HEADS, YOU DIE:

Bad decisions, choice architecture, and how to mitigate predictable irrationality

Jack Fuller



percapita

Heads, You Die:

Bad decisions, choice architecture, and how to mitigate predictable irrationality

Jack Fuller

Contents

Executive Summary 3

Section I: Making bad decisions 4

Section II: Predictable irrationality and the brain 7

Section III: Choice architecture and its rationale 8

Section IV: Policy tools and case studies 12

Section V: Conclusion and new questions 17

Acknowledgements

The author would like to thank David Hetherington, Katherine Gregory, Tony Kitchener, Tom Bentley, John Armstrong, Jane-Frances Kelly, Joshua Funder and the Per Capita Board for their valuable comments and feedback on this paper. Naturally all errors remain my own.

About the author

Jack Fuller is a Project Leader at Per Capita. He has previously worked as a neuroscience tutor at Trinity College, Melbourne, where he co-founded the Melbourne Cognitive Science Forum. He has a Bachelor of Science (Neuroscience) from the University of Melbourne.

About Per Capita

Per Capita is an independent think tank dedicated to building a new progressive vision for Australia. Our research is rigorous, evidence-based and long-term in its outlook, considering the national challenges of the next decade rather than the next election cycle. We seek to ask fresh questions and offer fresh answers, drawing on new thinking in science, economics and public policy. Our audience is the interested public, not just experts and practitioners.

Graphic Design by Design Clarity

Cover photograph by Jesus Conde / iStockphoto

© Per Capita Australia Limited, 2009

Executive Summary

Modern societies are organised around the assumption that people are perfectly rational. This understanding of human nature assumes that we are hardwired to be perfect rational calculators. It is an assumption out of touch with the latest evidence from brain research. It is also out of touch with common sense. The assumption leads policymakers to ignore the role of predictable irrationality in a wide range of problems across health, macro- and micro-finance, business, education, and sustainability.

The context in which we make decisions is as important as the actual choices offered. This paper argues that policymakers should design choice contexts for social outcomes – an approach called 'choice architecture'. It is based on an understanding of how humans really make decisions. While sometimes calculating and rational, people are also irrational in predictable ways. We are influenced by framing and social contexts. We are motivated by factors other than price: social norms, habits, morality, formal and informal authority, non-monetary incentives, community expectations, and the way choices are presented.

Two themes run throughout this paper. Firstly, that choice architecture offers a range of tools to solve problems and save resources, without resorting to either mandates or laissez-faire approaches. Secondly, that there is a progressive rationale for designing choice contexts, to improve patterns of choice in relation to social outcomes and individual lives. Choice architecture employs five tools to design the contexts in which people make choices:

1. Setting the default option in a set of choices
2. Offering 'self-contracting' to support commitment
3. Presenting and organising information
4. Designing physical spaces to guide behaviour
5. Supporting the development of social norms

The applications of choice architecture are immediate. Rebuilding a resilient economy will require behaviourally-informed regulation, and improving health and sustainability outcomes will require policies informed by realistic human decision-making. Its applications are also long term. Policies based on a real account of human decision-making will enable communities, organisations, and government to improve social outcomes. By focusing on how physical and social environments shape choice patterns, and how choices are framed, we can put markets to the service of a better society.

This paper is the first in a series of Per Capita reports on choice architecture. Subsequent publications will examine the rationale and approach to "promoting good choices", and further develop the policy tools of choice architecture for applications in the Australian context.

Section I: Making bad decisions

Markets are not perfectible, nor are people. But modern societies are organised around the assumption that they are. People, of course, can think rationally – but we are not *perfectly rational.* Our institutions, however, are calibrated in the belief that we fully calculate the costs and benefits of every decision. For this approach to work, policymakers have had to ignore evidence that people make the same mistakes over and over again. They have assumed not only that everyone is perfectly rational, but also that we have perfect self-control, and perfect self-interest. This is a common view of human nature. It is not entirely wrong. But it is narrow, out of touch with the latest science, and – applied to policy – it is damaging.

Counter to this assumption, there is a commonsense idea that people are not perfectly rational. We regret choices, often immediately after we have made them. We are motivated by factors other than price: social norms, habits, morality, formal and informal authority, non-monetary incentives, community expectations, and the context in which choices are presented. Importantly, also, we are beginning to recognise that the immediate source of our choices – our brains – are organs of our body, not calculating machines. They are not perfectible. Irrationality and morality are part of human nature (Cacioppo & Nusbaum, 2003; Casebeer, 2003). Rationality is too, of course, but decisions often go wrong in predictable ways. Irrationalities pervade our everyday thinking, and shape our lifelong choices.

Markets are not perfectible, nor are people.
But modern societies are organised around the assumption that they are

Heads, you die: an illustration of irrational choice

Systematically poor decision-making is often overlooked by policymakers, though it is in fact a pervasive cause of multiple social and economic problems. Consider gambling: the pokies are fixed against us, built to make us lose. We all know this. But you wouldn't think so from the size of the casino carparks.

Another example: we have known for decades that the death rate from smoking is 50 per cent (Doll et al, 1994). Put another way: heads, you die. But we still smoke. Revealingly, even if we decide to stop, we might fail to stick to our decision in a different context. Economists now recognise that we can prefer one thing in a low-stimulus (i.e. reflective) context, but in a high-stimulus (i.e. tempting) context, we act differently. This inability to stick to our decisions was once called 'weakness of will'. Today economists refer to it as 'time-inconsistent preferencing'.

This paper will introduce choice architecture – its rationale and its tools. Section I will survey human irrationality and its role in social and economic problems. Section II will examine the brain basis of irrationality and what this means for politics. Section III will outline the rationale for choice architecture; Section IV surveys case studies. The final section concludes with new questions for Australian policy.

