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Behavioural Business

The Psychology of Decisions in Economy, Business and Policy Contexts

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Part I
Background

Chapter 1
Behavioural Business: The Psychology of Decisions in Economic, Business and Policy Contexts

Janneke Blijlevens, Meg Elkins, and Ananta Neelim

1.1 Behavioral Business

Since the 1990s, globalisation and digitalisation have fundamentally shifted many aspects of life. Unlike any other time in history, we are wealthier, more educated, longer living and less hungry (Sachs, 2012). At the same time, we also face many challenges that are unique to our time. As individuals, we need to (i) process more and increasingly complex information from many different sources, (ii) interact in more diverse and expansive networks and (iii) contend with the fact that decisions are more visible and therefore have far-reaching implications and repercussions. Businesses and policymakers are similarly affected by the complexities of modern life. Making "good" decisions in these complex environments require understanding how individuals and groups behave. One of the ways to solve these complex problems in the twenty-first century is to understand how individuals and groups behave.

Indeed, over the last decade universities have seen an increased demand from various stakeholders to provide an understanding of human behaviour to inform their decision-making processes. Students are looking to future proof their careers. Gen *Z* is faced with the uncertainty of six career changes in their lifetime (McCrindle and Fell, 2019). They also want to be meaningful catalysts of change in the world by solving complex problems. Governments and policy-makers have the responsibility of managing a society going through large disruptions and often look at universities to lead the way, in both teaching and research. Moreover, general

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society is looking at universities to lead research in a way that is meaningful to them and thus is immediately practical and implementable. They are the ones experiencing the complex problems and disruption that society faces. It is the proposed role of universities to bring people together, in research, teaching and advocacy in a public-facing capacity and provide an experimental ethos to find new ways of thinking and raising new voices (Biesta et al., 2009).

This is where behavioural science has expanded its reach in the modern business world; it is increasingly relevant for business, policy making, and regulators interested in understanding and changing behaviour for the benefit of society. In that regard, the disparate disciplines at universities have generated theories, frameworks and evidence on how people behave in different contexts. Indeed, we have seen an influx of scholarship in the traditional business disciplines that use psychological insights and theories to explain and affect behaviour in business contexts; for example, behavioural economics, social marketing, consumer psychology and social innovation. However, a single discipline approach is constrained in its capacity to solve these complex problems that stakeholders grapple with in the modern world. Solutions to complex problems are better served through a unified multi-lens approach. In this chapter, we introduce behavioural business as an engaged scholarship that provides this unified multi-lens approach.

As will become apparent throughout this book, we can quite distinctly envision behavioural business as an engaged scholarship that bridges the traditional boundaries between the social sciences; it is interdisciplinary. As you will read in Chap. 2, the social sciences are divided by topics and methods and how they view the world because they picture human behaviour in different, often contradictory ways. But recent progress in psychology and cognitive science has afforded a new, scientific foundation of human behaviour and its application in business. What brings these previously disparate businesses(sub-)disciplines together lies in the commonalities of scientific 'habits' and our scholarship application to complex societal and business problems.

The recent shift towards behavioural business as a distinct scholarship does have parallels to paradigm shifts. Paradigm shifts emerge when a crisis or revolution brings about change due to confusion over the inconsistencies and an incapacity to answer the questions seen as important to practitioners (Kuhn, 1962). It is the latter, an incapacity to answer questions seen as important to practitioners, where behavioural business offers new knowledge. It fills a void in acknowledging that the complex problems businesses and societies face cannot be solved without an interdisciplinary scholarship to understanding behaviours and their antecedents. (Masterman's, 1970) interpretation of Kuhn's theory of paradigm shifts describes them as puzzle-solving activities which are habit-governed. In line with that view, behavioural economics made big strides in shifting the economics paradigm from a rational perspective to decision making to a perspective that accounts for human irrationality. Similarly, behavioural business as an engaged scholarship brings the social and business disciplinary habits and world-lenses together to solve the complex business and societal puzzles that the world faces.

Suppose there is a need for behavioural business. In that case, as is clear from the previous—it is surprising that no one has stepped forward to provide this platform and foundation for solving the complex societal problems that we are facing today. Indeed, a web search of behavioural business currently produces no direct hits other than our laboratory. It is not (yet) a recognised term! Behavioural business as a new area of scholarship is broad and emerging, and, as such, the chapters in this book provide a first glimpse into what it entails.

1.2 What Does Behavioural Business Scholarship Entail?

The questions seen as important to practitioners are approached from different disciplinary lenses, and different methodological stances. All, however, explain relevant behaviours and decision-making patterns in business contexts through employing cognitive and psychological science insights of which cause-and-effect relationships have been established. Behavioural business as a scholarship includes the 'habit' or practice of establishing cause and effect (primarily through experiments). This does not mean that each study or research project that contributes to the paradigm must include an experiment; it merely means that insights and theories within the behavioural business paradigm that inform business practice have cause and effect relationships well-established through empirical means. Similarly, theory or qualitative research endeavours can contribute to these insights as starting points. We clearly distinguish behavioural business from behaviourism. The former is grounded in psychological insights obtained through empirical analysis, explaining the cause-and-effect relationships between trigger and human behaviour; it goes beyond merely the observable. Further, human behaviour, within this scholarship, is more than just decision making or choice-making, which constitutes only a part of human behaviour. Indeed, human behaviour is defined as a human's response to external or internal stimuli, including underlying and objectively observable activities, introspectively observable activities (covert behaviour), and non-conscious processes. As you will see in this book, sometimes behavioural business looks at how attitudes are formed, sometimes we look at one decision at one moment in time, and at other times we look at longer-lasting behaviour change. Behavioural business as an engaged scholarship seeks to study individual humans' activities and their resulting consequences in response to external and internal stimuli within a business or organisational context and the psychological mechanisms that explain these responses.

