



Office of the Information Commissioner
Queensland



the Australia and New Zealand
School of Government

Transparency and Policy Implementation

Building Transparency Part One: The ecology of information and the significance of reputation

Building Transparency Part Two: Practical applications in the public sector

Occasional Paper No. 3

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The Queensland Office of the Information Commissioner and the Australia and New Zealand School of Government are collaborating on a partnership to identify the ways in which transparency can augment quality public administration. The Occasional Paper series is part of the partnership program.

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About the series

The Queensland Office of the Information Commissioner and the Australia and New Zealand School of Government are collaborating on a partnership that draws together a broad network of policy-makers, practitioners and leading academics.

The partnership is designed to build awareness of the impact of transparency and its utility as a public sector management tool. Drawing the connections between the new approach to information management brought about by the right to information reforms, research and practice we hope that the series will foster a more open public sector culture.

The Occasional Papers explore the available evidence base, point to areas that would benefit from more research and study, draw new insights and begin to define what transparency looks like as a tool. They also provide practical tips about when, where and how transparency can best be applied to current public administration challenges.

Written by academics, public servants or other experts, the papers bring together research and practice. All the papers have been critically appraised by a group formed for that purpose. The authors of the papers were included. Particular acknowledgement for their contributions go to Professor John Wanna, Professor Michael Di Francesco, and Office of the Information Commissioner staff Ms Rachael Rangihaeata, Mr Justin Toohey, and Mr Steve Haigh, who kept this project on track with great care and skill.

We trust that you find the Occasional Papers stimulating and thought provoking. All papers in the series are published on the ANZSOG and OIC websites.



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Note on structure of this report

This report is in two parts, though they have been separated in such a way – with independent executive summaries, appendices and references – that they can function either as a two part report or as two separate reports.

Part One: *The Ecology of Information and the Significance of Reputation* focuses on relatively broad and theoretical considerations and on information generally throughout our economy and society, whilst its companion is more focused on practical policy in the public sector. However, such a neat division of labour does not present the most effective way of conveying the ideas, for theory requires practical examples and applications to clarify its elucidation. Accordingly, in the process of elaborating certain principles we offer some observations about specific practical policies – for instance the regime of comparison interest rates imposed on Australian consumer lenders.

Further, having argued that far too much information policy depends on the unrealistic notion of consumers, citizens or users of information doing their own ‘due diligence’ on their purchases or analogous decisions they make, we set out the case for focusing policy much more squarely on the integrity of the process by which reputations are made. Given that this is one of the central thrusts of this first ‘theoretical’ part of the paper, it concludes with a range of practical illustrations of how this can be done by policy makers but also by those with aspirations to social leadership anywhere, whether inside or outside government.

Part Two: *Transparency and Policy Implementation in the Public Sector* then focuses on other matters that are more familiar to information policy – such as the imposition of transparency regimes in specific areas of importance to the citizen and the use of information in achieving specific policy objectives.

Information Commissioner's foreword

This paper is part of a series examining the impact of transparency and how it can be used as a strategic management tool. The utility of transparency has not been clearly articulated as part of the public sector manager's tool-kit. This is hardly surprising when confidentiality and anonymity have been ingrained in the public service culture. This series is aimed at objectively evaluating the available evidence as to whether openness can be a far more powerful tool than secrecy in serving the public interest. Where transparency can be used as a tool, the series also identifies the practical application and the lessons learnt so far.

One of the objectives of Freedom of Information legislation was to 'democratise' information held by government. FOI was an end in itself. The effective exercise of the entitlement to vote is dependent upon there being a free flow of information to the electorate about government decisions and activity. The Independent FOI Review Panel, chaired by Dr David Solomon, found that a major barrier to effective FOI implementation was the public sector's culture of secrecy. Recent national and international FOI reforms are designed to shift the public sector information management culture from 'closed' to 'open'. Public sector information is now commonly legislated as open to the public unless contrary to the public interest.

Public sector information is increasingly recognised in legislation to be a community asset or national resource. Public sector information can also be a strategic asset. Public sector managers are charged with achieving important economic, social and environmental goals effectively, efficiently, economically and ethically. This series of papers is designed to show how transparency can be used as a means to the end: effective policy implementation while minimising costs to the taxpayer. In the series there are papers that show the impact of transparency in improving public sector performance, productivity, implementation, integrity and innovation.

This paper evaluates the evidence about the use of targeted transparency to achieve key policy and regulatory goals. The paper reviews the contribution of economic thinkers to our understanding of the significance of information in influencing market responses. The paper uses examples to illustrate the value of making public sector data available both in raw and value-added formats. The paper also extends beyond a focus on information held by government to the ability of government to influence the transparency of information more widely, including information held by industry and professions. Used wisely, there are many ways in which targeted transparency can deliver wider economic and behavioural outcomes. For example, the paper highlights the Queensland Water Commission's 'target 140' campaign, which included publication of water consumption data. The campaign resulted in a saving of approximately 20,680 million litres of water (worth \$19.2 million at market rates) over an eight-month period and lasting behavioural change.

In 2012 it is sometimes asked, "What is the next big thing in public administration?" I hope the answer will be "Transparency".

Julie Kinross
Information Commissioner (Qld)

Building Transparency

Part One: The ecology of information and the significance of reputation

Policy implications at a glance

Much thinking about information, both by policy makers and academics, focuses on specific characteristics of information in very specific contexts. This can lead to an under-appreciation of the many aspects of what we call **the ecology of information**. Because it is 'non-rival' and can be made generally available to all, information is a potential public good. Moreover it exists within a broader context, which is populated with public goods like the standards within which information is conveyed, and the reputations for quality (or otherwise) acquired by providers of goods and services.

Contemporary thinking about information policy (for instance disclosure requirements in investment and consumer regulation) typically invokes the idea of empowering people to do 'due diligence' on their own decisions. In fact people rarely operate in this way and there is a much wider array of options for policy makers seeking to optimise transparency.

- Because consumers typically make consumption decisions based on **reputation** many mandatory disclosure regimes do not promote transparency – because consumers are not empowered by complex information concerning a single decision of theirs; there exists an alternative more promising avenue by which policy can improve the process by which reputations are made.
- **Some information of great public value is held confidentially**, either by government service providers or in the private sector, when it would be possible to encourage or require its release. A good example is experience-rated workers' compensation premiums, which are a good proxy for workplace safety and which, if published, would improve transparency about workplace safety with potential for strong economic and social benefits.
- To be useful, **reputations must be made against some standard** that permits comparison between providers. Often a primary reason for lack of information in a market (say information about the quality of clinical services in hospitals, educational services at schools or employee satisfaction in workplaces) is the lack of such a standard to report against. Governments can help such standards emerge both by showing leadership and by helping to develop and then reporting to such standards themselves.
- **Governments can influence the 'information architecture'** i.e. the framework of rules and practices within which information is generated.
- Governments could influence the information architecture in many areas of service provision such as clinical service provision, legal services, investment advice and employee satisfaction;
- The Gruen Tender provides an information architecture for service provision that generates large amounts of unbiased data comparing the quality of service provision between different providers.

Overview

Introduction

In any sphere in life we need information to make choices. And yet it is part of the human condition never to know enough. Hayek showed us how important it is for markets to harness the information distributed throughout the economy and which is largely inaccessible to government. Hayek's successors, like Arrow, Akerlof and Stiglitz showed us the dangers of 'asymmetric information' where those who are more informed keep their better information to themselves. This is the principal justification for government prohibitions of misleading behaviour and mandatory disclosure of certain information.

Yet much of this disclosure does not successfully tackle asymmetric information because it is possible to comply with such disclosure requirements without disclosing matters of significant import or because the consumers of the information do not in fact avail themselves of the disclosed information. This can be for lack of sophistication, attention or time. Yet information policy cannot be implemented effectively without understanding these issues. Beyond demonstrating the general value of disclosure regulation, the policy literature has paid surprisingly little attention to the *details* of policy design.

The coming of the internet, and particularly Web 2.0 applications that facilitate broadly based contribution and collaboration has delivered the decentralised generation and distribution of qualitative information to an extent barely contemplated by Hayek. In such an environment, behavioural economics has further developed and drawn attention to our own cognitive limitations in handling large amounts of information, a field pioneered by Herbert A Simon in the 1950s.

This world of exponentially growing volumes of information is also one of burgeoning complexity in which standard 'one size fits all' rules, subsidies or taxes may do more harm than good. In such a world, transparency policies can minimise coercion and so the chance of costly policy mistakes, while assisting agents within the system to make better-informed decisions. These policy virtues have their cognate political virtues. As Fung et al put it: The ingeniousness of targeted transparency lies in its mobilization of individual choice, market forces, and participatory democracy through relatively light-handed government action. (Fung et al, 2009, p. 5)

The ecology of information

Much more than the provision of discrete goods and services which have tended to dominate policy and economic thinking, information takes its meaning and its value within a complex context.

One important defining characteristic of information is that it does not exist on its own (as say a car or a cookie might) but is conveyed within *standards*. Thus for instance the information in this report is being conveyed in the English language using Roman text. And such standards are public goods (further defined in the body of the report). Further,

knowledge about the quality of services can only grow if the experiences and knowledge of many consumers are somehow *shared* again raising the spectre of information as a public good.

On the other hand if it is to be useful to its users, information often needs to be particularly suited to a specific situation (say a doctor's diagnosis) as well as reflecting domain expertise and such things are not characteristic of many public goods provided by the public sector. Further, there needs to be sufficient feedback between users and providers of information to optimise the cost effectiveness of information provision. And the adverse effects of asymmetric information need to be minimised.

- The adverse effects of any intervention, on both information overload and perverse incentives need to be minimised.¹
- Information must be relevant to users. For consumers this will usually mean that information is kept simple and indeed simplified, yet information regimes will usually need to be *differentially* simplified with appropriate levels of detail available to different users depending on their needs.

Information, complexity and reputation

This report expands Fung et al's canvas of targeted transparency in two ways. Firstly Fung et al only consider regulatory regimes where governments mandate disclosure. Often disclosure should be mandatory. However, often the immediate cause of lack of information in the market is the lack of a well-recognised standard to report against. Here the first task is to establish one or encourage one to emerge. Once it has, the best performers will generally have an incentive to report against it and this will put pressure to disclose on other players lest they be seen to have something to hide. Thus some standards like the Global Reporting Initiative (GRI) on environmental and other aspects of corporate performance have emerged from political and commercial activism, with producers being drawn into the process of voluntarily reporting against a standard. Thus policy makers and others wishing to improve information disclosure may be able to effect substantial change even without compulsion.

Secondly, Fung et al's gospel of simplicity arises directly from their having taken the dominant framing of the information problem as one of the consumer doing due diligence on the products they consume. Yet whatever its benefits in specific situations, the simplicity displayed on consumer labels and simple signals always comes with the costs involved in what is often the Procrustean process by which complex information is conveyed in a highly simplified standard. Such approaches will have their uses but are unlikely to ever amount to much more than a number of schemes for disseminating stylised information in specific circumstances.

In highly complex fields, citizens often cannot or do not want to do 'due diligence' on all their decisions. Here they typically make decisions by relying on reputations. Indeed economist John Kay argues that reputation is the "normal market mechanism for dealing

¹ For instance where hospitals must declare death rates, one way of reducing them is to refuse to treat the patients that are at highest risk of dying.

with asymmetric information”. It is hard to think of a single issue that contemporary transparency efforts get more wrong.

In many ways reputation can be understood as a particularly important aspect of the division of labour. As the world becomes more complex and as our expertise grows markets for information become richer – more intermediated. As our expertise grows new areas of specialism grow. The individual actor in the economy cannot realistically exercise ‘due diligence’ in all their choices. Instead they require access to expertise which is mediated. Once the need for expertise is identified, the question that then arises is how one should choose an expert.

Most professional services are heavily regulated often at substantial cost with little clear benefit. And yet very little if any of that regulation is directed towards improving the quality of the information on which reputations for expertise are based. Alas professional occupational regulation strongly reflects the involvement and interests of the professionals themselves. Accordingly while much effort has gone into requiring information disclosure from professionals and their obtaining of permissions from their clients – all of which interventions invoke the ‘due diligence’ model of decision making – little energy has been given to the question of how systems might surface information that would improve the process by which professional reputations are formed.

Some government regulators that act as consumer watchdogs subject those they are ‘watchdogs’ over via surreptitious surveillance. ‘Mystery shoppers’ or actors posing as shoppers are one option – which is also used by current affairs media. A somewhat less contentious option is ASIC’s deployment of ‘shadow shopping’ in which genuine consumers agree to report their experiences of visits to service providers to the regulator, without disclosing this to the service providers during the process. State government regulators use unannounced inspectors to inspect the hygienic condition of restaurants (for instance NSW). However, mystery shoppers are not standard fare in the regulation of lawyers or doctors, despite their being professions in which it is very difficult to detect over-servicing and other breaches of fiduciary duties.

Donations to the ‘reputational commons’

Government is often a purchaser of professional services in markets where there is a great deal of asymmetric information between buyer and seller. It is in government’s immediate interests for it to become an informed purchaser – to improve the quality of the services it receives and the value for money it gets. In contracting for such services the more its suppliers focus on winning and maintaining their good reputation in the future, the less they are tempted to ‘cut corners’ and exploit their own superior information. Yet though government agencies gain much information and expertise in the process of purchasing professional services, they often do little to share this information between each other. The more service providers are focused on impressing their existing clients to win future work from them, the more this enhances their tendency to virtuous behaviour. Reputation leverages this effect because it extends the future rewards (or penalties) arising from impressing (or disappointing) one client to the prospects of working for other clients.

This can be taken further. For the costs of releasing this information to the public are negligible. And this improves the incentives on professional service providers whilst putting the government in a stronger position with its suppliers. Yet as well as these private benefits to the government there are potentially large public benefits as the whole community gets to piggyback off the information generated by the government.

The strategy of information release has also been successful elsewhere. In Los Angeles restaurants received a grade of either A, B or C, according to their compliance with food safety regulations which they were then required to display prominently. This substantially reduced food borne disease and set off a 'race to the top' in which the percentage of restaurants receiving an 'A' grade increased from 58 to 83 per cent. NSW is currently trialling a similar scheme, though on a voluntary basis.

We could do likewise in other areas. For instance firms could be required to provide information to their employees and any prospective employees on their workers' compensation premiums explaining their value as an approximate measure of their health and safety record. If one does not do this for all service providers, it remains possible to 'name and shame' the worst. Thus the NSW Food Authority publishes serious compliance breaches on its website.

Influencing the architecture of the reputational commons

Those seeking to maximise transparency should also consider the *architecture* of the information ecology. For there are many things that can be done to create a situation where information that would be useful comes into existence and is disseminated to those who can benefit from it – and those who can discipline others to perform better with their buying and other choices. Thus for instance if investment advisors and/or share brokers kept independently auditable 'sample portfolios', we could, over a period of time, measure their performance.

Gruen has also proposed prognostic auctions or 'Gruen Tenders' to allocate clinical health work and to generate information on professional performance. Here government funders allocate clinical operations to clinical units – e.g. specific operational units of hospitals – based on a tendering system where those seeking to undertake the work 'bid' in prognostic terms. Thus cataract surgery clinics might 'bid' to do either individual or set numbers of operations by indicating that, should they perform the work they would do so at some specified level of quality (for instance expressed as an adverse event rate below some figure). If they are seeking to secure the work, this generates an incentive for them to offer optimistic prognoses. However, after the event their degree of optimism can be tracked against their actual performance from which can be determined a correction factor. Raw prognoses could then be corrected to take into account the bidder's historical level of optimistic or pessimistic bias for past bids. The Gruen Tender could provide a rich resource of performance data on which the reputation of specific clinical service providers could be based as well as data for other uses. Lateral Economics has also suggested Gruen Tenders for the contracting of legal services (2011, pp. 63 ff).

Conclusion

Although information economics in earnest dates back many decades, as this report highlights, information policy is, both in Australia and elsewhere, in its infancy. In this report we have seen how complex information is, how it relies on standards that are shared between information providers and which are the product of history and how rich the ecology of information is. This report draws attention to a panoply of factors that may require careful consideration when seeking to optimise the ecology of information. They include but are not limited to the following:

- Often governments, or indeed other actors can have a substantial effect just by facilitating the emergence and voluntary reporting to a voluntary standard. The better performing providers have an incentive to report to the standard voluntarily and users may suspect those who don't report as having something to hide.
- We should not be suppressing information of great public potential public benefit – like the workers compensation premiums that can proxy for firms health and safety record.
- Transparency requires careful consideration of the existing incentives which entrench asymmetric information and the possible incentives – perverse and otherwise – that can be unleashed by disclosure requirements. Thus, where disclosure is mandated, policy makers should consider what incentives this may be unleashing and what systems and supplementary supportive measures such as audit might be provided.

Ultimately, however, we will know that this area has come of age when those who think about it understand that, to serve our interests properly the market for information, or what this report calls the ecology of information, must become sufficiently rich to accommodate the idea of the division of labour. A great deal of thinking and policy making in the area of information is based on the idea of the sovereign consumer doing 'due diligence' on their own purchases and other decisions. Yet as Herbert Simon stressed from the 1950s on – and as we know from renewed attention to it in the sub-field of behavioural economics – we do not have the processing power to do 'due diligence' on all, or even very many of our decisions.

Rather, reputations get formed from which we generalise. Very little thinking and virtually no policy making has been focused on what might be done to improve the integrity and information richness with which reputations are forged and by which people come to know of them. This report has proposed a range of areas and means in which we might be able to begin making progress.

Table of contents

Policy implications at a glance	viii
Overview	i
Introduction	i
The ecology of information.....	i
Information, complexity and reputation.....	ii
Donations to the ‘reputational commons’	iii
Influencing the architecture of the reputational commons	iv
Conclusion.....	v
Table of contents.....	1
1 Introduction	2
1.1 Why now?	4
2 The ecology of information.....	6
2.1 Public goods	7
2.2 The ecology of public and private goods	8
2.3 Information, public goods and the age of the internet	10
2.4 Information as a complex, hybrid public good	11
2.5 The importance of standards.....	13
2.6 Political action and voluntary reporting	16
3 A taxonomy of information policy	18
4 Information, complexity and reputation.....	19
5 Information on the quality of services.....	22
5.1 Power imbalances in professional regulation	22
6 Donations to the ‘reputational commons’.....	23
7 Existing information and the ‘market’ for workplace safety	25
7.1 Naming and shaming	26
8 Influencing the architecture of the reputational commons	27
8.1 Investment advisors and share brokers	27
8.2 Gruen Tenders can enrich the reputational commons	28
9 Conclusion.....	29
Appendix One: The Gruen Tender	31
References for Part One	36

1 Introduction

Over 70 years ago Friedrich Hayek put information at the heart of the economic problem and by implication the policy problem. The exegesis in this paper takes market exchange as the paradigm case of the information problem largely because it is developed as an extension of economists' thinking and they have typically considered information in markets. However, this is largely for clarity of exposition. As will be seen, the principles thus derived will generally apply to the problems of asymmetric information and of optimising information discovery and dissemination in ecologies of information beyond markets.

In fact information is fundamental to all aspects of our lives, not just to our economic or policy concerns. In any sphere in life, if our choices are to be worth making, we need information, however imperfect, on which to base them. And yet it is part of the human condition never to know enough. Much of this cannot be helped. One reason we don't know enough to make better decisions is that we decide what to do now partly on assumptions about what will happen in the future. And much of the future remains unknowable – indeed unforeseeable. Yet different systems provide us with better and worse information on which we can choose to base our decisions.

Hayek (1945) argued that markets provided the essential mechanism for an economic and social system to harness information that is decentralised throughout society. His point was that central planners are typically poorly aware of specific information that exists distributed throughout an economy and society whilst those who trade goods and services have an interest in discovering that information and using it in their trade. Thus for instance a grain trader may be particularly interested in how the growing season is progressing to gain some idea of how it will affect the price of grain. He may then act on that knowledge by buying or selling grain. This action will convey information, not just to the counterparty in the trade but, by way of the altered market price, to whoever has a knowledge of the market wherever they are.