The 'cool' and the 'hot' you: conflicting preferences

The person who sets the alarm early before going to sleep (you), can be very different from the person (you) who has to wake up to it in the morning. Most of us have an idea of our multiple and competing sets of preferences. In a low-stimulus – 'cool' – context, you may decide to give up smoking, save more or lose weight. In a high stimulus – 'hot' – context you may reverse the decision.

Part of making good decisions involves ensuring that the preferences we decide on, then actually determine our behaviour. Our commitment can be undermined by contexts that are distracting, misleading, designed to exaggerate our cognitive biases, or to undermine our long-term preferences. To imagine this, think how we admire people who've decided to loose weight, who then actually stick to their decision.

In certain cases, there are even benefits to having fewer or less easy choices. Marriages shouldn't be easy to break. In competitive sport, it's not useful for a training schedule to be 'flexible'. When dieting, we actually don't want the option of junk food. More options are not always better. In some cases, it can be rational to restrict our choices over the long term. Expanding choice is important, but it is only half the picture. We want choices when choices are worth having.

The range of irrationality and its impact on outcomes

Predictable irrationality involves multiple biases that play a pervasive role in influencing poor outcomes. Contrary to some economic theories, people often find it difficult to decide. We use strategies to simplify complex choices (Slovic et al, 2002); we neglect probabilities (Baron, 2000). In 'hot' and 'cool' contexts we switch preference sets (Caillaud & Jullien, 2000), and 'irrational exuberance' can lead us to misjudge risk (Olsen, 2008). When evaluating the long-term we tend to excessively discount the future (Takahashi, 2005). We tend to think over-optimistically; to be loss averse; and to give things importance simply because they grab our attention (Matlin, 2004; Erev et al, 2008; Del Missier et al, 2007).

Poor decision-making affects outcomes across multiple issues. Excessive discounting of the future leads to unmanageable consumer debt (Stango & Zinman, 2006) and mortgage allocations that underestimate future earning capacity (Woodward, 2003). In medicine, initial diagnoses can bias future perceptions (Klein, 2005), and decision-making biases affect outcomes in environmental management (Gregory & Keeney, 2002) and in education (Sodian & Frith, 2008). In health, imperfect self-control contributes to binge drinking (Gibson et al, 2004), drug use (Pokhrel et al, 2007), gambling (Clark et al, 2009), and the undermining of commitments to healthier lifestyles (Kuijer et al, 2008).



A list of predictable irrationalities

Aversion to extremes: the tendency to avoid extremes, to prefer a choice simply because it is the middle-ground option.

Bandwagoning: the tendency to do (or believe) things simply because other people do.

Choice-supportive bias: the tendency to remember your own choices as better than they actually were.

Conservatism bias: the tendency to ignore the consequences and implications of new evidence.

Contrast effect: the tendency to perceive measurements of an object differently when comparing them with a recently observed contrasting object.

Distinction bias: the tendency to view two options as more dissimilar when viewing them together than when viewing them separately.

Endowment effect: the tendency to demand much more to give up an object than you would be willing to pay to acquire it.

Excessive temporal discounting: the tendency for people to have excessively stronger preferences for immediate gains relative to future gains.

Exposure effect: the tendency for people to like things simply because they are familiar with them.

Framing effects: the tendency to draw different conclusions based on how data are presented.

Irrational escalation: the tendency to make irrational decisions based upon rational decisions in the past, or to justify actions already taken.

Loss aversion: the tendency to fear losses more than to value gains of equal size.

Neglect of probability: the tendency to disregard probabilities for absolutes when making a decision under uncertainty.

'Not Invented Here': the tendency to ignore an idea or solution because its source is seen as unfamiliar.

Planning fallacy: the tendency to underestimate the time it takes to complete tasks.

Post-purchase rationalisation: the tendency to rationalise your purchases as 'good buys' merely based on the fact that you purchased them.

Pseudo-certainty effect: the tendency, when seeking positive outcomes, to make only risk-averse choices; but to make risk-seeking choices to avoid negative outcomes.

Selective perception: the tendency for expectations to shape perceptions.

Wishful thinking: the formation of beliefs according to what is pleasant to imagine rather than based on evidence or rationality.

Zero-risk bias: the preference for reducing a small risk to zero over a greater reduction in a larger risk.

Section II: Predictable irrationality and the brain

Examining the brain tells us something about irrationality. Our brains evolved to respond to natural rewards, like food and sex. In fact, food and sex have shaped choices for millennia. These systems then evolved into more elaborate circuits for pursuing complex (often social) rewards. Irrationalities come in many forms; our brains do more than just calculate utility. To take one example: the neural networks which enable us to assess morality are dependent on networks underpinning aesthetic judgment (Takahashi et al, 2008). Rationality, of course, also has a brain basis. Part of the cortex, the 'anterior cingulate', is involved in identifying errors and altering our behaviour to learn from mistakes (Figure 1).