Scholarship in behavioural business offers a robust evidence base for doing business and making public policy in the modern social environment that we live in. As a raft of recent crises makes all too clear, the globalising world is facing unprecedented problems that are essentially social. Climate change can only be stopped through collective action at the global level. COVID-19 is a virus that brings disease, but it leads to pandemic only through social interactions between individuals. Our best weapons fighting the pandemic will need to come from the

social sciences. Technology presents threats as well as opportunities; social science needs to address both. Behavioural approaches are our best hope in all these cases. We believe that this social science, particularly in the business school, has a crucial role to play. Business schools, still roundly maligned, are the most important forum where social scientists, policymakers and the community habitually interact. With this book, we hope to convince you of this and demonstrate how behavioural business makes its contribution. By way of example, in the following section, we discuss how our particular behavioural unit came into being. Strategic choices were made in the establishment of the group to provide an exemplar of how such a group could create a real-world impact in practice. These choices involved creating infrastructure in a physical lab, the development of a range of behavioural teaching units, industry outreach and media engagement. All of these developments represent stakeholder engagement to promote and demonstrate this new way of doing business.

To demonstrate what behavioural business is in the field we outline how our group moved from a conceptual understanding to a deliberate scholarship and practice. The process involved the establishment of an experimental lab, the development of courses and purposeful engagement and advocacy with industry, the public and the media.

1.3 RMIT University's Behavioural Business Lab

In this section, we highlight the experience of the Behavioural Business Lab (BBL) at RMIT (Royal Melbourne Institute of Technology) University. The authors of these chapters (and the book) were heavily involved with the formation and proliferation of this research group. Our aim in this section is to highlight some of the challenges we faced in establishing the BBL as an interdisciplinary group in a traditional academic setting characterised by rigid disciplinary structures. By providing an account of our experiences, we hope to provide like-minded researchers with an outline on how to navigate potential challenges they may face in their pursuit of establishing inter-disciplinary research groups or programs.

The BBL started in 2014 with the hiring of two behavioural economists from Nottingham University in the UK. The group expanded rapidly by strategically recruiting scholars from not only behavioural economics, but also marketing (consumer behaviour) and design (behavioural design). By the middle of 2015, the BBL became a research group of seven academics who shared a common view that traditional explanations for business phenomena, practices and their impact on society required refinements. They believed these refinements should be grounded in psychological foundations and should use an interdisciplinary lens.

The first set of challenges the BBL faced was related to the formulation and management of a collaborative research agenda facing any interdisciplinary research group. Given the commonalities in our approach and the type of methods we utilise, this would seem straightforward. However, that was not quite the case in reality.

Researchers have various incentives to adhere to discipline-specific research in a traditional university. At a macro level, universities are broadly judged on excellence in research in individual disciplines and not in interdisciplinary research. This filters through into institutional incentives that require individual academics to focus on a single discipline. Regarding research outputs, the relative costs of publishing in interdisciplinary journals in terms of learning norms associated with publishing, new methods, and generating research ideas with someone using a different academic lens can be high. Often, this culminates in individual researchers joining in research groups, but not actively contributing towards collaborative projects. From the very outset, we were conscious of the pitfalls mentioned above by proactively managing how we operated as a research group. For example, we emphasised a decentralised leadership structure and met weekly to vote on the overall strategy and objectives of the group. These choices resulted in eliciting costly commitment from members to the long-term cause of the group. The weekly meetings also allowed us to discuss some of the institutional and non-institutional incentives and challenges we faced and find common solutions to them. This process allowed us to move from being a group of researchers doing behavioural work in disparate disciplines to a community of academics conducting behavioural business research. Nevertheless, some issues associated with interdisciplinary work, like the choice of incentives or statistical estimation model for analysis, persist.

As experiments lie at the heart of behavioural business research, having a functional laboratory was a priority for our group. This posed the second set of challenges for us. Building physical infrastructure at any university requires engagement with various academic and non-academic stakeholders. These engagements can be cumbersome and time-consuming. Therefore, expectations and timelines must be properly managed. It is important to note that having flexibility in terms of timelines and disposition towards collaborating with other entities in sharing spaces can be an asset. For example, prior to moving into our own lab, we co-shared a computer lab with the RMIT Trading Facility to access infrastructure that allowed us to conduct in-lab experiments to develop our research profile and showcase our capabilities to the university leadership team. This was important in getting significant financial commitments from the University that do not have incentives to fund interdisciplinary research. Eventually, four years after establishing the research group, we moved into our custom-built, dedicated, state-of-the-art experimental laboratory in the middle of Melbourne CBD. However, note that university managers are often motivated by financial returns, i.e., want to ensure that the returns to investment on labs are sufficiently high. This implies the decision to move to a space dedicated to only conducting experiments should be based on realistic predictions of its usage in the long run.