It is more than a metaphor to describe the price system as a kind of machinery for registering change, or a system of telecommunications which enables individual producers to watch merely the movement of a few pointers, as an engineer might watch the hands of a few dials, in order to adjust their activities to changes of which they may never know more than is reflected in the price movement. . . . The marvel is that in a case like that of a scarcity of one raw material, without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its products more sparingly.

Hayek's point was the superiority of markets over central planning and the collapse of centrally planned economies comes as close to a vindication of his point as one is likely to find in social sciences. Yet it would be misguided to take Hayek to have generally demonstrated the benignity of free markets in handling information. For in a market as in a society, every person knows different things. And they can often advantage themselves by concealing aspects of what they know from those with whom they deal. To invoke economic

jargon, this is the ‘asymmetric information’ problem. And systems, whether they be market or non-market based, create incentives to disclose some information (for instance an offer price) but not others (for instance knowledge of the quality of some good or service). Indeed, although Hayek’s work is frequently taken to demonstrate the superiority of unfettered markets in handling information, it is striking that Hayek’s arguments apply exclusively to the price system. And price and cognate information such as quantity is the *only* information that is not shared asymmetrically between the parties because they must agree on it for a transaction to take place. The penumbra of additional information around price and quantity involving product quality will almost invariably involve some scope for asymmetries of information between buyers and sellers.

Generations of economists since Hayek, for instance Kenneth Arrow from the 1960s and George Akerlof and Joseph Stiglitz in later decades, demonstrated the perversities of asymmetric information. The economics of information is now a vast literature containing numerous theoretical and empirical studies demonstrating various shortcomings of unfettered markets. One of the most straightforward results is George Akerlof’s landmark study of the market for lemons (See Box 1). One might argue that it suggests that the efficiency of the market can be improved by imposing the obligation to provide warranties on all used car dealers. However, it is far from clear that this is necessary, for if there is a ‘lemons’ problem which is harming trade, individual used-car sellers can offer warranties and those purchasers who might have withdrawn from the market can purchase from those sellers.

Box 1: Asymmetric Information and the Market for Lemons

In "The Market for Lemons: Quality Uncertainty and the Market Mechanism", George Akerlof (1970) famously demonstrates how the presence of asymmetric information can lead markets to collapse.

Akerlof presents a stylised market for used cars. In the market there is asymmetric information: sellers know more about the quality of the vehicles than buyers. Buyers, who are unable to distinguish good cars from the 'lemons', respond to the risk of buying a lemon by decreasing the amount they are willing to pay for any car.

As a result sellers of quality vehicles are no longer able to get a fair price for their car, and exit the market. The relative share of lemons in the market thereby increases, prompting buyers to lower their offer prices even further, and so on. Ultimately, the market goes into a 'death spiral', and collapses altogether.²

Nevertheless one of the most basic lessons of information economics is the requirement that traders buying and selling in the market not mislead each other on material aspects of

² In fact Akerlof’s insight is a variant of what is called Gresham’s Law after Sir Thomas Gresham, an English financier during the Tudor period who observed that ‘bad money drives out good’. Wikipedia explains the mechanism thus: “Consider a customer purchasing an item that costs five pence, who possesses several silver sixpence coins. Some of these coins are more debased, while others are less so—but legally, they are all mandated to be of equal value. The customer would prefer to retain the better coins, and so offers the shopkeeper the most debased one. In turn, the shopkeeper must give one penny in change, and has every reason to give the most debased penny. Thus, the coins that circulate in the transaction will tend to be of the most debased sort available to the parties.”

the transactions they are entering. Yet we did not need economic theory to tell us this. Indeed to a substantial extent, this insight evolved in the common law and was codified in common law countries in the second half of the 19th century in the Sale of Goods Acts.

If one has demonstrated that unfettered markets produce unsatisfactory results, then generally one has demonstrated the case that, in principle some fettering of that market – some intervention – could improve outcomes. Since the problem will generally be one party’s lack of information, successful intervention is generally conceived to be regulation to the effect that such information must be disclosed. But as the examples in this study show, mandating disclosure in a way that actually assists the flow of information is far from straightforward. Thus for instance regulation requires the purveyors of investments to meet elaborate requirements in disclosing the nature of the investments they are purveying. Yet the evidence shows that much of this disclosure does not in fact lead to more informed investors (both at the consumer and – more surprisingly – even the institutional level), because it is possible to comply with such disclosure requirements without disclosing matters of significant import or because the consumers of the information do not in fact avail themselves of it. This can be for lack of sophistication, attention or time.

Given the relative failure of such disclosure regulation, it seems reasonable to suggest that information policy cannot be implemented effectively without understanding these issues. Beyond demonstrating the in-principle value of regulating to require better disclosure in various situations, the policy literature has paid surprisingly little attention to the details of successfully implementing policy for the disclosure of information. It is surely remarkable that after decades of intellectual effort and thousands of learned journal articles in the sub-discipline of the economics of information, as late as 2007 the authors of *Full Disclosure, the Promise and Perils of Transparency* began their task with this startling discovery: When we searched for studies by other researchers, we found almost no literature analysing targeted transparency³ across a range of policy areas (p. xiii).

1.1 Why now?

As the request for tender illustrates, there has been increasing interest in the role of information in effective policy in the last five years. The original US Freedom of Information (FOI) Act was passed in 1966 in the US though it took until 1982 for the first legislative manifestation of similar intent to find its way into Australian Law. However, placing the act in its historical context illustrates how FOI was seen as a civil rights matter. Recent reforms to FOI legislation in a number of Australian jurisdictions have arisen since the 2008 Independent FOI Review Panel (“the Solomon Review”) of Queensland’s FOI legislation bear the marks of a new sensibility. Freedom of information is now justified not just as a defence of people’s civil right to information – particularly information about them. The reforms generally extend the objectives of FOI to the promotion of Australia’s representative democracy.⁴ And this is offered not simply as an ethical or constitutional value. The additional focus is the *utility* of citizens being well informed. The reasons given for passing the legislation include recognition that in a free and democratic society, there should be

³ Fung et al use the expression targeted transparency as a term of art to refer to specific policy regimes which seek to make markets more informed and transparent.

⁴ Section 1(f) Right to Information Act 2009 (Qld); Freedom of Information (Reform) Amendment Act 2010 (Cth)

open discussion of affairs, increased “public participation in Government processes, with a view to promoting better-informed decision-making”⁵ and “improving the quality of public administration”⁶.

This focus on utility resurfaces when the legislation emphasises the Parliament’s intention “to increase recognition that information held by the Government is to be managed for public purposes, and is a national resource” or as a “public resource”⁷. FOI has become micro-economic reform. It is as much about making the best possible use of our resources as it is about addressing people’s civil rights to information about them or which bears on their interests.

Describing government information as “a core strategic asset” Recommendation One of the Solomon Review (2008, p. 14) called for the Queensland government to “develop a whole of government strategic information policy that posits government information as a core strategic asset in the Smart State vision, addressing the lifecycle of government information and interconnecting strategically with other relevant public policies” (p. 34). The Preamble to the *Right to Information Act 2009* duly “recognises that in a free and democratic society . . . information in the government’s possession or under the government’s control is a public resource” (p. 11.)

The Review of the National Innovation System called for a National Information Policy in 2008, and the 2009 Government 2.0 Taskforce endorsed the idea in (then) draft reform legislation that the information held by government is a national resource. The United Kingdom and the United States have also been active in developing government information policy.

It is not before time that greater policy attention has been given to information. With the extraordinary rates of exponential growth in productivity implied by ‘Moore’s Law’ and related laws our productivity in generating, storing, processing and disseminating digital information has doubled every one to two years for many decades now, the amount of information being generated and becoming available is burgeoning to an extraordinary degree.

The coming of the internet, and particularly Web 2.0 applications that facilitate broadly based contribution and collaboration, has delivered the decentralised generation of and distribution of qualitative information to an extent barely contemplated in Hayek’s formulation of the ‘telecommunications’ network of the price system. In such an environment, behavioural economics has further developed and drawn attention to our own cognitive limitations in handling large amounts of information, a field pioneered by Herbert A Simon in the 1950s.

This world of exponentially growing volumes of information is also one of burgeoning complexity in which standard ‘one size fits all’ rules, subsidies or taxes may do more harm than good. It is also a world in which people are increasingly impatient with ‘red tape’. In

⁵ Section 1(e) Right to Information Act 2009 (Qld); Freedom of Information (Reform) Amendment Act 2010 (Cth)

⁶ Section 1(g) Right to Information Act 2009 (Qld)

⁷ Section 1(b) Right to Information Act 2009 (Qld)

such a world, transparency policies can minimise coercion and so the chance of costly policy mistakes, while assisting agents within the system to make better-informed decisions in their own and/or others' interests (See also Fung et al., 2009, p. 14).

These policy virtues have their cognate political virtues. For disclosure and transparency may not just assist individuals make decisions but are also the stuff of political action. Political action will often be directed towards drawing attention to public acts – for instance the release of pollutants into the environment. It may or may not be appropriate that governments should regulate to prohibit or limit such emissions, but it is hard to argue that, to the extent practicable the populace does not have a right to know about such things, and to express its views in political action. Fung et al summarise all these virtues of targeted transparency regimes thus:

The ingeniousness of targeted transparency lies in its mobilization of individual choice, market forces, and participatory democracy through relatively light-handed government action. (Fung et al, 2009, p. 5)

Yet paradoxically, the obvious attractions of targeted transparency together also set a trap. For as our lives become more complex and as expectations from government grow, transparency or disclosure regimes take on a particular allure in situations where being seen to do something is at a premium but so too is avoiding politically costly mistakes. Transparency policies naturally emerge from this situation. Yet if the research literature tends to support the *potential* role for governments to vouchsafe better information flows, it is usually of relatively little practical help in assisting policy makers understand how they should design and administer such policies. As will be shown, the upshot is that transparency policies are often pursued in such a way that little care is shown beyond the 'announcable'. The policy of greater disclosure can be announced and government will have been seen to have 'done something' yet the implementation of the policy and its ongoing optimisation may be such that costs are incurred but little if anything is done to bring about a sign in which the intended beneficiaries of the policy are any better informed.

2 The ecology of information

Incentives driving the research literature tend to reward work that focuses on very discrete points of theory or empirical measurement and which comes to definitive conclusions. Whether or not this is a satisfactory state of affairs, it creates a serious problem for policy makers in this area. Apart from the fact that policy is inevitably a product of compromise between competing ideas, needs and interests, we are still a long way from having a coherent intellectual theory of information policy. The sharp points of focus that are illuminated by analytical work such as Akerlof's "The Market for Lemons" (See Box 1 above) are as points of light in a sea of complexities and subtleties. It is well beyond the scope of this paper to fully elaborate such theory. Nevertheless it is possible to set out a range of theoretical considerations that, though they have often been neglected in information policy-making, are of considerable importance. We begin our elaboration with the concept of public goods.

2.1 Public goods

A common economist’s definition of public goods is that of Ostrom and Ostrom who characterise them as exhibiting two characteristics – non-excludability and non-rivalrousness.⁸ Non-excludability prevents anyone supplying the good to some from excluding others (Cowen, 2008). In economics textbooks, classic examples of non-excludability include lighthouses⁹ and the defence of a country. In the textbook exegesis, the non-excludability of public goods “present[s] serious problems in human organization”. For producers of goods in a market typically fund themselves by charging a price for the good they provide, but non-excludability raises the free rider problem. People can ‘free ride’ by enjoying the good without paying for it. If the country is defended, everyone enjoys the peace and safety this brings, whether or not they pay for it. Ships can benefit from the light thrown by the lighthouse whether or not they pay to fund its existence. But if everyone does that there will be no profit in supplying the good and it will be undersupplied or not supplied at all.

However, if non-excludability discloses a free rider *problem*, non-rivalrousness discloses a free rider *opportunity*. Rival goods – either a physical good like a cookie or a car or a service not subject to economies of scale like a massage or legal advice on a specific case – are goods such that one person’s enjoyment of them excludes others enjoyment of them. On the other hand, at least until there are congestion effects, our consumption of fresh air or the environment is non-rival; it does not prevent others from enjoying it.

Figure 1: Types of Goods

Jointness of Use or Consumption		
	Alternative Use	Joint Use
Feasible Exclusion	<u>Private good</u> : bread, shoes, automobiles, haircuts, books, etc.	<u>Toll good</u> : Theatre, night club, telephone service, toll road, cable TV, electric power
Infeasible Exclusion	<u>Common pool resource</u> : water pumped from a ground water basin, fish taken from an ocean, crude oil extracted from an oil field	<u>Public good</u> : peace and security, national defense, mosquito abatement, fire protection, weather forecasts, “public” TV

Source: Ostrom and Ostrom, 1977, p. 4.

⁸ In all cases in this report, unless the contrary intention is implied, the term ‘goods’ should be taken to mean goods or services.

⁹ Although Coase’s paper “The Lighthouse in Economics” (1974) traces the evolution of the oft-used example of the lighthouse as a public good and provides an interesting and amusing case study of the way economics works through the reiteration of stylised tropes and with little attention to institutional detail. In fact lighthouses have been successfully run as ‘club goods’ by subscription.

The Ostroms' purposes in constructing the table above underpin the examples they choose to illustrate public goods. Each of the examples requires a source of funding, although the last one, "public TV" can be funded from advertising from the private market as well as by governments. But some public goods are the emergent properties of spontaneous human activity. Indeed Adam Smith's famous description of the way in which public benefit emerges from private self-seeking activity in a market provides the paradigm example. He describes how the scarce resources of a nation are put to the best possible use in meeting the needs of the society by virtue of people using their own industry and capital "in such a manner as its produce may be of the greatest value" to themselves.

Box 2: Adam Smith and 'Emergent' public goods

Adam Smith's 'market model' in which public goods are the emergent and unintended product of private endeavours to meet private needs, applies not just to the way markets serve the common good . . . but also to the way language, currency and social mores emerge – all of which are foundations of a market order. We might summarise by saying that the public goods of language and widely shared social mores, and a currency, are the preconditions for the emergence of a sophisticated market order, which itself is the precondition for the emergence of the public good of market prices and liquidity. . . . Since Smith, economics has always taken the central problem of public goods to be the difficulty of funding them, given the presence of free-riders. But by virtue of their very nature as emergent properties of self-seeking humans, within society no one has had to pass round the hat to bring emergent public goods into existence. They're no more or less than the accretions of life itself!

Source: Gruen, 2011a, p. 130

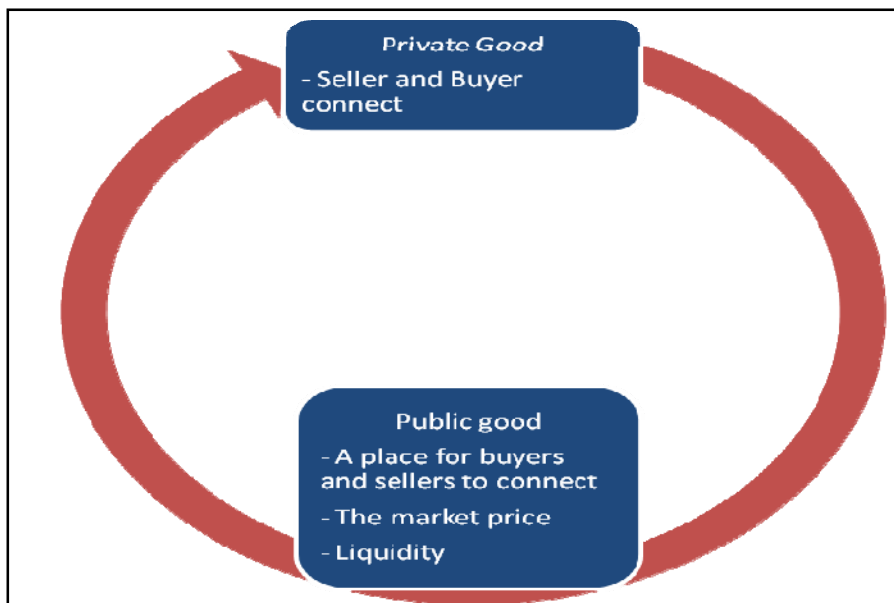
2.2 The ecology of public and private goods

Public and private goods are richly interdependent. Though he did not use the terminology we use here, one might restate Hayek's argument by saying that it was about the quality of public goods. Hayek was arguing that the spontaneous order that arose through markets was a public good. We can be more specific and say that (given certain conditions) the prices that emerge in a free market are an emergent public good operating as a free, economy-wide information system available to all to use.¹⁰ A central planning apparatus could be described as a public good as well. Yet Hayek's point was that it was of very poor quality because it could not take into account all the disparate information that is captured in a well-functioning price system. By contrast in the right circumstances, a market price system provides an incredibly efficient single quantitative indicator of the relative value of a given commodity (its price) considered as a function of its utility to each and every potential buyer and its cost of production to each and every potential seller.

¹⁰ The liquidity of the market is also a public good built up from private activity. As each trader in a market trades it contributes to the liquidity of the market, and the liquidity of the market enables anyone to buy or sell things at a predictable market value whenever they want. We relearned during the global financial crisis that the public good of liquidity could disappear with frightening speed as traders desert a market.

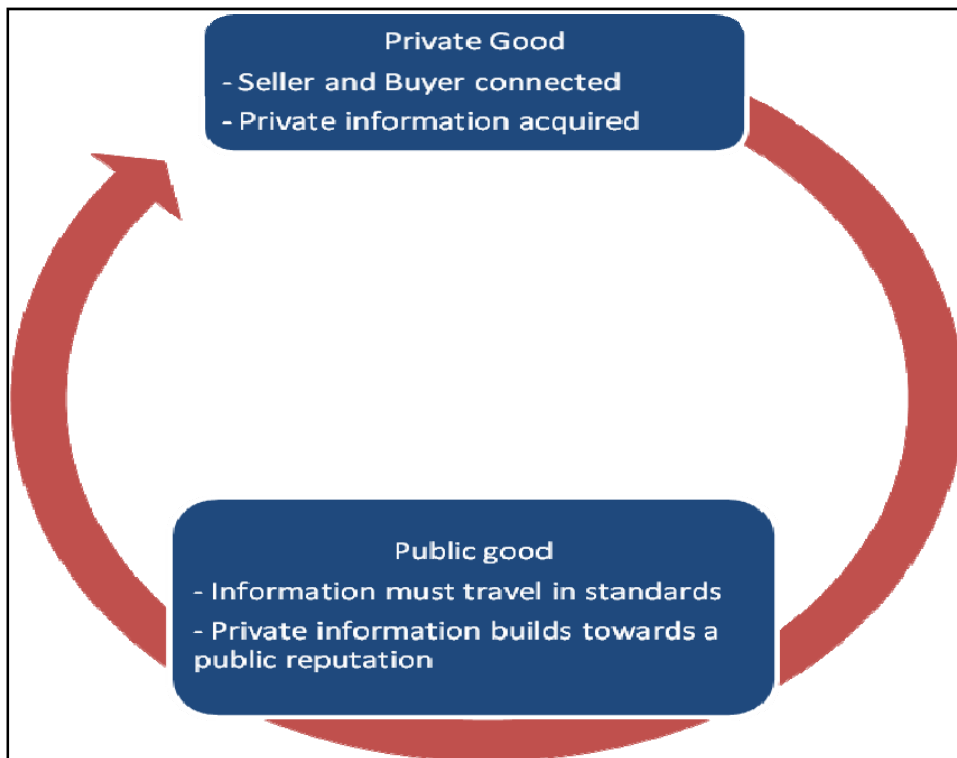
In fact the miracle of the price system is an example *par excellence* of a free riding opportunity. Price information between buyer and seller is privately known to them and indeed in thin markets can be tightly held as a secret between them often enforced by contractual obligations. However, in the kind of markets Hayek was considering, it was either impossible to conceal prices or the parties did not seek to. In either event the free riding opportunity was taken. Figure 2 illustrates the cumulative causation by which private and public goods grow together. Private goods when traded help build a market which generates the public goods of price discovery and liquidity which makes the market more useful for private transactions which further reinforces the emergent public goods being generated by the market – with improved price discovery and deeper liquidity.

