonrival. Efficient provision with nonrivalry then requires zero pricing of any ‘observation’ since marginal costs are zero. Private firms will underallocate land to such activities so that biodiversity is then underprovided. This motivates a standard case for public provision based on market failure. Optimal provision equates accumulated marginal valuations of biodiversity with marginal costs of foregoing other production — the Bowen-Lindahl-Samuelson rule (Laffont, 1988:37; Clarke, 2003).

Alternatively, however, biodiversity can be delivered as a privately (or publicly)-provided club good — Sandler and Tschirhart (1980) provide a discussion of club goods. Those deriving marginal benefits from biodiversity subscribe an amount sufficient to purchase targeted conservation assets outright and then supply it among themselves as a club good at zero observation cost. The purchase will be made if the discounted consumer surplus accruing to members with purchase, which determines their willingness-to-pay, exceeds the resource cost. Since private interests can operate such clubs, public management is not an inevitable consequence of nonrivalry. Four comments on club good solutions are appropriate:

• User pays arguments favour such schemes over public provision since those deriving benefits pay for them. This is the benefits principle of public finance.
Hobbyists with willingness-to-pay for a stake in a ‘biodiversity club’ often have specialised conservation knowledge from which they derive utility. Fostering clubs can facilitate effective management at low community cost.

Efficient club good solutions are consistent with external conservation benefits. Externalities can be addressed by subsidising capital or ongoing management costs. In Australia, such subsidies might be *Natural Heritage Trust Grants*.

With ongoing costs of management or congestion costs, as there should be in an efficient club, there should be both usage-specific and fixed membership fees. If land purchasers seek to minimise their costs subject to meeting certain specific conservation and non-congestion objectives they will typically trade off these attributes against each other. This implies an optimal, non-zero, congestion level.

There are several examples of ‘club good’ structures in Australia. Dryland nature reserves such as Gluepot and Newhaven Stations, owned by the ornithological group *Birds Australia*, are private club goods. They offer the option of a fixed membership fee that, upon payment, provide unlimited access rights to observing rare dryland birds in the reserves. *Earth Sanctuaries Ltd* is a private firm attempting to conserve biodiversity (mainly mammals) with some of the character of a club good. It provides investors with negligible dividend returns but provides non-pecuniary returns to those with conservation interests. For information about ESL see their *Annual Report 1999, Earth Sanctuaries Limited* (1999) and Productivity Commission (2001). ESL has a club good character at least in the sense that a 20 per cent discount is offered to shareholders who consume its services. The Western Treatment Plant at Werribee in Melbourne is a public club good. It provides access to birdwatchers for a biannual fee of $70 and thereafter entry is free. Zoos such as the publicly-owned Melbourne Zoo are also public club goods. *Zoo* users are offered the options of annual membership or a fixed entry fee. Users then may wish to visit only once or very occasionally. A fixed fee leaves the club good structure intact with low-interest members given a self selected price discrimination option at a lower membership fee.

**Public Biodiversity Supplies**

Arguments for public provision are traditionally rationalised in terms of lack of property right completeness due to imperfect information or to consumption non-excludability. These attributes make it difficult for conservation agencies to regulate private institutions effectively, so as to advance social conservation objectives.

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* Zoos are becoming increasingly important in global conservation of rare animals. It is thought that about 800 species of mammal, 800 species of birds and 400 species of reptiles would disappear if there were no captive breeding programs of the type operating in zoos (Spellerberg and Hardes, 1992:52-56).
Non-Excludability. Strict non-excludability, or high costs of enforcing excludability, are a motive for public provision of biodiversity. The consumption of much biodiversity is non-excludable because, in aggregate, it is prohibitively expensive to restrict access to the large areas of land necessary to conserve the wide variety of biota existing in nature. To compound such difficulties, while flora is sedentary much fauna is locally or even internationally migratory which increases problems of limiting access (Clarke, 1999; 2000b). Non-excludability means private markets under provide socially desired biodiversity conservation.

Moreover, as mentioned, partial enforcement of access rights that provides local excludability may be counterproductive for ‘second best’ reasons. Restricting access to biodiversity by fencing and charging entry fees becomes non-viable if neighbouring areas, having the same biodiversity values, are consumed as open access resources. Suppose, for example, that fire risk can damage biodiversity that is subject to inevitably unregulated access. It may then be preferable to provide free access to regulated, supervised biodiversity conservation sites if pricing to reflect fire risks on these sites provides incentives for more damaging, unregulated illegal access elsewhere. Socially optimal access regimes have an ‘all or nothing’ character. The incentives are to either promote excludability on all such resources or to do it on none. The difficulty is to promote excludability on all resources without inducing large enforcement and monitoring costs.

Viability of private conservation operations can be enhanced if there are substantial transport costs of accessing competing open access resources or if managed resources involve provision of goods complementary to biodiversity (camp sites, food, accommodation, reduced search or access costs of viewing flora or fauna). Of course provision of such complementary goods may reduce the authenticity of a biodiversity consumption experience.

Efficient public biodiversity supplies are defined, as before, by the Bowen-Lindahl-Samuelson ‘public goods’ rule. However, this rule is difficult to implement for particular candidate conservation projects, such as those dedicated to conserving particular species, if community knowledge of biodiversity values is low or misinformed. More plausibly, communities will have general preferences for biodiversity conservation that are revealed at the ballot box. These preferences drive tax-financed public expenditure on conservation that are allocated by politicians who reflect on the public appeal of such projects and the views of scientists with specialised knowledge of conservation needs. This can be an informed equilibrium that reflects scientific knowledge of conservation needs and also reflects conservation preferences.

3 It might be argued that access to selected sites could be priced and then hefty legal penalties imposed on illegal access to other sites. This works if policing and enforcement costs are low. These costs can be made arbitrarily low by making penalties for infringement high enough although there are well-known ‘marginal deterrence’ arguments against very high penalties. In addition, since biodiversity resources have often been accessed at low (or zero) costs in the past, draconian penalties on illegal access now are unlikely to receive community support: see Clarke et. al. (1993), Clarke (1997).
Incompleteness. Completeness of property rights requires that information about ownership of biodiversity be perfect and shared by all. This is seldom the case for endangered biodiversity resources subject to conservation effort. The definition and distribution of such biodiversity is usually uncertain and provisional. Moreover, the knowledge of biodiversity that does exist and of appropriate conservation effort is asymmetrically distributed between biodiversity managers and conservation planners creating potential agency issues.

Public good issues and property right incompleteness provide a case against private provision in the absence of feasible regulations or contracts to deal with such problems. If regulations or contracts can be designed which ensure socially desired provision then private provision remains possible. Then landowners can carry out conservation or other activities and secure a return that reflects their ability to realise the social objectives that are embodied in regulations or contracts. Our immediate concern is to question the feasibility of such regulations or contracts.

Regulations and Contracting. A rationale for public provision of biodiversity stems from difficulties of designing regulations and contracts that drive sound conservation outcomes. Biodiversity is difficult to even define let alone to incorporate into a regulation or contract: indeed Gaston (1996:1) characterises biodiversity as a pseudocognate term since different users of this concept often have distinct views of what it means but act as if others shared their individual view. There are moral hazard difficulties of using private self interest to advance biodiversity objectives if policy authorities, on the one hand, and landowners or project managers, on the other, hold divergent objectives or have different information.

When might the public sector outperform regulated private firms in advancing biodiversity objectives given contracting difficulties? There are three aspects to this question: (i) defining and valuing biodiversity, (ii) coordination issues and (iii) quality contractibility issues. These are now discussed in turn.

Contracts and the identification and valuation of biodiversity

If there is no difficulty in identifying and valuing biodiversity, then design of conservation regulations on private land and design of incentive contracts for managing public biodiversity involves, in the main, specifying such identifications and valuations. Resources with very high conservation value will have their exploitation restricted by regulation or by contract. With respect to conservation on private land, given such identifications and valuations, biodiversity property rights will be allocated by one of two possible efficient Coasian assignments. Property rights can be assigned to society with landowners then charged the price of utilising biodiversity. Alternatively, property rights can be assigned to landowners with society compensating landowners for not using the biodiversity whose conservation is sought.
By the Coase theorem, each of these latter assignments is efficient\(^4\). Which property right allocation should be made? If most amenity values provided by conservation accrue to society as a whole at a private cost to the landowner then the user-pays principle (or benefits principle of public finance) suggests assigning rights to the landowner. This sometimes also reflects historical circumstance and popular perceptions of where rights lie.

The alternative assignment of rights to society as a whole offers lower, real-politic chances of realisation. This view ignores uncertainty in identifying and valuing conservation assets. These valuations will be stochastic and evolving through time: see Clarke & Reed (1990). Moreover, the viability of conservation endeavours and the quality of conservation outcomes depend on managerial effort. Making high effort is costly in terms of work disutility but low effort is socially costly in terms of foregone production. Moreover, this effort can only be observed by conservation authorities at significant cost. Outcomes conditional on effort have a random environmental component that motivates opportunistic behaviour among managers and moral hazard.

Compensation to conservation managers must be adequate to reflect these uncertainties. Risk averse managers must be paid enough to offset the chance that resources being conserved may eventually have low social value. A fixed component of compensation must also compensate managers for the chance that random environmental circumstances may adversely offset conservation efforts resulting in low eventual rewards. Conservation managers cannot be paid only a fixed reward, since incentives to provide effort are then eliminated as in standard principal-agent problems (Moyle, 1998; Milgrom and Roberts, 1992).

Inevitably, regulations and contracting will require monitoring by conservation agencies. Loose and changing conservation objectives can, at best, be formalised in an incomplete contract or by provisional regulations. Then, given selfishness, individual managers will have incentives to shirk and landowners will have incentives to avoid regulations. Monitoring the achievement of conservation objectives can foster favourable ‘reputation’ effects if management contracts are made subject to renewal or if it is made clear that regulations can potentially be more intensively applied. Penalties can be imposed for non-achievement of specific contract objectives while poor performance with respect to non-contractible quality objectives or unregulated biodiversity characteristics can be dealt with either by non-renewal of contract (or threat of non-renewal) or by intensified future regulations (or threat of such).

That monitoring is expensive is a reason for seeking decentralised control. Inexpensive monitoring involves observation primarily when contracts are awarded. A simple private monitoring scheme then might involve awarding leasehold rights to own or manage land with lease renewal being subject to achievement of biodiversity objectives. This has not been how leasehold

\(^4\) Aretino et al. (2001) are confused on this point and seem to misunderstand the Coase theorem. They favour ‘impacter pays’ property right assignments using arguments that mix ‘efficiency’ and ‘equity’ objectives.
agriculture in Australia has been managed. Australian leases have been very long-term with emphasis on destroying rather than conserving biodiversity by encouraging clearing. Recently, sustainable development criteria have been inserted into lease contracts. This can be taken further by employing shorter leases and still more specific biodiversity objectives.

When requisite monitoring costs are very high and incentive design issues complex, there re-emerges a case for dedicated public conservation. Private ownership with regulation and public ownership with incentive contracts are then inferior to public ownership with public management.

Coordination issues and contracting

Coordination issues create specific contracting difficulties for two reasons: there are relations between distinct biodiversity types at a given location and between conservation activities at different locations.

Species interrelationships can be so complex and crucial for ecosystem stability that ecologists often advocate conservation of habitats, ecosystems or ‘communities’ rather than sets of species (Meffe et al., 1997:chapter 8). This can create regulatory and contracting difficulties. So-called keystone species can have a disproportionate impact, relative to their abundance, on community structure. These species may not comprise charismatic fauna but might, for example, include mycorrhizal fungi that enhance a plant’s ability to extract nutrients from soils. Such species require specific management effort of identifying and maintaining symbiotic mutualisms. Other management issues include problems with invasive species and the possible overabundance of certain species populations and consequent arguments for culling. Managing complex ecosystems can require inputs of training and experience in conservation biology that are difficult to elicit using a simple incentive contract. With enough complexity, dedicated public sector management can again become appropriate.

In addition, conservation is undertaken in physical space as emphasised in the biogeography theory of Harris (1987). Extinction rates are higher in small ‘disconnected’ islands of habitat so connected habitat corridors need to be maintained if extinction risks are to be minimised. In addition, migration of species may call for coordinated conservation of habitat in different locations (see Clarke, 2003). Private markets and regulations are poor ways of achieving coordination so public sector management may be optimal for geographic reasons.

Non-contractible quality issues

Incentive contracts seek cost efficiency and innovation. With incomplete contracts, however, cost cutting can result in non-contractible biodiversity quality losses. Schleifer (1998) sees four reasons for avoiding incentive contracts with private managers:

(i) When cost reductions lead to significant non-contractible quality deterioration. With respect to biodiversity conservation, cost savings can be
realised by sacrificing difficult-to-define aspects of environmental quality such as economising on research or on the conservation of non-charismatic biodiversity. In this case, the public sector can become a more efficient provider because its employees are not motivated to employ such inefficient cost reductions.

(ii) When innovation is unimportant. An appropriately motivated private manager has incentives to improve biodiversity provision efficiency. For example, attractive, environmentally benign complement goods can be provided with a biodiversity experience or access costs to biodiversity reduced through improved roads. When there is limited scope for such innovation, adverse cost changes, as in (i), become more significant in contract design and the case for public provision strengthens.

(iii) When consumer choice is ineffective. Adverse quality effects of cost cutting are important when competition does not limit incentives to use them. Incentives to adversely cut costs are limited if consumers can substitute alternative resources. Consumer choices are also ineffective if biodiversity consumers are just too misinformed to make meaningful choices when a merit good argument can motivate public provision.

(iv) When reputation is unimportant in contract renewal. Opportunistic private manager actions are constrained by their desire for further contracts. If such reputation effects are relatively unimportant the case for public provision increases.

These points determine whether cost reductions have significant effects on non-contractible quality. An argument for public provision becomes stronger when stick or carrot monitoring or incentive contracts cannot feasibly address quality effects. Hart et al. (1997), for example, focus on tradeoffs between achieving cost efficiency and quality of services provided. This model, originally developed for prison management, is adapted to the case of biodiversity provision in an appendix provided in an expanded version of this paper (available from the author). The main idea is that public employees or private contractors can invest time in improving service quality or in reducing service costs with cost reductions reducing quality. Neither improving service quality nor reducing costs is ex ante contractible but both types of innovation require approval from the owner of the biodiversity. If the public sector is the owner, it shares in gains accruing from cost reductions or quality improvements so that not all gains from cost-reducing effort accrue to its employees. Employee gains are also limited by the fact that employees can be replaced. However, if the provider is a private contractor they do not need public approval for cutting costs. They only need to negotiate with government to secure a better price on quality improvements since government values biodiversity service. Private contractors have stronger incentives to cut costs and improve quality but cost cutting will be socially excessive since effects on quality are ignored.
Generally, the case for outsourcing biodiversity conservation is seen to be stronger when quality-reducing cost reductions can be controlled through contract or competition.

Conclusions and Final Remarks

With non-attenuated property rights and without competitive distortions, private markets ensure efficient biodiversity conservation given complementarities in either production or consumption. The obstacles to private provision are neither externalities nor nonrivalrousness. Externalities can be internalised using economic instruments such as taxes while nonrivalrousness can be catered for in club good structures where, if necessary, subsidies are provided if externalities arise.

Non-attenuated property rights, however, characterise idealised, utopian situations so that biodiversity conservation has traditionally been pursued on publicly-owned and publicly-managed land. Indeed, the case for public involvement in conservation remains strong on the basis of the present analysis with the public reserve system being an important component of national conservation efforts. This role is vital when resource use is non-excludable, when costs of contracting conservation effort, including monitoring, are high and when agency costs are a particular problem.

The completeness and excludability of property rights remain issues limiting the private sector’s ability to deliver efficiency. These limitations do not arise if biodiversity resources have a high known use value as in farming, zoos, captive breeding programs or flora and fauna reserves with high demand and low transaction costs of pricing. Then conservation is easily realised in private markets. However, it is in the important case of low use values and high non-use values that incompleteness or non-excludability problems drive a case for public provision.

There are reasons for conserving biodiversity on private as well as public land. Such activity increases the scope of conservation effort and hence its effectiveness. The major difficulty in involving the private sector can be seen to stem not from externalities or nonrivalry but rather from difficulties in designing appropriate regulations or contracting biodiversity management.

References


The author is grateful to two anonymous referees for their careful review of my arguments and for their helpful suggestions. Thanks also to Lee Smith and Franco Papandrea for editorial assistance. This is a revised version of a paper presented to the Industry Economics Conference, Melbourne Business School, June 2001.
Restructuring of utility industries in Australia has been underway since the early 1990s in response to the National Competition Policy reform process. The process commits Commonwealth, State and Territory Governments to a number of initiatives, including structural reform of public utilities and providing open access to significant infrastructure facilities that meet criteria specified in the Competition Principles Agreement (National Competition Council, 1995). Essential to this process was the addition of Part IIIA to the Trade Practices Act 1974 (TPA), which facilitates a regime for open access to essential infrastructure facilities.

Western Australia is a signatory to the reform process, initiated restructuring of its electricity industry in the early 1990s, and has had an open access regime in place since 1997 which enables Independent Power Producers (IPPs) to access the transmission and distribution network of the State-owned utility (Western Power). Vertical disaggregation of the industry has not yet occurred, and Western Power is largely responsible for developing, administering and regulating the access regime, as well as being the dominant generator and retailer in Western Australia. It has been argued that the existing open access regime (particularly its lack of an independent regulator) supports the dominant position of Western Power and has not led to increased competition.

In January 2001 one IPP sought a ruling under Part IIIA that would require access arrangements to be negotiated through independent arbitration rather than through the existing access regime. In response, Western Power argued that electricity networks in a vertically integrated utility are an integral part of the production process and therefore beyond the jurisdiction the TPA. The two parties reached a negotiated settlement which prevented a judicial testing of Western Power’s claims about the electricity production process which bring into question the cornerstone of the open access regime with respect to the electricity industry. It thus leaves open a larger question of whether Part IIIA can deal adequately with open access in an industry, such as electricity, where the essential facility cannot be clearly identified, and the services provided by it cannot be clearly separated from other parts of the industry.