The building of a functional lab is not only limited to the physical infrastructure. Lab experiments require human participants, and therefore, efficient recruitment and management of these participants are essential. Research groups often utilise participant management systems such as *ORSEE* or *SONA* for this purpose, and liaising with IT departments early on is helpful. Also, since personal information is stored in these participant databases, it is essential to ensure all relevant laws/regulations

are followed when such databases are set up. For an interdisciplinary group, it is imperative to set up rules regarding the nature of experiments/data collection that can be conducted using the participant database. Experimental economists are not only serious about not allowing deception in their own studies, but they are equally serious about not recruiting participants from subject pools where participants have been exposed to deception in other studies. This is especially relevant as consumer psychologists may do experiments that involve deception. Similarly, issues around using flat incentives or only paying a section of the participants using lotteries can also be contentious.

The issue of human ethics/IRB clearance is also pertinent to establishing a behavioural group. In most universities, any study involving human participants generally require ethics clearance at the institutional level (Hoffmann et al., 2020). Often this process can be very cumbersome. Members of ethics committees are often not familiar with experimental research methods. Issues related to random assignment into treatment and control groups for non-medical studies, provision of differential monetary incentives across participants, etc. can challenge the standards set for ethical protocols in ethics boards in business schools. Our experience found that taking a collaborative approach towards understanding the ethical concerns and finding tailor-made solutions is a fruitful strategy in approaching this issue. For example, at the BBL, we collaborated with our relevant ethics committee to generate a list of best practice protocols for conducting economic experiments at our lab. This document provided both the researchers and the committee with standards against which research projects were evaluated and drastically improved time frames and the efficiency with which the ethics process was completed. In some instances, research groups have negotiated blanket ethics approvals for studies conducted in their lab.

The second set of challenges relates to establishing the importance of behavioural business in generating insights into business and policy decision-making. The BBL organised several public events in 2015 and 2016 to highlight the importance of using behavioural insights in decision making. However, it was not until 2016 that the BBL embarked on defining the behavioural business as a practice. In 2016, the BBL organised a mini-workshop in RMIT Europe, where 30 leading European-based scholars from various disciplines (psychology, economics, finance, marketing, and design) were invited. The workshop's objective was to generate academic consensus on delineating the behavioural business research agenda. The input from that workshop has shaped our view on behavioural business, which we have presented in this book. Several inter-disciplinary projects were initiated at the workshop to demonstrate how behavioural business research would look in practice. For example, one of the projects uses the psychological needs for belonging and uniqueness to generate a behavioural intervention to improve social inclusion in multicultural societies. Another project investigates how goal-setting and lotteries can be combined to generate more motivating incentive schemes for workers.

Over time, the BBL has pursued an active engagement strategy with media and public policy. It is important to be relevant in these spheres because of the type of work we do and the nature and source of research funding for the type of

work we do. As a group, we comment on television, newsprint and radio outlets to apply behavioural insights to the issues of the day. During COVID, much of this commentary has been about incentivising behaviour in vaccine uptakes and understanding information biases in social media messaging. Our research is being used in submissions for policy change by independent consumer research groups and government run committees. Previously, the BBL also took on advocacy roles conducting public events; one such example was the session on human irrationality by exploring a series of human biases during National Science week in Australia. The BBL also played a critical role in developing behavioural economics in the Victorian high school curriculum through workshops with teachers and introductory lab sessions for high school groups. These engagements have established the BBL as a well-known research group in the industry and policy circles, leading to various grants and collaboration for impactful research projects.

In most universities, the major source of revenue is still based on teaching and learning. Further, stakeholders in this space have repeatedly highlighted the importance of integrating research into teaching. While most academics bring research into the units that they teach, we were in a unique position to offer more than that. As an interdisciplinary group, we could offer a set of coordinated units with a broad-based appeal from students in different disciplines. In 2018, we established the behavioural business minor, which consists of the courses behavioural business, psychology for business, strategic games for business and behavioural finance. The minor provides students from all different business disciplines a unique understanding of business practices and their impacts on society using a behavioural lens. These courses are exciting because they integrate the facilities and most current scientific studies in behavioural business into the curriculum. This allows students to experiment and learn to identify situations in which their own (irrational) decisions might not be in their best interest and thus provides a platform for individual development and preparation for their future careers. Importantly for us, it provides us with another avenue through which we engage with the different stakeholders in the university and beyond. Our students report high satisfaction levels with taking these units and highlight that the skills they learned in these units made them more job-ready.

In this section, we highlighted the challenges we faced as an interdisciplinary research group. While it is quite easy to get bogged down with these challenges, finding practical solutions to them is important for the continued existence of such groups. Further, in a world where resources are limited, making the most out unique opportunities and leveraging them into generating revenue is required for the continued existence of research groups. In the early days of the BBL, we had many productive discussions with fellow academics in similar situations at RMIT and other universities in Australia. These conversations and their advice allowed us to successfully navigate some of the challenges that we faced. In that regard, we hope that our story and our experience will provide some guidance to other aspiring interdisciplinary research groups.

1.4 Scope of the Book

This book is an exciting opportunity to present multi-disciplinary research and understanding of multi-faceted behavioural business. This book presents an overview of how behavioural business applies in practice and explores behavioural science's role beyond the theory. We see our readers to include business schools, policymakers, and those interested in applying behavioural science in a business context. We hope that this revolutionary book gives a multi-disciplinary view on a broad range of future decision-making and policy making issues and establishes behavioural business as a practical but evidence-based engaged scholarship.

The book is divided into eleven chapters, each tackling an area of business that uses behavioural insights to navigate the complexity and uncertainty of societal and business problems to create more effective interactions in business and public policy.