Figure 2: The market as an emergent public good



There is a similar ecology between public and private goods in the way non-price information circulates in markets. Information is encoded in standards and these standards are public goods. We discuss their significance below. Further, as trades take place, non-price information that was not strictly necessary for transactions to be completed is acquired. Buyers discover aspects of the quality of what sellers are offering and/or vice versa. Like price information, this information is a potential public good. Thus for instance, if I need knee surgery, I can benefit from knowing which surgeons and hospitals have performed knee surgery best. But there may be no standard way in which such things are reported, or the standard may not surface information in a way that is useful to me.

Figure 3: Information flows in markets



Where price information is simple (involving a particular number) and often emerges in a market or can be easily engineered to emerge (as for instance it does on the stock exchange) non-price information may be complex and context dependent. In such circumstances it may be difficult to report meaningfully (the standards problem) and/or may not naturally circulate in the community. This frustrates the emergence of the public good from all the knowledge implicit in the private transactions.

2.3 Information, public goods and the age of the internet

Knowledge is a classically non-rivalrous good, and its non-rivalrousness has underpinned our progress from the caves to the internet age. For most of the wealth all around us comes not from the accumulation of capital but from the accumulation of knowhow. And knowhow has two important qualities. Firstly, it can be copied. Secondly it is the foundation of further knowhow, or in the more picturesque words of Newton, we are all standing on the shoulders of giants. And whether or not money passes to the originator of some knowledge from those who come after, the resource cost of using others' knowledge is typically zero.

Two centuries ago Thomas Jefferson's expressed his excitement about the non-rivalrousness of ideas:

He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air

in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation.¹¹

Jefferson felt himself to be at the beginning of an age in which knowledge would grow in significance, and he was right. As our societies and economies have become more knowledge based, the significance of Jefferson's insight has grown. But the coming of the internet, of big data and of Web 2.0 or 'collaborative web' has produced a step change in the significance of knowledge and so in the significance of its non-rivalrousness.

For where the discipline of economics was focusing on the *problem* of free riding in the age of the internet, a host of entrepreneurs – both profit seeking and also from philanthropic motives – have tapped into the free riding *opportunities* offered by the internet. Thus Google, Facebook, Twitter, Wikipedia and Linux are all technically excludable – each could require secure logins or claim intellectual property protection and charge their customers for use (as do subscription broadcasters on pay TV for instance). Yet the entrepreneurs who have built each of these platforms – whether they have been seeking profit or more philanthropic goals – decided that their objectives could be better achieved by opening the platform as a public good to all. Indeed such platforms might be regarded as 'super public goods' because their publicness actually *adds* to their value. Because production and use of information are often conjoint in particular users, unlike the public good of fresh air or a clean environment for instance, the more people enjoying the platforms, the better it is for all. They combine the characteristics of networks – which grow in utility to each member of the network as they grow in size – with the non-rival and non-excluded characteristics of the public good.

2.4 Information as a complex, hybrid public good

As the previous sections have argued, information can be thought of as exhibiting important public good characteristics. And yet several things distinguish information from the classic public goods of economics textbooks. Firstly, those textbooks often imply that the free rider problem will prevent public goods coming into existence in the absence of some deliberate collective action. Yet as we have argued, much crucial information comes into existence as a by-product of life whether that is within markets or other information ecologies. We have used the example of markets, but administrative systems also generate information as part of their functioning.

Further, often information is a different kind of public good to the classic public goods of a lighthouse, the provision of national defence or a clean environment. In these cases, typically there is a single public good – albeit one which may take some skill to produce or maintain – which is available to all. This fits easily with the notion that public goods are provided by government. By contrast, to be useful, information will often need to be highly tailored to context. Hayek's point about the miracle of the price system is that the market price is a simple, single indicator of relative utility and scarcity which each producer and consumer can reckon into their own calculations. By contrast non-price information is many faceted and may need to be tailored right down to a particular, singular interaction.

¹¹ Thomas Jefferson, Letter to Isaac McPherson, August 13, 1813

The point is now well illustrated by the various platforms and associated phenomena of Web 2.0 or ‘collaborative web’. We have argued that they are public goods – non-rival and non-excluded, even though they are in-principle excludable. Yet successful Web 2.0 platforms are overwhelmingly the product of immense entrepreneurial effort and perseverance. At least from the perspective of the economics textbook, this is a decidedly unusual turn in the production of public goods – though rather less so when one considers the perspective of those like Smith and Hayek who emphasised the importance of spontaneous order or emergent public goods. And indeed though it is no surprise, it is notable that governments have played almost no direct role in the development of these public goods.¹²

This suggests that improving the ecology of information will often be a complex and subtle business. Some commonsensical principles by which we can guide our efforts are as follows:

- It is usually important for the information to reflect domain expertise and knowledge.
- There should be sufficient feedback between those in the system to optimise its costs to providers and its benefits to users (keeping in mind that some or all users may also be producers of information).
- A healthy information eco-system should do what it can to minimise the adverse effects of asymmetric information.
- Where information disclosure is mandated, the same incentives parties have to conceal information from one another can generate perverse incentives.¹³ For this reason, where mandatory disclosure is relied upon to inform, it is also appropriate to consider what incentives this may be unleashing on those that report and considering the way in which systems are designed and if appropriate supplementary supportive measures – such as audit. It is a pity for instance that in over a decade of annual reporting on Government Services (SCRGSP 2012), the idea of auditing the figures that are reported is so rarely discussed.
- Information must meet the needs of users. Where consumers are concerned this usually means that the information needs to be simple, indeed even simplified – although here there is a trade-off with the risk of misinformation for specific users.¹⁴ Yet it is also important for information regimes to be *differentially* simplified with appropriate levels of detail available to different users depending on their needs.

¹² Dewey (2008, 272) is, as ever, illuminating on this theme:

“The organised community is still hesitant with reference to new ideas of a non-technical nature. . . . A new idea is unsettling of received beliefs; otherwise it would not be a new idea. This is only to say that the production of new ideas is peculiarly a private performance. About the most we can ask of the state, judging from states which have so far existed, is that it put up with their production by private individuals without undue meddling. A state which will organise to manufacture and disseminate new ideas and new ways of thinking may come into existence some time, but such a state is a matter of faith, not sight.”

¹³ For instance where hospitals must declare death rates, one way of reducing them is to refuse to treat the patients that are at highest risk of dying.

¹⁴ Fung et al stress this in discussing specific consumer information regimes they call ‘targeted transparency’. Dingwerth and Eichinger (2010, p. 75) make a similar point compellingly. “With regard to policy design, we expect transparency to make a difference if its design allows the reported information to become embedded in the users’ routines.”

So far we have argued that information is a hybrid and complex public good. However, we now turn to an even more fundamental way in which information partakes of public good characteristics. For it takes its meaning within the context of standards. And standards are public goods.

2.5 The importance of standards

Unlike a physical good, information is incorporeal. Further, information gains its meaning, and so its usefulness, within a larger schema. Consider your own participation in consuming the information in this report. If you are reading it you must understand at least two standards, the Roman alphabet into which the report's words are encoded and the English language itself. The report was written on a computer that encoded those letters into binary computer code using umpteen digital standards. The computers that received it by email and then printed it out and/or displayed it on their screens needed access to the same standards – and perhaps some others – in order to decrypt the binary code in which the report was sent.

Likewise the kinds of information that are of interest in this report will typically have little interest or meaning – indeed they will often be strictly meaningless – except where they are interpreted within some *standard*. Thus for instance information about the energy efficiency of a fridge or the water efficiency of a washing machine will be expressed within, or be reducible to, some standard form of expression if users are to compare the information relating to different products. This standard is a public good. None of the producers are excluded from using the standard (non-exclusion) and the standard is non-rival. The use of one does not degrade the standard for others. This raises at least four issues of significance, which we explicate below using the example of comparison rates for mortgages.¹⁵

Firstly, public goods are joint in consumption – which is to say in this context that they are configured for all. A standard may be simple or complex. However, by definition, as a standard it is nevertheless a single entity. The standards of the English language and the alphabet permit vast complexity. On the other hand, as will be observed below, particularly where consumers are concerned, there is a considerable premium on simplicity. And if simplicity is at a premium, it is likely that difficult trade-offs must be made between simplicity and the completeness of information provided and/or the extent to which a standard meets the needs of some producers and/or users more than others.

Thus in the case of mortgage comparison rates, a single summary interest rate was desired which would provide a simple measure taking into account all normal fixed and variable costs of a home loan so that it might be used as a benchmark for price comparison. Such summary rates typically make some calculation of the significance of fixed costs such as application and valuation fees as well as the benefits of 'honeymoon rates' over the lifetime of the loan. Immediate design questions involve what fixed costs are counted and what are not. For instance, one issue is whether penalties charged for early exit should be calculated in comparison rates and if so what assumptions should be made about the likelihood of users encountering such penalties.

¹⁵ Disclosure of interest: Nicholas Gruen is the Chairman of Peach Financial, which is regulated under the regulation discussed here.

A second issue is whether adopting and reporting to the standard should be mandated. On the one hand, if the standard is felicitously designed, mandatory reporting should be beneficial because this will allow all products to be easily compared using the standard, and this is one of the principal objectives of there being a standard. On the other hand, not surprisingly, use of the governments' coercive powers can make things worse. Individual players' ability to opt out of the standard will usually give them more 'voice' in ensuring that their specific needs are taken into account in designing the standard. This will be beneficial if it improves the standard, and it may do so if the putative hold-out participant has a worthwhile contribution to make to the standard. This may be related to the participant's *bona fides* in seeking to improve the accuracy with which the standard reflects their product. However, hold-out behaviour may come from firms seeking to obfuscate to avoid invidious comparison.

A third, related issue is the skill, knowledge and interests of those designing the standard. Here the same point can be made about the standard that has been made above about the felicity of the information itself, reflecting Hayek's concern about the inability of governments to harness knowledge and information that is distributed throughout the community. Users and producers who are close to the 'coalface' of transactions in a market may have better knowledge about how the standard should be crafted than government agencies. This is illustrated by the introduction of Comparison rates on consumer credit (See Box 3).

Fourthly, the benefit of public goods typically exceeds their value to any one user of them. Often this will not prevent a standard from emerging where there is a substantial collective gain, particularly to producers. This is particularly the case for standards for products, but less so for information. For instance computer manufacturers frequently develop standards that, once established, most other producers have an interest in conforming with. Thus standards like the various now largely obsolete floppy disc configurations or the standards for USB or Firewire evolved either unilaterally with their development by a firm that was or became dominant or from cooperative action by producers. There are frequent meetings of cooperative industry groups to define standards of interoperability such as these both for products and for the distribution of information on the internet.

Box 3: Comparison Rates for consumer credit

Bank deregulation saw increasing competition and differentiation of home lending products making it harder for consumers to compare the full cost of home mortgages between lenders. To make such an assessment they needed to make some calculation of the significance of fixed costs such as application and valuation fees as well as the benefits of 'honeymoon rates' over the lifetime of the loan. But this obviously depended on how long the loan would last.

In the 1990s the finance industry developed a voluntary standard against which most industry participants reported. Difficult choices must be made in specifying such a standard. The whole point of the standard was to simplify the question of total mortgage costs for consumers, but those costs depend on consumers' behaviour and that behaviour differs between consumers.

The result of this initiative, the Annualised Average Percentage Rate (AAPR), calculated costs over seven years because at the time this was close to the average length a mortgage was taken out before it was refinanced. Subsequently Government imposed regulation which enforced a mandatory standard. In doing so it introduced a different method of calculation. The government-mandated 'Comparison Rate' was to be calculated over 25 years, rather than the shorter period that most people held their mortgages.

As a result, up-front fees had relatively less weight in the comparison rate than previously in the AAPR though the higher rate to which honeymoon rates defaulted had more. Yet from the perspective of both the 'average' consumer and indeed most users, the new methodology provided less useful calculations.

The government also mandated the publication of comparison rates across a schedule of 15 loan sizes, for each mortgage product offered by an institution. The result was to swamp consumers with information, itself already somewhat compromised from the earlier AAPR standard. Given that the comparison rate was mandatory only where lending rates were advertised, the complexities of compliance led some lenders and brokers to simply stop advertising rates altogether. The only study of which we are unaware showed that the comparison rate had a low level of awareness and was very poorly understood.¹⁶

In this instance the government would have done well to work with the drive to transparency already emerging in the market. The AAPR was an attempt by industry leaders to prompt the market into 'unravelling', and industry leaders themselves were best placed to know which mechanisms would do that. In this case, the government should probably have lent its weight to giving the mechanism more clout, by mandating and enforcing AAPR reporting - something which the industry could not do on its own.

However, there are two additional problems. Firstly, the immediate beneficiaries of the standards against which consumer information is generated are consumers, and consumers constitute a much more diffuse set of interests with fewer resources than producers to

¹⁶ Scott Ewing of Swinburne University, in a small survey of Victorian consumers, found that in relation to the comparison rate, consumers had, "a low level of awareness and an even lower level of understanding of the concept. In our sample survey 37% of our sample claimed to recognise the term but only 12.5% could define it as being a rate that includes fixed fees and charges." (2006, p.3)

contribute to a standard.¹⁷ And secondly, because the main benefit of the standard is enjoyed by consumers, this gives producers too little stake in assisting the emergence of a standard and/or complying with it. Thus for instance if one bank is marketing a loan with fees, it can choose to advertise the interest rate without adjusting it for fees. This raises the prospect that some standards with considerable overall benefits to the community nevertheless fail to emerge because they generate insufficient benefits for any individual or group to justify the design and negotiation costs of establishing it.

Box 4: Promoting the emergence of standards to report against

Markets for most goods are usually pretty well informed because we can inspect goods before sale and there are plenty of repeat purchasers. But what if you need a heart bypass? Your GP will recommend a surgeon. But does he know the surgeon's success rate, or the infection rates of the hospitals to choose from?

We regulate for mandatory disclosure of information to investors and consumers to tackle this kind of information asymmetry. But such disclosure regulation typically assumes that consumers and investors are in a good position to work through all the detail that's disclosed when what they really need is a way to work out which professionals they can rely on.

But if information on who to trust is so useful, why hasn't the market provided it? To be useful, information on the quality of services must enable users of the information to compare providers. And this can't be done unless providers report to the same standard. In this context the standard is a public good, which markets will often fail to produce.

While Stiglitz and Akerlof might suggest some form of regulation, Hayek reminds us of how little governments know and so how dysfunctional regulation can be as for instance when Financial Services Reform forces firms to produce hundred-page financial product disclosure statements that investors despair of ever understanding before throwing them in the bin. . . .

[T]here's a middle way. Governments can use their own dominance of some professional services like health and education to force much better levels of disclosure which can then drive improvements in service quality as has occurred in the UK.

And sometimes all it takes is a little leadership to nudge market forces along. An energetic and prominent leader . . . could throw out a public challenge to the leaders in a field to get together and develop a standard against which to report. The best hospitals, schools and employers should jump at the chance of demonstrating their superiority.

Source: Nicholas Gruen, 2008, "Information key to efficiency" *Australian Financial Review*, 17th April, at http://www.afr.com/p/opinion/item_OTNtLLLuuXbDFHAXGIRUnN

2.6 Political action and voluntary reporting

An appreciation of the importance of standards opens up a field of inquiry that has received insufficient attention in writing about policy transparency. Not only can policy transparency with inadequate attention to the quality of reporting standards lead to disappointment, but in some circumstances, the most important task may be to ensure that a high quality

¹⁷ Mancur Olsen's framework (1965) offers a sensible approach to this issue. His *Logic of Collective Action* argued that the larger groups are, the less easy it is for them to coordinate activity and to prevent free riding on others' efforts.

standard emerges without necessarily mandating reporting to it. Political activists have sought – some with success – to establish standards to which others then report voluntarily. Thus for instance the Global Reporting Initiative (GRI) provides an example of a standard that is widely used, despite its use not being mandated by governments.

Box 5: The Global Reporting Initiative: a voluntary standard of reporting

The Global Reporting Initiative (GRI) is the best-known framework for voluntary reporting of environmental and social performance by business and other organisations worldwide. If measured by rate of uptake, comprehensiveness, visibility, and prestige, GRI has been amazingly successful since its modest inception in 1999.

The founders' strategy was to (i) mobilise a broad coalition of actors who had not previously thought of themselves as members of the same political or policy network, and to engage them in a discussion around a set of rules and practices embodied by GRI Reporting Guidelines; (ii) to create a mechanism for maintaining the discussion well into the future and for building a sense of shared ownership of the new rules and practices; and (iii) to create an organisation which would serve as steward of the Guidelines and of the evolutionary process (GRI Secretariat) ...

[I]t was asserted that it would benefit each stakeholder by producing efficiency gains, empowering, and creating an opportunity to influence an emerging influential set of rules. A built-in process for producing successive generations of the Guidelines, Sector Supplements and country-specific Annexes would assure future broadly based participation and support...

The information based approach to regulation...offered the much sought after addition to the traditional regulation-enforcement based environmental policies of the 1970s and '80s and for some portended a new era of environmental politics. Another assumption was that GRI would serve the interests of progressive companies with public claims to being socially responsible, transparent and accountable. These organisations would take up the GRI system and become its strong supporters in order to gain competitive advantage and pre-empt formal regulations. Over time, the middle-of-the-road and laggard companies would follow. Furthermore, it was hoped that the inclusivity and broad base of the GRI multi-stakeholder process would facilitate the diffusion of the GRI principles and practices into the broader field of CSR.

Source: Brown et al, 2009, p. 571.

The Global Reporting Initiative (GRI) develops 'Sustainability Reporting Guidelines' which are used by businesses and other organisations to produce comparable assessments on a range of social and environmental issues. The GRI is one of the world's leading voluntary non-financial reporting schemes. It covers over 3,000 organisations. It has been quite successful in getting firms to agree to take part in reporting. However, Brown et al. (2009) argue that, so far, there is little evidence that GRI reporting increases sustainability. In fact, the primary goal of comparable assessments is only partly being met, comparing companies is difficult due to missing data and lack of context for the information that is available. In only one major country (Germany) is a majority of major companies reporting to the standard whilst in the UK and the USA compliance is just over one-fifth and one-eighth of all major public companies respectively (Dingwerth and Eichinger, 2010).

64 per cent of Germany's DAX 30, 48 per cent of France's CAC 40, 22 per cent of the UK's FTSE 100 and 13 per cent of the US's S&P 500 report to the standard.

Further, though this is information that people in the community want, it is unclear how pressure is exerted on companies to adopt the standard. As Brown et al (2009) report, though financial markets have historically been an important source of pressure for firms to conform to various accounting standards, "financial markets have so far shown little interest in social and environmental reporting as predictors of financial performance." And with consumer activism likely to be aimed towards laggards in environmental performance, such firms are unlikely to choose to report to a standard that will expose their weaknesses. Indeed, not reporting to the GRI leaves plenty of room for firms to provide extensive and informative environmental and corporate social responsibility reporting that nevertheless does not comply with the GRI standard.¹⁸

Voluntary mechanisms such as the GRI can also be a nursery for the formal measures of tomorrow. For example, the Carbon Disclosure Project (CDP) was a voluntary carbon emissions reporting standard, operated through an NGO based in the UK. Refined and developed over several years with industry input, the CDP was fundamental to the development of the National Greenhouse and Energy Reporting (NGERS) Act, which in turn was the basis for reporting greenhouse gas emissions under the carbon pricing regime to be introduced in July.¹⁹

3 A taxonomy of information policy

The material in this report to this point provides us with a way of locating the targeted transparency that Fung et al discuss within a larger context. For in seeking to improve transparency we can do so either in pursuit of some specified policy goal (say more efficient household appliances – as discussed in the companion report to this one) or simply to empower people to make better choices, whatever choices they may be. This consideration is captured in the vertical axis of the quadrant in Figure 4 which classifies information policies as *purposive* or *empowering*. The horizontal axis then captures whether the policy is voluntary or mandatory. The targeted transparency that Fung et al explore is then in quadrant 2, which represents policy that is both mandatory and purposive in seeking some specific policy goal.