This paper examines the reform process and the importance of Part IIIA of the TPA. It uses a Western Australian case study to discuss the usefulness of this part of the legislation and suggests that the case put forward by Western Power

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represents a direct challenge to the applicability of the Competition Principles Agreement and Part IIIA to electricity networks. It also suggests that the State Government has, to date, been ineffectual in its restructuring of the electricity sector, completing only part of the task and leaving IPPs frustrated in their attempts to compete against, and contract with, the utility. The State Government, however, established the Electricity Reform Task Force (ERTF) in late 2001, which has provided recommendations to Government regarding further restructuring of the electricity industry, and these recommendations may lead to changes in the access arrangements (ERTF, 2002a).

The paper is organised as follows. First, it reviews the Australian reform process and describes the three avenues for achieving access to essential infrastructure facilities under Part IIIA. It then outlines the reform process that has occurred in Western Australia and describes the background to the disputes between Western Power and the IPP. It concludes with some comments on the applicability of Part IIIA to electricity networks and arguments against vertical integration in an open access environment.

**Background**

Reform of Government Business Enterprises is part of the broader National Competition Policy designed to improve the productivity and international competitiveness of Australia’s firms and institutions. The need for a national competition policy was agreed on by the Council of Australian Governments, which established an Independent Committee of Inquiry (1993), chaired by Professor Hilmer, to report on the reforms necessary to give effect to the policy. Major recommendations of the Inquiry (Hilmer Report) were incorporated in the Competition Principles Agreement 1995 and enacted in the National Competition Policy Reform Act 1995 — an amendment to the TPA. The Competition Principles Agreement commits Western Australia, the other States and Territories, and the Commonwealth to a common set of competition laws and policies including the principles of competitive neutrality, structural reform of public monopolies and providing third-party access to significant infrastructure facilities.

Oversight of National Competition Policy is provided by the National Competition Council (NCC) which advises on design and coverage of access rules under the national access regime and makes recommendations concerning whether an access declaration should be made under Part IIIA. Access rules are regulated by independent, generic regulatory bodies at the Federal and State levels (Outhred, 2001). The Australian Competition and Consumer Commission (ACCC) is the Federal body responsible for policing the TPA. Jurisdiction of competition laws in the TPA is vested with the Federal Court of Australia.

With respect to open access to essential infrastructure, the Hilmer Report recommended that the TPA be amended to incorporate a regime for access to essential infrastructure facilities and, in response, Part IIIA was added to the TPA in 1995. Part IIIA establishes a national access regime for significant infrastructure facilities and sets out three pathways for achieving access:
certification as an effective regime, undertakings, and declaration. Details of each pathway are provided in the next section.

The Productivity Commission (2001) recently reviewed the National Access Regime. Among other issues, the review discusses vertical integration and the potential role that the claim of a production process might play in avoiding a declaration. The review recommends that a production process should continue to be exempt from the national access regime, but that the NCC should monitor any developments of its use. Should any judicial interpretation lead to outcomes that detract from efficiency, the review suggests ‘it may be necessary to remove the exemption or clarify its intent’ (p. 154).

Third Party Access to Essential Services

As part of the National Competition Policy framework, Part IIIA establishes a national access regime for achieving access to the services of a range of essential infrastructure facilities. The Hilmer Report (1993:240) defines an ‘essential facility’ as a facility that cannot be duplicated economically, and cites electricity transmission grids, rail tracks and airports as examples. Part IIIA, on the other hand, does not define ‘essential facility’, instead relying on limitations placed on the definition of the term ‘service’. A ‘service’ is defined in s44b (Part IIIA) as a service provided by means of a facility and includes the use of an infrastructure facility such as a road or railway line, handling or transporting things such as goods or people, and a communication service or similar service. It does not include the supply of goods, the use of intellectual property, or the use of a production process, except to the extent that it is an integral but subsidiary part of the service.

Under Part IIIA, there are three pathways to access essential infrastructure facilities: certification as an effective regime, undertakings, and declaration, (NCC, 2001). Each one is described below.

Certification as an effective regime

This mechanism, set out in s44m and s44n (Part IIIA), gives State and Territory Governments the opportunity to establish their own access regimes and have them certified as effective. When a State or Territory introduces an access regime, the responsible Minister may apply to the NCC to seek a decision by the Commonwealth Minister that the regime is effective. The NCC makes a recommendation to the Commonwealth Minister based only on the relevant principles set out in the Competition Principles Agreement. If the NCC decides that the regime meets the criteria for an effective regime, it is certified by the Minister. Once certified, the effective regime determines the terms and conditions of access. A number of State access regimes under the National Gas Code have been certified as effective regimes through this mechanism.
Undertakings

An undertaking allows a network service provider to give an access undertaking to the ACCC specifying the terms on which access will be made available to third parties. The ACCC assesses the undertaking as described under S44ZZA (Part IIIA) and is required to decide whether or not to accept the undertaking after a public consultation process. In its assessment, the ACCC is required to consider the legitimate business interests of the provider, the public interest, the interests of the person who might want access, whether the facility is already the subject of an access regime and any other matters which the ACCC thinks relevant. If the undertaking is accepted by the ACCC, the undertaking determines the terms and conditions of access for all third parties. The regime governing access to the National Electricity Market (NEM) operates as an industry code approved as an undertaking through this process.

Declaration

Declaration, the process relevant to the discussion in this paper, provides third parties (individuals, businesses, or a designated Minister) with an avenue through which they can apply to the NCC to have a facility declared an essential facility. A third party seeking a declaration can do so if they are not satisfied that the existing open access regime is fair. A declaration may be sought when the regime has not been certified effective and an undertaking has not been accepted using one of the two processes described above. That is, a network service provider has chosen not to seek an undertaking, and the responsible State or Territory Minister has not sought to have the regime certified as effective, or when either of these pathways has been pursued and has resulted in the rejection of an access regime.

Declaration involves a third party making a written application to the NCC for a declaration that a facility is an essential facility. The NCC assesses the application under S44G (Part IIIA) considering a number of criteria including the promotion of competition, the existing access arrangements, safety and the public interest (NCC, 2001). The NCC makes a recommendation to the designated Minister, who then declares the facility or decides not to declare it. If it is declared, the third party and the network service provider are required to try to negotiate terms and conditions of access. Failure to reach agreement through negotiation will see the terms and conditions determined through legally binding arbitration by the ACCC.

In Western Australia, a third party power producer sought a declaration from the NCC which, had it been successful, would have seen Western Power’s transmission and distribution network declared an essential facility. The process, however, was challenged by Western Power in the Federal Court of Australia. In its defence, Western Power claimed that the transmission and distribution network is an integral component of its production process and thus not within the scope of Part IIIA.
Western Australia is part of the national reform process but its geographical isolation from the eastern States’ National Electricity Market (NEM) enables it to undertake electricity industry restructuring at its own pace. Restructuring of the energy sector in Western Australia has been underway since the early 1990s, following recommendations by the Energy Board of Review (1993). In 1995, the then State Energy Commission of Western Australia (SECWA) was split into corporatised gas (AlintaGas) and electricity (Western Power) utilities. AlintaGas has since been further disaggregated, and privatised, while Western Power remains in State Government hands as a vertically integrated monopoly. A recent report by the ERTF has recommended vertical disaggregation of Western Power (ERTF, 2002a).

An open access regime for Western Power’s transmission and distribution networks, based on compulsory bilateral contracting between the generator and each of its customers, with half-hourly balancing between energy generated and energy consumed, has been in place since 1997. The regime is developed and administered by Western Power while the Minister for Energy has progressively lowered access levels. The State Government, through the responsible Minister, has not sought to have the regime certified as an effective regime, nor has Western Power sought to have an access undertaking accepted.

The situation in Western Australia contrasts with developments in the rest of the country. The vertically integrated utilities in the eastern states were disaggregated prior to joining the NEM. The National Electricity Code under which NEM participants operate has been accepted by the ACCC through an undertaking. In Tasmania vertical disaggregation has occurred and, while the open access regime has not been certified, Tasmania is set to join the NEM pending the construction of an undersea cable and from that time will operate under the National Electricity Code. In the Northern Territory, Power and Water remains a vertically integrated utility. Open access to the transmission and distribution network is provided through the Electricity Network (Third Party Access) Code, the undertaking for which was accepted by the ACCC in March 2002 (NCC, 2002). Importantly, an independent regulator has been appointed with powers to regulate the transmission and distribution business, but it may take several years before the effectiveness of this regime can be determined.

Introducing an effective access regime to an integrated monopoly in most industries is difficult, even with an independent regulator, because it assumes that something called a ‘transmission service’ can be unbundled and priced separately from the rest of the industry. This open access model fails to recognise the importance of an independent system operator that is responsible for coordination of both production and transportation assets. In a vertically integrated industry, entities associated with the network operations will have, or will be perceived to have, an unfair competitive advantage unless a regulator steps in to tip the balance in the other direction. In the electricity industry, it creates the additional problem
of trying to define and price all the interactions between independent network users and a utility’s own operations (Ruff, 1996).

In Western Australia, IPPs and industry commentators complain that the open access regime is ineffective and that it has not led to effective competition in the industry (Perth Energy, 2000; Booth, 2000:134). Certainly, to date, no private plant has been developed specifically to sell power to contestable customers. In its second discussion paper, the ERFT (2002b) drew attention to the perceived deficiencies of the current access regime, and cited the application to the NCC for a declaration as evidence of them.

Three proponents, Normandy Power Pty Ltd, NP Kalgoorlie Pty Ltd, and Normandy Golden Grove Operations Pty Ltd (Normandy Power et al.) sought a declaration of the transmission and distribution network that would have given them the legal right to negotiate access conditions and, if necessary, to have access conditions determined by legally binding arbitration through the ACCC. The background to the declaration is outlined in the next section.

The Parkeston Power Station and Normandy Power

With its construction facilitated by a State Agreement, the Goldfields Gas Pipeline Agreement Act 1994, the Goldfields Gas Pipeline brought with it a number of associated developments. To enable these developments, the State Agreement included provisions to allow the owners of the Goldfields Gas Pipeline to sell electricity to their own affiliated companies using the Western Power network. Also included was a provision that enabled the Minister for Resources Development to approve customers who would then be permitted to purchase electricity from the supplier of their choice.

The Parkeston Power Station is an example of an infrastructure development that was facilitated by the construction of the gas pipeline and the associated State Agreement. Commissioned in 1996, it is located near Kalgoorlie at the end of a long feeder line. It is owned by Goldfields Power, an associated company of Normandy Power. Normandy Power purchases the major portion of the output for supplies to its customers, while Goldfields Power markets the remaining output to contestable customers (Normandy Power et al., 2001).

There were certain technical difficulties associated with the proposed method of interconnection of the Parkeston Power Station, related to the low inertia of the turbines, and suggestions that interconnection would result in instability in the State’s electricity network (Hansard, 1998:4097). These technical issues might have been avoided had there been an environment in which there could have been constructive discussion between the Normandy group of companies and Western Power prior to their decision to purchase the turbines. It seems that the Normandy group of companies were reluctant to reveal their plans to a major competitor at an early stage in the project evaluation, and purchased turbines that Western Power was subsequently reluctant to connect to its network.

Despite the technical hurdles, Normandy Power and Western Power reached an Interim Access Agreement (IAA) in October 1996, which was facilitated by the
Goldfields Gas Pipeline Agreement Act 1994. The IAA entitled Normandy Power to export up to 15 MW of electricity from the Parkeston Power Station to their remote loads at specified locations in the Kalgoorlie area and to purchase or deliver up to 35 MW of standby power (Normandy Power et al., 2001).

**An Environment of Distrust**

The application for declaration of the transmission and distribution network was the third in a number of legal disputes between Western Power and the Normandy group of companies. These disputes have been settled through a negotiated process between the two parties, which brings to a conclusion the specific issues discussed below. Details of the settlement are confidential. Thus there will be no judicial outcome for any of the legal actions. However, some implications remain to be resolved about the applicability of Part IIIA of the TPA to electricity networks.

The first dispute related to the IAA between Western Power and Normandy Power. Western Power (2001) claimed that the terms and conditions provided under the IAA were on an interim basis pending the introduction of the general open access regime and, in 2000, sought to enter into negotiations with Normandy Power regarding future access. An outcome to the negotiations was not reached and Western Power sought to terminate the IAA, which would have forced Normandy Power to seek access to the network under the regulations applying to the general open access regime. Legal proceedings were brought by Western Power against Normandy Power in which Western Power sought a declaration that the IAA had been validly terminated or was otherwise at an end with effect from 20 January 2001. The case was heard in August 2001 and the Supreme Court of Western Australia ruled in favour of Western Power. In his ruling, McKechnie J (2001) concluded that the IAA was intended to be a bridging agreement until such time as the general open access regime was applicable to Normandy Power. He determined that it had been applicable to Normandy Power since 1 July 1997, quoting the then Minister for Energy who announced (Barnett, 1996, cited in McKechnie J, 2001:point 53) that open access would be provided

... for all consumers with an average load exceeding 10MW at a single point, as well as consumers who are approved under law to receive electricity from other than Western Power on another site (i.e. Normandy Power under the Goldfields Agreement Act).

As such, McKechnie J (2001) declared that the IAA had been validly terminated. Normandy Power appealed the decision.

In the second case, Normandy Power et al. (2001) claimed that during the period of negotiation of the IAA, Western Power contracted those customers permitted to purchase electricity from the supplier of their choice at a reduced tariff, thus breaching the provisions of s46 of the TPA. They also claimed that Western Power abused its market power and was involved in misleading and
deceptive conduct. These allegations were the subject of a legal action by Normandy Power, Normandy Pipelines and NP Kalgoorlie in the Federal Court of Australia. The case was expected to be heard in late 2002.

These two cases give an indication of the environment of distrust that had developed, culminating in the application for declaration of Western Power’s transmission and distribution network. Details of the application for declaration are discussed below.

Two classes of contestable customers, those approved under the *Goldfields Gas Pipeline Agreement Act 1994* and those approved under the general open access regime, can be sold power by Goldfields Power and Normandy Power using the open access regime described above. The Normandy group of companies, however, were of the view that the general open access regime was not fair because of unreasonable technical limitations placed on IPPs, limited scope for negotiation and dispute resolution, the lack of an independent regulator, inadequate ring fencing arrangements within Western Power, and because the regime hinders the access seeker from gaining access (Normandy Power *et al*., 2001). Accordingly they sought a declaration from the NCC that the transmission and distribution services of Western Power be given the status of declared services under s44G (Part IIIA).

On 9 January 2001, the NCC accepted an application for declaration of Western Power’s transmission and distribution networks from Normandy Power, NP Kalgoorlie and Normandy Golden Grove. The applicants claimed that Normandy Power had entitlements under the *Goldfields Gas Pipeline Agreement Act 1994* and the general open access regime to supply specified customers, while NP Kalgoorlie and Normandy Golden Grove had entitlements under the general open access regime to access the network. They maintained that neither the IAA nor the open access regime provided effective means to access the Western Power network. The future of the IAA was not assured because of the ruling by McKechnie J, and they asserted that the general open access regime was not effective because of its terms and conditions, the ring-fencing arrangements within Western Power, an unfair past capital contributions policy, the absence of an independent regulator, an inadequate negotiation framework, and the lack of enforceable dispute resolution (Normandy Power *et al*., 2001).

The NCC released a discussion paper outlining the NCC’s preliminary consideration of the application against each of the declaration criteria and called for written submissions from interested parties to assist in assessing the application (NCC, 2001). Eleven responses were received, mostly in support of the applicants. Western Power’s submission, however, took a different view. It made the claim that the transmission and distribution network is an integral component of its production process and thus beyond the scope of the Part IIIA. Details of Western Power’s submission are discussed in the following section.

Table 1 provides a summary of the relevant legal challenges between Western Power, the Normandy group of companies and the NCC.
Table 1  Summary of Relevant Legal Challenges Between Western Power, the Normandy Group of Companies and the NCC

<table>
<thead>
<tr>
<th>Defendant</th>
<th>Plaintiff</th>
<th>At issue</th>
<th>Court/Council</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Power</td>
<td>Normandy Power</td>
<td>Breaches of the TPA</td>
<td>Federal Court of Australia</td>
<td>Negotiated settlement</td>
</tr>
<tr>
<td>Western Power</td>
<td>Normandy Power et al</td>
<td>Declaration of access regime</td>
<td>National Competition Council</td>
<td>Negotiated settlement</td>
</tr>
<tr>
<td>Normandy Power</td>
<td>Western Power</td>
<td>Termination of the IAA</td>
<td>Supreme Court of Western Australia</td>
<td>Judgement in favour of Western Power.</td>
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<td>Appealed by Normandy</td>
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<td>Negotiated settlement</td>
</tr>
<tr>
<td>National Competition Council</td>
<td>Western Power</td>
<td>Invalidity of TPA to open access regime</td>
<td>Federal Court of Australia</td>
<td>Will not proceed to judgement: negotiated settlement</td>
</tr>
</tbody>
</table>


Western Power’s Response

In response to the application to the NCC, Western Power (2001) initiated proceedings in the Federal Court of Australia which sought a ruling that the service that was the subject of the application is not a service for the purpose of Part IIIA and should therefore not be considered by the NCC.

Western Power considered the definition of a ‘service’ within the meaning of the term as defined in §44b (Part IIIA) and noted that the applicants defined the ‘service’ for which they sought a declaration to be ‘the transmission of electricity from electricity generators, particularly from the Parkeston Power Station to consumers of electricity in the south-west of WA’. Similarly, they noted that the applicants defined the ‘facility’ used to provide that service as the ‘electrical transmission and distribution systems’.

Western Power argued that the ‘facility’ (as described above) is unable to function without sufficient generating capacity connected to it, and that without this capacity the transmission and distribution systems would be unable to perform the function of delivering electricity to meet customer loads. Due to the physical properties of electricity and customer quality requirements, Western Power argued that electricity generated by a generation plant is not in a marketable form until it is transformed through a production process, of which the network is a fundamental component. Furthermore, all operations essential to the production of electricity in a marketable form must be continuously available to Western Power, and are integral, not a subsidiary, part of its production process. Thus, according to Western Power, the Applicants were seeking access to Western Power’s production process and not a service as defined in §44b (Part IIIA).
Western Power cited the case of *Hamersley Iron Pty Ltd vs NCC (1999)* where the judge found that the use of a rail track to deliver iron ore from mine to port is an ‘integral (indeed essential) operation in Hamersley’s production process’. The verdict was appealed, but the appeal did not proceed. However, when dismissing the appeal, some matters were dealt with by the Full Federal Court. Specifically, despite the fact that a precedent on the definition of a production process has been set by the decision, the NCC is not obliged to follow it when handling future declaration applications and, furthermore, the decision would not be binding on the Australian Competition Tribunal in relation to appeals against declarations (Productivity Commission, 2001).