In Chap. 2, Robert Hoffmann introduces behavioural business in the historical context of the disunited social sciences struggling for legitimacy and relevance at a time their intellectual leadership is needed more than ever. He suggests that there is a motive and opportunity to build a unified, interdisciplinary social science based on psychology to tackle social problems in collaboration with its stakeholders in policy, the university and society. He concludes that behavioural business is a result of this process.

In Chap. 3, Swee-Hoon Chuah and Robert Hoffmann review their research program on the effects of culture, the collective programming of the mind and economic behaviour. One which followed the course of behavioural business research to a large extent. Their program examined behaviour from the vantage point of economic science using a behavioural approach with specific experimental methods. There are two primary areas explored. The first is culture and economic behaviour. The second is the stylised effects of culture on economic behaviour demonstrated in the experimental behavioural approach to culture.

In Chap. 4, Ahmed Skali provides an overview of forensic approaches to studying human behaviour. Inspired by the way crime scene investigators inspect a physical space for clues of a crime, we take a look at data to see if we can find traces of people engaging in behaviour of an illegal or unethical nature. He discusses three key case studies: (1) corruption in Suhartos Indonesia; (2) racial bias in the application of the death penalty in the United States; and (3) the manipulation of Gross Domestic Product (GDP) statistics by governments around the world.

In Chap. 5, Ananta Neelim introduces readers to two stylised gender disparities observed in the labour market, i.e., the gender gap in earnings and the gender gap in leadership. To explain these stylised gender gaps, he appeals to behavioural economics literature findings that document gender differences in behavioural preferences (risk, competition, and other regarding) and psychological attributes and non-cognitive skills (negotiation, personality, confidence, and self-promotion). Further, the role of gender-based stereotypes and discrimination is also investigated as potential explanations for differential labour market outcomes across gender.

In Chap. 6, Janneke Blijlevens explores the definition of behavioural business design and how designers can approach design for behavioural change in business contexts. First, we are guided by a narrow view of how behavioural economics' heuristics, fallacies, and biases may be utilised in the design for optimal choice-making. Then expand our view to come to a definition that encompasses the inter-disciplinary nature of behavioural business design: "the application of psychological insights to design interventions to change individual humans' activities in response to external and internal stimuli." She then considers behavioural business design along the spectrum of behavioural economics-based design to human-centred design approaches for behaviour change, their objectives, and how they are approached in practice. A series of examples will illuminate how and why behavioural economics-based design differs from a human-centred design perspective and what the pros and cons are of each. She ends the chapter by discussing how, in reality, a behavioural business designer benefits from combining both approaches into their tool kits.

In Chap. 7, Joanne Peryman discusses organisational decision making, where she finds business success depends crucially on an organisations choice of structure, objectives, and procedures. As humans run organisations, and human decision making is heavily influenced by psychology, organisations are subject to the same errors and biases as individuals. The behavioural organisational strategy applies psychological insights to organisational decision making to maximise efficiency. The emphasis is on how organisations behave rather than how theory predicts them to act. This chapter introduces the behavioural theory of the firm and then applies this to organisational decision making, focusing on interactions with three major stakeholders: employees, consumers, and competitors. She concludes with an analysis of organisations' biases in their decision-making and suggest ways to overcome such biases. The chapter is written from the organisation's point of view and addresses how an organisation can use behavioural insights to maximise their efficiency

In Chap. 8, Simon Feeny discusses how donations to charitable organisations are huge globally, yet they vary greatly across and within societies. People donate to charitable organisations has been studied extensively, particularly by behavioural economists. This chapter seeks to summarise the extensive literature in order to provide insights into the fundraising efforts of International Non-Government Organisations (INGOs). The experimental approaches adopted by the empirical literature examining charitable giving is discussed and the different motives for why people donate are identified. The chapter demonstrates that multiple motives are at play, implying that people do not always give to the most-worthy causes or the most effective organisations. It also reveals that people can be 'nudged' in certain ways to elicit a donation or to donate more to a specific cause or appeal. Implications are discussed, and directions for future research are proposed.

In Chap. 9, Meg Elkins explores how a pandemic is a perfect storm that allows us to explore how behavioural science can be used to bring the population together to fight the invisible enemy. The villain, however, was not always obvious. The Australian government's misuse of information and credibility was called into question. To gain public trust to manage the crisis, the government employed behavioural

science to promote COVID19 safe behaviours such as mask-wearing and social distancing. When this was not enough, fines and lockdowns were employed. This chapter examines the persuasive tactics employed to prompt intrinsic COVID19 safe behaviours and the use of fines to illicit compliance when the challenge of controlling the spread of the virus became too difficult to control. The chapter assesses the role of the government's credibility in gaining the public's trust and provides a case study into the case of the anti-maskers to demonstrate alternative behaviourally inspired policy responses. Each of these components can be applied in a broader context of what does and does not resonate in behavioural messaging and provides policy suggestions on preventing the spread of the diseases.

In Chap. 10, Bronwyn Coate focuses upon creativity at a business organisational level. We begin by exploring what makes a business organisation creative in the first place. Here we focus upon the determinants of creativity within individuals and consider how organisations can leverage this through the business processes and structures they create. We follow by addressing how creativity contributes to business success and identifying strategies businesses can implement to enhance their creative capacity.