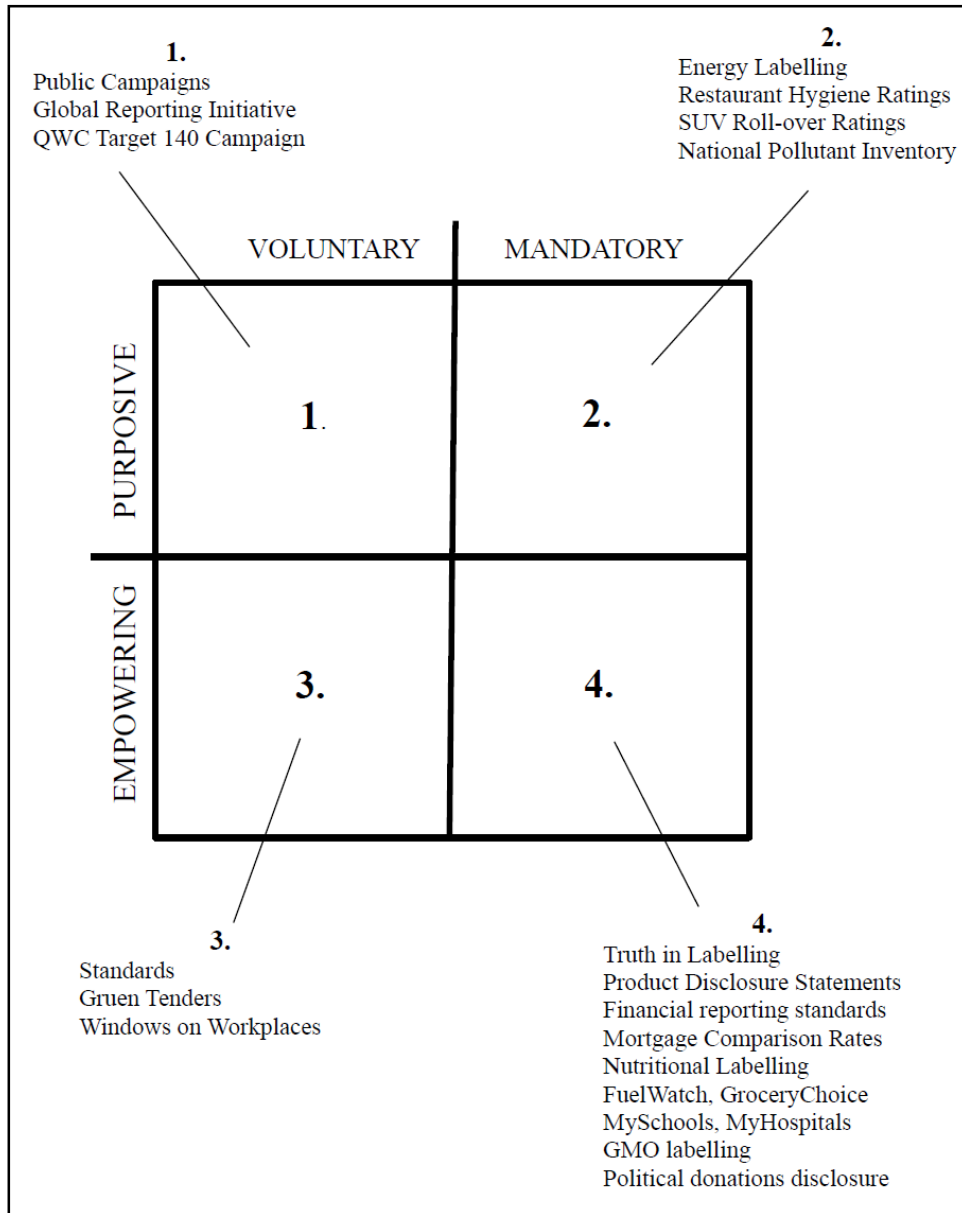
Figure 4 also identifies where some of the transparency policies described in this and report and its companion fit in the quadrant. Note that the level of coercion from government increases from the 'origin' in the third panel of the quadrant where policy is both voluntary and does not prejudge what outcomes transparency is supporting, to targeted transparency where disclosure is mandatory and in aid of some specific policy purpose. Generally speaking one would also expect that the extent to which the policy would transform behaviour would increase with that coercion. Thus the lowest risk, but also possibly lowest impact quadrant is the bottom left quadrant with the highest risk, highest impact quadrant being represented by the top left. Even so, as Fung et al (2009) note, this is still much less

¹⁸ Further, not all of them are obvious laggards. Some firms that do not report to the standard include GlaxoSmithKline, GM, Johnson & Johnson, Procter & Gamble, Chevron and Exxon Mobil.

¹⁹ See: <http://www.thesustainabilityreport.com.au/voluntary-sustainability-disclosures-carry-legal-weight/1952/>.

coercion than is required by more traditional policy mechanisms like regulation, taxes and subsidies.

Figure 4: the information policy terrain



4 Information, complexity and reputation

Fung et al emphasise the importance of providing consumers with highly simplified information. Certainly the paradigm example of successful information policy dealt with by the authors – requiring A, B and C ratings on restaurants in Los Angeles – is an example of simplicity and appears to have been a clear policy success.²⁰ Yet the most successful

²⁰Though the authors provide no clear articulation of it its benefits exceeding its costs, it seems fairly likely that it has been cost beneficial.

information markets combine simplicity and complexity. That is they can be understood at different levels of complexity depending on the needs of the user.

The markets for form on the races or for investments are both simple and massively complex, depending on context – depending that is on the purposes and inclinations of individual users. It may be the case that to maximise understanding, information given to consumers must be simple or simplified, but even in the case of the A's, B's and C's on the windows of restaurants in Los Angeles, these displayed letters are the tip of a large iceberg which, below the water line, depends on considerable expertise – of inspectors operating within a rich ecology of information and jurisprudence.

Fung et al's gospel of simplicity arises directly from their having taken the dominant framing of the information problem to be that of the consumer doing due diligence on the products they consume. Yet whatever its benefits in specific situations, the simplicity displayed on consumer labels and simple signals always comes with the costs involved in what is often the Procrustean process by which complex information is reduced to a highly simplified standard. Such approaches have their uses but are unlikely to ever amount to much more than a number of schemes for disseminating stylised information in specific circumstances.

There is an alternative and often more powerful means by which complex information and expertise can be communicated in a way that can be more flexible and sensitive to the specific needs of users. And being more flexible it can also adapt more readily to changing circumstances. Where a field is highly complex, often consumers cannot or do not want to do 'due diligence' on all their purchases. When buying a computer some will read up on the specifications of competing models, but even here, there is much that is not in the 'specs'. Apart from the 'user friendliness' of the way a computer or some software operates, other considerations include the build quality, durability and after sales service in the event of faults or other difficulties. Here consumers typically make decisions by relying on the reputation of particular sellers and/or their brands.

This was something that Adam Smith noted, and which has asserted itself with vigour recently as online trading has been established. On eBay the value of a good reputation is around 8 per cent of the value of the good (Resnick et al,2003). Indeed John Kay (2004, p. 214) goes so far as to suggest that the use of reputation is not an adaptation to unusual levels of complexity but is "[t]he normal market mechanism for dealing with asymmetric information".

[E]very day, we rely on the reputations of physicians and accountants, supermarkets and newspapers, car manufacturers and banks. We rely on them because we do not wish to train for years to diagnose our own illnesses or understand the tax code. We do not want to visit factories to see that our food is prepared in clean conditions, or to go to Iraq to see the state of affairs for ourselves. We cannot ourselves judge the reliability of the cars we buy or the solvency of the banks to which we trust our money.

It is simply wrong to think that a market economy does or could rely on the diligence of individual consumers to deal with these problems. Life is too short, and there are more interesting ways to spend it than studying the balance sheets of banks. We can

never have enough information to assess the competence of our doctor. . . . Of course, individual experiences are the stuff of which the reputations of firms and practitioners are made. But these individual and command experiences take on a life, and significance, only when they become part of shared social knowledge (Kay, 2005, pp. 224-5).²¹

It is hard to think of a single issue that contemporary efforts to promote effective consumer information get more wrong. Most professional services are heavily regulated often at substantial cost and yet with little clear benefit. However, very little if any of that regulation is directed towards improving the quality of the information on which reputations are based. In the sections below we illustrate this with regard to a number of professions as well as in some other areas. By contrast numerous internet platforms are working hard at developing systems in which reputations can be made and validated by observed conduct.²²

Reputation can be understood as a particularly important aspect of the division of labour. As the world becomes more complex and as our expertise grows so does the division of labour. As our expertise grows, new areas of specialism grow. The individual actor in the economy cannot realistically exercise 'due diligence' in all their choices. Instead they require access to expertise that is mediated. Once the need for expertise is identified, the question that then arises is how one should choose an expert.

Alas professional occupational regulation strongly reflects the involvement and interests of the professionals themselves (See below) and policy makers remain mired in the model according to which consumers do their own 'due diligence' on the products they purchase. Accordingly, much effort has gone into requiring information disclosure from professionals and their obtaining of permissions from their clients. This has come with unclear and largely unmeasured benefits while virtually no energy has been given to the question of how systems might surface information that would help disclose the relative merits of individual experts and professionals.

Not only is a focus on reputation necessary as a means of enabling users to cope with complexity, but it also provides a more organic means by which information systems can meet the challenges of change. For once a person or organisation has obtained a reputation for quality, integrity and high levels of expertise and performance, they have an incentive to maintain it into the future and to adapt their behaviour to do so. Thus for instance Apple uses a reputation for quality, good design and innovation initially forged in the 1980s to take its customers into the 21st century. By the same token a hospital with a low infection rate has an interest in innovating to maintain and enhance that reputation as technology changes. In the rest of this report we explore a range of ways in which policy makers keen to optimise the generation and dissemination of information can do so by using the fulcrum of reputation. The companion study *Transparency and Policy Implementation in the Public Sector*, then explores a range of further applications of the ideas developed in this paper.

²¹ Note the two books quoted here (2004, 2005) are versions of the same book which was marketed under different titles in different markets. However, the words are somewhat different and quotes have been selected from each.

²² Such platforms include eBay, Slashdot, RateMyTeacher, oDesk, Elance, Freelancer and many more. See Farmer and Bryce (2010).

5 Information on the quality of services

Professions dispense expertise. In and of itself this raises the spectre of asymmetric information. For with some exceptions, mostly involving very large buyers of professional services, those who seek professional services know dramatically less about what they are buying than the people supplying them. To use economists' jargon, many goods in our economy are 'experience goods' which is to say that consumers do not know the quality of the goods until they have experienced them. However, with repeat purchases this need not be a huge problem. Consumers, aware of the quality of what they have received will either become repeat purchasers or not. In any event they can also tell others of their experiences. However, a more radical kind of information asymmetry arises in many areas of professional services – and in some other areas. This extreme form of asymmetric information is often exhibited in areas where expert practitioners both diagnose their client's problem and then contract to fix it. This includes highly prestigious areas of expertise in the area of law and medicine but also car repairs. In these areas consumers may *never* know the quality of the services they received, for they may not even know the accuracy of the diagnosis they received. Thus if a doctor or a car mechanic diagnoses a particular problem and then administers a 'cure', the client may never know if the diagnosis was correct, whether the treatment improved the situation, whether the problem fixed itself or whether the practitioner claimed to have performed one kind of service while actually performing a much cheaper service.²³

5.1 Power imbalances in professional regulation

In such circumstances such as those outlined above, the whole industry supplying the service has some interest in maintaining certain minimum standards of behaviour to prevent 'the lemons problem' from depressing the market for all its practitioner's services. As a consequence, professional regulation typically begins with the industry regulating itself. Such regulation may vouchsafe certain minimum standards of service, but at the same time industry bodies suffer from numerous conflicts of interest. Thus in addition to representing the service providers in any consideration of a case, professional bodies will often seek to insist on minimum standards of qualification. Not only does this provide some means by which they can point to due process being followed (the doctor was qualified), but it also helps to insulate the profession from competition legitimate or otherwise from those outside the profession. There are also what might be called 'conflicts of perspective'. Professional bodies see things from their own practitioners' point of view, which may mean that, left to their own devices they will be relatively tolerant towards behaviour when it is perceived as 'normal industry practice' for fear of generating hostility amongst their membership.

Over time it has been typical for governments to be drawn into this regulation. This means that it can insist on standards to be followed wherever certain kinds of expert services are provided, which can make a useful contribution to public safety. Yet it is also the case that,

²³ For instance a car mechanic may claim that some particular remedial task was appropriate maintenance to avoid future problems as part of the routine servicing of the car – the replacement of a gasket for instance – with the client being never the wiser as to the *bona fides* of such a diagnosis.

with the industry often having a major influence on the way it is regulated, government regulation continues to reflect the interests of the profession as much as (some might argue more than) it reflects the public interest. The extent to which this is the case will often reflect the relative power and prestige of the profession or trade involved and the commercial power of the purchaser of the service (Bayles, 1986).

Where a profession is selling 'credence goods'²⁴ it can manipulate demand for its product – for instance by proposing diagnoses and treatment protocols that lead to profitable services being provided when they are unnecessary or cheaper options would perform as well or better. It will be difficult to detect this kind of behaviour to ensure the public knows where such 'over-servicing' is going on without some surreptitious search for evidence of misconduct – for instance through 'mystery' or 'shadow' shoppers.²⁵ Thus for instance ASIC has shadow shoppers to determine the compliance of mortgage brokers and financial planners with ASIC administered professional regulation.²⁶ State government regulators use unannounced inspectors to inspect the hygienic condition of restaurants (for instance NSW). However, mystery shoppers are not standard fare in the regulation of lawyers or doctors, despite their being professions in which it is very difficult to detect over-servicing.

Where high status professions are subjected to invasive and/or inconvenient or costly observations of their performance, it is often because the purchaser of their services has the commercial power and/or the public support to insist on it. Thus for instance pilots go through random checks (for instance for drugs and alcohol),²⁷ are subjected to regular tests of their competence through simulations and inspections as well as being supervised by others in flying planes, even once they become fully qualified and indeed highly experienced.²⁸

6 Donations to the 'reputational commons'

Given how profoundly asymmetric information is in some markets, how much sellers are selling 'credence goods', integrity and quality are at a premium and those who do have information that bears on this are sitting on information of great social value. Further, as John Kay (2005, p. 225) has observed, the more 'viral' information can be, the stronger are the disciplines on providers to act with integrity in not over-servicing and delivering value for money.

²⁴ A provider is providing credence goods where the recipient of the service or good can never know the quality of the product provided even *after* having received it. This is surprisingly common. For instance if one visits a doctor and they prescribe a particular medicine and one recovers, one usually never knows for sure whether the medicine improved one's condition or one got better of one's own accord.

²⁵ 'Mystery' shopping typically involves getting people to pretend to be customers. Shadow Shopping involves recruiting real consumers who do not inform the providers that, following their involvement as shoppers will participate in a process of assessing the quality of the service they received.

²⁶ ASIC's latest "shadow shopping" exercise (released March 2012) was about the "quality" of financial planning advice given to retirees:[http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/rep279-published-27-March-2012.pdf/\\$file/rep279-published-27-March-2012.pdf](http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/rep279-published-27-March-2012.pdf/$file/rep279-published-27-March-2012.pdf)

²⁷ <http://www.casa.gov.au/aod>

²⁸ The frequency and degree of these tests depend upon the type of pilot licence held. See: http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_90022

Reputation works best when reputations are contagious. Respected businesspeople deal with other respected businesspeople, and their continued reputation depends on behaving in this way. This is the most important mechanism for enforcing trust in business dealings. But it often breaks down. The rapid collapse of Anderson after its role in the Enron Scandal was exposed illustrates how contagion can support reputation – or destroy it. Physicians, believing it important to maintain public confidence in their profession, have been notoriously slow to act against incompetent colleagues.

Many markets are characterised by asymmetric information and few more so than markets for professional services. However, government is often a purchaser of such services and it is in its immediate interests for it to become an informed purchaser – to improve the cost-effectiveness of its purchases. In contracting for such services, the more its suppliers focus on winning and maintaining their good reputation in the future, the less they are tempted to ‘cut corners’ and exploit their own superior information. For these reasons, in reviewing the Commonwealth’s purchasing of legal services for the Attorney General’s Department, Lateral Economics (2011) suggested that governments decide on performance metrics that could be shared between departments so that each supplier had in mind its reputation not just with a single public agency with which it was contracting but with all public agencies.

It went further, suggesting that such information was a powerful public good. A system that measures the quality of service providers’ performance and which circulates that information takes advantage of the free riding opportunity to allow purchasers to piggyback off each others’ experience and evolving knowledge. This does much more than simply ensuring the ‘static’ benefit of more informed purchasing. The more service providers are focused on impressing their existing clients to win future work from them, the more this enhances their tendency to virtuous behaviour. Reputation leverages this effect because it extends the future rewards (or penalties) arising from impressing (or disappointing) one client to the prospects of working for other clients. This free riding opportunity can be taken further. For it costs nothing for this information to be released to the public. This improves the incentives on suppliers by making their reputation more ‘viral’ in John Kay’s sense above. It rewards good suppliers and disadvantages poor suppliers more than otherwise – at the same time as putting the government in a stronger position with its suppliers. Yet as well as these private benefits to government agencies it also helps contribute to the public good of reputations within the profession. Thus leveraging the free riding opportunity has potentially large public benefits, allowing the whole community to piggyback off the information generated by the government and in the process strengthening the incentives for virtuous behaviour in otherwise highly opaque markets.

A very different market in which the strategy of release has been successfully tried concerns the information governments already have from health inspections of restaurants. NSW is currently trialling a ‘Scores on Doors’ rating system of restaurant hygiene.²⁹ The program involves providers of ready-to-eat food displaying a rating certificate, issued after an unannounced inspection by council Environmental Health Officers. The rating certificate indicates levels of food safety compliance, from three stars, meaning good, to five stars, meaning excellent.³⁰ The certificate is then displayed in a prominent location, either by the

²⁹ <http://www.foodauthority.nsw.gov.au/consumers/other-food-topics/scores-on-doors/>

³⁰ Restaurants cannot trade with lower scores than 3.

door or on the shop window. The intention is to spark a "race to the top", as consumers seek out more businesses with more hygienic food preparation practices. There is good evidence that this is an effective regulatory practice.

In Los Angeles rather than stars, restaurants received a grade of either A, B or C, according to their compliance with food safety regulations. Introduced in 1998, within five years the percentage of restaurants receiving an 'A' grade increased from 58 to 83 per cent (Fung et al., 2007, p. 194), and the incidence of food-borne disease decreased by as much as 20 per cent (Simon et al., 2005). Following the program's success, several other US cities and states have followed the LA model. Rather than regulate food preparation practices directly, the Scores on Doors program uses transparency to intensify the incentives produced by the health inspection system, with, the LA experience suggests, particularly strong effects on the laggards.

7 Existing information and the 'market' for workplace safety

Where they are risk rated, workers compensation premiums provide good information to workers about the work and safety record of workplaces. This would be of great value to those who are working, or considering working in such workplaces. In some states of Australia, for instance in Queensland, such insurers are publicly owned. Yet they do not publish information. Ideally such information would be published and made readily available – for instance on a website which, following recent practice might be called 'MyWorkplace'.

Yet as this report suggests, it would be of greater use still if citizens were able to access it with material that assisted them in interpreting it – for instance one might provide the information alongside state, national and industry markers and trends over time to give people an idea of how a given workplace compared with others and its tendency to improve or otherwise over time. It would also be sensible to provide the information with some 'confidence interval' generated according to some accepted methodology. Further it might be required that workplaces provide such information to their employees and to any prospective employees in the process of considering whether to take up work with a workplace.

Of course the fact that, in some other states such as NSW, workers compensation insurance is underwritten privately should not stop governments from bringing about a situation where information about the relevant premiums was public and was disseminated in a similarly useful fashion. However, this brings us to the question of how policy makers and indeed others can influence the *architecture* of a given market or ecology of information, a topic to which we turn in the following section after discussing naming and shaming.

Box 6: Windows on Workplaces

'Windows on Workplaces' is a proposal I took to the 2020 Summit. Firms regularly survey their employees to understand how engaged they are in their work. This information has obvious value – most particularly to those considering working for the firm. You might think it's obvious why it's not public. Who'd want their dirty linen aired in public? But that doesn't explain why the best firms don't publish their results. And if they did, that could create a dynamic which forced other firms to publish their results lest people think they were covering something up.

But the problem is that there is no standard against which all firms report. As a result, no-one can really compare different results. And a standard is a public, which is to say, a collective good. So my proposal was that some leader – the Prime Minister is the obvious candidate but it could be any prominent and well intentioned figurehead – challenge the best firms to join them in developing and reporting to a standard.