Western Power argued that because of the physical constraints of the network, the access being sought is actually a request for Western Power to supply the customers of the applicants with power produced by Western Power. It also quoted the *Electricity Transmission Regulations 1996* and *the Electricity Distribution Regulations 1997* that transfer all title to, and risk in, electricity within the network to Western Power. Thus any power (or ‘good’) that is supplied to the applicants’ customers, it was argued, belongs to Western Power. It claimed that the ‘supply of goods’ is what the applicants were requesting. Since the supply of goods is not a subsidiary part of the service provided by the network, the application referred to a supply of goods that is excluded from a ‘service’ in s44B (Part IIIA), and therefore beyond the scope of the NCC.

Western Power argued that the application was based on the false premise that the network only provides a transmission and distribution service from the Parkeston Power Station to customers. Instead, it claimed (Western Power, 2001:18) ‘it is simply not physically possible to use the (network) solely as a means of transmission and distribution as suggested by the Normandy Entities’. It suggested that the following services, which fall outside the scope of Part IIIA, were what the applicants really required:

- the exchange of bulk production of electricity;
- reservation of standby bulk electricity production capacity;
- supply of backup bulk electricity production capacity;
- a billing arrangement between the IPP and customer; and
- an agreed mechanism of charging for the above.

A judicial outcome supporting Western Power would have seen the NCC unable to make a declaration of the facility and would have set a precedent determining Part IIIA as unsuitable for regulating the access regimes for vertically integrated electricity networks. In Western Australia, it would have left IPPs at the mercy of an open access regime developed and regulated by Western Power.

On the other hand, an outcome in favour of the NCC would have allowed the application for declaration to continue. After assessing the application, the NCC would have made a recommendation to the relevant Minister, in this case the Premier of Western Australia, regarding whether to declare the service or not to declare the service. The Premier would have then either declared the service or
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...decided not to declare the service. This process would have put the Premier in a potentially awkward situation — acceptance of a NCC recommendation to declare the facility would be an acknowledgment that the existing open access regime (endorsed by the State Government) is ineffective.

Concluding comments

Although there is not going to be a judicial settlement on these matters, the issues arising from Western Power’s proceedings in the Federal Court warrant further consideration. In particular, they raise the following questions.

- Do the provisions in Part IIA adequately provide for access to essential facilities in the electricity industry?
- Is vertical integration an appropriate structure in an open access environment?

In response to the first question, the validity of Western Power’s argument that the electricity transmission and distribution network are parts of a production process needs to be examined. Western Power argued that the electricity industry operates by maintaining a continuous energy conversion process from primary energy forms to end-use energy forms. As part of the energy conversion process, the network conveys electrical energy from power stations to end-use equipment. The flow of electrical energy between generators and end-use equipment is instantaneous. A power station cannot continue to produce electrical energy unless end-use equipment is connected to the network and able to immediately convert the electrical energy to end-use energy forms. Thus, generator, network, and end-use equipment are all essential to the satisfactory operation of the electricity industry. However, even with a vertically integrated electricity supply industry, end-use equipment is separately owned by final consumers. This is the case with Western Power. It does not own the end-use equipment, and makes no claim upon it. Therefore, its argument breaks down because it does not have exclusive ownership of the ‘production process’. Once independent ownership of end-use equipment is acknowledged, it is inconsistent to claim that independent ownership of power stations is not also possible (Outhred, 2002).

Although Western Power’s production process argument is flawed, its claim (Western Power, 2001:18) that ‘it is simply not physically possible to use the (network) solely as a means of transmission and distribution’ is justified in terms of the physical operation of an electricity network, which is governed by the laws of physics, rather than commercial contracts. An electricity network differs from a road or railway line in that it does not operate by connecting the flow of electricity from the point of production to the point of consumption. Instead, the flow of electricity within the network is dependent on the interaction between all other participants connected to the network. Thus, electricity from a specific generator cannot be directed to a specific load. Although there may be a bilateral contract between a power station and load, that contract has no bearing on the
actual flow of electricity within the network. The essential tasks of monitoring the actual flows in the system, maintaining system stability and coordinating widely dispersed generators and loads are undertaken by a system operator.

In a vertically integrated utility, the system operator is an integral part of the utility. Using its intimate knowledge of the generators, fuel contracts, the network and loads, the system operator optimises the efficiency of the system. In a disaggregated industry, the system operator is separated out from other components of the industry, to create an independent system operator or, in some instances, one that is integrated with the transmission and distribution business. In either case, the system operator uses bids submitted by participants to optimise the efficiency of the system. In an industry structure, such as that in Western Australia, however, where third parties are permitted to access the transmission and distribution networks of a vertically integrated utility, the system operator is still an integral part of the vertically integrated utility. This creates a potential problem because the system operator may operate, or be perceived to operate, the system in favour of the utility’s own generators and customers, and at the expense of third parties. Western Power’s open access regime, as well as Part IIIA, fails to recognise that, for a competitive electricity industry to emerge, access to the markets for trading and dealing facilitated through an independent system operator is as essential as access to the network.

The applicability of Part IIIA to an industry where the essential facility cannot be clearly identified, and the services provided by the essential facility cannot be clearly separated from other parts of the industry, is yet to be tested through the judicial process. A judicial outcome in some future situation may prove Part IIIA in its current form inadequate for dealing with open access to essential facilities in the electricity industry. It is possible that only a change in the regulatory arrangements will adequately address open access regimes for essential facilities in the electricity industry.

Western Power’s assertion that Part IIIA does not have jurisdiction over its essential infrastructure is unlikely to have direct implications for electricity industries in the rest of Australia. Such a defence is unlikely to be put forward in the NEM where vertical disaggregation has occurred and no participant has an interest in making a case for a production process. In the Northern Territory, the ACCC recently accepted an undertaking for the open access regime, so the declaration process will not be tested. It is too soon to make a judgement on the effectiveness of this regime.

With regard to the second question of vertical integration in an open access environment, the Western Power argument does reinforce the need for the disaggregation of vertically integrated electricity (and other) utilities. The problems that were predicted by Ruff (1996), the testing of the declaration process in relation to electricity transmission and distribution networks, and the other legal challenges within the industry, are unlikely to occur in a disaggregated industry. The Hilmer Report recommendation, and a cornerstone of the Competition Principles Agreement, to disaggregate the functions of vertically integrated utilities, has been vindicated by the difficulties encountered in Western Australia.
The *Hamersley* case indicates that vertical integration may have implications for open access in other industries. The Productivity Commission (2001:492) noted that the judgement ‘had set too broad a precedent for what constituted a production process’ and that ‘the decision sent a signal that vertical integration could be used to avoid access claims under Part IIIA’. The negotiated settlement pre-empted a judicial definition of a production process, thus leaving open the opportunity for future use of this argument by vertically integrated utilities.

The *Goldfields Gas Pipeline Agreement Act 1994* and the general open access regime gave one IPP reason to believe that it had a right to seek to use the Western Power network to supply customers. Western Power, however, appears to be blocking attempts to have its network access regime brought into line with national policy through the declaration process. The negotiated settlement between the two parties ensures that, for the time being, Western Power will continue to use the current open access regime, and that the regime will not be subject to the process available under Part IIIA.

On the other hand, a victory for the NCC would have seen the application for declaration proceed, and possibly an access regime developed through independent arbitration, but no structural changes to Western Power. Thus, whatever the result of the case (including a negotiated settlement), the outcome for competition in Western Australia’s electricity industry would not have been satisfactory in the long term.

The ERTF (2002a) presented recommendations to the State Government in October 2002, and recommended the vertical disaggregation of Western Power, in order to remove the inherent conflict of interest that arises when trying to provide open access to the transmission and distribution component of a vertically integrated utility. On its own, this will not be sufficient to ensure that a fair and non-discriminatory open access regime is established. The ERTF also recommended the development of an open access regime, which the State Government should seek to have certified as effective through the mechanism described in previous sections of this paper. Were this to occur, the electricity industry in Western Australia would be a step closer to fulfilling its obligations under National Competition Policy. But such a step, combined with disaggregation, would not address the question of whether the provisions under Part IIIA are satisfactory to deal with open access to essential facilities in the electricity industry.

**References**


Independent Committee of Inquiry (1993), National Competition Policy, AGPS, Canberra.


The author is grateful to Frank Harman, Hugh Outhred, Brian Spalding and two anonymous referees for invaluable input on earlier versions of this work. The work described in this paper has been supported by the Australian Cooperative Research Centre for Renewable Energy (ACRE). ACRE’s activities are funded by the Commonwealth’s Cooperative Research Centres Program.
Genetic Testing and Insurance: The Case for Regulation

Margaret Otlowski

There is currently a significant level of debate in Australia and other jurisdictions about the appropriateness of intervention in the private insurance market to regulate the use of genetic test information by insurers. Whilst the issue has arisen most directly with the emergence of genetic testing, concerns appear to be extending to the use of any predictive genetic information for risk assessment purposes. Indeed, questions are currently being raised about insurers' use of family history information which is a source of information insurers have historically always had access to.

In response to concerns about the use of genetic information, in August 2000, the Commonwealth Government established an Inquiry into the Protection of Human Genetic Information to be jointly conducted by the Australian Law Reform Commission and the Australian Health Ethics Committee of the National Health and Medical Research Council. Pursuant to this Inquiry, a Discussion Paper has recently been released which contains proposals for reform, amongst other things, covering the circumstances in which insurers can use genetic test information (Australian Law Reform Commission, 2002).

The aim of this paper is to look at some of the problems associated with insurers' reliance on genetic information for underwriting purposes and to present the case for regulation (although not necessarily through legislative means). The main source of contention in relation to insurers' use of genetic information appears to lie in the field of predictive genetic test information: that is, in the situation where the individual is asymptomatic and the testing indicates that he/she is predisposed to developing a genetically related disease in the future. Predominantly, this contention is caused by limitations of the predictive value of such tests — usually only indicating that a person is at increased risk of developing a genetic disease, there being no certainty about this issue.

It should be made clear from the outset that the scope of this paper is limited to those forms of voluntary insurance for which underwriting on health grounds is undertaken, such as life insurance, sickness and critical illness insurance: in the Australian context at least, this does not include health insurance for which a system of community rating is statutorily mandated pursuant to the National Health Act 1953 (Cth). Further, it should be noted that the paper is written primarily from a legal perspective. Clearly, economic efficiency implications would also need to be fully considered by policy makers.

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The Legal Framework

The current legal framework can be simply stated as there is no doubt that insurers are legally entitled to have access to genetic test results, and to take these into account for the purposes of underwriting for life and related forms of insurance. Contracts of insurance are contracts ‘uberrimae fidei’ — of the ‘utmost good faith’. This terminology describes a class of contracts, including insurance contracts, in which one party has a duty to disclose material facts relevant to the subject matter to the other party. In the insurance context, this requirement reflects the reality that applicants for insurance usually know more about their risk factors than the insurance company. The common law (now codified in the Insurance Contracts Act 1984 (Cth) s 21(1)) therefore imposes an obligation to make full disclosure of all information material to the insurers’ assessment of risk, which a reasonable person in the circumstances could be expected to know to be a matter which is relevant, in order to ensure that there is symmetry of information between the applicant and the insurer. Failure to make the required disclosure may result in the contract being invalidated (see Part IV, Div 3 Insurance Contracts Act 1984 (Cth) which deals with both innocent and fraudulent non-disclosures).

The important role that commercial insurance plays in our society is reflected in the fact that insurers are given an exemption from disability discrimination under Commonwealth and State/Territory anti-discrimination legislation. The exemption from disability discrimination recognises that the whole notion of insurance is premised on treating individuals differently, based on principles of risk assessment which have regard to their health status, and that insurers routinely engage in conduct which would otherwise constitute unlawful discrimination.

The relevant Commonwealth legislation is the Disability Discrimination Act 1992 (Cth) which would apply to insurers operating in Australia, except for those who conduct business solely within a State and therefore would come within the scope of the State and Territory legislation (see s 12(11)(b)). The term ‘disability’ is defined broadly (see s 4)) as including a disability that presently exists, that may exist in the future, or one that is imputed to a person. Together with the wide definition of discrimination (essentially to mean less favourable treatment: see s 5), there is little room for doubt that this legislation would cover discrimination on the basis of genetic test information where that information discloses that the person may in the future develop a particular genetic disease.

The legislation is framed so that prima facie, disability discrimination in insurance will be unlawful, and if challenged, the onus would lie on the insurer to affirmatively establish that the relevant discrimination on the grounds of disability came within the insurance exemption. This is clear from the High Court decision in Australian Mutual Provident Society v Goulden and Others (1986) 160 CLR 330 in the context of interpreting the former Anti-discrimination Act 1977 (NSW). The operation of the exemption is qualified by the requirement that insurers must be able to justify their decisions on the basis of actuarial or statistical data on which it is reasonable for the insurer to rely, or in the absence of such data, that the discrimination is reasonable having regard to other relevant factors. The key
provision in the Commonwealth Act is s 46 covering both discrimination in the form of refusal to offer insurance or discrimination in respect of the terms or conditions on which insurance is offered, and the provisions of most State and Territory anti-discrimination Acts are in similar terms.

The Disability Standards and Guidelines: Guidance for Providers of Insurance and Superannuation of the Human Rights and Equal Opportunity (1998), which seek to give some general guidance on the operation of the exemption, are relevant to its interpretation. Amongst other things, the guidelines spell out what is unreasonable for insurers to have regard to. In particular, the guidelines state that it is not reasonable — and therefore unlawful — for an insurer to: refuse to insure a person with a disability because the insurer does not have any data or there is little data or statistical information available; or to refuse to insure a person with a disability because of historical practice; or to make inaccurate assumptions about people with a disability.

The guidelines specify that statistical or actuarial data should be considered if it is available or reasonably obtainable. This includes data from sources that the industry uses domestically and internationally, including underwriting manuals, local data, relevant overseas studies, and domestic and international insurance experience. Further, the guidelines provide that in the absence of statistical or actuarial data, the decision to discriminate must be shown to be reasonable because of other relevant factors, eg medical opinion, opinions from other professional groups, actuarial advice or opinion, relevant information about the individual seeking insurance, and commercial judgement.

The precise scope of the exemption in the context of genetic test information is presently untested as there have been no cases alleging genetic discrimination before the Human Rights and Equal Opportunity Commission or State and Territory anti-discrimination tribunals. There has, however, been a recent case involving interpretation of the equivalent provision in the Sex Discrimination Act 1984 (Cth) s 41 which has highlighted the importance of there being actuarial or statistical data from a source on which it is reasonable for the insurer to rely (see D and A Registered Life Insurer 11 February 2000, a decision of Commissioner McEvoy of the Human Rights and Equal Opportunity Commission.)

The Practical Context

By virtue of the established practice of insurers seeking and taking account of genetic information from family history, the life insurance industry has long been involved in a form of genetic underwriting. Clearly, however, the increasing availability of predictive genetic test information presents a new, and potentially more accurate source of data. Due to the relative novelty of this form of information and the long time-lag in the actuarial tables reflecting new developments, there has been little experience in Australia in underwriting based on genetic test information. As noted, there is no doubt that for the purposes of risk assessment, insurers are legally entitled to take into consideration, genetic test information disclosed by an applicant, subject only to the constraints imposed by
anti-discrimination legislation (that is, the insurers have relevant actuarial or statistical data on which it is reasonable to rely, or, in the absence of such data, the discrimination is reasonable having regard to other factors).

The peak insurance body, Investment and Financial Services Association Ltd (IFSA) has commissioned the Institute of Actuaries of Australia to undertake periodic surveys on the use of genetic tests by insurers. To date, three six monthly surveys have been reported: the first for the period ending 31\textsuperscript{st} May 2001; the second covering the period 1\textsuperscript{st} June-30\textsuperscript{th} November 2001, and the third for the period 1\textsuperscript{st} December 2001-31\textsuperscript{st} May 2002 (Institute of Actuaries of Australia, 2002). From the industry’s own data, it is known that the use of genetic test results, in some instances, leads to the denial of insurance, or the offering of insurance on non-standard terms. For the entire data collection period, 174 applications were received which disclosed a positive genetic test result. Of these applications, which were across a range of life insurance products, 70 were accepted on standard terms, 45 were accepted on non-standard terms, 16 were deferred and 25 were declined. (Underwriting was not yet complete at the time of the survey for the remaining applications.)

Insurance application forms have always included questions about family history, tests undertaken etc. Some of the questions contained in some recent application policies appear to be more searching, for example, whether the applicant is considering to undergo any medical test or procedure, or whether they have been advised by their medical practitioner to do so. This new approach appears to be aimed at discouraging individuals from taking out life or related forms of insurance prior to undertaking testing, although one might question why this is in any event perceived to be problematic, given that the individual at this point in time does not know more than the insurer about the outcome of that test, and presumably any family history or other health information leading to the test being considered would, in any event, need to be disclosed (Otlowski, 2001).

The position of insurers in relation to genetic test information, in particular, their vigorous defence of the industry's right to use this information, has been clearly stated in IFSA’s Policy on Genetic Testing. This policy, developed initially as a voluntary industry code, now takes the form of an industry standard which converts the policy from guideline status to a mandatory standard for IFSA members (IFSA, 2002).