In Chap. 11, Daniel Richards investigates the role of behavioural research on financial decisions and role of financial planners in those decisions. As financial products and financial markets become more complex, there is an increase in people seeking out financial advice to make important financial decisions. Financial planning is emerging as a profession that provides clients with comprehensive financial plans to achieve their financial goals. Yet the practice of providing financial advice is an under-researched topic and worthy of more interest. This chapter reviews behavioural research to provide insights into financial planning. It accomplishes this in two ways. Firstly, it reviews behavioural research on how people make financial decisions, showing that the concepts of the disposition effect, home bias, and mental accounting are relevant for financial planners who want to understand their clients' behaviours. Secondly, the chapter reviews research on the advisor-to-advisee relationship covering the topics of conflicts of interest, disclosure, and persuasion, which inform the process of providing financial advice. Overall, behavioural research can offer unique insights into financial planning. This knowledge should be developed further and incorporated into the financial planning curriculum.

In Chap. 12, Peyman Khezr outlines the behavioural aspects of decision making in the real estate market. In most countries, real estate markets are one of the most significant markets in terms of financial transactions and importance in the whole economy. Usually, these markets include large numbers of buyers and sellers who enter and leave at any given time to buy or sell properties. What makes the real estate market interesting is that in most cases, the decision about selling or buying a property is the largest lifetime financial decision of the individuals who make these decisions. Further, due to the search dynamics in these markets and the stochastic nature of many influential variables, all parties face risky decisions with uncertain outcomes. Thus, it is natural to think of behavioural aspects of these decisions under uncertainty. Researchers have tried to analyse and understand

many characteristics of the behavioural component of decision making in real estate markets. This chapter will review and outline the existing literature related to the behavioural aspects of decision making in real estate markets.

We are deeply grateful for the contribution of the authors for this high quality of their chapters. This book contributes to the knowledge of behavioural business. The authors have generously donated their time and effort with the backdrop of COVID-19, which has caused disruptions to their academic and personal lives. We would like to especially thank Robert Hoffmann, as current chair and co-founder of the RMIT Behavioural Business Lab for providing valuable input at various stages of this project. We also thank Kate Rears for her work in improving the final draft of the book.

We would like to acknowledge RMIT University and in specific, the contributions of the College of Business and Law, and the School of Economics, Finance, and Marketing, over the years. Their support has resulted in the establishment of behavioural business as a program of research and engaged scholarship, and as a force to be reckoned with. Further, we want to acknowledge the role of Tim Fry, whom we consider the early visionary father of the BBL, in his role as Head of School.

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Chapter 2
Introducing Behavioural Business

Robert Hoffmann

2.1 Introduction

If you had to design (from scratch) a mechanism to provide society with the intellectual leadership, knowledge and solutions to deal with the biggest social upheaval in its history, what would that mechanism look like? To what extent would it resemble the current system of arbitrarily divided and tribal social sciences and business disciplines, each operating out of their own ivory towers, each struggling with diminishing public relevance of their careerist, arcane research and commodified teaching offerings? This is precisely the situation our globalising world is facing in the early twenty-first century, one that demands our urgent attention.

In the following chapter, I will propose a role for something I have come to call "behavioural business" as a type of engaged scholarship (relevant research *and* education) that follows a different path: The path of a unified social science based on a common psychological foundation and developed in dialogue with society and relevant to its issues. This chapter examines where behavioural business came from, what it looks like and why we need it.

To make this case, I first trace the causes of the present predicament in the story of social science, which resembles the tale of the sorcerer's apprentice. It begins with the creation of a science of the social that quickly grows and divides out of the control of its founders. Different social sciences develop separately, partly by accident, based on a lack of a common human science, researchers' tribalist tendencies and administrative expediency. In the middle of the story these accidental beginnings become solidified as self-reinforcing but bad social conventions that

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prove hard to shake off. The social sciences end up serving none of their diverse constituencies well and are lambasted by all.

The story ends with a glimmer of hope in the opportunities the cognitive revolution and the business school provide for a reunification of a relevant social science that its founders dreamt of and that is needed to address today's social problems. I conclude by proposing behavioural business as one small part of such an ambitious (and maybe grandiose) programme.

2.2 A Science of the Social

> The economic changes that have occurred during the last quarter of a century have unquestionably been more important than during any period of the world's history: Industrial effort inventing and perfecting tools and machinery, building workshops and factories, and devising instrumentalities for the easy intercommunication of persons and thought and the cheap exchange of products and services. The world has never experienced in so short a time such an expansion of what is cal1ed "business". Concurrently has come a series of widespread and complex disturbances manifesting themselves in the discontent of labour and in the increasing antagonism of nations which to many thoughtful and considerate minds seem for an attack on the whole present organisation of society and even the permanency of civilisation itself. The problems are of the utmost urgency and importance and are already occupying the thoughts of every intelligent person in all civilised countries (Wells, 1891).

The Second Industrial Revolution, roughly the period between the American Civil War and World War 1 (1865–1914), brought unprecedented progress in 50 short years.[1] The development of new energy sources and materials afforded new powered and communication devices as well as large-scale infrastructure that transformed society. Mass transport and communication made people more interconnected. Mass production caused urbanisation but also unemployment and inequality. Household devices changed gender relations. The old social order was shaken from the retreat of religion following Darwin, a new working class, women's suffrage and, in the United States (US), mass immigration and the emancipation of slaves. On one hand the result was a gilded age of individual opportunity, health, wealth, population and economic growth. On the other there arose economic inequality, unemployment, social conflict and uncertainty.