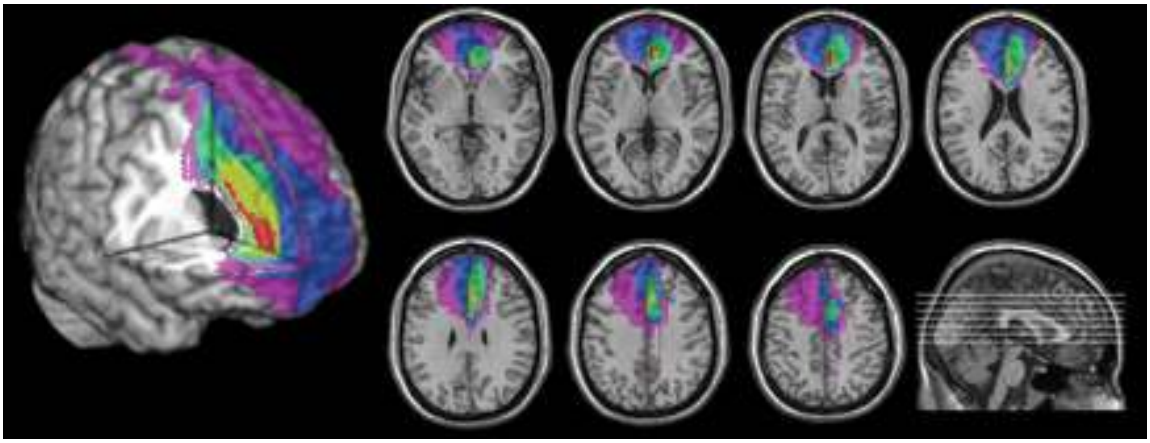


Figure 1: The anterior cingulate (in red) and surrounding cortex (other colours) is a focus for neural circuits involved in error processing. Source: Modirrousta & Fellows, 2008.

Rationality, though, is not an isolated function. Rational thought depends, for instance, on a well-developed emotional system (commonly known as maturity) (Damasio, 1994). Decision-making involves multiple brain areas, including rational and irrational processes. In gambling, for example, a near-miss stimulates win-related circuitry that increases the motivation to gamble again – but this effect is less pronounced in people with higher self-control (Clark et al, 2009). In certain contexts, then, one decision-making strategy can dominate; in others, our impulsive brain (largely the 'avian forebrain') takes over. One way to put this is that, despite being generally capable and smart, we are highly context dependent.

We are motivated by factors other than price: social norms, habits, non-monetary incentives, community expectations, the way choices are framed, and the context in which choices are made

What predictable irrationality means for politics

The interesting insight here is that, across human populations, there are predicable ways that people make bad decisions. Of course, people (including policymakers) can learn to understand these biases, and mitigate them. We can learn to unite our preferences across time (i.e. actually give up smoking if we decide to). People do, in fact, do learn to judge risk, to have self-control, and to make reflective decisions. Yet bias is resilient and tends to appear across populations. Indeed, resilient bias is what we should expect, given that the relevant neural networks are partly learned and partly innate. Certain irrationalities, at a population level, tend to be widespread.

This has a number of implications for politics. Firstly, that there is a clear public interest in policymakers focusing on widespread human irrationalities and how they influence outcomes in macro- and micro-finance, health, business, education, and sustainability. Secondly, that policymakers in communities, organisations, and government should explore how to design the contexts in which people make decisions, and principles to guide the use of these tools. This approach to designing choice contexts is called 'choice architecture'. The following sections will describe its key elements.

Widespread human irrationalities influence outcomes in macro- and micro-finance, health, business, education, and sustainability

Section III: Choice architecture and its rationale

"The idea that unfettered, unregulated capitalism would invariably produce good outcomes was a wrong economic theory regarding how capitalist societies behave and what causes their crises. That wrong economic theory fails to take account of how animal spirits affect economic behaviour."

- Robert J. Shiller, The Financial Times, 8th March, 2009

Our current approach to improving social welfare involves a central commitment to maximising choice. Policymakers have focused on liberalising choices in health, education, and finance, and have offered incentives and subsidies to those who choose private provision. This commitment to expanding choice is important: people's lives are improved when they have choices, and when they choose for themselves. However, merely increasing the number of choices should not be equated with higher social welfare.

People are driven by more than price signals, and our decisions involve more than calculated rationality: predictable irrationalities shape our economic choices and social behaviour. Maximising choice, therefore, is only half the picture; the context in which people choose is highly influential, and plays a key role in determining outcomes. Policymakers should design choice contexts for social and economic outcomes. Choice architecture offers five tools for designing choice contexts:

Table 1: The tools of choice architecture

Choice architecture tool	*Description*
Setting default options	Setting the default option in a set of choices and employing 'opt-in' and 'opt-out' designs
Offering self-contracts	Offering the option to voluntary limit future options via binding 'self-contracting' as a commitment device
Presenting information	Organising complex information and presenting useful (often hidden) information and metrics
Designing spaces	Designing physical spaces through architecture and urban design to support patterns of good choice
Influencing social norms	Establishing the conditions for the evolution of social norms which influence social outcomes

The progressive rationale for designing choice contexts

Designing the contexts in which people choose is often unavoidable, but when it is done in ignorance of the consequences it is often done badly. For instance, some companies have long exploited consumer bias around decision-making: contract design in the US credit card, gambling, life insurance, and mobile phone industries targets consumer misperception of future consumption (Malmendier & DellaVigna, 2004). In every market, choices are presented to us in some context, designed consciously or unconsciously by advertisers, web designers, doctors, regulators, and institutions engaged with the public.

Progressives recognise that prosperity and fairness are a virtuous cycle, not a tough trade-off. Successful markets maximise choice. But without a focus on the contexts in which people choose, free choice doesn't work for people. For example, though the choice between healthy and junk foods is available, market saturation by easily accessible, energy-dense foods has contributed to an 'obesogenic' environment. The risk factors for obesity remain particularly prevalent in socially disadvantaged groups. Progressives understand that, for free choice to produce good outcomes, policy must be developed based on how people really experience a market – the 'user's end'. From this perspective, factors such as product availability (and its interaction with urban design) become important influences over choice.

Commercial markets have long understood human irrationality and the importance of designing choice contexts. By assuming, wrongly, that people are perfect in rationality and willpower, public institutions leave the floor open to those choice architects who know otherwise, who often sell the short-term over the long-term, with little regard for better outcomes. The argument of this paper is that policymakers should design the contexts in which people make choices to improve social outcomes. This raises the important issue of what principles should guide the use of these tools.