It has been argued on behalf of insurers that genetic test information is no different from other medical information which they seek and that, in any event, they have, for decades, already been using genetic information through family history. For the most part, insurers’ arguments defending their access to and use of genetic test information centre on fears about ‘adverse selection’ — the tendency of individuals to take out or increase their insurance or coverage more than they would otherwise when they are aware of their higher than average risk status. Insurers argue that individuals with a high or increased risk of a genetic disease may have an incentive to insure their lives and incomes for high values, leaving insurance companies vulnerable to large pay-outs if they are not entitled to gain access to the genetic test information available to the applicant.
Further, it is argued that if there is a disproportionately high number of high-risk individuals amongst the insured population, the level of claims will increase, thereby increasing the cost of life insurance for the majority. This, in turn, would reduce the number of low-risk people prepared to pay for cover, with people on lower incomes most likely to be affected. In this context, equity considerations have also been raised in support of life insurance companies having access to all information relevant to risk. It has been argued that adverse selection works to the advantage of those who ignore their obligations and to the disadvantage of those who do not, and that measures must be taken to deter this practice which discriminates against existing policyholders. On this basis, it is contended that the results of genetic tests should be treated no differently to any other information relevant to the assessment of risk. (For further analysis and critique of the insurance industry position, see Otlowski, 2000:201-208)

Consumer groups representing people who are at genetic risk, and related organisations such as the Human Genetics Society of Australasia, have urged that genetic test results be viewed in their wider context, in particular, taking account of the fact that people who are identified as being at greater risk due to positive genetic tests may initiate preventative measures which reduce that risk. In response, the IFSA policy on genetic testing was amended and now states that ‘when assessing the overall risk associated with a particular genotype, insurers will take account of any special medical surveillance that may be beneficial, early treatment and the likelihood of successful treatment’ (IFSA, 2002:10.5).

There have been a number of other positive developments. The current IFSA policy is that insurance companies in Australia should not require genetic testing as a precondition to insurance. In particular, clause 2 of the IFSA Policy on Genetic Testing states ‘insurers will not initiate any genetic tests on applicants for insurance.’ This position, not to initiate genetic testing, accords with international instruments which highlight the importance of voluntary consent and require that individuals are not coerced into genetic testing: for example, the Council of Europe Bioethics Convention, 1996 Articles 5 and 12 and Explanatory Memorandum 1997; the World Health Organisation Proposed International Guidelines on Ethical Issues in Medical Genetics and Genetic Services 1997; and the United Nations Educational, Scientific and Cultural Organisation, Universal Declaration on the Human Genome and Human Rights 1997 Article 5.

Related to this is the fact that insurers have agreed not to offer cheaper rates to those with ‘good genetic test results,’ to avoid possible indirect pressure to undertake testing. This is clear from clause 4 of the IFSA Policy on Genetic Testing which states ‘in order to prevent indirect coercion to undergo genetic tests, insurers will not use genetic tests as the basis of preferred risk underwriting (offering individuals insurance at a lower than standard premium rate).’ However, because of the potential anti-competitive effect of this and other clauses of the draft policy, it had to be submitted for approval to the Australian Competition and Consumer Commission. It was ultimately given authorisation in November 2000 for a period of two years, although only after some amendments to the original application, and lobbying from consumer groups and other stakeholders who
supported these clauses as a means of avoiding inappropriate incentives being given to individuals to undergo genetic testing.

The new IFSA standard now contains a requirement that people must be given reasons for underwriting decisions. However, it is not clear as yet what this requires in practice, in particular, whether it extends to details of the actuarial, statistical, or other data relied on by the insurance company in reaching its decision. Under s 75 of the *Insurance Contract Act 1984* (Cth), individuals can request in writing that they be given written reasons. There are, however, questions about the scope of this provision, and whether it would entitle an individual to details of the actuarial, statistical, or other data relied upon. At present, the only way of obtaining this information is to lodge a complaint under the *Disability Discrimination Act 1992* (Cth) invoking the powers of the Human Rights and Equal Opportunity Commission to require full disclosure: if disability discrimination proceedings are commenced under s 107(1) of that Act, the Human Rights and Equal Opportunity Commission has the power to require a person who is *prima facie* in breach of the prohibition of unlawful discrimination to disclose to the commission the source of the actuarial or statistical data on which the act of discrimination was based.

So far as appeals are concerned, where an applicant for insurance is aggrieved about a decision affecting him or her, they may take the matter up with the internal complaints body within the company, and in practice, decisions are regularly challenged. (It is now a requirement under the IFSA Standard that insurers will have a competent and efficient internal dispute resolution system to deal with complaints relating to underwriting decisions involving a genetic test result.) However, the options presently available to an aggrieved individual beyond this are limited. Although there is a Financial Industry Complaints Service (an Ombudsman type body sponsored by the industry), a wide range of matters are expressly excluded from its jurisdiction, including complaints about the level of premium, underwriting or actuarial factors resulting in an offer of insurance on non-standard terms, or underwriting or actuarial factors leading to the rejection of a proposal for commercial or medical reasons. Currently, therefore, there is no independent industry appeal mechanism for complaints in respect of the use which is made of genetic test information. The only choice aggrieved individuals have is to bring proceedings for disability discrimination under anti-discrimination legislation, and this option has not yet been used. The creation of an intermediate level of appeal, more accessible than the formal legal avenues, is one of the proposals put forward by the current Inquiry in its *Discussion Paper* (Australian Law Reform Commission, 2002:620-627).

**Arguments for Regulation**

One of the arguments advanced in support of regulation is that allowing insurers access to genetic information will have the effect of decreasing the availability of insurance. Individuals may be excluded outright from buying insurance due to their genetic status; limited in the coverage that they can obtain;
or forced out of the market altogether due to unacceptably high premiums. The fear is that this will result in a ‘genetic underclass’ which is uninsurable, and as already noted, there is evidence in Australia of individuals being rejected by insurers, or otherwise disadvantaged because of their genetic status. This, in turn, raises questions about the social function of insurance, and whether it is acceptable that certain individuals may be precluded from access to insurance due to their genetic make-up. Put another way, the question needs to be asked where the burden of the risk should lie: is it fairer to expect all those who take out life insurance to subsidise this risk if insurers are prevented from factoring this into their risk assessment, or should the risk lie with the genetically vulnerable individual, and ultimately the state through social security protection? It must be remembered that life and income protection insurance such as sickness and disability insurance operate on commercial principles, and that individuals may be lawfully discriminated against on the basis of their health status (e.g., high blood pressure). This gives rise to the question — is it justifiable to differentiate genetic test information from other medical information?

The unique and sensitive nature of genetic information has been put forward as a reason for denying insurers access to genetic test data. It is argued that such information is intensely personal and highly confidential and that once particular genetic information has been identified in an individual, it represents an irreversible biological marker (Brom, 1991:141). Moreover, because of the very nature of genetic test information, it discloses information not only about the individual upon whom the test has been undertaken, but also about members of that individual’s family. Arguments based on the 'uniqueness' of genetic information have, in turn, been countered with claims that 'genetic exceptionalism,' that is, inappropriately singling out genetic conditions for special treatment, should be avoided. Whilst debate continues about the appropriate status of genetic information, it seems difficult to dispute that this form of information has certain characteristics which call for careful protection.

Another concern that has been raised regarding insurers’ access to genetic test information is that at-risk individuals may be deterred from undertaking necessary genetic testing. The fear is that individuals who, in the light of their family history, may be at risk of developing a genetic disease may decline to be tested, knowing that if they are definitely found to have the relevant gene, they may be completely denied insurance. This disquiet is particularly well-founded in circumstances where early knowledge of a condition or predisposition to developing a disease may play a significant role in treatment. One example is the condition familial adenomatous polyposis — an autosomal, dominantly inherited condition, which usually leads to cancer. Those at risk of developing the condition are recommended to attend for regular sigmoidoscopic surveillance to determine whether any of the hallmark bowel polyps develop. Genetic testing is now available for this condition which would establish whether or not such surveillance, which involves an invasive and costly procedure, is required. However, fears have been expressed by health care professionals in this field that permitting insurers to use genetic test information will impose significant barriers
to genetic testing in these at-risk families which may have ramifications for individual health and well-being, given the potentially life-saving nature of this form of testing.

There is also the related concern that individuals will be unwilling to participate in genetic testing for research purposes because of fear that they will be disadvantaged by such participation, thus possibly jeopardising the success of such research endeavours. A study by the Office of Technology Assessment of the US Congress reported that some who participated in screening programs and were found to be carriers of sickle cell trait (who would not themselves be affected) nevertheless experienced discrimination at work and from insurance companies that raised their premiums (Nuffield Council on Bioethics, 1993:7.21).

A number of studies have been undertaken to examine the incidence of genetic discrimination and the circumstances in which it occurs (Billings et al, 1992; Lapham, Kozma and Weiss, 1996; Geller, et al 1998; Low, King, and Wilkie, 1998; Wertz, 1998). The results of many of these studies point to instances of misinterpretation and misunderstanding of genetic test information, with the consequence that decisions are being made which are prejudicial to the individual’s interests in circumstances where that is not justified on an objective view of the evidence. For example, there have been instances where individuals have been discriminated against in their access to insurance purely on the basis of a genetic label arising from a positive gene test, without regard to the actual manifestation of the condition for that individual — what has been described as the ‘problem of variability’ (Billings et al, 1992:479). Additionally, there have been instances of discrimination in the US directed against healthy carriers of recessive genetic conditions (Billings et al, 1992:478). There is, furthermore, evidence of genetic discrimination from the United States in relation to sickle cell screening undertaken during the 1970s.

There has also been some anecdotal evidence from the United Kingdom of misunderstandings of genetic test information. The Human Genetics Advisory Commission noted in its 1997 Report that it had ‘received compelling evidence of unreasonable discrimination, due probably to misunderstanding of genetics, but no hard evidence that this was systematic, nor a clear idea as to whether it was rare or quite common’ (Human Genetics Advisory Commission: 1997:3.11). A study of genetic support groups found that people in three subgroups which represented no adverse actuarial risk to insurers on genetic grounds reported problems in obtaining life insurance: healthy carriers of recessive genetic or sex limited conditions; healthy non-carriers of genes for late onset disorders; and parents of children whose condition is the result of spontaneous mutation. This included instances of some carriers of childhood onset conditions such as Duchenne muscular dystrophy and cystic fibrosis being mistakenly treated by insurers as if they had the disease (Low, King, and Wilkie, 1998:1634). The conclusion of the researchers was that confusion and ignorance in interpreting genetic information are central to the problem of genetic discrimination.

There is no reason to suppose that the situation would be different in Australia. Indeed, the potential for decisions being made by insurers without a
legitimate basis is illustrated by the practice of some Australian insurers in relation to the use of HIV/AIDS exclusion clauses in automatic acceptance superannuation funds. Because of complaints that had been made about the discriminatory nature of such clauses, an independent firm of consultants was commissioned by the Commonwealth Government to examine their use and to ascertain whether there was valid actuarial or statistical evidence supporting the concerns of the industry. The resulting report (Trowbridge Consulting, 1993), found that the clauses used were unjustified and illegal under the Disability Discrimination Act 1992 (Cth).

This experience suggests that fears about misuse of genetic test information by insurers are probably not misplaced. Indeed, there have been documented reports of alleged genetic discrimination by insurers in a study published in the Journal of Law and Medicine (Barlow-Stewart and Keays, 2001). The authors identified a total of 48 cases of alleged genetic discrimination, virtually all in the insurance context. All of these cases affected individuals who were in good health and where the adverse treatment was believed to be a direct result of the predictive genetic test result.

Genetic discrimination was reported with respect to genetic tests for a wide range of conditions including, haemochromatosis, inherited predisposition to cancer (breast, bowel, melanoma) neurological degenerative disorders such as Huntington’s disease and early onset Alzheimer’s disease. In the area of insurance, which involved by far the majority of cases, discrimination was reported in accessing a wide array of insurance packages and types following disclosure of a positive genetic test result (which, as noted earlier, applicants are required to disclose at the point of taking out insurance or if they seek to raise their level of cover.)

The discrimination was alleged to have taken various forms. In some cases, it resulted in premiums being loaded when the individuals sought to increase their level of cover (eg two individuals who had undergone genetic testing for haemochromatosis); in some cases, applications for increased cover were rejected (eg in the case of some individuals with inherited predisposition to cancer or neuromuscular and connective tissue disorder). There were few outright rejections, but notably, the majority of the respondents (29 out of 48, or 60 per cent) had reported taking out life and income protection insurance prior to having the genetic test. Quite a few of the individuals affected (17 in total) had sought to appeal within the company against the discriminatory condition imposed by the insurance company: only one did so successfully. Notably, however, no individuals reported appealing through existing legal avenues: the majority stating that it was all too hard and stressful and, in some cases, it being reported that they did not know how to seek redress.

It must be acknowledged that there are limitations with this research because of its reliance on unverified accounts (anonymous reports provided to the researcher with limited or no opportunity for any follow up with the person alleging discrimination). Indeed, the authors themselves are very careful to state that these are simply ‘alleged’ or ‘reported’ cases of genetic discrimination. Furthermore, it is difficult to discern from the limited information available the
precise legal status of the insurers' decision in these cases, in particular whether or not the discrimination would have been justified under the insurance exemption and therefore lawful. However, the study authors were of the view that at least some of these cases involved unlawful discrimination under the present disability discrimination legislation.

It should be noted that further empirical research funded by the Australian Research Council is currently being undertaken on a national scale into the nature and extent of genetic discrimination in Australia (Otlowski, Taylor and Barlow-Stewart, 2002). A key feature of the project is its triangulated design, seeking to gain the experience and perspective of all key stakeholders. In particular, data will be gathered amongst: 'consumers' (those considered to be at risk as a result of a genetic test result or because of their family history); third parties comprising insurers and employers (these being the groups against which allegations of genetic discrimination have most frequently been made); and also through the various organisations within the legal system through which complaints of genetic discrimination may be pursued, with a view to ascertaining whether any cases of genetic discrimination have been recorded. An important aspect of this project will be the verification stage whereby, with the explicit consent of those involved, individual allegations of genetic discrimination will be followed up with the relevant third party. It is anticipated that this process of verification will elucidate factors associated with genetic discrimination from both consumer and third party perspectives, allowing for objective assessment in relation to the legality of the conduct and providing an opportunity for integrated analysis. This project is due to be completed by December 2004 and is expected to establish baseline data against which the success of any future reforms such as those proposed by the joint national Inquiry into the Protection of Human Genetic Information in its Discussion Paper (Australian Law Reform Commission, 2002), can be assessed.

Given the limited terms of the exemption for insurers under current laws, and the need for them to be able to justify what would otherwise be unlawful discrimination, there is no doubt that underwriting decisions that are disadvantageous to the applicant and which are based on a misinterpretation of genetic test information, would amount to unlawful discrimination. Thus, individuals would, in these circumstances, have some remedy pursuant to anti-discrimination legislation, although in practice, as already noted, this option does not appear to have been taken up. One cannot at this stage be certain why this is so, but indications are that factors such as cost, stress, fear of exacerbating the sense of stigmatisation, and in some cases, lack of awareness about legal remedies probably play some role, although as noted earlier, this latter aspect is now being addressed through the IFSA Standard.

Further, it should be acknowledged that it is difficult for individuals to establish that insurers have misinterpreted their genetic test information: they may not be aware that it has occurred, or even if they suspect it has, they are unlikely to have enough information to assess the situation. For this reason, having the option of challenging insurers' use of genetic test data under disability discrimination legislation is arguably not an adequate response. For one thing, as previously
observed, there has been a notable lack of use of such formal legal remedies in practice. But even more significantly, anti-discrimination legislation deals with the problem of discrimination once it has occurred, after the damage has already been done. There is a case for arguing that it is better to anticipate these problems and put strategies in place to avoid the risk of unfair discrimination. This would also be a much safer option in the light of the sensitive nature of this information and related privacy concerns.

The most compelling argument against allowing insurers unrestricted access to genetic test information is based on the limited predictive value of genetic tests. Little is known about the way in which genetic data is factored into the underwriting process to calculate risk assessment and the cost of premiums. There are, however, reasons to believe that there is real potential for problems to arise. The predictive value of genetic testing varies considerably, depending on the nature of the condition being tested for. In the case of single gene disorders, tests may predict that a disease will probably manifest at some time in the future, however, due to variable expressivity and incomplete penetrance, it will not be possible to predict accurately the point when the condition will begin to reveal itself and the severity with which the person will be affected.

The outcomes of testing for complex or multifactorial disorders, which in practice are the more common genetic conditions, are even less certain as such tests can only identify predisposition to disease, thus changing probabilities but by no means establishing conclusively that the person will in fact develop that condition. The concern is that in a society where a fairly deterministic approach is taken to genetics, if insurers are permitted to use this information for the purposes of risk assessment, it will be credited with greater probative value than it warrants.

It has to be understood that a genetic test result does not, of itself, have actuarial significance. Additional statistical information is required linking a given test result to the occurrence of some disorder in order for a sound prediction of disease or of lowered life expectation to be made: without this additional information which connects genetic test results and the incidence of disease or death, these results lack actuarial import (O’Neill, 1998:721). Establishing relationships between genetic indicators and the economic costs of the risks identified is a painstaking process which must developed separately for each genetic condition. It requires population based research, which optimally should be undertaken within whole national populations to take account of local variations. For this reason, some commentators within the field of clinical genetics have cautioned that it will be many years, quite possibly decades, before an accurate picture emerges (Holtzman et al, 1997).

The complexity of evaluating the ‘risks’ associated with positive gene tests is compounded by the fact that account needs to be taken of the availability and effectiveness of any treatment which may operate to reduce the level of risk. It has been predicted that once genetic information is properly understood, it will probably have significantly less impact on risk assessment than is currently thought to be the case. Indeed, there have already been some revisions of initial assessments of risk in respect of the BRCA1 test for breast cancer, with original
estimates of risk being significantly reduced once population based studies were undertaken. In this light, a case can certainly be made that there is presently insufficient reliable evidence regarding the extent to which genetic test results can be used to predict life expectancy or onset of ill health, and that it is therefore impossible for insurers to be in a position to use this information accurately.