People looked to science for answers to the social upheaval it had created.[2] A *science of the social* was clearly required. From the earliest times, the study of human interactions and society had been the province of philosophers. In the US,

[1] See Layard (2005), Mokyr et al. (2015), Mokyr (1992), chapter 6. Among the inventions of the period are gasoline, electricity, (cheap) steel, chemicals, rubber, plastic, synthetic pharmaceuticals, processed foods, washing machines, dishwashers, vacuum cleaners, refrigerators, sewing machines, elevators, machine gun, dynamite, typewriter, photography, gramophones, zippers, automobiles, aeroplanes, telephones, radios, the telegraph, bicycles.

[2] See Cravens (1985), Furner (2010), Ross (1991), Haskell (1977).

a cosmopolitan gentry of WASP[3] heritage had conserved this tradition as broadly educated thinkers in the renaissance tradition, afforded by privilege and wealth. As they struggled to make sense of the new social realities their intellectual as well as social authority began to wane. Intent on addressing social problems but also protecting their public opinion monopoly, they summoned the spirit of the same scientific thinking that created this new social world to uncover its fundamental laws and forces.

The old American gentry was ideally placed to begin a new science of society. Wealthy, educated and relatively free from religious or centralised state control, they were influential in public agencies and charities, and in establishing scientific organisations such as the American Social Science Association (ASSA).

2.3 A Process of Professionalisation

> In the progress of society, philosophy or speculation becomes, similar to every other employment, the principal or sole trade and occupation of a particular class of citizens, subdivided into a great number of different branches. Each individual becomes more expert in his own peculiar branch, more work is done on the whole, and the quantity of science is considerably increased by it (Smith, 1776).

The gentry leveraged its influence to reform the reactionary university system into one free from state or clerical interference, no longer with a mission to uphold the old social order by socialising the new generations into the status quo. But ultimately the gentry could not manage the powerful spirit it summoned, which, as in the tale, divided and multiplied beyond the control of its conjurer. The reform produced a uniquely American university system that eventually spread globally, replacing the older British and German systems, and that dominates to this day.[4] The new university was organised into separate 'departments'[5] consisting of professional, specialised researchers with a primary mission to push the boundaries of existing knowledge in addition to educating the next generation. It spelled the premature end of a singular, engaged social science, and the beginning of a division of labour that Adam Smith presaged one hundred years earlier. The American university soon became the setting for the emergence of different social sciences in such separate departments, beginning with economics, political science and finally anthropology and sociology. Figure 2.1 shows these in the context of the specialisation of knowledge that emerged from the professionalisation of research more generally. Eventually the amateur gentlemen thinkers of the ASSA were

[3] White Anglo-Saxon Protestant.

[4] See Kerr (2001), Nowotny et al. (2001), Boyer (1990), Abbott (2001), Calhoun and Rhoten (2014).

[5] If we weren't so used to it, the designation "department of economics", for example, might have quite a Kafkaesque ring to it.

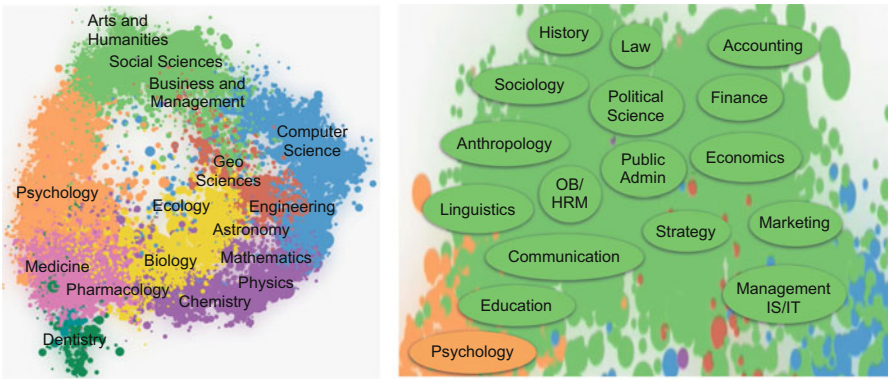

Fig. 2.1 Scimago's *shape of science* provides an empirically-based visualisation of the areas of knowledge where distance corresponds to frequency of citations between journals from different disciplines (Hassan-Montero et al., 2014). The visualisation provides a map of disciplines by intellectual proximity. The left panel shows branches of all human knowledge; the enlargement in the right panel shows social science and business disciplines. Source: Adapted from https://www.shapeofscience.com

unable to compete with professional university researchers resulting in the demise of the ASSA.

The emergence of separate specialised, professionalised social sciences had several causes. The first was efficiency. The prevailing view was that the complexity of society made a unified scientific approach impossible and required specialised researchers focusing, in sufficient detail, on different parts of the picture. In Smith's original spirit, the greater extent of the market for social science knowledge gave rise to a greater division of labour. Reflecting what was observed in industry, the resulting specialisation was a more productive organisational principle for knowledge creation to solve urgent social problems. It made mastering the rapidly developing knowledge and methods more manageable for individual researchers.

A second cause was a desire for objectivity that the scientific approach demanded. The ASSA gentlemen's social activism not only limited the contribution they could make to new scientific knowledge but also left them open to accusations of bias that was exploited by university researchers. Dispassionate professionalism was seen as a way to take subjectivity out of the equation and improve efficiency in the process.