Now the public sector is well placed to introduce something like this. Because most public sectors, including Queensland's, have central bodies which conduct standardised surveys of employees. And as the Australian Public Service Commission (APSC) notes (2010, p. 19) citing the US Merit Systems Protection Board there is "a significant positive correlation between employee engagement scores and agency performance."

Source: Gruen, 2011b.

7.1 Naming and shaming

Any release of information which enables people to differentiate the quality of products is a 'naming and shaming' policy to the extent that it puts the worst performers in an invidious light. But where information on all participants is concerned it will also name and proclaim the best. But some programs focus on the negative side of the ledger - naming and shaming. Thus for instance the NSW Food Authority has a 'name and shame' policy of publishing serious compliance breaches on its website.³¹ In tandem with fines and prosecution, the ignominy and negative publicity associated with being 'named and shamed' works to threaten food businesses into compliance with food safety law.

In January 2012 the government of Greece published the names of 4,000 tax evaders. The list, which included famous business people and celebrities, collectively owed over 14 billion Euros. Amidst the growing financial crisis, the EC task-force to Greece estimated that unpaid taxes at the time summed to more than 60 billion Euros, about 25 per cent of GDP. While the naming and shaming exercise can look like the government getting tough on enforcement it may nevertheless leave the tax code full of loopholes (Kouki and Vradis, 2012). Further, such transparency can be a double-edged sword. Publishing a list like this can act to normalise and de-stigmatise tax avoidance. If people think that most other people are doing it – including famous people they may look up to – they may decide to do it themselves. Anecdotal evidence suggests that the policy of transparency around executive salaries in public companies which was ostensibly prosecuted to exert pressure on boards

³¹ <http://www.foodauthority.nsw.gov.au/news/offences/>

not to pay excessive salaries to their most senior executives in fact empowered executives to demand more on the grounds of comparative wage justice.³²

8 Influencing the architecture of the reputational commons

In the preceding section we have explored how disseminating existing information can improve outcomes by making people better informed. The beneficiaries will often be consumers who can use the information at their disposal to make better value purchases. However, it might also include workers who are able to choose safer workplaces. There will also be important second round effects. As we have seen, restaurants in LA do not like having to put a 'C' on their front windows advertising that their state of hygiene is as bad as is consistent with their staying open and so they change behaviour. We expect a race to desert the bottom if workers compensation premiums were released as a public resource and indicator of employers' safety records.

On the other hand all the examples observed so far have involved the distribution of information that has already come into existence. But there is more to information policy than that. Those with an interest in maximising transparency and the generation and dissemination of high quality information need also to attend to the question of the architecture of the information ecology. For there are many things that can be done to create a situation where information that would be useful comes into existence and is disseminated to those who can benefit from it – and those who can discipline others to perform better with their buying and other choices. It is to such examples that we now turn.

8.1 Investment advisors and share brokers

The case of financial advisors is perhaps most instructive. Here the industry's origins lie in life insurance salesmanship. Regulation grew in the industry as a range of dissatisfactions arose both with the level of fees charged and the potential for conflicts of interest where salespeople offered advice and also received commissions from a range of different sources of insurance.

Such people also provided tax planning advice and over time took on names such as financial planners. Regulation was extended to require such people to disclose commissions. But as consumer activism grew regarding the conflicts of interest involved, advisors were required to do more and more 'due diligence'. Thus for instance advisors must now be licenced and clients of advisors must receive risk analyses of their position – whether they wish to receive them or not. In many ways as Gruen (2006) has argued, such measures can actively mislead consumers because they legitimise the advisor's pose as an independent expert intermediary – indeed they typically market themselves as 'licenced' advisors.

Even so, what is striking is firstly that public debate tends to focus around the moral issues raised by conflict of interest, and secondly that government regulation rarely tackles the

³²Personal experience of Nicholas Gruen at the Business Council of Australia. Perry and Zenner (2001) show that in America, the tax legislation in 1992 that capped corporate income tax deduction of non-performance related compensation at one million dollars, together with the compensation disclosure rule enacted in 1993, actually caused dramatic increases in real compensation levels

matter directly. For to do so strikes at the heart of the economic underpinnings of the industry as it has been established. In fact after two decades of consumer activism, the requirements on advisors have not just escalated in onerousness but have in fact begun to bear down on the conflicts of interest inherent in the economic underpinnings of the industry. Yet despite all this, virtually no policy attention or commentary has been directed to what one might imagine is the far more important – if perhaps less entertaining and engaging – question of which financial advisors provide the best advice!

Lateral Economics has suggested (2007) that:

[D]espite huge resources being invested by both government and business in regulatory development, administration and compliance with new financial services regulation, there is no simple and reliable way to find a share broker or investment advisor whose out-performance of the market can be demonstrated from an independently audited record of their actual investment performance. Yet, unlike some professions (psychotherapy, for instance), it is relatively straightforward to generate information which, over a period of time, can be a very good indicator of the quality of the advisors' investment skills. Thus, for instance, if investment advisors and/or share brokers kept independently auditable 'sample portfolios' operated in 'real time', we could, over a period of time, measure their performance. The investments in these portfolios could be kept confidential – to protect what the practitioners were selling – their investment skill. But their performance – in terms of absolute and after-tax returns and the volatility of portfolio – could all be published.³³

Various strategies could be articulated. None generates perfect information, but many generate information of great value on the key question which is how well have such professionals performed in the past. The same data that would provide information on performance could also be interrogated to determine how robust it was. One would place less confidence in a record stretching back a short time with only a few data points than one would on a longer period of performance. In any case the data would then be available for further analysis and development to provide further insight into what it was reasonable to deduce from it.

8.2 Gruen Tenders can enrich the reputational commons

Gruen (2002) has proposed prognostic auctions or 'Gruen Tenders' to allocate clinical health work and to generate information on professional performance. Here government funders allocate clinical operations to clinical units – eg specific operational units of hospitals – based on a tendering system where those seeking to undertake the work 'bid' in prognostic terms. Thus maternity wards might 'bid' to do individual or set numbers of obstetric deliveries by indicating that, should they perform the work, they would do so with an adverse event rate below some figure. If they are seeking to secure the work, this generates an incentive for them to offer optimistic prognoses. However, after the event their degree of optimism can be tracked against their actual performance from which can be determined a

³³ Practitioners would be free to keep several portfolios so long as the strategy of the portfolio (e.g., conservative low risk, aggressive high growth) were nominated at the outset.

correction factor. Raw prognoses could then be corrected to take into account the bidder's historical level of optimistic or pessimistic bias for past bids.

After a sufficient period this system produces unbiased prognoses of likely future outcomes. This then provides a way to determine which bidders are performing best, which can be of great value not just in allocating jobs but also in identifying the best performers so that others can learn from their performance. The system has a range of additional attractions not least of which that it generates far fewer perverse incentives (for instance to turn away the sickest patients) than many performance measurement systems (See Appendix One). The Gruen Tender could provide a rich resource of performance data on which the reputation of specific clinical service providers could be based. Lateral Economics has also suggested Gruen Tenders for the contracting of legal services (2011, pp. 63 ff).

9 Conclusion

Although information economics in earnest dates back many decades, as this report highlights, information policy is, both in Australia and elsewhere, in its infancy. In this report we have seen how complex information is, how it relies on standards that are shared between information providers and which are the product of history and how rich the ecology of information is. This report draws attention to a panoply of factors that may require careful consideration when seeking to optimise the ecology of information.

We have drawn attention to the importance of the standard within which information travels. And given this we have pointed to the importance of encouraging the best possible standard to emerge. Probably even in simple circumstances, and certainly in more complex ones, widespread consultation and indeed genuine engagement of a range of stakeholders will improve the chances of a good outcome. Further we have drawn attention to the way in which information disclosure can be improved even without mandatory requirements. Often governments, or indeed other actors can have a substantial effect just by facilitating the emergence and voluntary reporting to a voluntary standard and encouraging reporting to that standard.

Governments can also assist by encouraging information to be released where it has clear public value. This includes regulatory information – for instance about the assessed hygiene performance of food retailers and the workers compensation premiums of 'experience rated' employers which can provide a useful summary proxy for workplace safety.

Given that the task is to tame asymmetric information – which is itself the product of incentives which lead people to keep information to themselves – transparency cannot be properly thought about without carefully considering the existing incentives on people to disclose accurate information and the possible incentives – perverse and otherwise – that can be unleashed by disclosure requirements.

Accordingly, what economists call 'incentive compatibility' is an important issue. Incentive compatibility defines a situation where it is in the interests of various actors in a situation to behave well, rather than badly. For this reason, where mandatory disclosure is relied upon to inform, it is also appropriate to consider what incentives this may be unleashing on those

that report and considering the way in which systems are designed and if appropriate supplementary supportive measures – such as audit. It is a pity for instance that in over a decade of annual reporting on Government Services (SCRGSP 2012), the idea of auditing the figures that are reported is so rarely discussed.

Ultimately, however, we will know that this area has come of age when those who think about it understand that, to serve our interests properly, the market for information, or what this report calls the ecology of information, must become sufficiently rich to accommodate the idea of the division of labour. A great deal of thinking and policy making in the area of information is based on the idea of the sovereign consumer doing ‘due diligence’ on their own purchases and other decisions. Yet, as the philosopher Alfred North Whitehead stressed in the early years of the twentieth century, as Friedrich Hayek reiterated from the 1930s on, as Herbert Simon stressed from the 1950s on and as we know from renewed attention to it in the contemporary sub-field of behavioural economics, we lack the processing power to do ‘due diligence’ on all, or even most of our decisions. Rather reputations get formed from which we generalise. Very little academic and policy making thinking has been focused on what might be done to improve the integrity and information richness with which reputations are forged and by which people come to know of them. This report has proposed a range of areas and means in which we might begin making progress.

Appendix One: The Gruen Tender

Just as auctions extract from potential buyers of a product, estimates of their true willingness to pay, Gruen tenders provide a means by which those who seek to perform some service can be induced to provide an unbiased prognosis of how they will perform.

This offers a powerful tool for administrators who must allocate jobs to service providers and, potentially for consumers.

Step One: The service provider is required to offer prognoses in terms of a particular quantitative outcome – for instance the price that will be achieved on your house by a real estate agent – or the chances of a particular clinical procedure being completed without any specified adverse events.

Step Two: Service providers' prognoses are logged and then compared with their results when they become known. The system then produces an 'optimism factor' which captures the extent of the service provider's past optimism. Thus for instance, if the service provider has on average been 10% more optimistic than his results would justify, the 'optimism factor' would be -10%.³⁴

Step Three: Once the system has sufficient data to give the 'optimism factor' some statistical robustness, 'raw prognoses' provided in Step One' can be 'moderated' by reference to the 'optimism factor' applying to the service provider. The moderated raw prognoses then become unbiased predictions of actual results. To take the example above, if a real estate agent's optimism factor was -10%, and its raw prognosis for selling your house was \$400,000, the optimism factor would see the raw prognosis reduced by 10% in the moderated prognosis of \$360,000 ($\$400,000 - 10\% \text{ of } \$400,000$). It would be clear that an agent with a lower raw bid of \$370,000 but a neutral or positive 'optimism factor' would be a superior agent for selling a home through.

An example

Assume there is a client seeking to engage a real estate agent to sell their house. They receive a prognosis from three agents as indicated in the table below. The first agent does not offer the most attractive raw prognosis, but when it is taken into account that it typically underestimates the prices it will achieve by 5 per cent whilst the other two agents overpromise, its moderated prognosis is the most favourable.

	Raw prognosis	Optimism Factor	Moderated Prognosis
Agent 1	\$420,000	5%	\$441,000
Agent 2	\$415,000	-2%	\$406,700
Agent 3	\$450,000	-15%	\$382,500

Indicated Service provider

In the case of clinical service providers the prognoses could be in the form of some probability of a procedure being successfully completed without an adverse event occurring – according to some agreed definition. Thus for instance on setting a broken bone the prognosis would be in the form of a probability that certain benchmarks would be met. Thus

³⁴ In some circumstances it may be more appropriate to use some measure of optimism other than a percentage of bids – for instance some absolute figure.

for instance the prognosis might be that there is a 92 per cent chance of the fracture being set without any adverse event as defined in some code. Such events may include infection, the need to reset the bone and so on.

The service providers might provide prognoses as follows with the indicated service provider being that with the best moderated prognosis.

	Raw prognosis	Optimism Factor	Moderated Prognosis
Hospital 1	92%	2%	94%
Hospital 2	90%	-2%	88%
Hospital 3	95%	-15%	81%

Indicated Service provider

The merits of such an approach can be arranged under the following sub-headings. Most of the illustrative examples will be taken from clinical service provision where the problems of information seem most difficult and solving them seems likely to generate the greatest benefits.

Reputation

Reputation is the principle means by which consumers and others without expertise (such as administrators of health systems who allocate funding and clinical work) judge the likely quality of the future work of experts. Yet in many markets for expert services, very poor information is generated – and often even less information is released – according to which reputations are made. As a result when seeking to determine who is the best surgeon or the best hospital, consumers and even their referring doctors often have very poor knowledge – based frequently on some ‘word of mouth’ opinions of a few people, many of whom themselves base those opinions on small samples. The Gruen Tender generates a mass of information both about the quality of service providers and about their accuracy in making prognoses.

Incentives

Unlike most systems which measure the quality of service provision, there is never any incentive to turn someone away – for instance from a hospital – on the grounds that they are a bad risk. If someone presents with an unusually bad prognosis, then the only thing the clinical unit must do to protect its reputation is not to offer an overly optimistic prognosis. If the patient has a 90 per cent chance of dying, the clinical unit need only predict that and their reputation for delivering on their prognosis remains intact.

Forward risk rating

One solution to hospitals turning away bad risks, and to seeking to better estimate the quality of care is to have particular clinical episodes ‘risk rated’. Thus for instance some small surgical operation might be rated as producing a one in three thousand risk of infection compared with a one in three hundred risk with open heart surgery. However, this method relies on the classification of specific risk rated events centrally. Yet individual clinical units may discover factors that influence risk. The Gruen Tender allows them to gain ‘credit’ for this in their ‘bids’ for clinical work – with the work going to the unit that produced the most attractive bid (once moderated for their optimism factor).

Information

This system produces a lot of information that will aid in the discovery of good practice both by consumers (reacting to the highest quality tender ‘bids’ for work) or by health administrators seeking to allocate large numbers of clinical jobs to the highest quality providers.

Thus in the example set out above, where a particular clinical unit had discovered some way to improve the quality of its performance in certain specific cases – for instance it may have developed some additional intervention, either medical or otherwise which lowers adverse event rates in some population – this information would rapidly assert itself in superior bids for certain kinds of jobs.

Where jobs are classified into diagnostic related groups (DRGs), the innovation of the clinical unit may remain unknown to the centre, it might be for some subset of all cases within the DRG. But information would be emerging of the improved performance by way of the improved bids, and the unit might then be approached so that others could understand and learn from the improvements it built into its own routines to achieve the performance improvements that underlie its improved bids.

Building reputations

Despite the plethora of regulatory regimes that mandate disclosure of information, the most successful regulations tend to mandate the provision of simple information in simple formats that consumers can understand. Where information becomes more complex, top down supervision becomes difficult, sometimes even for those with considerable resources.

It is for this reason that, as John Kay observes “reputation is the principal means through which the economy deals with consumer ignorance”.³⁵ The Gruen Tender creates an environment in which reputations can be built on excellent information not just about outcomes, but also about the accuracy of clinical unit’s prognoses. Because in any situation where the corrected prognoses are influential in influencing the allocation of work, each clinical unit has an interest in preserving and enhancing its reputation both for accurate prognoses and for high quality clinical outcomes. As Jason J Smith & Paris P Tekkis observe: a system that uses risk adjusted prediction is going to become an essential tool for clinical governance reviews to ‘prove’ a unit’s performance and also for an individual consultant surgeon’s appraisal process for much the same reason.³⁶

Reputations for the patient

Not only are doctors’ and hospitals reputations built from very flimsy evidence – often a few people have a good experience and this is passed on within their community – but those reputations are typically fairly diffuse in their focus. A doctor or hospital is likely to acquire a reputation for being ‘good’ or ‘bad’. But the chances are that, presuming these reputations are warranted, they are warranted in some areas and not others. A surgeon or clinical unit

³⁵ Kay, 2003. *The truth about markets*, Penguin, p. 214.

³⁶ <http://www.riskprediction.org.uk/background.php>.

may be good at simple lower back surgery, but this does not mean they will be good at complex upper back surgery. They may be good at natural deliveries of babies, but not particularly distinguished at deliveries using cesarean section. The Gruen Tender creates a situation in which the reputation of the bidder is expressed *for the patient regarding the circumstances of their clinical presentation*. It is not an average.

Reputations in real time

Jha and Epstein report (2006) that the 'report cards' available for New York surgeons are typically based on data which is two or more years old when it is being relied on in report cards. By contrast the kind of system envisaged here would use data from results immediately it became available to the system.

Building bridges

One of the problems with rare events is ensuring that one has a sufficient sample to make reasonable inferences about the true population. This is both a genuine problem of knowledge – if one doesn't have the data one doesn't have the data. But it's also a question of judgement. Even if the procedure is essentially similar, every operation is a different operation. Let's say that a hospital with a good reputation for quality wishes to expand the range of operations that it does – perhaps moving from some simplified operation to one that is similar but more complex. How should we measure its performance and make inferences about its new area of activity?

This is not an easy question, but using the Gruen Tender one can delegate it to the clinical unit or the hospital itself. If a clinical unit is prepared to elect before the event to put its own reputation on the line by putting in tender bids in which its optimism factor is 'on the line' then the presumption should be that it has a good reason for doing so.

Improving the efficiency of prediction

Different ways of gathering data will generate statistical signals of varying quality. Consider the contrast between a typical office footy tipping competition and betting on horse races. Competitors in a footy tipping competition tip the winners of football matches with a prize going to the competitor that tips the greatest number of wins. This is very statistically inefficient.

To see why, compare this with betting on horse races. In the latter case a punter can benefit from placing a bet on a horse where he rightly divines that the odds that are offered are advantageous to the punter. In most cases the improved information or judgement of the punter will not lead him to change his best guess as to who will win the race, it will only lead him to weight the odds of the various horses slightly differently. If the punter is confident of any judgement of his own that is different to the market's judgement, there is a money making opportunity – which, if he is right, is also an opportunity for 'the market' to improve the accuracy of its expectations.

An analogy can be drawn with the simple measurement of clinical results in hospitals. If all the events are perfectly 'risk rated' then it is possible to correct the results with risk ratings.

However, if there is no risk rating, or, what is much more likely, risk rating is not as good as it could be, then information is being lost and the accuracy and efficiency of statistical information is being accordingly degraded.

Any clinical procedures for a specific patient will be allocated to one clinical unit or another. Thus when comparing units how does one compare their performance? Of course one can compare their outcomes but how does one know the extent to which they may be affected by the different catchment areas of the two clinical units? However, if the Gruen Tender is in use, one can look at the moderated prognoses offered between two clinical units in those cases where they are providing prognoses for the same patient and the same clinical event (which was ultimately allocated to just one clinical unit).

Prediction helps practitioners learn

Scholars from the philosopher Karl Popper to the first Nobel Laureate in economics Paul Samuelson have commented on the importance of practitioners making predictions in order to focus their minds on what they know and to test their knowledge. In medicine it is likely that the discipline of making careful predictions and seeking to improve them will focus clinicians' minds on matters that affect outcomes in ways that could lead to new initiatives to improve outcomes.

It has been widely documented how a range of psychological biases dog expert decision making. Overconfidence appears to be rife in the corporate community. It would be possible to require the directors and other senior figures within companies to issue regular probabilistic forecasts and for those forecasts together with their subsequent performance to generate a more transparent track record over time.

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Building Transparency

Part Two: Practical applications in the public sector

Policy implications at a glance

If policy makers seek to establish specific policy regimes for conveying information to citizens to advance some specific policy objective, those regimes are most likely to be successful if they are user centred and sustainable.

Successful policies focus on the needs and interests of users. They should also be focused on the capacities and inclinations of disclosing organisations.