Principles for employing choice architecture

Choice architecture should only be employed when:

1. **Freedom of choice can be exercised with negligible effort**
2. **The social or environmental costs or benefits from private decisions is high**
3. **The design is proven to mitigate irrationality or promote better choices**

Policymakers using choice architecture in communities, public organisations and government should focus on areas where systematically poor decision-making causes serious problems, when private risk has public consequences. The following additional principles should guide choice architects towards legitimate areas on which to focus:

- When patterns of poor decision-making generate public problems
- When choice is unusually complicated or intentionally structured to increase bias
- When individuals lack the moral resources (such as self-control) to achieve their goals
- When distracting or intrusive environments undermine rational deliberation
- When designing choice contexts can significantly reduce costs

As a starting point we propose encouraging people to be healthy, to be fiscally responsible, to use resources sustainably, and, when addressing issues in other areas, to identify choices that are win-win for both individual and society.

Policymakers using choice architecture should focus on areas where systematically poor decision-making causes serious problems, when private risk has public consequences

Where is choice architecture being used?

1. Barack Obama's budget proposal for 2010 includes a plan to automatically enrol workers in personal savings schemes, with an opt-out option:

> "Research has shown that the key to saving is to make it automatic and simple. Under this proposal, employees will be automatically enrolled in workplace pension plans—and will be allowed to opt out if they choose... if their family or individual circumstances make it particularly difficult or unwise to save. Experts estimate that this program will dramatically increase the savings participation rate for low and middle-income workers to around 80 percent." ("A New Era of Responsibility," Proposed Budget, p. 37).

2. David Cameron, the Leader of the Opposition in the UK, has proposed a cooling off period after people sign up for credit cards before the card becomes active:

> "We can "nudge" people to act more responsibly. Take store cards, for example. Right now, consumers are often enticed to sign up for a store card at the shop counter, only to end up lumbered with problem debts because they hadn't had a chance to think about what they were doing... we will introduce new rules that mean people are given a cooling off period of seven days between signing up for a card and being able to use it. This will give people the opportunity to stop and think." (The Guardian, 14 July 2008).

3. The Brotherhood of St Laurence and the ANZ Bank have developed a program that helps people on low incomes establish a long-term savings habit. As part of the program, participants receive financial education training, $1 in "matched savings" for every $1 saved, and guidance from a trusted community organisation:

> "Our view is that key design elements of Saver Plus (the initial dollar matching incentive, saving for a purpose that is both relevant and cared about, and skills and knowledge building) and the way that it is delivered to participants (through a trusted Saver Plus worker) address and tap into the behavioural biases of participants in a positive way so that for the majority, a lasting behaviour change results." (Gerard Brody, Brotherhood of St Laurence, interview with author).

Section IV: Policy tools and case studies

The following sections will survey case studies of the five tools of choice architecture: setting default options, offering self-contracts, presenting information, designing spaces, and supporting the development of social norms. Subsequent Per Capita reports will further elaborate these tools.

Tool 1: Setting default options

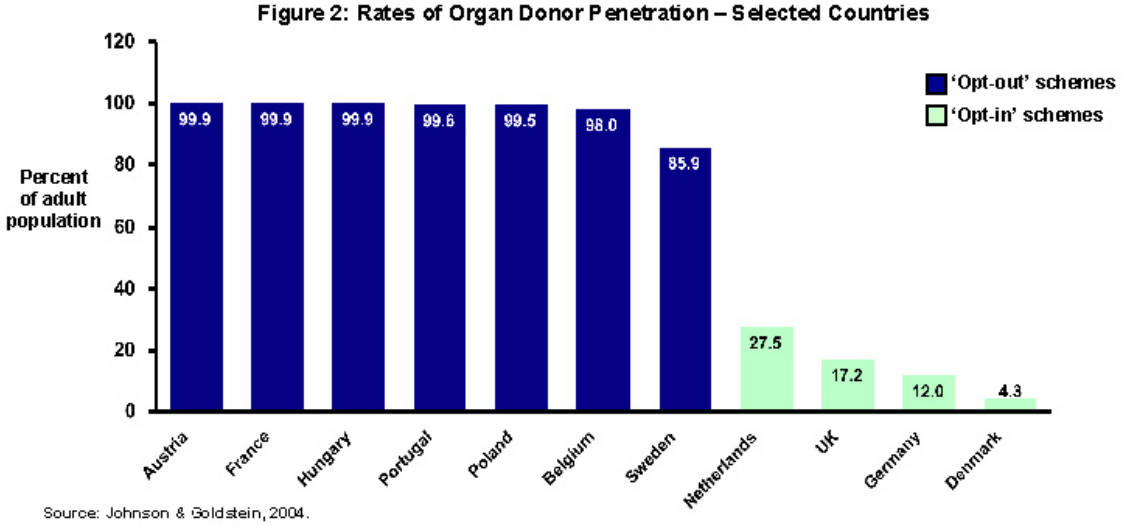
Setting default options in a set of choices can significantly influence patterns of choice, improving outcomes across a population while enabling people to easily make their own choice. Default schemes can be effective in finance, health, education and sustainability.

Default options could be applied in Australia across multiple issues. For instance, retirement plan risk allocations could be set based on age, leaving the option open to choose alternatives. Default options could be employed in policy trials for default savings accounts, home insulation and green building options, default green power and carbon offsets, organ donation, internet censorship, text message reminders for health, or an opt-in only policy for submitting individual tax receipts.

- Two-thirds of all Australian retirement plan assets are invested according to the default option (APRA, 2005). In the US, up to 80 per cent of assets are invested in the default fund; and in the UK approximately 80 per cent of group personal pension scheme members accept the default option (Basu & Drew, 2006).