A third cause was that a division of intellectual labour served administrative convenience (Gordon, 2002, p. 1). Specialisation provided a rational system of organising academics, students and programmes in line with the Taylorist scientific management ideal. In this turbulent time, the different arenas of social life (the economy, politics and society) harboured different pressing issues and thereby presented an obvious principle for dividing the labour of social science.

The final, general cause of disciplinary specialisation is the all too human tribalism that even social scientists succumb to (Haidt, 2012a; Clark and Winegard, 2020). Social science can serve as a theatre in a war of ideas with opportunities for empire building and turf protection. Disciplines are closely tied to particular scientific methods and provide intellectual alliances to combat competing world views (Bryman, 2011, p. 19) and secure resources as war booty (Repko et al., 2017). Discipline badges lend professional researchers a differentiator to better compete in the marketplace of social scientific solutions (Cravens, 1985, p. 193). Differentiation meant that a growing army of researchers occupied increasingly narrow, proliferating niches (Wilson, 1999).

2.4 Self-Perpetuating Hyperspecialisation

> For the most part, anthropologists, economists, sociologists, and political scientists fail to understand and encourage one another. Split into independent cadres, they stress precision in words within their specialty but seldom speak the same technical language from one specialty to the next. A great many even enjoy the resulting overall atmosphere of chaos, mistaking it for creative ferment. Some favor partisan social activism, directing theory into the service of their personal political philosophies (Wilson, 1999, p. 198).

Once the different social sciences went their own merry ways, the process became self-reinforcing, resulting in lock-in into the arbitrary disciplinary conventions we are used to today (Abbott, 2001). Researchers' investment in a discipline's subject matter and methods produced an incentive to resist change later. Their career progression was increasingly determined using discipline-specific criteria. Incentives were provided for specialised discoveries rather than broad knowledge and big-picture thinking. Because of the university's dual monopoly in teaching and research, all intellectual training became discipline bound through the major system, where students follow the specialisations of their teachers at the expense of a broad education (Wilson, 1999, p. 6). Any change in the disciplinary structure would endanger the job market prospects of graduates who come branded with a particular degree. Such a change would require large-scale coordination not only by university departments but also employers. Instead, as more universities were founded, the organisational principles and strategies of older ones were often simply copied in a 'snakelike procession' (Riesman, 1958) that continues to this day (Jacobs and Frickel, 2009; Boyer, 1990, p. 54).

Disciplinary tribalism became an equally self-sustaining force through its channels for socialisation and community (Tooby et al., 2005, p. 308). A distinct social identity of each of the individual social sciences was supported by differing market outcomes and demographic profiles. For example, the perceived superiority of economists was reinforced by their greater income and public prestige. To this day, economists hold views that set them apart not only from other social scientists but

also the general public (Fourcade et al., 2015).[6] Social networks solidify these group identities. The result is researcher bias along discipline lines in terms of whose work is learnt, accepted and cited. Research topics and publication outlets are similarly chosen within one's own field (Jacobs and Frickel, 2009; Fourcade et al., 2015).

Professionalisation contributes to solidifying discipline identities through hierarchical structures, such as discipline-based journals, conferences and associations that keep harmful internal divisions at bay. They maintain control through the influence of top departments (Fourcade et al., 2015), canonical textbooks (Stigler, 1978, p. 200) and graduate schools used as barriers to entry (Colander and Klamer, 1987). Classification systems divide a discipline into recognised subfields and reinforce specialisation by directing literature searches (Kosnik, 2018). Journals routinely raise discipline-based entry barriers by insisting on discipline-specific discourse, stylistic conventions and journal self-citations. Judgments regarding research quality and topics, career progress and course offerings are based on disciplinary conventions. For anyone involved in these power structures, the maintenance of the discipline (and competition with rival ones) is a matter of self-preservation. In addition to their professional status, institutions also exercise a powerful cultural role by socialising members into particular world views that are passed between generations of researchers. Empirical evidence suggests that disciplines are more important to academics than their departments or universities (Boyer, 1990, p. 56).

A final element in the different trajectories that the individual social sciences took was the absence of a viable alternative—a unifying scientific basis of human choice that could function as a common foundation. At the dawn of the social sciences, psychology was a long way off from offering usable scientific methods and insights. Instead, each social sciences developed the next best thing according to their own priorities and increasingly separate epistemologies (Camerer and Loewenstein, 2003).

2.5 Disunity and Its Discontents

> Each of the behavioral disciplines contributes strongly to understanding human behavior. Taken separately and at face value, however, they offer partial, conflicting, and incompatible models. From a scientific point of view, it is scandalous that this situation was tolerated throughout most of the twentieth century. (Gintis, 2007, p. 15)

[6] Fourcade et al. (2015, see also Jacobs and Frickel 2009) evidence the 'relative epistemological insularity' of economics: Compared to their colleagues in sociology and political science, economists cite relatively more inside their own field, believe more in the scientific superiority of their methods, agree less with interdisciplinary work and hold views that set them apart not only from other social scientists but also the general public. Other reasons for the separateness of economics include economists' higher socio-economic profile, professional entry barriers, labour market rewards and public prestige as well as the resulting sense of entitlement.