A recent report of the United Kingdom House of Commons, Science and Technology Committee (House of Commons, Science and Technology Committee, 2001) expressed dismay at the situation then prevailing in the United Kingdom. At that time, the official policy was that insurers would only use those predictive genetic tests for underwriting purposes which had been approved by the Genetics and Insurance Committee (GAIC) — a committee of experts established to monitor and regulate insurers’ use of genetic tests and in particular, to determine which genetic tests have sufficient actuarial relevance to justify insurers’ reliance on those test results. However, in practice, there appeared to be considerable uncertainty, even within the industry, about what its policy is regarding the use of genetic test information. One of the telling conclusions of the Science and Technology Committee was that ‘it does not appear to be certain, at present, that the information obtained from positive genetic tests is relevant to the insurance industry’ (House of Commons, Science and Technology Committee, 2001: para 32). The report pointed to the fact that four of the tests that the Association of British Insurers had recommended insurers use three years ago are now regarded as no longer relevant or reliable. The committee heard evidence that the tests for familial adenomatous polyposis and hereditary motor and sensory neuropathy are irrelevant to insurers owing to the typically early onset of these conditions; the test for myotonic dystrophy is not sufficiently predictive, and multiple endocrine neoplasia has too wide an age of onset. It was suggested that ‘this casts the gravest possible doubts on the validity of all the tests not explicitly approved by the Genetics and Insurance Committee ’ (House of Commons, Science and Technology Committee, 2001: para 33) which at that stage had only approved the test for Huntington’s disease. The committee accordingly expressed its firm view that insurers have given the test results a predictive significance that cannot, at present, be justified.

The committee did note that it is the policy of a number of British insurance companies to only take account of negative test results in the calculation of premiums. Significantly, the committee urged that other companies also consider adopting this approach on the grounds that the scientific and actuarial evidence currently available seems to indicate that ‘this is the only justifiable use that can currently be made of genetic test results’ (House of Commons, Science and Technology Committee, 2001:paragraph 40). The concerns expressed by this committee about the unreliability of genetic test information (echoing also previous inquiries undertaken in the United Kingdom) led it to recommend that no predictive genetic test result should be used by insurers for the purposes of underwriting, with the exception of negative genetic test results. In the wake of this recommendation, an agreement has been negotiated between the British government and the Association of British Insurers for a moratorium on the use of
predictive genetic test information by insurers for a five year period, even exceeding the two years that the Science and Technology Committee had recommended. This agreement covers all but the largest quantities of insurance, enabling consumers to obtain up to £500,000 of life insurance and £300,000 of critical illness, income protection and long term care insurance, without having to disclose any genetic test results. For policies in excess of these amounts, insurers would be entitled to use genetic test results for underwriting purposes, but only those authorised by GAIC (the situation which had prevailed for all policies prior to the moratorium).

Conclusions on Arguments for Regulation

Although clearly there are limitations to our present knowledge of the extent of genetic discrimination, it is submitted that enough is known of its nature already to determine that there is a problem. Moreover, the extent of the 'problem', if unaddressed, is likely to increase in terms of the number of people affected because of the inevitable expansion in the uptake of genetic tests. The dangers associated with insurers' use of predictive genetic information are too great, at least at the present time, for routine use of genetic information in underwriting. This information should not be used until such time as there is better understanding of its significance, particularly in relation to multi-factorial disorders. In this case, treating genetic test information differently is justified as a response to an identified problem.

The risk of doing nothing has to be weighed up against the risks of intervention: this requires attention to be focused on the nature of the harm in each case and on whether anything can be done about it. Most would agree that individuals in these circumstances are already vulnerable and in a weaker position compared to the insurer who has the capacity to spread the increased risk, if necessary, passing it on to consumers through an increase in premiums. Further, there are ways of protecting insurers from the risk of adverse selection by imposing a financial ceiling, such that for large policies, disclosure of genetic test information would still need to be made, at least for genetic tests for which there was some consensus about their actuarial relevance. This can be justified on the basis of evidence from statistical modeling which shows that the real risk for insurers with regard to adverse selection would be in respect of very large policies, and that the costs to insurers in the case of small to medium sized policies would not be significant (Harper, 1997:1066; Macdonald 1997:1074; Macdonald:1999). It may, however, be necessary to distinguish between life and other forms of personal insurance such as disability or critical illness insurance, as there are indications that the effect of adverse selection arising from the applicant’s knowledge of genetic test information could be more severe in relation to such other categories of insurance (Macdonald, 1997:1069; Pokorski and Ohlmer 2000:146). A number of reasons can be put forward to explain this. Gene analysis is likely to be a better predictor for disability than the age at which a person is likely to die. Further, there are far more conditions that result in
disability rather than death, and pay-outs may be large if over an extended period. However, the key factors appear to be that the use of asymmetrical information has a greater potential to influence purchasing decisions in respect of these products than in the case of life insurance (Pokorski and Ohlmer 2000:146). Moreover, the market for critical illness insurance and related products is more price sensitive, in that a given price increase in insurance causes a greater decrease in the quantity of critical illness insurance purchased as compared with life insurance. Any reform model would need to take these differences into account to ensure that insurers are given adequate protection from the risks of adverse selection.

**What Needs to be Regulated?**

If we assume that a need for some intervention in the private insurance market to regulate access to and use of genetic information is accepted, this in turn leads to a number of further questions: where exactly should regulation be targeted and what form should it take? It is important that any intervention take into consideration the competing interests (those of consumers and also the industry’s concern about adverse selection) and that it is limited to those areas which currently present a difficulty.

It is therefore necessary to engage in some line drawing to determine the limits of intervention. Firstly, in light of the comments made at the outset of this paper, the focus here is on those forms of voluntary insurance for which underwriting on health grounds is undertaken, such as life, sickness or critical illness insurance. Further, intervention should be limited to predictive genetic tests in circumstances where the individual is healthy and free of symptoms. Indeed, there is no real debate about the entitlement of insurers to use genetic test information where the individual is already suffering symptoms of the condition — or what can be described as diagnostic genetic testing.

A more difficult issue arises with regard to family history: a form of genetic information that insurers have long had access to. Because of the current debate about insurers' access to and use of genetic test results, insurers' use of family history information has now also come under scrutiny. In the United Kingdom, the moratorium only extends to genetic test information, leaving insurers free to continue to draw on family history for underwriting purposes (but a negative genetic test may be used to counter unfavourable family history.) However, the Human Genetics Commission which has been examining the issue of insurers' utilisation of genetic information, had flagged in its Interim Recommendations the status of family history as a troublesome issue which requires attention. The commission expressed its concern 'that the principles of utmost good faith and full disclosure seem to fall most heavily on the consumer' and that 'Few people are provided with information as to how their premiums are loaded' (Human Genetics Commission, 2001:1). It also expressed the worry that family history information is not always interpreted appropriately in underwriting. In its final report the commission resolved to 'not at present recommend that the insurance moratorium
currently in place in the UK should be extended to the use of family history information’ (Human Genetics Commission, 2002:7.16). However, it made clear its intention to continue to consider, with the industry and others, the wider question of access to personal genetic information, including family history, in more detail during the period of the moratorium (Human Genetics Commission, 2002:7.17).

Also in the context of the current national Inquiry in Australia, attention has been focused on the continued use of family history by insurers, with specific questions being posed in the Issues Paper seeking submissions on this issue (Australian Law Reform Commission, 2001: questions 11-9, 11-11). It may at first sight seem counter-intuitive to say that the historical practice of using family history should continue, regardless of any new development in the field that would allow a more efficient practice to be followed. Further, it could be argued that if there are perceived to be problems with both, then the more accurate form of information available through genetic testing should be used.

Whilst distinguishing between genetic test and other genetic information such as family history may appear to create some anomalies, there are some grounds to argue that the risks associated with genetic test information are considerably greater than those arising from the use of family history. Through established usage of family history, there is a better understanding of its significance for underwriting purposes than is presently the case in relation to most genetic tests: as most of these are very new, there has been little opportunity for the actuarial relevance of the test information to be properly assessed. Unlike genetic test results, which are often credited with greater probative value than they warrant, family history is generally understood as lacking in precision. Notably, most of the concerns that are being raised about the use of genetic information, including claims of unfair discrimination, relate to the use of genetic test information rather than family history, and this has generally been the focus of reforms in other jurisdictions.

The justification for restricting insurers’ access is greatest in respect of genetic test information, and it would be overly restrictive of insurers’ underwriting practices if substantial inroads were to be made on the current position in relation to information obtained through family history. Indeed, access to family history could be argued to be necessary as a safeguard against adverse selection, and there has already been some actuarial modeling undertaken in the United States in respect of genetic testing for breast and ovarian cancer which supports this view (Subramanian et al, 1999:548-549). Accordingly, it is submitted that it is appropriate to draw a distinction between genetic tests and family history. This position reflects a pragmatic recognition that insurers have traditionally had access to family history and that precluding access to this form of information could have significant adverse selection implications for insurers.

Notably, the Inquiry Discussion Paper does not propose to change the rules in relation to insurers’ access to family history information. It has, however, indicated its view that insurers, through their peak bodies, should develop industry policies on the use of family medical history in underwriting to ensure that
Inevitably, questions arise challenging the validity of distinguishing genetic test information from other health information, some of which may also be predictive or particularly sensitive. It is argued that there are good reasons for singling out genetic test data in view of the greater risks associated with this kind of information. In particular, there is concern that predictive genetic test results will be misunderstood and misinterpreted, treated as having greater probative value than they deserve, resulting in unfair discrimination against individuals. Singling genetic test information out is not unfair as all comers will be treated the same in relation to that data. The fact that the impact of this may be haphazard, benefiting some more than others, does not necessarily make this approach inequitable.

Sometimes there are attempts to take the argument the other way: instead of arguing against special treatment for genetic test information, it is claimed that intervention should go further, such that there is no risk assessment on any health grounds for life/disability insurance. This can be dismissed as a Utopian ideal. Such a proposal might work if the industry was underwritten by the state or if such insurance cover were compulsory, but this sort of proposition is totally unrealistic for a system of voluntary insurance within an industry that is based on commercial principles. So, it is submitted that it is not sensible to challenge the idea of risk assessment per se, but there is justification for creating a limited exception in respect of genetic test information because this is an area where the operation of the normal insurance principles has proved to be troublesome in practice.

It has been suggested that there is a need to balance competing interests: whilst there are strong justifications for restricting insurers' access to and use of genetic test information in the interests of individuals, there is also a need to protect the insurance industry from the most costly aspects of adverse selection — in respect of above average claims. Drawing on developments elsewhere, the most sensible solution would be to limit the restriction on the use of predictive genetic test results to small to average sized policies, permitting use of genetic tests where individuals are seeking large amounts of cover. In these circumstances, there will be a need for safeguards to ensure the scientific reliability and actuarial relevance of genetic information used in underwriting.

Notwithstanding considerable support for a 'two-tier' model along these lines from a range of quarters, as reflected in submissions to the Inquiry (Australian Law Reform Commission, 2002:24.67), the Inquiry has made its view clear that there should be no fundamental change to the basis of underwriting applications that involve genetic information (Australian Law Reform Commission, 2002: 24.90). It does, however, recognise that some degree of independent oversight of the use of predictive genetic test information in underwriting is needed to help ensure that the use of such information is either firmly based on actuarial or statistical data, or that it appears reasonable, in the absence of such data. To this end, the Inquiry proposes the establishment of the Human Genetics Commission of Australia (HGCA) which would be vested with the responsibility of
determining which predictive genetic tests are appropriate for use in insurance underwriting (Australian Law Reform Commission, 2002:Proposals 3-1 to 3-7, 24-2, 24-3). It further proposes that no predictive genetic test should be used by insurers in underwriting mutually rated insurance unless the test has been approved for that purpose by the proposed HGCA (Australian Law Reform Commission, 2002:Proposal 24-3).

**Form of Regulation?**

If changes are to be made along the lines suggested in this paper, which go somewhat further than the reforms proposed by the joint Inquiry into the Protection of Human Genetic Information, the difficult question then arises as to how reform is best achieved: should legal or non-legal solutions be invoked to protect the community from unfair genetic discrimination? In seeking to answer this question, one should be wary of placing too much store in legal solutions: whilst the law is an important instrument to promote justice and fair treatment of individuals, one needs to be realistic about what the law can achieve. The law should not be thought of as an omnipotent force, but rather as a guiding instrument which helps to shape society. It seems logical to suggest that a multifaceted approach rather than a single pronged strategy is needed to tackle the problem of genetic discrimination, involving laws or regulations, but also committed to more focus on education, both within the industry and the wider public.

Assuming the need for some change is supported in principle, the choice would be for either a legislative approach — be it through amendment of existing legislation or the introduction of new legislation specific to genetics such as the *Genetic Privacy and Non-Discrimination Bill 1998* (Cth) — or the implementation of change through non-legislative means. Each approach has some attractions but also drawbacks.

There are considerable limitations attached to a fixed legislative approach including the practical difficulty of defining, in statutory terms, the scope of operation of the legislation, and related problems of interpretation (for example, what is ‘genetic disease’?). There has also been debate about the validity of distinguishing between genetic and non-genetic conditions; or between genetic and non-genetic tests, and whether these boundaries can be drawn precisely for the purposes of legislation (Alper and Beckwith, 1998:143-146). Whilst these are problems which arise with any attempt to regulate in this area, they arise most acutely in the context of legislative reform. There is also the difficulty that once enacted, a legislative solution is an inflexible instrument, limited in its capacity to respond to change in an area of rapid scientific and technological development.

These difficulties may point to less formal, more flexible non-legislative solutions, for example through the introduction of industry codes of conduct or moratoria. Such an approach would, of course, require cooperation from the relevant industry, but this may be forthcoming, particularly if the alternative is a more heavy-handed legislative response. However, reforms achieved in this way would not have the same capacity for enforcement, and are therefore likely to be
less protective of the interests of individuals who have undergone genetic testing. Nevertheless, measures along these lines may be appropriate in the shorter term, possibly as an interim solution. Notably, in the Netherlands such measures were in place for a number of years, and were later formalised through legislation.

If there is ultimately to be a legislative response, it is important that it is well targeted, preferably along minimalist lines, modifying existing legislation where necessary. Above all, care must be taken to avoid creating a statutory monolith by way of overreaction to the problems that we are currently facing.

Conclusion

In conclusion, it is submitted that there is already enough evidence of a 'problem' to justify intervention aimed at regulating insurers’ use of genetic test information. However, the response that ought to be taken is a measured, targeted response addressing those aspects of the present situation that are most problematic. This would entail limiting the use of genetic test information for small to average sized policies but permitting use of 'approved' genetic tests for the underwriting of large policies. A legislative solution should be a last resort: ideally such measures could be achieved through an industry supported moratorium as has occurred in the United Kingdom. A co-regulatory model of this kind would guarantee industry input (eg in determining the level of the threshold or ceiling) and would avoid more rigid solutions being imposed on the industry.

References


Investment and Financial Services Association Ltd (2002), Genetic Testing Policy, Standard No. 11.00, January.


This article is based on a paper presented at a recent conference on Genetics and Financial Services organised by the Centre for Actuarial Research at the ANU’s School of Finance and Applied Statistics, the Institute of Actuaries and the Securities Institute. The author would like to extend her thanks to the two anonymous reviewers for their helpful comments.
Estimating Disease Risk with Genetic Screening

Helen O’Neill

It is more than a year since the complete sequence of the human genome was publicly announced (International Human Genome Sequencing Consortium, 2001). The impact of this milestone on medical research is already apparent. Scientists are geared up to adopt new experimental approaches in the race to combat human disease. New information flowing from the human genome project should fuel a revolution in medical research with wide-ranging implications for human health, longevity and employability. There are very good reasons to collect and use all of this information for the benefit of mankind, to improve health care and sustain life. It remains for society to dictate the level of protection placed on personal genetic information. Checks and balances will need to be implemented sooner rather than later. However, the time may come when the genetic blueprint of an individual will be viewed no differently to any other personal information. The potential to predict disease risk by genetic screening is considered here along with the health and medical benefits which should flow from new approaches to medical research fuelled by completion of the human genome project.

Genetics Today

The science of genetics originated in the mid-1800s with the experiments of Gregor Mendel who investigated the inheritance of characteristics in pea plants. While the classical genetics experiments of the early 20th century identified many inherited traits, it was the discovery of the DNA double helix in 1953 by Watson and Crick which led to identification of DNA as the carrier of genetic information. All somatic cells in an individual carry genes from both the father and mother and these are inherited en bloc on chromosomes. The human cell has 23 different chromosome pairs including an XX pair of sex chromosomes in females and an XY pair in the male. The approximately 30,000 genes carried by the 46 chromosomes represent the human genome.

Each chromosome is made up of a string of four different nucleotides or bases, making up a four-letter code referred to as the sequence. For a given gene, the nucleotide sequence forms the genetic code, represented by triplets of bases. Genes are aligned along this strand, delineated by regions of coding rather than non-coding DNA. Each gene is first transcribed into an RNA intermediate form and then the base triplets are translated into amino acids. The amino acids are

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joined together in the sequence dictated by the RNA, producing a protein molecule that performs a distinct structural or physiological role in the cell.

Different proteins have different cellular functions. Each different type of cell produces a distinct range of proteins providing all the necessary structural and metabolic functions required by the cell. Different types of cells or cells in different stages of development have a distinct pattern of gene expression and produce a unique profile of proteins. There are many examples of this division of function between cells. For example, B lymphocytes, which represent one type of white blood cell type, produce antibody molecules which are released into blood where they destroy blood-borne pathogens. In the pancreas, islet cells are specialised for production of the insulin protein. Any gene mutation which leads to reduced levels of insulin can precipitate development of diabetes.

The nucleotide sequence of a given gene can also vary slightly between individuals. This gives rise to allelic variants of the gene. One example of this is the ABO blood group system, where individuals carry either the A, B or O allele of a gene encoding a molecule called the glycosyltransferase enzyme. This molecule functions differently in individuals of different A, B, AB and O blood types, leading to the addition of variant carbohydrate side chains on a cell surface molecule expressed by red blood cells. The presence of multiple alleles, or ‘polymorphism’, in a population leads to the existence of variant forms of the one protein, most of which will be functionally indistinguishable and retain normal function. Some allelic variants result in proteins which function less well in some circumstances than others. If this protein is critical to cell function it can place an individual at risk of disease.

Some genes have large numbers of alleles. One example is the HLA antigen system encoded by the major histocompatibility gene complex important in tissue matching for transplantation. There are many HLA alleles and some have been associated with disease states like ankylosing spondylitis and hereditary hemochromatosis. HLA genes can be sequenced to determine which alleles are carried by members of a multigenerational family. This information can then be used to determine the pattern of inheritance and the penetrance of the particular disease.