They should seek to embed new information in the decision-making routines of users and to embed user responses into the decision making of the discloser. The policies must be politically sustainable. Sustainability is a function of the respective political power of users and disclosers, particularly at the time when the policy is introduced (typically at some time of perceived crisis). Powerful, well-organised users help establish transparency regimes just as powerful, well-organised disclosers have the best chance of resisting them. Also, to be sustainable, the policy should generate good information about its own efficacy and should be updated and improved as that information emerges.

Further behavioural economics shows us that where policy goals are sought, human motivation is complex and information can help promote citizens' pro-social inclinations. Provided it does not appear to be exploitative, and in so doing give those who exhibit pro-social behaviours the feeling that they are being 'played for suckers', it can be an important tool to improve economic and social outcomes.

As illustrated by the 2007 Queensland Water Commission 'Target 140' campaign **pro-social campaigns are particularly indicated where:**

- There are reasons to suspect that **people will regard a market-based approach as unfair** in some way;
- There may be some **sensitivity to the 'intrusion' of inspections** to administer market-based incentives – for instance in the privacy of people's homes;
- There is scope for **complementary measures** which encourage people to do the right thing;
- People receive **regular feedback** on how they are performing;
- **Progress** towards the socially desired target **is made and effort** to do so is generally perceived as being **broadly based within the community**.

Overview

Introduction to Part Two

Part One of this report, *The Ecology of Information and the Significance of Reputation*, sketched a broad range of considerations to be taken into account in contemplating policy's role in improving information flows in our economy and society. This report applies those ideas to specific policy issues. We explore transparency regimes in specific areas – which Fong et al have dubbed targeted transparency – along with a range of other issues. A related subject of study is the significance of behavioural economics in determining appropriate policy particularly where policy makers seek to use specific measures to bolster transparency as policy alternative to more traditional and directive policy approaches such as taxes and charges, subsidies and regulation.

Simple targeted transparency

The information policies that Fung et al dub 'targeted transparency' seek to address some specific problem. Of 18 examples of such policy in the US Fung et al identify only two clearly successful interventions. The reasons for the relative (or total) failure of the other regimes vary but often involve excess complexity and/or lack of usefulness to consumers. Both of these factors can also undermine political support for some specific regime. Drawing on this policy experience, Fung et al propose the following principles:

- Targeted transparency must be *user centred*. Successful policies focus on the needs and interests of users. They should also be focused on the capacities, and inclinations of disclosing organisations. They should seek to embed new information in the decision-making routines of users and to embed user responses into the decision making of disclosers.
- The policies must be *politically sustainable*. Sustainability is a function of the respective powers of users and disclosers, particularly at the time when the policy is introduced (typically at some time of perceived crisis). Powerful, well-organised users help establish transparency regimes just as powerful, well-organised disclosers have the best chance of resisting them. Also, to be sustainable, the policy should generate good information about its own efficacy and it should be updated and improved as it emerges.

A good example of targeted transparency is Australia's 25-year-old regime requiring energy rating stickers on household appliances. Between 1986, when labelling was first introduced in Australia and 1999 when Mandatory Energy Performance Standards were introduced, the annual energy use of the average new family refrigerator fell by 50 per cent; a sharp drop from the immediate preceding period in which little energy efficiency had been observed.³⁷ Australia's energy rating label is well regarded having been imitated in Thailand, South Korea and India. The energy rating labels are popular, and the labelling program has been greatly extended from refrigerators and freezers that were covered under the initial system. Further, star ratings have been applied to a range of new areas such as water efficiency and housing.

³⁷ Implied by the data shown in figure 1 in Elliset al., 2006.

Complex targeted transparency

Fung et al's gospel of simplicity provides excellent advice, but only where simplicity is actually obtainable. There remain major areas of public policy where greater transparency should be able to make a contribution that are poorly amenable to such simplification. Certainly the MySchool experience so far suggests that Fung et al are right in stressing the difficulties of conveying complex information. Yet the issues are subtler and more methodologically contestable in areas like the quality of our health and education system and they are far more diverse than for instance reducing the energy intensity of whitegoods.

Governments have not mastered the art of presenting complex data to the community whereas the entrepreneurs of Web 2.0 have built numerous platforms that both engage people and provide very valuable and complex information. For this reason it seems likely that the problems of complex transparency will be best solved in the context of a more open model – in line with the recommendations of the Government 2.0 Taskforce. This would enable those with an interest to present the data in ways they felt were appropriate and to do so in a way that they felt was most useful for users. Moreover, governments could assist by:

- Participating in the field of 'retailing' the data on their own websites;
- Opening up their own data as a free 'wholesaler' to let others use, manipulate and present the data in other ways; and
- Funding research, competitions, prizes and other activities to open up the problem to those who can find the best ways of presenting the data and engaging the public in it.

Behavioural Economics and pro-social behaviour

Information can also be useful in promoting pro-social behaviour and in helping to inform political action. In this regard we know that people are naturally inclined to both pro-social and self-regarding behaviour and that where there is a tension between them, context helps 'frame' the way they see and how they make the choice between them. On the one hand the monetary incentives so beloved of economists can undermine people's natural inclination to do the 'right thing' from others' perspective. On the other hand, though people seek to do the right thing, their good intentions can be fragile. At its best the rule of law in society and incentives to prosper in markets work as complements to people's desire to do the right thing. Cooperation and good will prove much more robust if those who are contributing know that non-contributors will be punished in some way. People usually want to cooperate but wish, perhaps even more, to avoid being the sucker who is exploited by self-interested defectors from a social norm that calls for selflessness.

The Queensland Water Commission appears to have understood these principles admirably when they designed the 'Target 140' campaign in 2007 to reduce water consumption to 140 litres per person per day. They understood the:

- Difficulty and sensitivity of the task – namely that water restrictions had successfully reduced outdoor use and that therefore the next most propitious increment of water economy would have to come from the privacy of people’s water use in their own homes – something that could not be directly observed to ensure compliance;
- Scope to use complementary measures;
- Potential counter-productiveness of heavy handed extrinsic motivation; and
- Importance of focus, accountability and feedback. The campaign convinced Queenslanders of the seriousness of their situation, and provided them with regular feedback on the state of water capacity and their own progress in rising to the challenge set by the campaign.

In the upshot, Queenslanders overshot the target by 11 litres and this embedded habits in their water use which meant that water use stayed much lower than it had been even after, in the presence of flooding, the restrictions were eased.

As has already been seen with the Global Reporting Initiative (GRI), a further important motivation for transparency is that of informing the community, which can empower political accountability. Thus for instance the National Pollutant Inventory (NPI) in Australia collects data in standardised units, which makes emission comparisons possible across companies, across geographical areas or over time. Some have suggested that registers have played a role in reducing emissions (Fung and O’Rourke 2000). However, it is difficult to determine the extent of this result. Further it had been hoped that these registers might be used by the investment community, which would provide a source of discipline on companies. But apart from the very small pool of capital managed by investment managers who market themselves as ‘socially responsible’, there has been little interest. Further, because they are so driven by newsworthiness and ‘hot button’ issues even social activists use the information provided in the registers only sporadically.

Conclusion

Fung et al provide a useful summary of principles for policy makers embarking on what they call targeted transparency, which is to say the establishment of specific policy regimes for conveying information to consumers to promote some specific policy objective. Firstly, measures should be user centred, focusing on the needs and interests of users embedding new information into the decision-making routines of users and in turn providing incentives for producers to provide products which better meet users needs and in so doing promote specific policy objectives.

Secondly targeted transparency measures must be sustainable. Powerful, well-organised users help establish transparency regimes just as powerful, well-organised disclosers have the best chance of resisting them. To be sustainable, the regime should gain in use, accuracy, and scope over time. Such improvement is important because policies inevitably start as compromises, because markets and public priorities change, and because policymakers constantly need to fill loopholes discovered by reluctant information disclosers.

Finally behavioural economics shows us that where policy goals are sought, human motivation is complex and information can help promote citizens’ pro-social inclinations.

Provided it does not appear to be exploitative, and in so doing play those who are prepared to do the right thing for 'suckers', it can be an important tool to improve economic and social outcomes.

Table of contents

Policy implications at a glance	i
Overview	ii
Introduction to Part Two	ii
Simple targeted transparency	ii
Complex targeted transparency	iii
Behavioural Economics and pro-social behaviour	iii
Conclusion	iv
Table of contents	1
10 Introduction	2
11 Simple targeted transparency	2
12 Complex targeted transparency	7
12.1 MySchool	8
13 Behavioural Economics and pro-social behaviour	10
13.1 Behavioural economics	10
13.2 The principles of behavioural economics: as illustrated by the South East Queensland Water Commission's Millennium Drought Program	15
13.3 Transparency for political action	18
14 Conclusion	19
Appendix: Behavioural Economics	21
References	25

10 Introduction

Many, though not all, of the examples of initiatives discussed in Part One of this report, *The Ecology of Information* seek to empower those needing high quality information to make decisions but they do not seek to address a specific mischief. The case for them rests on the proposition that, providing it can be done cost effectively, improving the quality of information that is generated and disseminated to decision makers can generate large benefits because people will use that information to make choices more suited to themselves, and those choices may drive further adaptation by producers to produce better products which meet needs better.

This can be distinguished from information policy that is inspired by, and seeks to address some specific problem. Fung et al (2009, p. xiii) call such policy action ‘targeted transparency’. Fung et al argue that targeted transparency should be simple. We agree that, where it is possible to clearly identify some simple and straightforward value towards which policy is driving targeted transparency should likewise be simple. Fung et al are within their rights focusing on such exercises, however the fact remains that many information regimes cannot be simple. The information system that enables people to judge health care or educational service providers cannot be simple because these services are highly complex and people want to know many things about them. Accordingly we outline simple targeted transparency in the next section and more complex targeted transparency regimes in the following section.

In these sections of the report the policy problem is the use of transparency to assist people help themselves. Consistent with the terms of our brief, we then explore situations where the policy objective is to encourage pro-social behaviour – that is behaviour in which people seek to ‘do the right thing’ within their society rather than advantage themselves. We do this by first considering the insights offered by the new sub-discipline of behavioural economics and then explore examples of transparency being deployed to promote pro-social behaviour.

11 Simple targeted transparency

Professors Archon Fung, Mary Graham and David Weil, based at the Ash Centre for Democratic Governance and Innovation at the Harvard Kennedy School are recognised researchers into the effectiveness of transparency and disclosure policies. In their 2009 book, *Full Disclosure: The Perils and Promise of Transparency*, they identify the emergence of what they argue is a new phenomenon in public policy – the use of mandated disclosure and transparency to tackle specific policy issues.

They argue that these policies, which they call ‘targeted transparency’, have a common *modus operandi*. They:

- mandate public disclosure
- by corporations or other private or public organizations
- of standardized, comparable, and disaggregated information
- regarding specific products or practices
- to promote a defined public purpose. (2009:6)

Fung et al. provide numerous examples of targeted transparency policies. Of 18 examples they identify one highly successful intervention – the policy of requiring Los Angeles restaurants to post an A, B or C on their front windows to rate their hygiene. One other policy requiring labelling of the propensity of SUVs to overturn was also successful in inducing the kind of cascade of changes identified above – with consumers responding to the information that drove car makers to improve the stability of SUVs. But many other targeted transparency regimes were not successful for various reasons. Very often the information was too complex to be useful. This can also undermine political support for the regime and this in turn threatens its political viability. One might have guessed the commonsensical principles that emerge, though it is reassuring to have one’s intuition confirmed by the evidence.

- Targeted transparency must be user centred. Successful policies focus on the needs and interests of users. They should also be focused on the capacities, and inclinations of disclosing organisations. They should seek to embed new information in the decision-making routines of users and to embed user responses into the decision making of disclosers.
- The policies must be politically sustainable. Sustainability is a function of the respective political power of users and disclosers, particularly at the time when the regulation is introduced (typically at some time of perceived crisis). Powerful, well-organised users help establish transparency regimes just as powerful, well-organised disclosers have the best chance of resisting them. Also, to be sustainable, the regulation should generate good information about its own efficacy and should be updated and improved as that information emerges (p. 11).³⁸

A good example of targeted transparency is Australia’s 25-year-old regime requiring energy rating stickers on household appliances. The regime requires labels that report expected kilowatt-hour(kWh) usage for an estimated typical use of the product from an energy test performed under specific conditions (as specified by the Standards Association of Australia). This value is translated into a 'star rating'. This makes the ratings easy to comprehend and facilitates comparisons.

Energy efficiency labelling in Australia began with a bilateral agreement between Victoria and New South Wales that from late 1986 required all refrigerators and freezers to display energy rating labels. By 1991 all States had energy rating labels for some appliances and in 1992 a national administrative framework was established covering five important categories of appliances. An updated label was introduced in 2000 after the introduction of minimum energy performance standards (MEPS). Energy efficiency labelling has gradually been expanded and now covers 14 product groups and around 31,000 products (Wilkenfeld 2010).

The energy labelling and MEPS programs operate together with MEPS removing the least efficient models from the marketplace and energy labels shifting the range of demand

³⁸See also Nicholas Gruen’s review of Fung et al at <http://clubtrotto.com.au/2008/04/07/full-disclosure-the-promise-and-perils-of-transparency-book-review/>

towards more efficient models. Energy standards and labels are very inexpensive policies (Ellis et al. 2006). The current cost of administering the energy labelling and MEPS programs is around \$10million per annum (Wilkenfeld 2010). Industry bears most of the costs from efficiency labelling but even that is a relatively small cost. Wilkenfeld (1996) estimated that in \$30billion of appliance purchases over 16 years, industry costs of the labelling scheme would be around \$83million or 0.3 per cent of total costs. The cost of mandatory standards is likely to be higher as this actively interferes with production decisions Wilkenfeld (1999). Sometimes this will be justified by total life-cycle costs, but there is no guarantee that it will be.

Given its low costs, energy labelling seems to have been highly successful. A survey of consumers in 2005 found that 96 per cent of Australians were aware of the energy label program, 88 per cent considered it at some point in their decision making, and 75 per cent stated that the energy label is at least quite important in their decision to purchase (Winton 2006, p.3). Mahlia and Saidur (2010) confirm energy labelling does seem to affect people's purchasing decisions and that it has shifted demand towards more efficient products. Between 1986, when labelling was first introduced in Australia and 1999 when Mandatory Energy Performance Standards were introduced, the annual energy use of the average new family refrigerator fell by 50 per cent; a sharp drop from the immediate preceding period in which little energy efficiency had been observed.³⁹

Australian energy rating labels are estimated to have reduced household demand for electricity by about 13 per cent and to have reduced demand for electricity by around 1,500 GWh per annum (Wilkenfeld 2009). This is consistent with the findings of Waide (2001), who found that the combination of labelling and minimum standards that the EU introduced in 1999 reduced the average electricity consumption of new refrigerators and freezers by around 27 per cent. These first minimum standards are thought to have had a similar sized impact as rating labels.⁴⁰

Australia's energy rating label is well regarded having been imitated in Thailand, South Korea and India. The energy rating labels are popular, and the labelling program has been extended from refrigerators and freezers covered under the initial system. Further, star ratings have been applied to a range of new areas such as water efficiency and housing.

Central to the success of the energy label system were efforts to embed the information in consumer and producer decision-making. Research commissioned by the Equipment Energy Efficiency (E3) committee showed that consumer decision making around household appliances involved two stages. In the first stage, consumers short-list appliances based on factors such as size, design and functional features. In the second stage, consumers select from within that short-list. The research also showed that consumers were much more likely to consider energy labels in the second stage of their decision making, after they had drawn up their shortlist, and this in turn influenced label design (Winton, 2006).

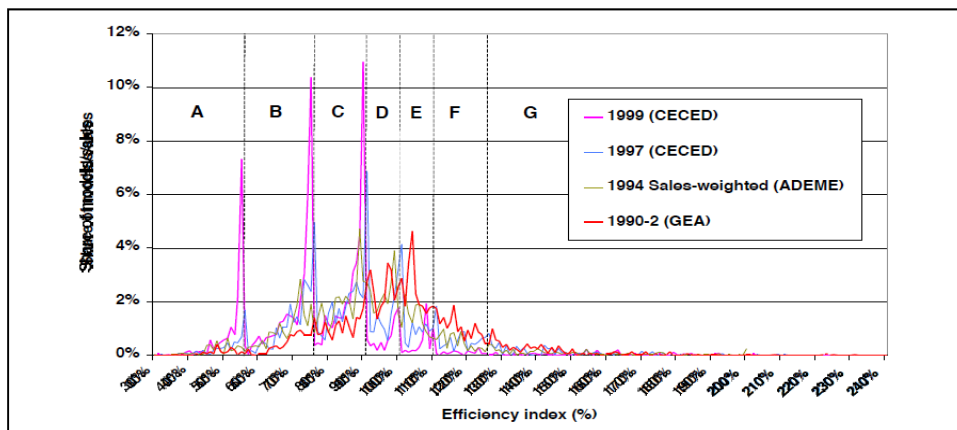
³⁹ Implied by the data shown in figure 1. Ellis et al, 2006.

⁴⁰ Note, however, that a UK study that was undertaken when the energy rating labels were first introduced estimated only a 7% reduction in energy use. This may have been in part due to lack of familiarity with the labelling scheme as only 35% of customers said they found the label useful (Boardman et al. 1997).

Furthermore, from the outset an important objective of the labelling program was to encourage manufacturers to design more efficient appliances. The E3 committee actively sought to gauge industry response, and Winton (2006) reports that from as early as 1991, as consumer awareness of the program was becoming entrenched, manufacturers were instructing engineers to make sure they achieved a 5-star rating on new products.

One issue that this raises is the extent to which such simplification as a five star rating can distort decision making. There is always an incentive for goods producers to achieve the highest rating at the lowest cost possible. Some may find themselves just short of a particular benchmark and increase their performance to that level at reasonable cost. Others might have been prepared to achieve a more ambitious target, but it is unlikely that regulators will ever have enough information to optimally set the targets. There is certainly evidence of producers targeting specific ratings just as they target specific 'price points' in the retail market (See Figure 1).

Figure 1: distribution of appliances for sale in the EU- by energy efficiency index



Source: Waide, 2012, p. 378.

If we assume that producers prefer a higher rather than a lower one, there remains the question as to how to set the various points to 'stretch' the producers. It is unlikely that regulators know enough about the relative costs of various production possibilities to do this, however presuming that technology continues to improve, one conclusion that arises is that the index should always leave room for improvement at the top. If the system starts with five stars, those stars may need to be recalibrated, or stars may need to be added over time.

Box 1: US 'Roll-over Ratings' for Sports Utility Vehicles (SUVs)

At around the time of the new millennium, public concern was growing at the number of fatalities involving SUVs. Studies showed that SUVs were far more likely to rollover than cars and sedans, and that roll-overs were far more likely to be fatal than other types of road accidents.

Between 1991 and 2001, light truck (including SUVs) roll-over fatalities had increased 43 per cent (Fung et al 2009, p. 194). Caught between growing public concern and entrenched auto-industry opposition to minimum roll-over safety standards, the government finessed the politics of the situation by introducing compulsory roll-over ratings.

Based on government data of roll-over propensity given a side-on or head-on accident, the roll-over ratings used a simple five-star system. A five-star vehicle had a less than 10 per cent chance of rolling over, while a one-star vehicle had a 40 per cent or more chance of rolling over. Evidence suggests that this measure succeeded in sparking a race to the top, as SUV manufacturers sought to improve their own safety standards, and began using favourable ratings in their own marketing. The system is also credited with accelerating the introduction of stabilisation technology, eventually paving the way for the introduction of minimum safety standards.⁴¹

The failed *FuelWatch* and *GroceryChoice* schemes in Australia highlight the challenges associated with getting even relatively simple targeted transparency policy right. These policies, similar in design and intention, fitted the atmospherics of an Opposition campaign, which highlighted costs of living. They were ideally suited to the appearance of 'doing something' and had they been implemented in a reasonably cost effective way may have made some contribution to transparency for shoppers and in so doing imposed some disciplines on retail margins in supermarkets where there is limited competition. But they were never going to make a major impact on the cost of living. Their central political purpose was rather to allow the government to claim that it had a plan to squeeze supermarket margins. Both programs failed to overcome industry opposition and to build a politically sustainable base. This opposition went on to undermine the usefulness of the information gathered, and ultimately scuttle the programs altogether (see Box 2).