- European countries that set opt-out organ donation have increased participation from 10-20 per cent to 99 per cent. Comparing Germany and Austria – two similar cultures – Germany's 'opt-in' policy is associated with 12 per cent participation, while Austria's 'opt-out' policy is associated with a 99.98 per cent rate (see Figure 2) (Johnson & Goldstein, 2004).

Figure 2: Rates of Organ Donor Penetration – Selected Countries



Source: Johnson & Goldstein, 2004.

Tool 2: Offering self-contracts

Self-contracts are a commitment device, offering people the opportunity to sign a contract with themselves to commit to a course of action. Self-contracts are a tool to enable preference-alignment over time, to ensure the preferences we decide on then actually determine our behaviour. The approach facilitates personal behavioural change and cultural change at a population level, while remaining entirely voluntary. Government should support social entrepreneurs in providing such tools.

Self-contracting, currently applied in Australian gambling, could be used to build a culture of savings and tackle poverty among low-income earners and indigenous Australians. Other applications could include a self-contract offered to teenagers to limit alcohol consumption; self-contracting for weight loss; for educational goals and behaviour; a voluntary but binding internet censorship service; or a service to allow people to bet with themselves that they'll meet health targets, forfeiting their money if they fail.

- Australian states have programs allowing gamblers to sign themselves to a 'self-exclusion' list that bans them from casinos. A recent review indicated that some 30% of participants abstain completely, with significant reductions across all participants in the urge to gamble, and in the consequences of gambling for daily activities, social life and work. Pathological gambling scores were significantly reduced over six months (Blaszczynski et al, 2007).

- Households in the Philippines signed up to accounts from which money could be withdrawn only once a savings threshold was reached. The scheme increased savings by 81% and changed the culture of savings in the population from 'time-inconsistent' to 'self-controlled' within one year (Ashraf et al, 2006). The accounts did not require higher interest rates or monetary incentives (they offered zero-interest).

Self-contracting supports committment, to ensure the preferences we decide on then actually determine our behaviour

Tool 3: Presenting information

Metrics and signage are often overused. Clutter and misleading advertising lead to poor choices. The goal of the choice architect should be to reveal, organise and prune information to what is necessary to making an informed choice. Useful information can improve cultures of choice. Data should be displayed regarding choice quality, not only price, particularly when decisions involve goods with varying dimensions that are difficult to compare, and when some dimensions are not priced.

- Los Angeles restaurants display hygiene grades in their windows. This scheme has increased A-grade ratings from 58 to 83 per cent, resulting primarily from consumer choice. Additionally, the grading cards caused restaurants to make hygiene improvements. C-graded restaurants began to lose revenue, and food-borne-illness hospitalisations decreased between 13-20 per cent (Jin & Leslie, 2003).

Consumers in Australia would benefit from meaningfully organised information, for instance, around school choices, carbon ratings and labeling for consumables, hygiene rating display systems for restaurants, and information in telecommunications contracts. Additionally, suppressed information relevant to consumers should be revealed in areas such as medication, financial services, sustainable products, and insurance. All new metrics must be carefully assessed to ensure they measure what is valuable, rather than encouraging cultures of behaviour to meet superficial targets.

• Company strategies in the airline industry are employed to make prices less transparent and more complex, increasing the costs of comparison between airlines. To counter this, the Airline Tariff Publishing Company is implementing a list of uniform codes for fee-based extra services, to allow consumers to compare prices meaningfully. Similar information suppression exists across numerous markets (Xavier & Laibson, 2006).

'Self-contracting': binding incentives to commitment

The self-contracting approach allows people to bind themselves to a decision they make. For example:

1. The website Stickk.com has $1.3 million invested under a 'self-contracting' service, under which people sign binding contracts with themselves:

> "Two Yale professors, Dean Karlan and Ian Ayres, studied the effects of commitment contracts on quitting smoking and then applied that research to dieting, developing a business around their theories. They started StickK.com last year, a website that motivates people to make changes in their lives by signing contracts: if they fail in their goals, it costs them money. The site has more than 23,000 users, the highest percentage of whom (42 percent) have commitment contracts for losing weight." (The New York Times, 5th February, 2009).

2. A Danish chain of gyms offers a contract for free membership, with the only caveat that members have to show up for it to remain free. If members fail to attend they are billed the normal weekly fee:

> "People have a strong tendency for loss aversion, sometimes irrationally so. We fear losses more than we value gains: we will usually answer mathematically identical questions differently based on whether the question is framed in terms of avoiding a loss or making a gain... [in this case] fear of losing $85 is probably a stronger motivator than hope of gaining better fitness. Put all these things together, you will get more compliant and committed customers." (See www.marginalrevolution.com).