Similar screening methods are used to determine the pattern of inheritance of mutant genes. Any single base change or deletion in a gene can lead to mutant forms which can be inherited and precipitate disease in some family members. Genetic screening to determine sequence changes in a gene of interest can determine the mode of inheritance of the mutant gene within the family of an affected individual. More drastic mutations can involve chromosomal aberrations such as polyploidy (more than two copies of the same chromosome as seen in Down’s syndrome) or translocations between different chromosomes. Once a gene mutation has been linked to a particular disease, standard diagnostic tests based on gene sequencing can be devised to detect both normal and mutant forms of the gene. Genetic screening can then be extended to the wider population. In a similar vein, genetic screening can involve chromosomal or cytogenetic analysis to detect chromosomal abnormalities associated with disease risk. Genetic
screening to determine disease risk is a straightforward task for diseases linked to known genes or known chromosomal aberrations.

The Nature of Inherited Disease

Monogenic diseases are caused by mutations in single genes leading to production of abnormal proteins affecting a vital cell function. Individuals who inherit the mutant form of the gene have a high risk of disease. The nucleotide sequence of a gene can be used to quickly identify individuals at risk of inheriting the disease or trait. Single gene defects precipitating phenotypic changes or disease can be easily traced in pedigree studies. There are four main patterns of inheritance, autosomal recessive, autosomal dominant, X-linked recessive and X-linked dominant. Autosomal recessive diseases require a gene copy to be inherited from both parents in order to see expression of the disease, while autosomal dominant diseases require only one copy. X-linked recessive diseases, like red-green colour-blindness, are usually only seen in males, whereas X-linked dominant diseases are found equally in both sexes. More than 1000 human disorders have a genetic component or are inherited to some degree, but most of these are extremely rare affecting between one in $10^4$ to $10^5$ people. Very few (~100) of these are due to a single gene defect.

The majority of diseases with a genetic component are complex diseases involving somewhere between 10 and 30 different genes. The issue of genetic screening for detection of disease is not so straightforward. Most disease states are complex or multigenic, involving sets of interacting genes. Many are also multifactorial, having both genetic and environmental cause. Diabetes is an example of a complex disease. It is genetically determined, with both genetic and environmental components and additive small effects contributed by multiple genes. Even common diseases like allergy, heart disease, depression and asthma show some evidence of genetic susceptibility but require environmental triggers to precipitate disease.

Propensity to develop some forms of cancer also has a complex genetic and environmental basis. Similarly, capacity to resist infection by a range of pathogens including viruses, bacteria and parasites is genetically controlled. Another complication is that some disorders cannot easily be attributed to a genetic cause. They can also have variable expressivity giving a range of severity from mild to extreme. In some cases the same disease phenotype (or appearance) results from different gene effects. In other cases, alternate allelic forms of the same gene can lead to different phenotypes. It can be argued that most diseases are so complex that ‘they push the current array of molecular genetic analysis to their limits’ (Schork, 1997). Despite our increased capacity for genetic analysis, it is not yet possible to develop genetic screening tests for most of these complex diseases.

The immune response plays an overriding role in many disease states. This is the defence system that monitors the body and removes damaged or infected cells. Many genetic effects related to complex disease map to genes that control the
immune response (Fahrer et al., 2001). It is well known that an effective immune response can alter the course of disease. It occurs in response to most disease states including infection, cancer, autoimmune disease and injury and there is increasing evidence that genes controlling immune responsiveness have a major influence on the progress and resolution of most diseases. For example, one of the recently mapped genes for diabetes incidence in mice is \textit{IL-12B} which encodes a soluble factor involved in regulation of immune responses involving T lymphocytes (Morahan et al., 2001). The immune response involves networks of cells and secreted molecules produced by cells as part of the defence against pathogens. It is vitally important to work out which genes are involved in immune response development since a defect in any one immune response gene could be manifest in multiple disease states. Of particular interest are networks of regulatory genes in humans which control the immune response. This type of study has enormous potential for development of new drugs which moderate immune function and disease resolution.

\textbf{Gene Discovery}

Family studies can be readily used to determine whether diseases are inherited and have a genetic component. However, the association or linkage of disease with particular genes segregating in that family is a much more complicated process. The endpoint of a successful linkage analysis is the discovery of a specific gene(s) associated with the disease and determination of the specific function of the protein(s) encoded by the gene(s). New technology developed in the past two decades has increased the capacity for gene discovery.

One tool now commonly used by geneticists is the library of SNPs or single nucleotide polymorphisms that have been located throughout the human genome. These represent known sites of natural sequence variation in DNA that can be detected by sequencing DNA across those regions in different individuals. A genome-wide map of 1.42 million SNPs has now been aligned with the human genome sequence (International SNP Map Working Group, 2001). The nature of SNPs makes them particularly suitable for high-throughput genotyping or allele identification so that linkage of disease states with SNPs can be easily calculated. With the complete sequence of the human genome the ability to link disease states with SNPs on known chromosomes has increased enormously. These will be used increasingly to map disease states to specific regions of the genome and to particular genes.

The complete sequence of the human genome has also been aligned and integrated with BAC clones (bacterial artificial chromosomes) representing regions of chromosomes that have been linked to many disease genes and human traits. (International Human Genome Mapping Consortium, 2001). This clone-based map will be used increasingly by geneticists to obtain rapid and accurate identification of genes linked to disease. BAC clones will be used to isolate genes of interest for further study. Once candidate genes are defined it will then be
important to define the products of those genes and to develop strategies to alter their aberrant effects.

While the sequencing of the human genome has led to the identification of many genes, the function of most genes remains unknown. One of the major challenges facing geneticists is the characterisation of the proteins produced by all genes in the human genome. It will also be important to work out how genes interact and regulate each other. Complex regulatory networks of genes have been described which involve a number of regulatory proteins influencing expression of sets of genes (Wyrick and Young, 2002). These networks are very important in development and act to govern gene expression as the organism acquires new form and function through its life cycle. An understanding of the interactions involved in complex regulatory networks represents a very challenging area of genetics.

**Functional Genomics**

Various experimental approaches can be taken to assess gene function. The pursuit of information on how genes are expressed and interact to give the phenotype or appearance of an individual has been called ‘functional genomics’ or ‘phenomics’. For complex diseases like diabetes, functional genomic studies aim to determine all genes contributing to the diabetic phenotype and to assess quantitative and regulatory aspects of gene expression. This same approach will be needed to assess gene function and expression in all diseases including different types of cancers.

One current activity of widespread interest is the gene profiling of cancers and diseased tissues. This involves analysis of the expression level of all genes within affected cancer cells. This analysis utilises small glass slides called micro-arrays which are dotted with an ordered pattern of probes. These probes represent short sequences of DNA called oligonucleotides representing short sequences of known genes. Micro-arrays are exposed to labeled RNA prepared from tissue. The binding or hybridization of a labelled RNA molecule to particular oligonucleotide probes will indicate gene expression within the tissue of interest.

Micro-arrays containing myriads of oligonucleotide probes specific for genes of interest allow simultaneous quantitation of RNA related to genes expressed in tissues or cancers from affected individuals. Custom-made micro-arrays can be designed to measure expression of genes related to infection with various pathogens. Micro-array data can also be used in cluster analysis to identify coincident gene expression and to map out gene networks under the control of common regulators.

The use of animal models is essential in order to proceed to the next step of linking genes with particular disease states and gene functions. This can involve ‘reverse genetics’ technology and the production of genetically engineered mouse strains. Transgenic mice are developed by transfer of new genes into the DNA or genome of a mouse. From this altered mouse a new inbred strain can be developed to study the effect of expression of the introduced gene on the
phenotype or characteristics of the animal. Similarly, ‘knockout mice’ are produced by mutating genes in order to study the effect of loss of gene expression on the phenotype of the animal. Other studies can include introduction of marked genes into isolated cells in culture using DNA vectors which facilitate new gene expression inside cells. The effect of introduced genes which are expressed within cells can be used to make predictions about gene function.

While these approaches give valuable information, ‘forward genetic strategies’ in which random genes are mutated offer a faster approach to identification of gene function. A number of large-scale mouse mutagenesis projects are now being conducted to develop a range of mouse mutants that can be used to study the effect of gene loss on animal development and disease states.

This approach is essential to add function to genes in the mouse genome that are linked to disease. Since many genes in mice have homologous or equivalent genes in humans it will be a straightforward progression to translate information obtained in mouse mutants to the human genome and to define a function for genes important in human disease states. In this procedure, male mice are mutagenised to produce single nucleotide mutations in genes with a view to breeding multiple mutant mouse strains. Mice showing phenotypes or diseases of importance are selected for further breeding, pedigree analysis and mapping of their mutated genes by linkage with SNPs. The complete sequence of the mouse genome is available, along with overlapping sequence and linkage maps for all the mouse chromosomes.

Using these tools, it will be possible to identify candidate genes controlling disease and to make predictions about the loss function of mutated genes and the nature of the proteins responsible for producing the disease state. For example, mice have been reported which are characteristically obese, diabetic, immunodeficient or which develop cancers at an early age (Justice, 2000). Many linkage studies to identify candidate genes are underway.

From the sequence of the human genome, we can now predict how much of the DNA contributes to protein production. In the human cell only about 1% of DNA is actually coding DNA which gives rise to proteins. The remainder of the genome consists of intergenic and intragenic non-coding DNA, most of which has unknown or unmapped function in the cell. There is increasing interest in the RNA transcribed from non-coding regions. Regulatory RNA produced from intergenic regions is now thought to influence the production of proteins (Mattick and Gagen, 2001), although the mechanisms by which this occurs are not well understood. This type of information removes the emphasis on proteins as the controlling elements of cell differentiation. The enormous potential for regulatory effects due to interactions between RNA and between RNA and proteins or DNA is almost beyond comprehension. It represents an area of genomics that extends beyond the scope of current molecular biology.
**Contribution of Genomics to Human Health**

The human genome project will almost certainly increase our capacity for improved genetic screening to determine carriers of genes linked to serious disease. Two new technologies appear to offer the greatest potential for identification of susceptibility genes. These are SNP typing and the use of micro-arrays coated with oligonucleotides representing the variant forms of genes. Custom-micro-arrays could be used increasingly to identify individual genes directly affected by known mutations. They could also be used to determine gene expression changes resulting from those mutations. The development of a comprehensive list of disease genes and definition of their function will link genetics with medicine and precipitate new approaches to medical research.

As more genes are mapped and their functions defined, the capacity to develop drugs and therapeutic strategies to halt or reverse disease states should increase. Once the protein product of a gene is known, new drugs can be designed to specifically block protein function. The field of pharmacogenomics, involving development of drugs based on genes that determine disease, will expand. It may also be possible to develop individualised treatment based on the disease genes carried by an individual. For example, individuals could be screened for genes determining sensitivity to certain drugs. This could allow more accurate determination of drug dose and type so that therapy for cancer can be more accurately applied resulting in more effective treatment and fewer side-effects.

One important area will be the definition of the genes determining susceptibility to infection. Pathogens are probably the greatest threat to human health and longevity. There will be increased information on genes determining immune response potential and capacity to overcome infection. New immunoregulatory molecules will be defined and exploited for their potential use in immunotherapy. It is expected that some genes determining immune response to infection will be associated with a number of different diseases. Along with the discovery of new genes controlling the immune response will come increased opportunity to design vaccines to induce immunity and prevent infection. Preventative medicine may become available to individuals genetically more susceptible to certain types of infection.

Continual investigation will be needed to gauge the impact of infection on the human genome since the genetic basis of disease susceptibility can change as new pathogenic variants arise due to mutation of rapidly dividing micro-organisms. While most vaccines will be directed against infectious diseases, the potential exists to develop vaccines against other complex diseases such as autoimmune diseases and cancers. Another important area of investigation will be the impact of infectious agents on the manifestation of diseases with a known genetic component. For example, previous infection is thought to be associated with the development of some diseases. Associations have noted between rotavirus infection and development of diabetes, retrovirus infection with multiple sclerosis and Epstein Barr virus with chronic fatigue syndrome.
The mutant forms of many genes are already known to contribute to cancer. The human genome sequence can be used to identify genes similar to or representing partial homologues of known cancer genes. Another approach is to fingerprint cancers to identify their gene expression profile. Using micro-array technology, it is possible to produce gene expression profiles for each of the different types of cancers (Alizadeh and Staudt, 2000). By comparing profiles of cancer cells with the normal non-cancerous cell counterpart, genes specifically expressed in the cancer can be identified. Mutations in gene products and copy number differences can be detected along with genes in the downstream pathways responsible for the defective phenotype. The new Cancer Genome Anatomy Project (Strausberg et al., 2001) aims to accelerate the field of cancer genomics by producing an online database of all gene expression data related to cancers.

**Concluding Remarks**

The capacity to perform rapid and multiple genetic screening tests will increase with the availability of the human genome sequence and associated linkage maps. Screening tests can be easily designed to detect small mutational differences between alleles in different individuals and to make predictions about disease risk associated with different genes and their allelic and mutant forms.

However, despite enormous technical advances, the very complexity of diseases with a genetic component remains a major inhibiting factor for development of routine genetic screening strategies to determine risk for the majority of diseases. Another important issue is that genetic information alone does not have predictive value for disease. Environment, lifestyle and infectious disease also impact on the manifestation of genetically determined disease. The main conclusion from this paper is that while it is now easy to establish diagnostic genetic screening tests, these will not tell us much about risk for the majority of diseases which are complex and for which there is significant environmental dependency.

Genetic testing will not be predictive for multigenic, multifactorial diseases until scientists understand the function of all genes and map out the interacting networks between those genes. The problem facing scientists relates to the sheer number of genes and environmental factors impacting on disease expression. The full impact of the human genome project will not be felt for decades. ‘The Human Genome Project will not be completed …until the functions of all human genes have been determined’ (Sutherland, p.594).

Understandably, people are concerned about issues related to genetic screening and the impact it could have on their privacy, health and financial situation. The problem with genetic data relates to its familial nature. People will remain sensitive about the need to disclose personal genetic information to insurers. The laws controlling privacy of genetic information will need to be protective but adaptable to meet the needs of individuals, researchers and insurance companies. Adaptability will be important because the development of knowledge may well accelerate with time. Information disclosure may become a
lesser problem as the functions of more genes are defined. Institutions offering life and medical insurance will need to consider how all of this new information will affect the type of policies they can offer to different risk classes at different premiums.

One prediction is that multiple genes will be associated with risk for most diseases. In the long run it may be possible to assign a value of risk to each gene linked to a particular disease. People may be faced with the decision to undergo genetic screening to assess their disease risk and to make lifestyle choices, or to undergo a variety of medical treatments. Longevity should increase with the availability of new preventative and therapeutic medicines (Sutherland, 2000). The nature of health and life insurance products could be quite different from those available today. People will still want insurance but the industry will need to adjust to meet consumer needs.

Actuaries will need to keep abreast of new developments in genetics in order to price insurance and make it available to most individuals. Once a risk is assigned to every gene in an individual for every known disease, then it is hard to see how life insurance as we know it will exist. The issue for actuaries and insurers may well be development of new products that guard against unforeseen factors like major environmental shifts or the occurrence of catastrophic genetic change. These are events that cannot be predicted given current knowledge. This process of change will depend on the accessibility of information under regulated circumstances.

References


The author gratefully acknowledges helpful comments by an anonymous referee. This paper was stimulated by a recent conference on Genetics and Financial Services organised by the Centre for Actuarial Research at the ANU’s School of Finance and Applied Statistics, the Institute of Actuaries and the Securities Institute.
Review

Coping with Economic and Social Change

Peter Saunders, The Ends And Means Of Welfare: Coping With Economic and Social Change In Australia, Cambridge University Press, Australia, 2002

Reviewed by Michael Keating

Saunders believes that the unprecedented prosperity of the 1990s has been overshadowed by social decline, apparent in a widespread perception of growing inequality, institutional decline and uncertainty. The root cause of this paradox, according to Saunders, is the emergence of economic rationalism and neo-liberalism as the dominant policy paradigm. This social philosophy in favour of market supremacy is hostile to state intervention. Instead the market has become an end in itself, rather than one of the means of achieving social objectives. Accordingly Saunders’ ‘basic purpose is to question the wisdom of continuing down a path in which economic forces, factors and arguments dominate the ends and means of “the good society”’.

In particular, Saunders is concerned that the welfare system is seen by those driving the neo-liberal reform agenda as an obstacle to achieving better policy outcomes. He alleges that while the population is increasingly dependent on welfare benefits to supplement more dispersed and insecure market incomes, ‘The focus [of welfare policy] has shifted away from the powerful distributional impact of welfare to its alleged detrimental effects on incentives’. In addressing these issues Saunders explores what is expected of the welfare system, focusing on how responsive the system is to broader social changes and community values.

The core of this book, and its best part, is in Part II which discusses the changing socioeconomic landscape. The four chapters in this part cover successively employment and unemployment, income and living standards, poverty and exclusion, and inequality. The first of these chapters considers the various dimensions and causes of mass unemployment, which Saunders properly identifies as the major policy failure of the last thirty years. In the next chapter on income and living standards there is a scholarly discussion of the different concepts of income and their relation to living standards. The hardly surprising conclusion is that money does not buy happiness, but those with higher incomes tend to report greater life satisfaction and happiness. Perhaps the most interesting finding is that despite the increase in incomes in the 1990s, a sample survey of public opinion found that over 70 per cent of the population consider that their living standards had either not changed or had declined in 1998-99 compared to two years previously.
The chapter on poverty and exclusion discusses the meaning and causes of poverty, and makes the best possible case for setting a poverty line to guide both research and policy in Australia. In Saunders’ view the concept of social exclusion, which is relatively new in Australia, should complement and not replace a focus on poverty. The two concepts represent different notions of need and what is required to achieve an adequate standard of living.

The discussion of inequality begins with its meaning and relevance for policy. Saunders reports the now well-established finding that the inequality of earnings has increased, as has the distribution of work. Despite frequent references throughout the book to increasing inequality, however, Saunders does not really establish that overall income inequality has increased. Indeed, Saunders largely ignores the most complete measure cited — equivalent disposable income — which shows inequality declining between 1986 and 1999-2000 (Table 7.2). And if allowance is made for the increased provision of ‘income-in-kind’ through the introduction of Medicare and the spread of services such as increased education enrolments and child care, then other studies not cited by Saunders have shown that the distribution of income became more equal between the mid 1980s and the mid 1990s.