⁴¹ For a full discussion see: Fung et al 2007.

Box 2: *FuelWatch* and *GroceryChoice*

One of the centrepieces of the ALP government's election campaign was bringing the cost of living down, particularly the cost of fuel and food. This was to be done, not through price regulation, but by increasing competition in the industry and empowering consumers with information. The new ALP government moved to introduce the *FuelWatch* and *GroceryChoice* websites. The websites were to provide consumers with up to date information on fuel and grocery prices. This would enable consumers to find the lowest cost items and in turn increase pressure on petrol stations and supermarkets – two sectors with only a few major competitors – to reduce margins.

In the end both schemes were scrapped. The *GroceryChoice* program was sunk less than a week before the site was due to be launched. Both schemes suffered from three fatal flaws. First of all, there were fundamental problems with program design. In particular, they worked against other competitive forces in the industry. *FuelWatch* forced petrol stations to lock in prices for a 24-hour period. Small and independent retailers argued that changing prices through the day was one of the main ways they were able to compete with the bigger players. Small supermarkets argued that they faced a relatively greater cost of compliance with the *GroceryChoice* scheme, though they may also have had higher prices and been disadvantaged by the initiative's regulatory intent.

Second, they were unable to provide consumers with up-to-date, useable information. In the case of *GroceryChoice*, supermarket prices varied from chain to chain, but also from store to store, depending on suburb level competition. Prices even varied through the day. Retailers claimed that they were only able to supply average prices of goods across regional stores, twice a week. Such untimely information would be of little use to consumers.

Third, both schemes encountered considerable industry resistance. While Aldi and Foodworks supported *GroceryWatch*, Coles and Woolworths actively opposed the measure. Consumer advocate group *Choice*, the body charged with administering the website, argued that check-outs are automatically updated, and there should therefore be little cost to supplying the required information. Coles argued that even providing the twice weekly averages would cost \$8 million a year. This further frustrated attempts to provide consumers with something useful, and ultimately killed the schemes.

Even in the few years that have passed since the sites were scrapped, we know more about how to make such complex ventures work. Had we persevered we may well have been able to bring much of the lightweight architecture of Web 2.0 – including crowdsourcing to the task of providing much of the necessary information.

12 Complex targeted transparency

Many information and policy needs are far from simple. This is particularly true in areas of social service provision such as education and health. Governments have made important attempts to improve information flows in these areas. And to an extent they've done so with similar motives to the motives of simpler targeted transparency regimes – that is they seek to empower consumers to understand what service offerings are the best for them to enhance consumer welfare and to do what they can to support a 'race to the top' from providers seeking to attract customers.

The current federal government has established two sites – *MySchool* and *MyHospital*– to provide information on schools and hospitals. Owing to its newness and to resource and space constraints we do not explore the latter site, but we do explore aspects of the *MySchool* experience below, even though it is also a very recent development.

12.1 MySchool

MySchool was launched just over two years ago in January 2010. Its purpose is to enable people to look at performance and other data for schools, such as standardised test scores, gender mix, and generalised information about the socio-economic backgrounds of children at the school.⁴² In March 2011 a revised website was launched which addressed some concerns about the first version and included more accurate data, more information about schools, such as completion rates, finances, and vocational training (Bonnor, 2011a). The *MySchool* website facilitates comparisons – most notably NAPLAN scores – between what it calls statistically similar schools.⁴³

Masters et al (2008) were instrumental in preparing the *MySchool* website. They reviewed the existing literature and the US No Child Left Behind (NCLB) program and determined that the My School website would be most effective if:

- There was not undue focus on the measured and reported aspects;
- Data were not simplified into ‘league tables’;
- ‘Adjusted’ measures should not be used, but rather comparisons should be facilitated between statistically similar schools;
- Year on year improvements in student scores is used as a metric of school performance rather than absolute levels of student scores.

It makes it easy to compare schools, but the usefulness of this is debatable given that the choice made by parents about which school to send their children to will typically be geographical. Comparison between local schools is possible but is probably misusing the data as the schools in a local area will often not have comparable student intakes and thus not be statistically similar. The *MySchool* website along with the standardised testing of NAPLAN, which is the primary variable compared between schools, resembles the methodology of the longer running NCLB program in the US which has increased accountability and transparency in the US through a program of standardised tests, publication of results and intervention at underperforming schools.

There seems to be some evidence that NCLB does increase school performance, although improvements were found in math scores similar improvements were not found in reading scores and there may be transfer of effort from unmeasured parts of the curriculum (Dee&

⁴² According to the Australian Curriculum, Assessment and Reporting Authority, “greater transparency and accountability for the performance of schools was essential to ensure that every Australian child receives the highest-quality education and opportunities to participate in employment and in society.” (MySchool FAQs www.acara.edu.au/verve/resources/FAQs.pdf)

⁴³ The OECD report ‘Delivering School Transparency in Australia’ was very positive about MySchool building upon international experience, scientific evidence, and wide consultation to provide the public with comparative information on school performance.

Jacob 2011). Nevertheless NCLB has been criticised for encouraging 'teaching to the test', ignoring vital education areas such as science and history, and for penalising disadvantaged schools and students. While these complaints have also been raised about *MySchool*, Masters et al proposed using year on year improvements to compare schools.

All this points to the complexity of the issues involved and the degree to which they involve highly contentious judgements, not just between specific interest groups like teachers, administrators, principals, parents and students, but also between philosophies of education and ultimately between values. All these considerations suggest that the resulting transparency regime will be complex and that its introduction will be highly politically contentious. The political process through which it gets introduced is accordingly likely to involve some compromises.

Thus Masters et al recommended that the *MySchool* site should only facilitate comparisons between statistically similar schools. This was to address concerns that the site would encourage 'league tables' that would conflate absolute performance of schools with their 'value added' given the socio-economic and parental background of students. As a result the site goes to considerable lengths to present the data in a manner that it regards as appropriate. Yet this is open to at least two objections. Firstly it is not appropriate for the designers of the site to specify the ways in which its data should and should not be used. There are myriad worthwhile uses of data and indeed many may not have been thought of when particular data is collected and released. It is for this reason that the Government 2.0 Taskforce (2009) recommended, and the federal government accepted, the principle that where the government releases data to the public it should generally release it in machine-readable form and licenced to permit anyone to add value to the data in any manner they think fit. Of course this may lead to misleading claims being made about the data but a free society typically puts more faith in something worthwhile emerging from open debate than it does in insisting on one authorised way of using data. In fact the *MySchool* website has a very restrictive copyright licence.⁴⁴ Not only does this stifle legitimate uses of the data but it also makes it more difficult for alternatives sites to use the data in ways that may make it easier or more useful for people to use.

Moreover, in fact the *MySchool* website can easily be used to make invalid comparisons between schools that are not statistically similar. It is actually easier to compare NAPLAN levels than year on year improvements. Further, the 'similar schools' component of the website that compares school results uses the absolute NAPLAN levels which is what Masters et al warned against. *MySchool* might be used to identify successful teaching and management techniques but this is not its objective and has not been designed to make this easy. However, specific NAPLAN data may be more useful for research purposes. In the US, New York City, Texas, Florida, and North Carolina have made anonymous student-level data available to researchers to help identify successful teaching approaches.

Certainly the *MySchool* experience so far suggests that Fung et al are right in stressing the difficulties of conveying complex information. However to a considerable extent, the provision of information about education is necessarily complex. The issues are subtler and

⁴⁴<http://www.myschool.edu.au/Copyright.aspx>

more methodologically contestable and they are far more diverse than for instance reducing the energy intensity of whitegoods or improving the stability of SUVs. Governments have not mastered the art of presenting complex data to the community whereas the entrepreneurs of Web 2.0 have built numerous platforms that both engage people and provide very valuable and complex information. For this reason it seems likely that the problems of complex transparency will be best solved in the context of a more open model – in line with the recommendations of the Government 2.0 Taskforce. This would enable those with an interest to present the data in ways they felt were appropriate and to do so in a way that they thought would be most useful for users. Moreover governments could assist by:

- Participating in the field of ‘retailing’ the data on their own websites;
- Opening up their own data as a free ‘wholesaler’ to let others use, manipulate and present the data in other ways; and
- Funding research, competitions, prizes and other activities to open up the problem to those who can find the best ways of presenting the data and engaging the public in it.

13 Behavioural Economics and pro-social behaviour

In the discussion thus far, where existing information has been better disseminated, or where improvements in the architecture of systems have led to more useable and relevant information emerging, the benefit of the improvements has been that people can use the information to protect or advance their own interests. Those interests may be pecuniary – as in the case of finding a better financial advisor or a cheaper supermarket – or broader interests, as might be advanced by a worker choosing to work in a safer workplace.

Even here elements of public good remain to be considered. Given that reputational information becomes progressively more useful the more observations one is able to aggregate, there is always a social dimension to information. Nevertheless in the remainder of this report we explore situations where the policy objective is to encourage pro-social behaviour, where people behave not primarily or even at all to advantage themselves, but rather to ‘do the right thing’. This is a subject about which economists had little to say until the advent of behavioural economics, and it is to this that we now turn before examining examples of policies to promote pro-social behaviour.

13.1 Behavioural economics

Behavioural economics cannot properly be understood without an appreciation of the field as a reaction to the extreme assumptions of rationality as they have been made within the orthodoxy of neoclassical economics. Here actors in the economy – whether they be firms, consumers or sometimes even politicians within a ‘public choice’ framework – are modelled as being perfectly, indeed omnisciently, rational. That means that they are in possession of all the information about the past and indeed the future and can calculate what is in their own best interests. Most economists using such models are not foolish enough to think that this is how the world actually is. A model is just that – a model, or simplification of reality – and assumptions about perfect knowledge and rationality are part of the apparatus whereby economists take to its logical conclusion Adam Smith’s idea that the order that emerges

from agents pursuing their own self interest can often suit the social interest as well as any other kind of order.

This has its uses but has unfortunately led to many phenomena becoming invisible in economists' models. The shortcomings of this situation have been noted by scholars for many decades. Herbert Simon received the 1978 Nobel Memorial Prize in Economics for his work as early as the 1950s and '60s on decision making in the presence of limited knowledge and/or cognitive capacity. But the juggernaut of economic orthodoxy rolled on through the 1960s and beyond. Behavioural economics emerged in earnest in the 1990s and received recognition with the award of the 2002 Nobel Memorial Prize in Economics to one of the founding figures in the sub-field, Daniel Kahneman.⁴⁵ It has since burgeoned as a catalogue of the economic implications of human cognitive heuristics with their attendant biases and shortcomings from the perspective of the neoclassical standard of perfect rationality.

The significance of behavioural economics extends far beyond the terms of information policy (see Appendix Two). However, the request for tender seeks an elucidation from behavioural economics of difficulties that can accompany pricing mechanisms. In this regard the canonical article details an experiment done in an Israeli kindergarten (Gneezy and Rustichini 2000). Here, fines were imposed on parents who came late to pick up their children. Perversely this *increased* parental tardiness. In effect the imposition of the fine changed the 'framing' of the situation, the 'ethical world' from which the parents viewed it. The initial frame was one of mutual social obligation in which, as decent people, the childcare workers looked after the children for the designated period and part of the parents' side of the (implicit social) bargain was not to keep the workers waiting. Once the fine was imposed the 'frame' or 'ethical world' informing parents understanding of appropriate behaviour became that of the market where people are expected to suit themselves. Indeed sellers are typically *pleased* to sell more rather than less of their product.

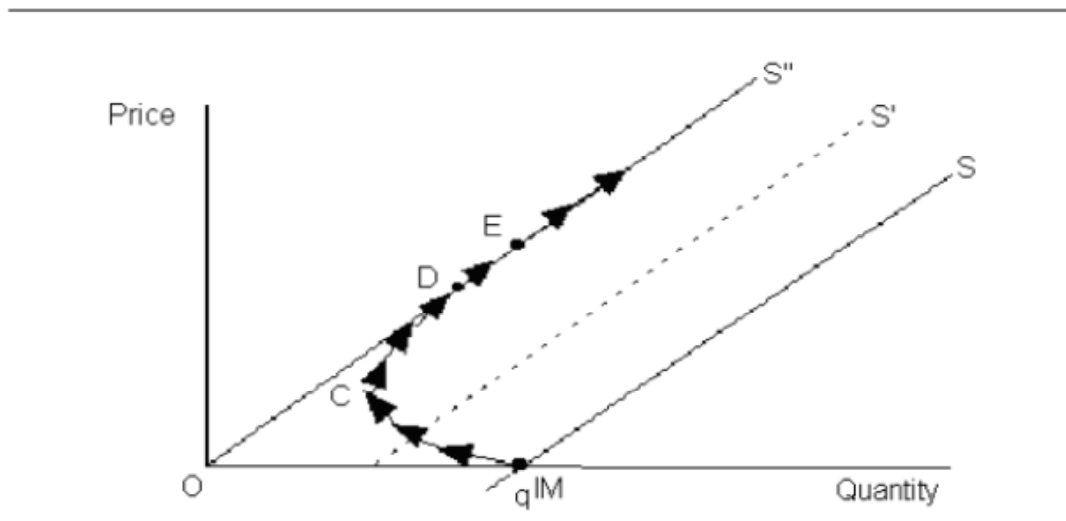
This transition from the initial world of social obligation to one of mercenary reciprocity can be captured in Figure 2 below. It illustrates the transition from voluntary to paid activity. Many activities are engaged in for their own sake and provide those that engage in them with intrinsic motivation. If one pays volunteers for the work they do, a well-recognised phenomenon is the way extrinsic motivation can 'crowd out' the intrinsic motivation of the volunteer. As Levitt and Dubner put it colourfully with regard to commercialising blood donation, remuneration turns "a noble act of charity into a painful way to make a few dollars" (2005, p. 24).

In the example illustrated below, the introduction of a small payment leads the supply of labour to fall, which is represented by a leftward shift of the labour supply curve from S to S'. As remuneration rises, intrinsic motivation continues to be crowded out and, in the diagram, the supply curve continues to shift to S'', which illustrates a supply curve in which intrinsic motivation is extinguished (note the supply at a zero price in this supply curve is zero). After

⁴⁵ It is widely considered that, if his long-time collaborator Amos Tversky had still been alive, he would have shared the award.

remuneration is increased sufficiently it becomes possible to finally exceed the supply that was provided voluntarily. Here, however, it may be that it is more difficult to maintain intrinsic motivation (which is often crowded out by extrinsic motivation), and this may be relevant to the quality of work done, or to a range of ancillary issues. High intrinsic motivation tends to generate higher preparedness to improvise and innovate in sensible ways, to cooperate with others and to 'do the right thing' (Pink 2009).

Figure 2: Labour supply curves and the intrinsic motivation of volunteers



Source: Frey 2008

As Bowles (2008, p. 1606) observes: Behavioural experiments that model the voluntary provision of public goods and relationships between principals and agents show that substantial fractions of most populations adhere to moral rules, willingly give to others, and punish those who offend standards of appropriate behavior, even at a cost to themselves and with no expectation of material reward.

This reservoir of goodwill is a critical resource in our society and our economy. The economic incentives of markets have also been crucial to the prosperity modern societies enjoy. But the two are in some tension with each other. For the extrinsic motivation of market incentives can 'crowd out' people's intrinsic motivation to do the right thing for the sake of it. At the same time as Adam Smith argued in his first book *The Theory of Moral Sentiments*, the efficient functioning of a market society actually depends in myriad ways on people doing the right thing – even where there may be no economic incentive to do so. And yet it is also possible to rely too heavily on people's desire to do the right thing. For usually there will be some who do not do the right thing. And if they become numerous or conspicuous enough there is strong evidence that this can undermine people's support of the common ethos, at least in their own behaviour.

Box 3: Bruno Frey on intrinsic and extrinsic motivation: Minimising crowding out and maximising crowding in

The following conditions determine which rewards negatively or positively affect intrinsic motivation:

- External intervention crowds out intrinsic motivation, if the individuals affected perceive the intervening individuals to be controlling. Self-determination, self-esteem and the possibility for expression suffer, and the individuals react by reducing their intrinsic motivation in the activity controlled.
- External intervention crowds in intrinsic motivation if the individuals concerned perceive it as supportive (or informative in a positive way). Self-esteem is fostered, and individuals feel that their self-determination is encouraged which, in turn, raises intrinsic motivation.

Both conditions are formulated in terms of subjective perceptions. Psychologists, however, have gone further, and have identified conditions applying more generally. Thus, the undermining effect is found to be the stronger:

- the more the rewards are expected (unexpected rewards do not crowd out intrinsic motivation, or do so only weakly)
- the more salient the reward
- the more contingent the reward is on the task or on performance
- the more deadlines and threats are used
- the more intensive the surveillance
- the more routine the rewarded work.

Source: Bruno Frey, 2008, p. 41.

The experimental evidence shows that people seem naturally well disposed to building public goods – including by making contributions of their own effort and/or resources – in many settings. In a typical public goods game a number of subjects begin with an amount of money that they can either keep or invest themselves or contribute it to a common pool that generates higher levels of returns but pays them out equally to all subjects regardless of their own contribution. This places every subject in a situation not dissimilar to the situation we are in when deciding whether or not to cheat on our taxes. If others cooperate we'll all be better off, but the alternative choice is to free ride on others' cooperation and to keep one's own money to oneself. Of course this works in the short run, but as others discover the cheating, they may not be so well disposed to cooperate themselves.

The idea that people act like '*homo economicus*' – and so act exclusively self-regardingly is embedded in much economic modelling is, as Gintis observes, wrong. On the other hand people are far from perfectly other regarding. Marwell and Ames (1979, 1980) found that the subjects often contributed about half of their initial money into the common pool. However, if subjects are involved in a series of public goods games then the mean contribution tends to decline over time (Isaac et al. 1984). In other experiments contributions to the common pool have seemed to increase with: non-binding communication, very large group sizes (Isaac et al. 1994) and the ability of subjects to punish each other (Fehr and Gächter 2002). Interestingly, the disclosures of identity of either the

largest contributors or smallest contributors both also seem to increase the contributions to the common pool (Jacquetet al. 2011).

However, in situations without these mitigating factors, the decline in contributions to the common pool from averaging about half to only about 10 or 20 per cent occurs over about 10 repetitions regardless of whether the group is kept the same or is completely new (Andreoni 1988, Croson 1996). So while there is definitely an appetite for pro-social behaviour, it can be fragile in various circumstances. In the experiments documented above it quickly breaks down where people feel that others are not reciprocating their own contributions.

In this regard appealing to pro-social behaviour is no panacea. Particularly in a world of concern about the extent of spin from politicians and perhaps others in authority, often messages to 'do the right thing' are undercut by cynicism. Often it turns out that people's views about collective decisions preserve for themselves particular privileges. Thus the number of people in favour of action on climate change drops precipitately when people think it may involve pain, not just for others but for themselves.⁴⁶

Indeed, the issues are well illustrated in the case of action on pollution. Stigmatising polluters will generally be a less efficient means of reducing pollution than regulating including, if it is practical, introducing economic instruments. In this case not only does the price radiate information about the opportunity costs of alternative actions for all involved in the market – creating incentives to reduce emissions, or consumption or production as the case may be, but also incentives to conduct research and development to develop new technologies. And in each case, because of the 'miraculous' properties of the price system outlined by Hayek (1945) at the outset of Part One of this report, every actor can identify the *most* cost-efficient steps they can take. Further if such a world is politically stable, then it is likely to be 'morally stable', which is to say that those who do not contribute to emissions reductions end up making payments to those who do.

This prevents the collapse of the social effort to build the public good of a cleaner environment for all. Though he acknowledges the ways in which external incentives can undermine moral sentiments, Bowles (2008, 1609) also insists on the importance of understanding that they can also "work synergistically as complements".

The rule of law and other institutional designs limit the more extreme forms of antisocial behavior and facilitate mutually beneficial interactions beyond the family. This may enhance the salience of social preferences by assuring people that those who conform to moral norms will not be exploited by their self-interested fellow citizens. This phenomenon may have been at work among the Hokkaido University subjects who cooperated more in a public goods experiment when assured that others who did not cooperate would be punished despite the fact that this had no effect on the subjects' own material incentives.