Tool 4: Designing spaces

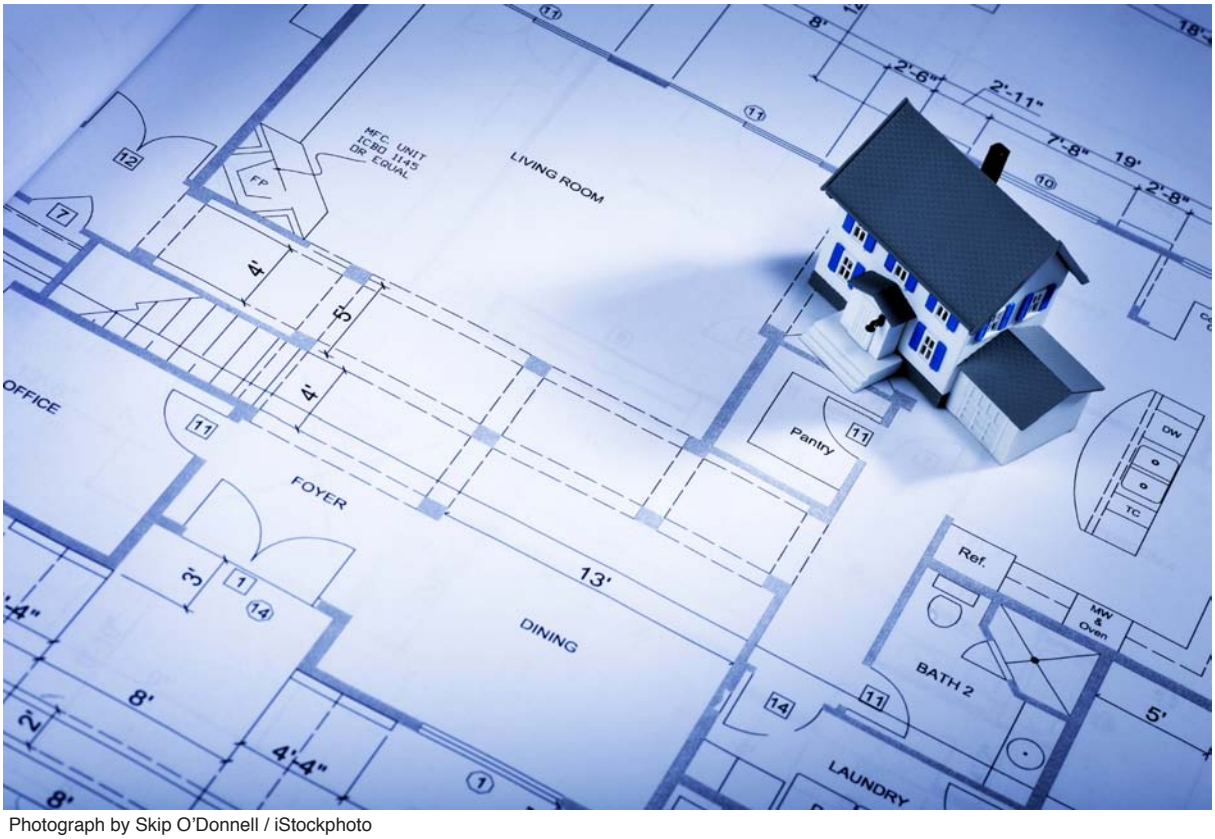
Policymakers should design spaces and built environments to improve outcomes by influencing patterns of choice. Designing spaces involves investing in quality buildings, guiding choices through urban design, employing architecture to develop community (Krier, 2009), and balancing the buzz of commerce with (quiet) contexts to support reflective decision-making.

In Australia, investment in public spaces of quality and character should reflect a public commitment to supporting pro-civic choices. The social contact promoted by attractive and unintrusive public spaces should be funded as part of mental health promotion; urban design should be employed to develop patterns of sustainable behaviour; and the positive externalities of investment in buildings should be measured in education, business, and health.

- Increased density in New Zealand neighbourhoods with integrated parking and transport infrastructure has encouraged walking and cycling – resulting in 43 per cent less fuel consumption (Newton, 2005).

- A UK study of pupils across 1,916 schools identified a strong relationship between capital investment in buildings, and staff morale, pupil motivation and effective learning (PWC, 2000).

- In 2000, a bill was proposed in the British Parliament to regulate 'involuntary listening' in public places, to limit the playing of recorded music in hospitals and waiting rooms, public amenities, public transport, and on the street.



Photograph by Skip O'Donnell / iStockphoto

Tool 5: Influencing social norms

Social norms are the conventions, implicit assumptions and social expectations which regulate behaviour in communities. They represent the idea that 'culture can do policy work' – and is the most informal, personalised, and least coercive means to achieve social outcomes. Social norms are supported not solely by government, but via interpersonal moral persuasion and informal social controls. Policymakers can play a role in establishing the conditions for their evolution.

One way to influence social norms involves social marketing, which focuses on values and beliefs at four levels: personal behaviour, people who design and sell products, people who design environments, and people with the power to allocate resources. The aim is to support improved norms. In this context, social ventures and civic associations can be recast as local norm entrepreneurs.

In Australia, norms could be supported around healthy lifestyles, informed risk-taking in investment, and cooperation in workplaces. Other areas include energy and water usage, tax compliance, and commitment to study. More interestingly, norms could be supported around clusters of behaviours shown to increase life chances, such as empathy, emotional intelligence, application, initiative, and self-control.

- In Australia, tax-payers were informed that that normal social practice was honesty in tax returns. This reduced the average deduction claim from $286 to $151 (Wenzel, 2004). Projected onto the population, this could reduce claims by about $2.8 billion. Assuming an average tax rate of 30%, this would mean a revenue gain of more than $800 million.

- A study of energy conservation in California found that social messages about neighbours' conservation behaviour spurred people to conserve more energy than did any appeals that are traditionally accorded motivational power, such as saving money, protecting the environment, or benefiting society (Nolan et al, 2008).

- A US study gave cards to hotel guests asking them to reuse bath towels, either to 'help save the environment', or appealing to peer influence: '75% of guests who stayed in this room reused their towels'. The social norms-based message resulted in a 34% greater increase in towel reusage, an effect that increased the more people perceived the others to be similar to themselves (Goldstein et al, 2008).

Social norms represent the idea that culture can solve policy problems and is the most informal, personalised means to a good society

Section V: Conclusion and questions

Choice architecture focuses on designing the context in which people make decisions, to mitigate irrationality and improve social and economic outcomes. Using this approach, government can influence outcomes without resorting to either mandates or laissez-faire approaches.