Overall each of these chapters covering our changing socioeconomic landscape provides an authoritative review of the topic. Recent research findings and the various arguments are mostly well and fairly summarised before Saunders presents his own personal conclusions. Consistent with his view that the legitimacy of the welfare system depends heavily on community support, Saunders also draws on a survey of community attitudes as they affect these issues. These survey findings are of most interest where value judgements, such as what represents an adequate income, are at issue. Community opinion regarding more technical issues, such as the causes of unemployment, are a less useful basis for policy, but even here the general tendency not to blame the victim of unemployment, suggests broad support for the traditional principles underpinning our welfare system.

My quibbles regarding this part of the book are, first, I think Saunders’ concept of the welfare system focuses excessively on the income support system. I would like to have seen the relationships between support in cash and in kind addressed at greater length. In particular, these relationships are relevant to the pursuit of an ‘active society’ and social inclusion as advocated by proponents of a ‘Third Way’. Second, I would also have preferred more discussion of the impact of changing household composition on the distribution of income. Third, although Saunders is persuasive I am still not convinced that in a society where poverty is defined relative to community norms, that policy would be assisted by official endorsement of a poverty line. In any event, it could be argued that we have essentially achieved the same purpose now that parliament has defined an adequate income for a single pensioner as representing 25 per cent of male average weekly total earnings.
But these quibbles notwithstanding, this part of the book dealing with the demands our changing economic and social structures are making on the welfare system succeeds admirably. I recommend it as an excellent background text for any student of public policy as well as for someone who has a particular interest in the welfare system.

Where the book is less convincing is its attempt to show that the welfare system is now being threatened by neo-liberalism, and that a major policy reversal is called for. Unfortunately Saunders does not provide any single connected statement of his arguments regarding the neo-liberal threat — rather they are scattered throughout the text. But Saunders’ key arguments appear to be that neo-liberalism is responsible for:

- Giving a greater role to market forces, particularly through deregulation of the labour market, that has produced greater inequality, uncertainty and stress;
- An obsession with smaller government resulting in welfare cuts and tighter targeting of assistance that have prevented the welfare system from being able to respond adequately;
- The refusal by the state to support the demand for labour through Keynesian policies, and instead relying exclusively on supply side policies; and
- Welfare ‘reforms’ to reduce the role of the state and to increase the role of incentives, market mechanisms and the obligations on welfare recipients, on the grounds that the structure of the welfare system is the major cause of unemployment rather than the failure of government economic policies.

There is little doubt that Saunders’ attack on neo-liberalism and its alleged influence, as briefly outlined above, will strike a chord with many social scientists. Many will welcome the endorsement of their prejudices by Saunders who has a deserved reputation as an expert on social policy. In my view, however, Saunders largely fails to make his case because of:

- Critical assertions that are factually wrong;
- Contentious opinions which are not really substantiated; and
- The nature of the policy recommendations, which largely represent modification rather than revolution, and are hardly consistent with the extreme nature of the criticisms expressed.

First, despite Saunders frequent references to welfare cuts his own data show little change in overall government expenditure and taxation in the last twenty years. Moreover, irrespective of politicians’ rhetoric, tax cuts have not been a priority in practice. Changes in the income tax rate scale have hardly altered the average tax rate for any income group since the mid 1970s, and all new tax packages — including the most recent GST package — have essentially amounted to only handing back the proceeds of fiscal drag.
Turning more directly to social expenditures, as is only normal, priorities have been reviewed since the early 1980s. Programs have been more tightly targeted and there has been an attempt to strengthen compliance. But the savings from all these various decisions were used to fund new social policy initiatives, and have been substantially supplemented by decisions to transfer resources to social policy. In fact the net impact of government *decisions* to save and to spend on social policy between 1983-84 and 1995-96 amounted to an *increase* equivalent to 2.5 per cent of GDP. These decisions are also largely responsible for social expenditures increasing their share of total Commonwealth outlays from just under half at 48 per cent to 62 per cent over the period from 1982-83 to 1996-97 (Keating and Mitchell: 138). Since 1996-97 it seems fairly certain that the New Tax System and other welfare reforms have further added to the net expenditures (including tax expenditures) on social policy.

As a result of these spending decisions access to health, education, aged care and child care services have been expanded greatly over the last twenty years. For example, Medicare did not exist twenty years ago, and there have been dramatic rises in the proportion of young people continuing their schooling to year 12 and in higher education. It is true that real expenditure per student in higher education has been cut — arguably beyond what could be expected from productivity increases — but that is not true of all other publicly provided human services where real expenditure per capita on the client population has increased. Similarly income support levels have increased faster than average weekly earnings for all pensions and benefits over the last twenty years, and the assistance for children and families who are renting has increased massively. This increased assistance has meant, for instance, that by January 1997 a single income family with a dependent spouse and two children, earning two thirds of average weekly earnings and renting privately, received 33.3 per cent of their income from government cash transfers compared to only 4.4 per cent of their income in January 1982. Indeed while real earnings increased only marginally over this period, the disposable income of this family increased by 24 per cent, and after housing costs it increased by as much as 75 per cent.

Equally Saunders’ suggestion that governments have not been willing to intervene fiscally to support employment is not consistent with the evidence. Estimates of the change in the real structural budget balance prepared by Abbot (1996) show that the scale of the discretionary fiscal intervention has increased in response to each recession since 1952. The largest such intervention was in response to the most recent recession in 1991-92, and the facts do not support the contention that governments have eschewed Keynesian demand management policies.

Second, in matters of opinion, Saunders asserts a causal connection between neo-liberalism and deteriorating social outcomes but does not demonstrate it. Perhaps the best example to illustrate this point is in relation to the labour market. Thus it is highly debateable how far neo-liberals were responsible for deregulation of the labour market. The shift to enterprise bargaining is probably the single
most important change, and this was initiated by the ACTU, hardly a bastion of neo-liberalism. More importantly, while Saunders explicitly recognises that the increased dispersion of earnings could be in response to changes in the structure of employment or changes in relative rates of pay, his discussion largely proceeds on the assumption that it is relative rates of pay that have changed. Even if that were true, it appears that earnings have become more dispersed in most developed countries and this trend started in the mid 1970s — well before deregulation of the Australian labour market — so it is not clear why restoration of centralised wage determination would reverse the process. But a more likely explanation for the increased dispersion of earnings is that the structure of employment has changed substantially with all the growth being concentrated in highly paid jobs and a loss of lowly paid and middle level jobs (Keating forthcoming). Of course, it is then possible that this changing employment structure reflects government decisions to free up product markets by reducing protection and increasing competition, but the weight of the evidence in a number of studies is that technology is the main explanation.

Third, given the nature of the threat that Saunders believes the welfare system is facing, one might have expected him to recommend substantial changes to the present set of policies. However, his policy prescriptions represent only very modest changes. The most important recommendation is to spend much more money, but of itself that would not change the policy paradigm, although as Saunders argues it would require a substantial change to taxation and recognition of the positive contributions of the welfare state. Significantly Saunders’ solution to increase the equality of income distribution would involve ‘a modest increase in marginal tax rates restricted to the top 5 per cent of taxpayers’, and an ‘effective minimum wage’. The modification in the tax scales would have negligible impact on the distribution of incomes and Australia already has a centrally determined minimum wage that in fact is higher relative to median earnings than in almost all other countries (Metcalf, 1999).

Saunders also raises — without explicitly endorsing — the major proposal for a guaranteed minimum income sufficient to provide a poverty line income without any work-oriented conditions. But such a proposal seems no more likely to gain acceptance now than when it was originally put forward in the report from the Henderson Poverty Enquiry nearly thirty years ago. Even the advocates of a guaranteed minimum income recognise that if the minimum income were to be equal to current social security entitlements, which is less than Saunders favours, then revenue neutrality would require all income to be taxable at a universal marginal tax rate of as much as 57 per cent (Dawkins et al., 1998).

Moreover when it comes to unemployment, although Saunders objects to the way mutual obligation is currently administered, he recognises that some form of work testing has always been required in Australia, and that the current emphasis on ‘mutual obligation’ meets his own key test of enjoying public support. Thus Saunders proposals for reducing unemployment largely amount to more of the same — maintaining economic growth accompanied by expansion of public employment and other labour market programs. More radical suggestions to share
the work are also canvassed, without addressing the prior question of whether this is really necessary because we cannot create enough jobs. However, Saunders does recognise the practical difficulties of matching skills and gaining acceptance from those who presently have the work. Saunders cites attitudinal evidence suggesting popular support for work sharing, but we do not really know how far people would be prepared to share their own work and take a commensurate reduction in their incomes. As almost all people report that they are not high income earners, perhaps they have in mind that any sacrifices will be made by someone else, in which case redistribution of work will be no easier than redistribution of incomes and arguably less necessary.

In sum Saunders attack on the reforms affecting the welfare state over the last two decades lacks credibility. Saunders recognises the pressures for change and opposes a return to collective provision within a bureaucratically organised and controlled system underpinned by a large public sector. Perhaps this is why Saunders’ alternative proposals are not significantly different to the directions that reforms have in fact been taking over the last two decades. But even so it is surprising that Saunders does not pursue further some of the ideas from the British Third Way. This alternative approach would involve a shift in priorities away from income support focussed on the individual in favour of more collective support for communities within which individuals could then realise their potential. It would, however, require a shift in power away from the centralised state to allow local communities more scope to shape their own destinies.

Personally I hope that Saunders in his next book will apply his considerable understanding of social relations and social policy to be more forward looking. In my view the best way to challenge neo-liberal extremism is to preserve the best features of the welfare state by reconstructing it in favour of a welfare society, and Saunders could make a valuable contribution to meeting that challenge.

References


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NON-AGENDA

With the view of causing an increase to take place in the mass of national wealth, or with a view to increase of the means either of subsistence or enjoyment, without some special reason, the general rule is, that nothing ought to be done or attempted by government. The motto, or watchword of government, on these occasions, ought to be — Be quiet...Whatever measures, therefore, cannot be justified as exceptions to that rule, may be considered as non-agenda on the part of government.

—Jeremy Bentham (c.1801)

Indigenous Welfare Policy: Lessons from a Community Survey

Anne Daly, Rosita Henry and Diane Smith

Although Indigenous Australians only represent two per cent of the Australian population, they have a high profile in the community as the original inhabitants of the continent and because of the problems associated with their poverty, dispossession and welfare dependence. In this article we present a summary of research findings from a three-year study conducted among Indigenous people living in and around the town of Kuranda in Northern Queensland — about half an hour’s drive inland from Cairns. According to the 1996 Census there were 203 Indigenous and 420 non-Indigenous people living in the Kuranda postcode area. (The term ‘Indigenous Australians’ is used to describe people of Aboriginal and Torres Strait Islander origin. In the context of this study, the people interviewed were Aboriginal.) The aim was to document the role of the welfare system in the Indigenous domestic economy and to consider options for improving the delivery of welfare payments and services.

The research arose from a recognition that family welfare payments were not necessarily reaching their targets of children and those most in need of support. In the context of Indigenous families, the care of children within an extended family network appeared to be a crucial factor. It was argued that a better understanding of sources of income, household structure and the mobility patterns of members, and child care arrangements would help develop more culturally appropriate welfare policy and services for Indigenous families. The study’s use of informal

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focus groups, and a structured questionnaire to the same people over a three-year period, provided a unique opportunity to detail the relationship of these people with the welfare system. The results confirm the picture from ethnographic and aggregate data about the importance of government transfers in the Indigenous domestic economy (see, for example, Finlayson, 1991; Daly, 1999). While too much reliance should not be placed on one case study, the results highlight some important issues for policy development in an era of welfare reform.

Methodology

The mixed methodology was designed to explore the domestic economy and childcare arrangements of Indigenous people with the aim of developing culturally-informed and workable welfare policy and service delivery. A loosely structured questionnaire was administered to one key reference person (any adult) per household in the sample. The questionnaire covered household membership, shared childcare arrangements, income sources, adult and child mobility, and employment status. Project researchers were assisted by local Indigenous facilitators who relocated respondents from the original set, introduced the interviewers to potential new respondents, helped explain the nature of the research, and acted as translators during each interview. At each successive survey, respondents were very keen to discuss the research outcomes. A detailed discussion of the methodology employed and the results of the first year of the study are available in Smith (2000). More detailed results from subsequent waves of the study are presented in Henry and Daly (2001) and Henry and Smith (2002).

A longitudinal survey of a highly mobile population such as the Indigenous population at Kuranda has many problems. It is difficult to ensure that respondents are representative of the underlying population and that they can be subsequently relocated. It was not feasible, in the light of the high rates of mobility of some individuals, to track all the original set of household members. To include them, and their new households, would have expanded the pool of respondents to unmanageable proportions. The project focus was therefore on tracking the original sample of key reference persons and eliciting information on changes to their respective households at each subsequent survey.

The employment of local Indigenous facilitators played an extremely important role in relocating respondents from previous years, and making contact with possible new respondents. New key reference people were not randomly selected, but were chosen by the Indigenous facilitators and researchers, so as to specifically add more households with welfare recipients (primarily female) who cared for children and young adults to the sample. Despite best efforts, this ‘familiarity effect’ probably skewed the sample towards particular members of the community and the final sample in each year was not statistically random. However, a comparison with data from the 1996 Population Census and

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1 Julie Finlayson, Anne Daly and Diane Smith conducted the interviews in 1999, Anne Daly and Rosita Henry in 2000, and Rosita Henry and Diane Smith in 2001.
administrative data from Centrelink suggests that the sample was representative of the Indigenous population living in Kuranda (Daly and Smith, 2000).

Table 1 summarises the number of households and individuals covered by the survey. New individuals and therefore households were added to maintain the sample size over the course of the study. Using the Australian Bureau of Statistics (ABS) definition, households were defined to be a group of two or more related or unrelated people who usually reside in the same dwelling, who regard themselves as a household, and who make common provision for food and other essentials for living (Daly and Smith, 2000:13). As the great majority of household members were close kin, all people living in the household at the time of the interview were included as household members rather than trying to make arbitrary decisions about who were ‘usual residents’ and who were ‘visitors’. These ABS categories make little sense in this context of a highly mobile population.

**Table 1: Size of the Survey Sample 1999-2001.**

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key reference people (no.)</td>
<td>28</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>Attrition from preceding year (no.)</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>New key reference people (no.)</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Key reference people from 1999 absent in 2000 but returning in 2001 (no.)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People in households (no.)</td>
<td>182 (106 adults, 76 children)</td>
<td>179 (105 adults, 74 children)</td>
<td>202 (117 adults, 85 children)</td>
</tr>
<tr>
<td>People from 1999 survey still in sample (no.)</td>
<td>108</td>
<td>136</td>
<td></td>
</tr>
</tbody>
</table>

Source: Henry and Smith (2002).

**Key results**

The research found many characteristics of these Indigenous households that have been identified in other studies. The households were typically large and multi-generational. The average household in the sample had about 6.5 members, compared with the Australian average from the 1996 Census of 2.7 persons (Daly and Auld, 2000). About half of all households in each of the Kuranda sample waves contained three or more generations of related kin and households approximating a nuclear family were rare (for example, only three of the 28 households in the 1999 sample contained just a couple and their biological offspring). The large size of these households was not just a reflection of
preferences for living in an extended family network but also can be attributed to the shortage of affordable housing in the Kuranda area.

The longitudinal nature of the study enabled a detailed documentation of the high levels of mobility among this group of Indigenous Australians. Localised networks of movement characterised by a high incidence of mainly circular or short-distance mobility were identified. For example, few people moved outside the Kuranda area (Kuranda and the outlying settlements at Mantaka, Kowrowa, Mona Mona, and Koah). Of those who did, most moved to neighbouring urban centres (Cairns and Mareeba). Between 1999 and 2000, only five people moved further afield (two to Perth and three to Armidale). Three of these had returned by the time of the 2001 survey. Between 2000 and 2001, five others moved (a family of three to Brisbane, and a single man each to the Gold Coast and to Nambour).

In 2001, 24 (13 per cent) of the 179 survey participants from the previous survey year were no longer in the sample. Of the remaining 155, 107 people (60 per cent) were still living in the same house, while 48 individuals (27 per cent), had moved from one place of residence to another by the time of the 2001 survey. Some of these had moved to households within the survey and others to households outside our survey sample. In addition, 59 new people (34 adults and 25 children) who had not been part of the 2000 survey, had moved into the ongoing sample of households by the time those were re-surveyed in 2001.

Table 2: Movement in and out of the Sampled Households Between the 2000 and 2001 Kuranda Surveys

| Adults (26 years and over)       | 47 |
| Youth (17–25 years)             | 15 |
| Children (16 years and under)a  | 45 |
| Total movers                    | 107|

Note: For the purposes of the three surveys, the definition of ‘child’ was taken to be a person aged 16 years and under, in accord with standard criteria used by the social security system to determine eligibility for a range of welfare payments.

Source: Henry and Smith (2002).

As Table 2 indicates, of all the people surveyed in 2000 and 2001 (222 persons), a total of 107 (62 adults and 45 children) had moved (either into houses outside the survey, between houses in the survey, or from houses outside the survey). In other words, one out of every two persons had moved. Nevertheless, in the midst of this substantial degree of mobility, there exists a critical core of stability for many families. Our data indicated that some families had remained in the same house for extended periods prior to the first survey.

Children and young adults were significant contributors to this high degree of mobility (see Table 2). A comparative analysis of data over three surveys enables some conclusions to be made regarding the relationship between child-care
arrangements and mobility in the Kuranda area. Child-care is an extended family-centred rather than a household-centred activity, and the mobility of children and youth is an expression of extended family networks. Of the 20 children in the 2000 sample who moved out of houses between 2000 and 2001, eight moved to other houses in our survey. Twenty-five children from houses outside the survey had moved into survey houses at the 2001 survey. Almost half of these moved with their primary carer or carers. Thirteen children moved alone, including one from Brisbane and three from Armidale. In all these cases the children moved to households within their kinship network.