⁴⁶ The 2011 Garnaut Review Update considered a number of studies (for instance Leviston, Z., 2011) that found that, despite broad popular support for tackling climate change, far fewer people – only a third to a half of respondents – were willing to pay more for electricity, fuel, and taxes themselves, or to decrease their standard of living. (<http://www.garnautreview.org.au/update-2011/commissioned-work/australians-view-of-climate-change.htm>)

They apparently wanted to be cooperative but wished even more to avoid being the sucker who is exploited by defectors. Similar synergies occur in natural settings: social norms support observance of traffic regulations, but these may unravel in the absence of state-imposed sanctions on flagrant violations.

13.2 The principles of behavioural economics: as illustrated by the South East Queensland Water Commission's Millennium Drought Program

During the 'millennium drought' in Queensland, the Queensland Water Commission (QWC)⁴⁷ was successful in orchestrating the pro-social inclinations of Queenslanders to deliver a substantial change in Queensland householders' water use practices. Moreover to a large extent the changes wrought became the 'new normal' for householders whose water consumption was substantially reduced even after water restrictions were lifted. It developed a website to help households find ways to save water and reduce water consumption. The QWC also made the publication of dam levels and daily water usage figures a central part of its campaign. This 'feedback' of public data served to focus the community on the importance of water conservation and their own ability to take action.

Extrinsic motivations had been relied upon with increasingly strict water restrictions. However, water restrictions applied only to use of water outside the house. This in itself showed a sensible regard for maintaining the community's morale in the application of restrictions. Restrictions on water use are broadly subject to surveillance where they are outside the house as neighbours or officials can observe breaches with the regulatory regime and impose penalties. It is important that this prospect is held out because it shows those who are seeking to do the right thing that they are not being exploited by others.

For as we have seen, the evidence shows that if they thought they were being exploited by others, their efforts would flag, perhaps very substantially. However, extending restrictions to the inside of the house (for instance specifying that showers must not exceed some particular duration) would not be observable. If this were not subjected to immediate public ridicule, it would lead to stories circulating about households not adhering to the restrictions but not being penalised for so doing. This would likely undermine faith in the scheme.

In April 2007, in the grip of the worst drought on record with rainfall less than 10 per cent of its average level (Qld Govt 2007) South East Queensland's water supply was at 19.5 per cent capacity, and was projected to fall to below 6 per cent in the coming year. The Queensland government had recently invested in additional supply, but none of it was set to come on line until the end of 2008 (Watson and Hume 2011).

Existing water saving measures had proved effective, but by 2007, it was clear that they would not go far enough. Schemes to retrofit homes with more water-efficient devices, rebates for water-tanks, and increasing water restrictions had reduced residential water use from over 300 litres per person per day in 2005 to under 180 litres (Watson and Hume 2011). However, QWC calculations indicated that to maintain dam levels at above 10 per cent capacity which they judged necessary to secure supply until additional investment

⁴⁷ The Queensland Water Commission (QWC) was established in June 2006 and functions as an independent statutory authority. It is mandated to ensure safe, secure and sustainable water supplies for South East Queensland and is answerable to the Queensland State Government (QWC 2008).

came on stream in late 2008, residential water use needed to fall to 140 litres per person per day.

In May 2007, the QWC launched the 'Target 140' campaign, which focused on bringing residential water consumption under the critical 140-litre level. QWC chose to focus on a tangible accountable target that was easily understood by consumers (Watson and Hume 2011).

Market research by McCann Erickson identified three key beliefs that needed to be tackled (Watson and Hume 2011, p. 218). They were that:

1. The water shortage was not critical
2. Businesses were the major users of water
3. Individuals could not make a difference

An extensive media campaign therefore sought to bring home the seriousness of the current situation, inform people that households were in fact responsible for 70 per cent of overall water use and then sought to personalise the solution by providing households with strategies for reducing their own water usage. Television advertising was a primary means of communicating this message, but the campaign also engaged direct mail, print media, radio, online advertising and outdoor billboards (McCann Erickson 2009).

QWC's strategic priority was reducing the duration of showers. With research showing that showers accounted for around a third of household water consumption, the campaign sought to reduce shower duration from the then average of seven minutes to four minutes. Over a million households were issued with a free four-minute shower timer, along with an information booklet containing a number of water saving tips, backed up by the campaign's website www.target140.com which contained, amongst other things, a 'virtual house' that highlighted water saving tips room by room.

Providing the community with feedback was also an important feature of the campaign. The QWC sought to inform households about how they were performing against the 140-litre target, and to congratulate or encourage as required. The region's performance relative to the target was synthesised into an easily understood graphical form, while dam water levels, as a per cent of capacity, become a standard feature of television and radio weather reports. Water utility bills also started to include clear measures of water consumption, and consumers could easily compare water usage against previous quarters. The QWC continues to publish aggregate water-consumption data on a weekly basis.

The campaign has been hailed as a resounding success, an archetypal case of managing effective demand through "attitudinal marketing strategies" (Hume 2011). It has won a host of advertising and marketing awards (Watson and Hume 2011). Residential water use fell from 180 litres prior to the campaign, to 129 litres per person per day, representing a saving of approximately 39 billion litres in the 2007/08 financial year (QWC 2008). Importantly, dam levels were successfully preserved, with dam capacity bottoming out at 16.7 per cent. A crisis had been averted.

Even when they are successful in the short term, campaigns appealing to ‘doing the right thing’ can be subject to two effects, each in tension with the other – habit formation and message fatigue or fragmentation. One of the most robust phenomena in modern psychology, imported into behavioural economics, is salience bias. We tend to be most influenced by what is most salient, and this imposes major constraints on how many things we can pay attention to at any given time. Thus not only is there likely to be a limit on the effectiveness of pro-social programs because of their brittleness when people suspect that others are not pulling their weight, but there also may be a limit to the *number* of appeals that can be effective at any one time. On the other hand temporary focus on particular issues can change habits well beyond the campaign period, perhaps permanently.

Certainly the effect of the campaign has engendered a shift in consumer behaviour that has outlasted the campaign. Even though the residential target was lifted in stages, first to 170 litres, then to its current level of 200 litres, consumption has held around 'Target 140' levels. Four years on, and following several years of regional flooding, current consumption is still only around 150 litres per person per day (QWC 2012). This reflects the enduring impact of the 'Target 140' campaign, as well as the effectiveness of other structural demand management policies implemented by the QWC since its inception.

The total campaign budget was reportedly \$3.6 million (McCann Erickson 2009). As a benchmark, McCann Erickson estimate that the 20,680 million litres of water saved during the eight months of 'Target 140' campaign, at market rates, was worth \$19.2 million. This represents an impressive return on investment. However, this probably underestimates the value of the 'Target 140' campaign. As noted, the campaign has had an enduring effect on water consumption and the amount of water ultimately saved as a result of the campaign is probably much greater. Furthermore, if dam levels had fallen to critical levels, the emergency response required would have surely involved severe economic and social consequences.

Notable aspects of the campaign were its sophisticated understanding of behavioural theory (explained in Watson and Hume 2011) and its extensive pre-campaign research. In particular the designers of the campaign appear to have understood:

- ***the difficulty and sensitivity of the task***

What happens within the home is private both in the sense that it cannot be observed to determine compliance with policies, and in the sense that people regard it as their own business. In this circumstance it would be easy to undermine intrinsic motivation with market incentives or with penalties, which may have focused householders on the injustice of the intrusion and/or on others' non-compliance with water saving.

- ***the scope to use complementary measures***

Thus the campaign ‘helped’ with assistance with water saving appliances while it ‘hassled’ with shower timers and constant reminders of the need to save water.

- ***the potential counter-productiveness of heavy handed extrinsic motivation***

The instinct of some public policy specialists would be to price water. Yet the kind of repricing necessary to produce the necessary response would have been huge and would have been resented as the burden of reductions would have fallen on the poor.⁴⁸

- ***the importance of focus, accountability and feedback***

The campaign broke through to people that this was not just another government behaviour change, feel-good or PR program. It convinced people of the truth that without change the community faced serious consequences. It also provided people with a great deal of reinforcement with media reports on the state of water capacity and the progress of the campaign.

13.3 Transparency for political action

As has been seen with the Global Reporting Initiative (GRI), one important motivation for transparency initiatives is that of informing the community. Pollutant Release and Transfer Registers (PRTs) are publicly available databases of the amounts of polluting chemicals released into the environment (See Box 4). Naturally such registers can be of interest to specific people in specific locations, but they are also a means by which political activists can seek to hold emitters of pollutants to account.

Box 4: The NPI and Pollutant Release and Transfer Registers

Pollutant Release and Transfer Registers (PRTs) are publicly available databases of the amounts of polluting chemicals released into the environment. Examples of PRTs required by regulation include the National Pollutant Inventory (NPI) in Australia; the Toxic Release Inventory (TRI) in the United States; the Pollutant Emission Register in the Netherlands; and the National Pollutant Release Inventory in Canada.

The most influential of these has been the TRI, which launched in 1987. The TRI was developed in response to community concerns about chemical accidents and a community right-to-know about the emissions of toxic chemicals. It requires a range of US facilities to estimate their emissions of a wide range of toxic chemicals and these estimates are then made publicly available.

The TRI collects data in standardised units, which makes emission comparisons possible across companies, across geographical areas or over time. However, the TRI has been criticised for failing to take account of important factors such as the method of chemical disposal, the risk to populations or measures of relative toxicity (Karkkainen 2001).

The Australian NPI is very similar to the TRI but builds upon some of the identified weaknesses by: using a more targeted list of chemicals, including estimates for non-point sources such as transport, agriculture and domestic sources, and estimating emissions from facilities too small to make individual reports.

Noting the reduction in emissions of pollution since their inception, some have suggested that registers have played a role in this (Fung and O'Rourke 2000). However, it is difficult to

⁴⁸ In fact, just as is happening with the introduction of carbon pricing, it would have been possible to recirculate any surcharge paid by households back to all households. But this could not have been done perfectly and would almost certainly have been resented by many. Further it would have recast the whole exercise in a 'market framework' which would have been inviting people to suit themselves. Again this would have weighed against the goodwill that was essential to getting a broad-based response to the campaign.

determine if this is the direct result of the TRI or due to other factors. After all, both the emergence of the TRI and the pressure on firms to reduce emissions are borne of the same emerging community environmental sensibility which it might be argued lay behind both phenomena. Some authors suggest that the TRI may be ineffective at creating public pressure due to the limited ability of lay people to process complex information on hazardous emissions (Bui and Mayer 2003). The principal use of PRTRs remains in helping policy makers manage the aggregated risks of chemical pollution, and helping community groups hold those responsible for pollution in their areas to account.

As with the GRI, it was hoped by many that the financial sector would use the information in such inventories and apply pressure to emitters, either under pressure themselves from activist groups to do so or because the information disclosed reputational risk for the firms involved. But, with the exception of the socially responsible investment community, which represents a very small percentage of all investment funds (Brown 2009, p. 575), the hopes for such inventories in this regard have proven elusive. A further problem is that even social activists use the information provided in the registers only sporadically. Brown et al report (2009, pp. 575-6) as follows regarding the GRI:

The low use of GRI reports by civil society organizations and other NGOs, consumer organizations, organized labor, and the media has been a long standing concern to GRI Secretariat. . . [E]xtensive study by Palenberg et al, . . . concludes that the use of non-financial reports, including GRI, is insignificant. . . [T]he main problem seems structural, namely that the information in GRI reports is not very useful for their issue-specific activist tactics.

A common complaint is that the information “is not detailed enough”, “does not give an adequate picture of the impacts on local communities and social conditions”, is not “situation-specific”, is “too processes oriented, rather than performance”, or is “disconnected from the realities on the ground”. On the other hand, for the media the information is excessive and unfocused. Noted a journalist: “[they] write these nice reports. What do we do with them? Nothing, just put them on the pile”.

14 Conclusion

Fung et al provide a useful summary of principles for policy makers embarking on what they call targeted transparency which is to say the establishment of specific policy regimes for conveying information to consumers to promote some specific policy objective. Firstly, measures should be user centred, focusing on the needs and interests of users embedding new information into the decision-making routines of users and in turn providing incentives for producers to provide products which better meet users needs and in so doing promote specific policy objectives.

Secondly targeted transparency measures must be sustainable. Powerful, well-organised users help establish transparency regimes just as powerful, well-organised disclosers have the best chance of resisting them. To be sustainable, the regime should gain in use, accuracy, and scope over time. Such improvement is important because policies inevitably start as

compromises, because markets and public priorities change, and because policymakers constantly need to fill loopholes discovered by reluctant information disclosers.

Finally behavioural economics shows us that where policy goals are sought, human motivation is complex and information can help promote citizens' pro-social inclinations. Provided it does not appear to be exploitative, and in so doing play those who are prepared to do the right thing for 'suckers', it can be an important tool to improve economic and social outcomes.

Appendix: Behavioural Economics

Much economic theory is built upon a very simplistic conception of individual motivations coupled with a heroic conception of that individual's cognitive capacities. It generally assumes that individuals are completely self-interested, have an understanding of what maximises their utility (makes them happy), and are able to process all relevant information necessary to pursuing their own happiness. *Homo economicus* is not intended as a realistic theory of human nature. Rather, it is one of the many abstractions required to build tractable models from the infinite complexities of the world.

However, such a conception of individual capacities and motivations does leave traditional economics at a loss to explain much observed human behaviour. The emerging field of behavioural economics is an attempt to fill this gap. Some of the key contributions behavioural economics has made to our understanding of the individual are outlined below.

Framing

Tversky and Kahneman (1981) found that the presentation of a problem could have a dramatic impact on people's perceptions of it, and so on the preferences they displayed in response to the problem. In one experiment, people were asked to choose between two policy options for preventing disease. In one group, the policy was presented in terms of saving lives, and people chose the policy with the less variable outcome. However, in the other group, the policy was presented in terms of preventing deaths, and people chose the policy with the more variable outcome. Therefore, even though each group was presented with essentially the same policy choice, the 'framing' of the choice had a significant impact on people's preferences.

Vividness

People put too much weight in things that are easy to recall and people tend to recall things that are unusual. Media coverage tends to exacerbate this as unusual events like plane crashes are newsworthy while everyday events like heart disease and not winning the lottery are less so. Sometimes behavioural economists refer to the "availability heuristic" where people put too much confidence in vivid, easily recalled information. An example is that US residents rate their chance of death by homicide as higher than their chance of death by stomach cancer. This is worthy of note for two reasons. Firstly most people ought to know enough to understand how little they know of the relevant statistics. Secondly they guessed wrong. Death by stomach cancer is five times more likely than death by homicide (Lichtenstein et al. 1978).

Anchoring

People have a tendency to be swayed by numbers even if the numbers are not relevant to the task at hand. Tversky and Kahneman (1974) asked people to guess the percentage of African nations that are members of the United Nations but only after the people had been 'primed' with a prior question. In the priming question Tversky and Kahneman spun a wheel numbered from 1–100 in front of the participants, they were then asked if the percentage of

African nations that are members of the United Nations was larger or smaller than the number spun. In the groups where the wheel spun to the number 10, people guessed a much lower proportion of members of the United Nations to be African (25%) than in the groups where the wheel spun 65 (45%).

Hyperbolic Discounting

While it makes sense to discount the future relative to the present in most circumstances the rate of discounting should remain constant. However, people often apply a very high discount rate over the immediate future and a slower discount rate between two future possibilities (Ainslie 1992). This produces the possibility of time inconsistent preferences (Strotz 1955–1956). In their study, people were offered a choice between \$100 in a month's time, or \$110 in two months. Most people chose \$110 in two months. However, after a month the subjects were approached again and asked if they would like to receive \$100 now, rather than wait the additional month for the \$110. Most people chose to take the \$100 then and there.

Risk and Loss Aversion

People are often risk averse, they prefer a less variable option over a more variable option even if they both have the same average value (Tversky and Kahneman 1981). This is tied to the principle of diminishing marginal returns. Because the first use of resources is addressed to our most urgent needs – for instance for food and shelter – gaining access to resources over and above the level necessary to provide these things becomes relatively less important, even though in a 'dollar value' sense they are identical.

However, risk aversion has also been shown to be asymmetric. Kahneman & Tversky (1979) showed that even given identical average values, people preferred a certain gain over a risky gain, but preferred a risky loss over a certain loss. The way the choice is conceived has a significant influence on the choice that is made.

People seem to assign more weight to losses than to gains. For example, Odean (1998) tracked stock market trades by brokerage firms and found that they were far more likely to sell stocks that were up and far less likely to sell stocks that were down, despite opposing tax incentives. Further, the average change in stock value 252 days after the sale was that the stocks that had gained and been sold had outperformed the market, while the stocks that had dropped in value and been held had underperformed the market

The Endowment Effect and the Sunk Cost Bias

Loss aversion is related to the 'endowment effect' and the 'sunk cost bias'. The endowment effect is the tendency for people to place more value on an object that they own relative to an identical object that they do not (Thaler 1980). For example, when people were offered a choice between chocolates or mugs they chose fairly evenly (58% chose mugs). However, when randomly assigned chocolates or mugs and given the opportunity to swap if they preferred the other gift, only 10% of those assigned chocolates chose mugs while 86% of those assigned mugs chose mugs (Kahneman, Knetsch & Thaler 1990).

The sunk cost effect, the sunk cost fallacy, or the Concorde fallacy is the tendency people have of not letting go of irrecoverable costs (Dawkins & Carlisle 1976, Staw 1981). For example, the British and French governments continued to 'throw good money after bad' in the development of the Concorde jets even after the economic case for the aircraft had fallen through. To not allow the past investment 'to have been a waste' is a common justification for further investment in a losing project. However, from a purely rational perspective, sunk costs are irrelevant, and additional investment, like any investment, should be decided on the merits of its expected returns.

Status Quo Bias

A finding similar to the endowment effect is the status quo bias, the arbitrary preference for a continuation of the current situation over change. For example, Samuelson & Zeckhauser (1988) asked people about a range of decisions but used a variety of questions to vary which options were the status quo, and which options involved changes. They consistently found that when an option was phrased as the status quo, this boosted its attractiveness to subjects and when an option was presented as a change, this reduced its attractiveness. The status quo bias may encourage initial resistance to reforms. However once the change is seen as normal then it gains greater acceptance. Thus for instance, rules mandating the wearing of automotive seatbelts and random breath testing were initially resisted but are now widely supported in the community.

Defaults

Similarly, people are strongly influenced by a default option. For example, in the US if people have to opt into their voluntary pension scheme few do, however, if the default is that some money is transferred into a pension scheme few opt out (Madrian & Shea 2001). Cass Sunstein and Richard Thaler present a range of suggestions for utilising this bias to produce pro-social outcomes in public policy (Sunstein & Thaler 2003).

Conformity

People will tend to follow what other people have done and be more confident of their own actions if others have followed them. For example, Asch (1955) asked people to do a trivial task of comparing line lengths, a task that people correctly performed 99% of the time. However, when the question came after a series of actors had deliberately and unanimously given an incorrect answer people became stressed, spoke in a low voice, smiled in an embarrassed way and often (as much as 37% of the time) gave the same answer as the actors despite the correct answer being clear. This is a powerful force for policy makers as it suggests that successful reforms will stick once people have started to change their behaviour. For example, Trotter et al. (2002) argues that restricting smoking in public areas has resulted in less smoking in private as people see fewer people demonstrating the behaviour.

Fairness

People value fairness (Kahneman, Knetsch & Thaler 1986, Fehr & Schmidt 1999). This is demonstrated by results from many experiments including those deploying “the dictator game” where one player, the Proposer, is given an amount of money and asked if they would like to give some of it to another player. The Receiver has no ability to manipulate the game but even in one-off plays, the Proposer often ignores self interest by giving non-zero amounts to the Receiver (Camerer & Thaler 1995, Hoffman, McCabe & Smith 1996). Fairness and a general desire to ‘do the right thing’ can be used by government to encourage pro-social behaviour. For example, people donate blood even when there is no direct benefit to them.

Heuristics

When people are confronted with a complex, confusing or poorly understood question they often rely upon a heuristic or rule of thumb to make a decision. These heuristics are often to go with the most popular, the default, or to choose based on only one aspect. The influential power of ‘star-ratings’ for example can be understood in this context.

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