These tools are not only relevant to government. They can also be used to devolve power to communities, organisations, and institutions in the civic realm. Institutions which promote good choices should be identified and empowered with the tools of choice architecture to develop cultures of good choice. Cultural change is the most subtle form of social improvement, but it is also the most resilient, self-perpetuating and least coercive means to a better society. Subsequent Per Capita reports will develop this approach.

When people decide themselves to eat healthily, to save more, to consume sustainably, or – more subtly – to practice empathy, application, initiative, and self-control, multiple social and economic problems are mitigated at their source. Choice architecture enables policymakers in organisations, communities, and governments to create the conditions to support and encourage such an evolution. But Australians will have to meet them halfway: such behavioural change does not last and is not effective if it is coerced.

Private market players have long understood that human decision-making is predictably irrational; governments are now beginning to turn these insights to public use. Progressives have long understood that contexts shape outcomes. These new tools are developing out of an understanding that contexts should be designed to improve outcomes, while maintaining the freedom to choose. There is an opportunity here for Australian policymakers to forge a new relationship with the public: to create the conditions to make free choice work for people, and to restore the conditions of our flourishing.

Questions for Australian policy

This paper opens up a set of discussions around the role of government in markets and individual decision-making, and around the relationship between private choice and community outcomes. It raises some fundamental questions:

- **What is the role of government in designing contexts to mitigate irrationality?**
- **Which predictable irrationalities are the causes of recurrent bad decisions?**
- **Does choice architecture undermine people's capacity to learn for themselves?**
- **Are the incentives and disincentives legitimate and enforceable – even if they are chosen by the individual?**
- **Which sectors and policy domains could best apply these tools?**
- **What choices lead to social outcomes, and how should good choices be defined?**

Over the coming months Per Capita will be examining these questions to further develop applications of choice architecture in the Australian context.

Bibliography

Ashraf, N., Karlan, D. & Yin, W. 2006, *Household Decision Making and Savings Impacts: Further Evidence from a Commitment Savings Product in the Philippines*, working paper from the Economic Growth Center, Yale University. Available at: <http://www.econ.yale.edu/growth_pdf/cdp939.pdf>

Australian Prudential Regulation Authority (APRA). 2005, *Annual Superannuation Bulletin*, Sydney: APRA

Baron, J. 2000, *Thinking and Deciding (3rd edition),* Cambridge: CUP, pp. 260-261

Basu, A. & Drew, M. 2006, *Appropriateness of Default Investment Options in Defined Contribution Plans: The Australian Evidence.* Available at: <http://mpra.ub.uni-muenchen.de/3314/>

Blaszczynski, A., Ladouceur, R. & Nower, L. 2007, "Self-exclusion: a proposed gateway to treatment model," *International Gambling Studies,* Vol. 7, No. 1, pp. 59-71

Caillaud, B. & Jullien, B. 2000, "Modelling time-inconsistent preferences," *European Economic Review,* Vol. 44, No. 4, pp. 1116-1124

Cacioppo, J.T. & Nusbaum, H.S. 2003, "Component processes underlying choice," *Proceedings of the National Academy of Sciences of the United States of America,* Vol. 100, No. 6, pp. 3016-7

Casebeer, W.D. 2003, "Moral cognition and its neural constituents," *Nature Reviews Neuroscience*, Vol. 4, pp. 841-846

Clark, L., Lawrence, A.J., Astley-Jones, F. & Gray, N. 2009, "Gambling near-misses enhance motivation to gamble and recruit win-related brain circuitry," *Neuron,* Vol. 61, No. 3, pp. 481-490

Damasio, A. 1994, *Descartes' Error: Emotion, Reason and the Human Brain.* London: Papermac

Del Missier, F., Ferrante, D. & Costantini, E. 2007, "Focusing effects in predecisional information acquisition," *Acta Psychologica,* Vol. 125, pp. 155-174

Doll, R., Peto, R., Wheatley, K., Gray, R. & Sutherland, I, 1994, "Mortality in relation to smoking: 40 years' observations on male British doctors", *British Medical Journal,* Vol. 309, pp. 901-11

Erev, I., Ert, E. & Yechiam, E. 2008, "Loss aversion, diminishing sensitivity, and the effect of experience on repeated decisions," *Journal of Behavioral Decision Making,* Vol. 21, pp. 575-597

Gibson, C., Schreck, C.J. & Miller, J.M. 2004, "Binge drinking and negative alcohol-related behaviors: a test of self-control theory," *Journal of Criminal Justice,* Vol. 32, No. 5, pp. 411-420

Goldsteain, N.J., Cialdini, R.B. & Griskevicius, V. 2008, "A room with a viewpoint: using social norms to motivate environmental conservation in hotels," *Journal of Consumer Research,* Vol. 35, pp. 472-482.

Gregory, R.S. & Keeney, R.L. 2002, "Making smarter environmental management decisions," *Journal of the American Water Resources Association,* Vol. 38, pp. 1601-1612

Klein, J.G. 2005, "Five pitfalls in decisions about diagnosis and prescribing," *British Medical Journal,* Vol. 330, pp. 781-783

Krier, L. 2009, *The Architecture of Community,* Washington DC: Island Press

Kuijer, R., de Ridder, D., Ouwehand, C., Houx, B. & van den Bos, R. 2008, "Dieting as a case of behavioural decision making: does self-control matter?" *Appetite,* Vol. 51, No. 3, pp. 506-511

Jin, G.Z. & Leslie, P. 2003, "The effect of information on product quality: evidence from restaurant hygiene grade cards," *Quarterly Journal of Economics,* Vol. 118, No. 2, pp. 409-451

Johnson, E.J. & Goldstein, D.G. 2004, "Defaults and donation decisions," *Transplantation*, Vol. 78, pp. 1713-1716

Madrian, B. & D. Shea. 2001, "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior," *Quarterly Journal of Economics,* Vol. 116, pp. 1149-1187