These results relate to mobility over a year but our discussions with key reference people highlighted the importance of short-term movements as well. Children were cared for by an extended family network and moved freely between households, sometimes staying for a few nights and at other times for much longer periods. The primary caregiver was not necessarily a biological parent. For example, in ten of the households surveyed in 2001 there were children under the age of 16 years without a biological parent present (Henry and Daly, 2001). In 2000, approximately 75 per cent of surveyed households had children other than their own biological children in residence and being cared for by people other than their biological parents (Finlayson, Daly and Smith, 2000:35). In these cases usually the grandparents, particularly grandmothers, were the primary caregivers and received family payments on behalf of the children.

In addition to collecting basic information on household composition, the questionnaire included detailed questions on sources of income for each of the household members. We did not attempt to collect information on the amount of income received from each source because of the biases expected in reporting on the income of other people. The results on the number of sources of income show the high level of dependence on government transfers among these households as to receive these transfer payments, individuals must pass income and asset tests indicating that they do not have substantial income from non-welfare sources (see Table 3). Data from Centrelink for 1999 show that Indigenous welfare recipients in Kuranda were less likely to have additional sources of income than were their non-Indigenous counterparts. On average, those that did, reported smaller amounts of additional income (Daly and Auld, 2000). The important role of welfare income was pervasive; there were no households identified in the survey without at least one adult receiving income support.

The major employer of Indigenous people in Kuranda was the Community Development Employment Projects (CDEP) scheme. Under this scheme, Indigenous communities receive funding based on their welfare entitlements with an additional payment toward capital costs in order to undertake community-based employment projects. Participants are expected to work part-time for their welfare entitlements.² Income from CDEP participation is in large part, funded by the government so approximately 85 per cent of the total surveyed adult household

² For a fuller discussion of the CDEP scheme see Morphy and Sanders (2001).
members in 2001 could be classed as being dependent on some form of government transfer payment as their main source of income.

Table 3: Share of Total Number of Sources of Income for Indigenous Adults, Kuranda, 1999, 2000 and 2001

<table>
<thead>
<tr>
<th>Income source</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDEP</td>
<td>34</td>
<td>36</td>
<td>31</td>
</tr>
<tr>
<td>Parenting Payment</td>
<td>13</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Family Tax Benefit</td>
<td>23</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Newstart</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Disability Pension</td>
<td>6</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Age Pension</td>
<td>7</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Carers Pension</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Youth Allowance</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wage</td>
<td>4</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Abstudy</td>
<td>3</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Total (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>No. of sources</td>
<td>129</td>
<td>132</td>
<td>147</td>
</tr>
<tr>
<td>No. of households</td>
<td>28</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>No. of adults</td>
<td>103</td>
<td>105</td>
<td>111</td>
</tr>
</tbody>
</table>

Note: Some people have more than one source of income, so the number of income sources exceeds the number of individuals. Some adults had no independent source of income.

Source: Henry and Smith (2002).

It is possible for participants in the CDEP scheme to supplement their basic welfare entitlements with additional income generated through activity on the scheme, for example sale of arts and crafts. Altman, Gray and Sanders (2000) show that Indigenous people working on the CDEP scheme in 1994 had 55 per cent higher incomes than the Indigenous unemployed and 64 per cent higher than those not in the labour market.

Wage earners were a small minority in the sample, although they had increased in number in 2001. The great majority of all employed adults worked part-time; only two were in full-time employment. Adults were in a range of jobs including cleaning, art and craft work, working with the railways, national parks, or the shire council, working as health and teaching assistants, or as Tjapukai
dancers. (The Tjapukai Cultural Park in Cairns, formerly the Tjapukai Dance Theatre in Kuranda, is a major cultural tourism attraction where a small number of Indigenous residents of Kuranda work as dance performers and artists. The Cultural Park also purchases arts and crafts from Kuranda CDEP participants.)

An important source of income for households was Abstudy — the income support payment, subject to the usual income and asset tests, given to Indigenous Australians studying at high school or a tertiary institution. In addition to Abstudy income received by adults (presented in Table 3), a larger component of Abstudy income accrued to children under 16 years. In 2001, for example, there were 20 children aged 16 years and under in receipt of such income, compared to the seven adults. If these sources of income were included in Table 3, then Abstudy would proportionally increase from 6 to 16 per cent of all sources of income from the surveyed households in 2001. The two earlier survey waves revealed that similarly high levels of Abstudy income accrued to children in 1999 and 2000.

While Abstudy payments for persons over 16 years are paid directly to the individual concerned, for children under 16 years it is paid to their responsible parent. Over three-quarters of respondents reported that persons receiving Abstudy within their households made a regular contribution from their payment to help with such things as clothing and food, in addition to their school needs. Thus Abstudy is a source of income which makes an important contribution to Kuranda domestic economies through demand sharing mechanisms. Schwab (1995:13), included the following among the core principles of demand sharing:

Aboriginal people are, in general, protected by and benefit greatly from the generosity of members of broad-ranging kinship systems. Individuals involved with and supported by such systems consider them normal and sensible, and expectations related to the sharing of shelter, food, cash and other resources appear entirely reasonable to the participants in such kinship networks. Sharing among Aboriginal people is propelled by demand but constrained by a delicate balance between what is considered appropriate to demand and appropriate to refuse.

The survey highlighted the problems facing youth in the transition from school to work, albeit based on a small sample. For the 32 individuals aged 17–25 years who were present over two, or all three, survey waves, only four were observed moving into waged employment. Ten young adults on CDEP stayed on the program over the three surveys; and seven on Abstudy stayed on that form of income assistance. For the remainder (11 persons) who transferred from one source of income to another, the major exits were from Abstudy to welfare or CDEP payments; from the CDEP to Abstudy or back to welfare payments; or from welfare to the CDEP scheme. In other words, these young people were already recycling through various forms of government transfer payments.

The data reinforce comments, repeatedly made by respondents, that the main transition for young school leavers in the community is into either the CDEP
scheme or the welfare system. Of those respondents who indicated they were CDEP participants, 36 per cent were aged 25 years and under, and a number of those were recent school leavers. For young Indigenous school leavers in Kuranda, the local CDEP scheme seems to be the first point of entry into any work environment. A number of respondents express concern about young adults taking the CDEP pathway, suggesting it could become a dead-end street for them. Parents were keen to see their children leave high school and enter into the local labour market where they might develop employment skills in local businesses, establish a career path, and gain a higher income.

Policy Implications

The results of this three-year survey have some important implications for welfare and employment policy development. The first result we would like to highlight is the implication of the lack of paid employment and the reliance on transfer payments for the incomes of these households. Evidence from the wider community shows a close correlation between a lack of paid employment and low family incomes (Harding and Richardson, 1999; Harding, Lloyd and Greenwell, 2002). Data from the 1996 Census show that the median household income per household member in Indigenous households in Kuranda was 57 per cent of that of other Australians living in Kuranda (Daly and Auld, 2000). If household incomes are to be raised among the Indigenous community in Kuranda, it is important that people move into paid employment.

Labour market opportunities are limited in Kuranda. Daly and Auld (2000) note that according to the 1996 Census, the unemployment rate in the Kuranda postcode was above the Australian average for non-Indigenous people (11 per cent compared with 9 per cent) but below the Australian average for Indigenous people (15 per cent compared with 23 per cent). The relatively good result for Indigenous people in Kuranda is probably attributable to the high proportion who considered themselves to be outside the labour force and the successful CDEP scheme whose participants were counted as ‘employed’ in the Census. While the local Indigenous population is highly mobile within the Kuranda area, there is a general reluctance, given cultural preferences and ties to the land, to move outside the area. Even if they were willing to move to a more active labour market, their low level of labour market skills, might limit their economic prospects at least in the short term. These restrictions imply that if growth in household incomes is to be achieved then locally available paid employment needs to be accessible.

The reliance of these households on income transfers from government appears to be a long-term issue. It continued at least over the three years of the survey. Clearly developments in welfare reform have important implications for the Indigenous population of Kuranda. A major development of welfare reform over the 1990s and increasingly emphasised by the Coalition government in its most recent policy statement *Australians Working Together* is the idea of a mutual obligation between the state and welfare recipients. The McClure (2000:34) report which is the basis for the most recent reforms of the welfare system argued:
Within the social support system .... social obligations are defined as mutual obligations, whereby the whole of the society has an obligation to provide assistance to those most in need. Similarly, those who receive assistance and opportunities through the social support system have a responsibility to themselves and the rest of society to seek to take advantage of such opportunities.

Under this policy, recipients are expected to undertake ‘reasonable requirements’ such as work experience, training or community work to prepare them for paid employment in return for their income support (Department of Family and Community Services, 2001a). Financial penalties can be applied for non-compliance. In this context, the list of activities that are considered to satisfy these requirements will be critical for Indigenous people in Kuranda. Our survey showed a high level of community participation among local organisations and family support activities such as informal childcare. As well as CDEP work, recognised activities need to be broadly defined to include some of these activities such as the care and education of children, voluntary activities undertaken for Indigenous and community organisations, and cultural activities such as teaching Aboriginal dance and language.

As part of Australians Working Together, the Aboriginal and Torres Strait Islander Commission (ATSIC) is responsible for the development of Community Participation Agreements between remote Indigenous communities and government agencies. This program is focused on remote communities where there are few opportunities ‘for people on income support to meet activity test requirements’ (Department of Family and Community Services, 2001b). Under these agreements a set of activities are recognised by the community and ATSIC as appropriate justification for income support. For example, in the case of the Mutitjulu community in Central Australia a proposed agreement included education and training activities such as adult literacy and numeracy, mechanical training and health training; employment activities such as landscaping, rubbish and firewood collection and craft production; and community development activities such as community governance, aged care, housing maintenance and sports coaching (Smith, 2001). Our study of the Indigenous community in Kuranda suggests that Indigenous people living in areas where there is an active labour market may also face some of the difficulties of those in remote areas in accessing opportunities. The recognition of a wider range of activities for the purposes of satisfying mutual obligation tests — such as those acceptable under Community Participation Agreements — is necessary for those Indigenous people in less remote locations who are excluded from wage employment for whatever reasons. Without these options many may find it difficult to satisfy the mutual obligation conditions. Recent discussions (August 2002) with Centrelink in Cairns suggest that they are adopting a fairly wide definition of mutual obligation activities in dealing with the Indigenous population in Kuranda.
The survey results emphasise the importance of the CDEP scheme in providing work opportunities for members of the community. It is important to note that the wage for this employment is notionally linked to welfare entitlements and therefore intended to support a minimal standard of living, although there are opportunities to supplement the basic CDEP income (see above). Under *Australians Working Together* the Coalition government is promoting the idea of CDEP employment as a temporary step on the way into standard employment (Department of Family and Community Services, 2001c). The introduction of Indigenous Employment Centres (IEC) in urban CDEP schemes is intended to increase the placement of participants in mainstream full-time employment. Under the IEC program, CDEP organisations will be funded to identify local employment opportunities, to provide selected participants with relevant skills and training, and to case-manage their transition into full employment.

The evidence of our survey in Kuranda suggests that at least so far, CDEP employment has not proved to be a stepping stone into standard employment in this labour market. It is important, therefore, to consider the incentives both financial and otherwise for leaving CDEP and to identify any barriers that are preventing Indigenous people from gaining standard employment before the CDEP scheme can be expected to act as a conduit to standard employment in a small urban centre such as Kuranda. Some of the barriers mentioned by respondents to the survey included transport, childcare, a general lack of employment opportunities in Kuranda and a perception that the wider community was not keen to employ Indigenous people.

A particular focus of our survey was childcare arrangements and the implications of these arrangements for the delivery of income support and services to children. The high level of mobility among the householders including children has important implications for this. Many welfare payments such as Parenting Payment and Family Tax Benefit are designed to provide income support for children but where children are highly mobile, the money does not necessarily go to the person currently responsible for the child. Over the course of the project a number of options have been considered and discussed with respondents. It was generally agreed that an important element for the success of any proposal is the recognition of the extended nature of childcare in Indigenous families. However, the majority of respondents in Kuranda preferred to make their own agreements regarding the financial implications of shared child-care. Initiatives to improve welfare delivery need to respect individual autonomy and be careful to avoid imposing unwanted restrictions on families and individuals.

A Statement of Care, agreed on a voluntary basis between carers for a child, is one possibility. It provides a means of facilitating an agreement among the various carers of a child on how Family Tax Benefit and related payments will be shared between them. However, as the Kuranda case study has revealed, among the carers of a child might also be people who look after the child regularly on a

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day-care or after-school basis, and who are often placed under financial strain as a result. How might this situation be addressed? These carers might be given financial assistance via adjustments to the Child Care Benefits scheme. They might also be included as participants in a Statement of Care where such an agreement is made.

A Statement of Care approach to paying Family Tax Benefit and other payments for Indigenous families has been tested by DFACS in a number of pilot sites, with early results indicating that the supportive case-management approach provides positive outcomes for some Indigenous families. These pilots were evaluated positively and are currently being considered for wider application (DFACS, personal communication). One of the respondents in the Kuranda survey, who was a grandmother experiencing difficulty supporting her two grandchildren on an Aged Pension, with no financial assistance from the mother of the children, herself suggested that such an approach might help alleviate her situation. However, it was suggested that supportive case management would only be required in particular situations, where families seek help in conflict resolution. It is important to recognise that there are some aspects of family life to which policy and service delivery cannot hope to respond fully.

One final set of our results with implications for policy development relates to young Indigenous people in Kuranda. Many respondents expressed deep concern for the futures of young people in Kuranda. The reasons they cited were lack of work and activities for youth, overcrowding in houses, and rising alcohol and drug abuse among the young.

The youthful Indigenous demographic profile and related rapid formation of young families in Kuranda suggests a growing future demand on services and a potentially expanding rate of welfare dependence amongst young unemployed parents and school leavers. This adds weight to the arguments in favour of immediate targeted support for this group, before they enter the welfare system.

The problem of how to effect the transition from welfare to employment and, in particular, from school into employment is a matter of mainstream policy concern. A number of new mainstream programs have been initiated to facilitate such transitions for welfare recipients. These include the Training and Literacy Supplement, Training Credits for the long-term unemployed and Job Search Training (Department of Family and Community Services, 2001a). However, there is little information available on such transitions among young Indigenous adults (for some relevant studies based in the Torres Strait see Arthur and David-Petero, 2000a; 2000b; 2000c).

Our results show the importance of the CDEP scheme as an employer of young Indigenous people in Kuranda, but they also show that a typical young person is not moving off the CDEP scheme into standard employment. If young adults are not to become permanent participants in either the CDEP scheme or the welfare system, then they must be targeted with policy and service support immediately upon leaving school — and preferably while still at school. The CDEP scheme could be used to provide training, mentoring and work experience for youth with the aim of facilitating entry into the local labour market. In
addition the position of young mothers who may wish to enter the labour market at some future date cannot be ignored.

Conclusions

In this paper we have summarised the results of a three-year case study of the Indigenous community in Kuranda in northern Queensland. The aim of the study was to examine the relationship between Indigenous people and welfare service delivery. Data were collected from key reference people on household composition, employment, sources of income and patterns of childcare over a three year period. The results show large multi-generation households organised around a core of individuals with a highly mobile group of temporary residents. Most of the households were dependent on welfare income for their survival and this was true in each of the three years of the study. The study raises some important issues for policy makers.

The lack of standard employment and the reliance on government transfers implies low incomes for these households. In order to raise these incomes it is important to promote employment of Indigenous people in the local labour market. Our survey shows that progress on this front has been slow and it seems to be important to understand why before the problem can be adequately addressed. For example, further training will not get Indigenous people into jobs if there are no jobs available in the local labour market, or if there is resistance to employing Aboriginal people amongst local businesses. If, as seems likely, many of these people remain on income support, it is important that a broad range of activities is included in the list of those that satisfy mutual obligation for recipients of welfare support. This is already the case for CDEP participants. While it has been recognised that those living in remote communities will have difficulties meeting stricter activity tests under *Australians Working Together*, Indigenous people living in small rural communities such as Kuranda may also face significant barriers to entry to the local labour market. Our survey shows that, at least so far, the CDEP scheme in Kuranda has not acted as a stepping-stone into the local labour market. How best to promote employment opportunities for Indigenous people remains a critical question for future research and policy consideration.

Our survey also considered the delivery of income support and services to children and young adults in the community. The advantage of a three year survey was that it enabled us to document the movement of children between carers over time. The results reported here show substantial movement of children between household but they only tell part of the story as in addition to these annual ‘snapshots’ of mobility, there was considerable movement reported by our key reference people between surveys. Children were cared for in an extended kin network that meant they might move between relatives for short or long periods. Our results highlight the importance of recognising a wider family responsibility for childcare in welfare payment systems. An example of one such approach is the Statement of Care which has been trialed by the Department of Family and
Community Services and enables welfare money associated with an individual child to be shared between a group of carers according to some voluntarily agreed formula.

The third wave of the survey has identified an important characteristic of young adults: the apparent absence of any transition from school into mainstream local employment. The main transition is, in fact, into early dependence on welfare or CDEP payments. If inter-generational welfare dependence is to be short-circuited, there needs to be immediate targeted policy and program support for this age group, preferably before they enter the welfare system.

The use of a longitudinal case study has enabled a more detailed investigation of some aspects of the domestic economy of Indigenous families that have been highlighted in earlier ethnographic studies (see, for example, Finlayson, 1991) and in aggregate data. It has proved to be a useful research tool for greater understanding of the complexities of these domestic economies. While the results we have presented relate to a small community in northern Queensland, the similarities between our results and other studies suggests that the conclusions have wider application although the small sample size suggests a need for caution in basing any policy changes solely on our findings.

References


Department of Family and Community Services (2001b), ‘Factsheet No 23’.

Department of Family and Community Services (2001c), ‘Factsheet No 22’.


*We thank CAEPR and DFACS for funding this study. Our particular thanks go to the Kuranda community, the Aboriginal facilitators and respondents and their families, the local organisations, officers from Centrelink regional and national offices and DFACS and its Indigenous Policy Unit for their contributions to the project. We also thank staff at CAEPR, particularly Jon Altman and all contributors to the project over the 3 years, for their comments and assistance on this and earlier papers based on this research. We are grateful to two anonymous referees for their comments.*