Malmendier, U. & DellaVigna, S. 2004, "Contract design and self-control: theory and evidence," *Quarterly Journal of Economics,* Vol. 119, No. 2, pp. 353-402

Matlin, M.W. 2004, "Pollyanna principle," in Pohl R. *Cognitive Illusions: A Handbook on Fallacies and Biases in Thinking, Judgement and Memory,* UK: Psychology Press

Modirrousta, M. & Fellows, L.K. 2008, "Dorsal medial prefrontal cortex plays a necessary role in rapid error prediction in humans," *The Journal of Neuroscience,* Vol. 28, No. 51, pp. 14000-14005

Nolan, J.M., Schultz, P.W., Cialdini, R.B., Goldstein, N.J. & Griskevicius, V. 2008, "Normative social influence is underdetected," *Personality and Social Psychology Bulletin,* Vol. 34, No. 7, pp. 913-923.

Olsen, R.A. 2008, "Perceptions of financial risk: axioms and affect," *ICFAI Journal of Behavior Finance,* Vol. 5, pp. 58-80

Klein, J.G. 2005, "Five pitfalls in decisions about diagnosis and prescribing," *British Medical Journal,* Vol. 330, pp. 781-783

Newton, P.W. 2005, *The Value of Urban Design, New Zealand Ministry for the Environment.* Available at: <http://www.mfe.govt.nz/publications/urban/value-urban-design-full-report-jun05/html/index.html>

Pokhrel, P., Sussman, S., Rohrbach, L.A. & Sun, P. 2007, "Prospective associations of social self-control with drug use among youth from regular and alternative high schools," *Substance Abuse Treatment, Prevention, and Policy,* Vol. 2, pp. 22

PriceWaterhouseCoopers (PWC). 2000, *Building Performance: An Empirical Assessment of the Relationship Between Schools Capital Investment and Pupil Performance, Research Report No. 242,* UK: CABE.

Slovic, P., Finucane, M.L., Peters, E. & MacGregor, D.G. 2002, "Rational actors or rational fools? Implications of the affect heuristic for behavioral economics," *Journal of Socio-Economics,* Vol. 31, pp. 329-342

Sodian, B. & Frith, U. 2008, "Metacognition, theory of mind, and self-control: the relevance of high-level cognitive processes in development, neuroscience, and education," *Mind, Brain, and Education,* Vol. 2, No. 3):111-113

Stango, V. & Zinman, J., 2006, *How a cognitive bias shapes competition: evidence from consumer credit markets.* Available at: <http://ssrn.com/abstract=928956>

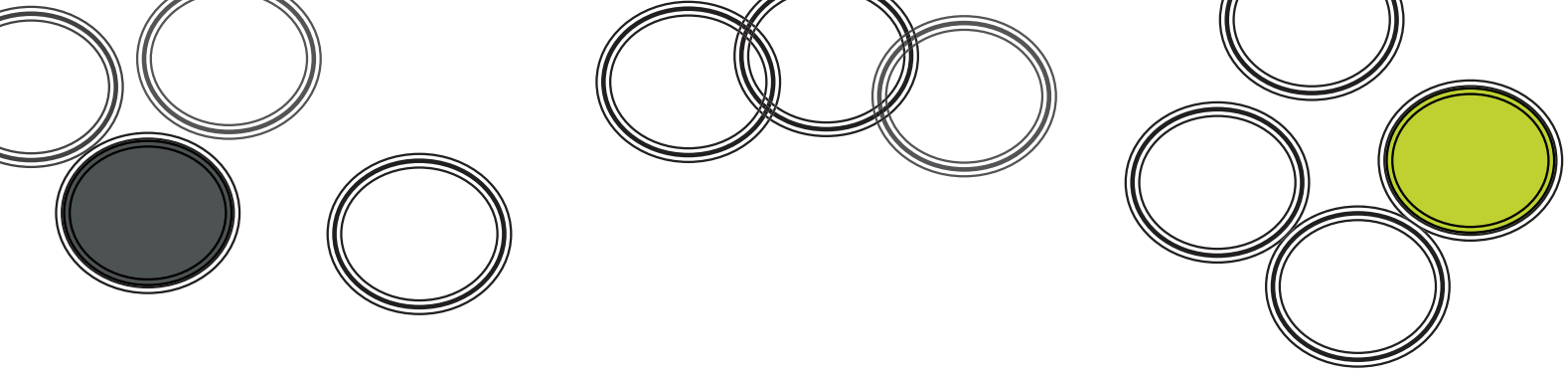
Takahashi, T. 2005, "Loss of self-control in intertemporal choice may be attributable to logarithmic time-perception," *Medical Hypotheses,* Vol. 65, No. 4, pp. 691-693

Takahashi, H., Motoichiro, K., Matsuura, M., Michihiko, K., Yahata, N., Suhara, T. & Okubo, Y. 2008, "Neural Correlates of Human Virtue Judgment," *Cerebral Cortex,* Vol. 18, pp. 1886-1891

Wenzel, M. 2004, *Misperceptions of Social Norms about Tax Compliance (2): A Field Experiment. Centre for Tax System Integrity*, Canberra: Australian National University and the Australian Tax Office

Woodward, S. 2003, *Consumer Confusion in the Mortgage Market,* California: Sand Hill Econometrics

Xavier, G. & Laibson, D. 2006, "Shrouded attributes, consumer myopia, and information suppression in competitive markets," *The Quarterly Journal of Economics,* Vol. 121, No. 2, pp. 505-540



www.percapita.org.au

percapita

Suite 205 61 Marlborough Street Surry Hills NSW 2010
50 Cardigan Street Carlton VIC 3053
info@percapita.org.au