> Studying psychology and neuroscience without the analytical tools offered by evolutionary theory is like attempting to do physics without using mathematics. It may be possible, but the rationale for inflicting needless damage on our ability to understand the world is obscure. (Tooby et al., 2005, p. 305)

The division of academic labour and resulting 'hyperspecialisation' (Fourcade et al., 2015) described in the previous section are not necessarily harmful phenomena and have worked well in the natural sciences (Barkow et al., 1992; Gintis, 2007). The reason here is the consistency of all disciplines, such as astronomy, physics, chemistry and biology, without any 'freestanding principles' in any of them (Weinberg, 2015). In sharp contrast, social science has become a matrix of relatively separate disciplines that differ in their methods, objects of study, epistemologies, and typical assumptions, as well as their central theories (Wilson, 1999; Frodeman et al., 2017; Repko et al., 2017). These epistemological differences are manifested in a social science philosophy consisting of countless competing schools and 'isms' that is entirely absent in natural science.[7]

In the social sciences, the division of labour has therefore resulted in a damaging disunity that now inhibits the field's scientific progress and public standing to a significant extent (Barkow et al., 1992; Streeten, 2002; Camerer and Loewenstein, 2003; Gintis, 2007). Specialisation necessitates exchange. But social scientists "find it very hard to recombine our divided intellectual labour" (Swann, 2006, p. 150) meaning they "often know little or nothing about the progress made by social scientists from another discipline working on essentially the same social problem. Sometimes, even the methodology of a neighbouring discipline is *terra incognita*" (Bimore, in Steuer, 2003, p. xvii).

Social science disunity is not just a matter of wasted opportunity, but also of bad science. The different disciplines have produced their own canonical models that continue to coexist despite obvious incompatibility or straight contradiction. The most glaring example is a proliferation of theories about human decision making, by definition the most basic process at the heart of all the social sciences (Tooby et al., 2005; Simon, 1985; Mueller, 2003, p. 1). In his bestseller, *Consilience*, biologist E. O. Wilson (1999) claims that current social science theories fall short of proper science because they cannot be integrated with each other, let alone with theories in the natural sciences. Consilience is the coming together of the factual knowledge of different disciplines to create a unified base.

[7] Some interdisciplinary activity in the social sciences has been preserved through deliberate funding agency policy (Repko et al., 2017; Cravens, 1985); heroic polymaths, like Simon Herbert and Kenneth Boulding;and new fields of study launched to address pressing social issues, such as ethnic and gender studies (Jacobs and Frickel, 2009; Abbott, 2001; Backhouse and Fontaine, 2010; Calhoun and Rhoten, 2014).

2.6 The Promise of Consilience

> At the heart of thought and creation we are letting some of our best chances go by default. The clashing point of two subjects, two disciplines, two cultures—of two galaxies, so far as that goes—ought to produce creative chances. In the history of mental activity that has been where some of the break-throughs came. The chances are there now. (Snow, 1959, p. 16)

Opposition to this state of affairs has grown within the social sciences. Their "acute schizophrenia" (Simon, 1945, p. 87)[8] "should not be tolerated by adherents to the scientific method" (Gintis, 2007, p. 1; 45). The problems of disunity provide a clear motivation for interdisciplinary initiatives to allow social sciences to learn from one another. In the natural sciences the principle of *cross-pollination* or *cross-fertilisation* between different fields is well established (e.g. Dhand et al., 2016; Grodal and Thoma, 2014; Duda et al., 2012; Wootton, 2015).

Interdisciplinary science of the sort envisaged by Wilson claims several advantages (Nissani, 1997; Streeten, 2002; Rhoten and Parker, 2004; Repko et al., 2017). One is that unlike social science, social reality is not fragmented and evades any single disciplinary lens. Social problems tend to be systemic—meaning every connected part, as well as its context, needs to be understood to address them (Sarewitz, 2014). Unexamined issues that fall between the disciplinary chairs can be mopped up in the process. Globalisation and its attendant phenomena (such as environmental degradation, ethnic conflict and migration) are examples of complex social issues that will only become more important and require interdisciplinary approaches.

Another reason for interdisciplinary research lies in scientific innovation. Interdisciplinary approaches are less conservative in terms of method and outlook, allowing greater innovation and "creative chances" (Snow, 1959, p. 16). Recombining insights and methods from different parts of research generates novelty. Outsiders bring not only new approaches but are less biased by unexamined assumptions and conventions. In contrast, the conservatism of smaller and more tightly controlled disciplines can retard progress (Kuhn, 1962).

Two final reasons for integration relate to the public role of the social sciences. Education in the humanistic tradition develops students' potential and prepares them for citizenship (as well as for work). Discipline-confined courses are less able to offer alternative perspectives and topics that such an education ought to offer. The result is a bystander effect when the social science disciplines fail to assume

[8] When Simon, Herbert won the 1979 Economics Nobel Prize for his pioneering work in behavioural economics, fellow laureate Milton Friedman reportedly said: "I disagree very strongly. He has not been influential in the closely defined professional economics discipline. Before the award, if you were to ask people to classify Simon, Herbert, almost no one would have labeled him an economist. No doubt there was great surprise when he won. Wrong ideas have sometimes had a great deal of influence." Source: https://people.com/archive/he-has-the-nobel-in-economics-but-professor-simon-is-more-interested-in-how-humans-think-vol-11-no-2/.

collective responsibility that public education and policy advice for urgent societal issues ought to entail.

2.7 Institutionalising Integration

> If science becomes more difficult when it undertakes to answer questions posed from outside science, it also acquires the potentiality of becoming more fruitful. These alternative ways of doing science disclose a whole range of opportunities for the business school. The business school is not simply an environment in which researchers with strongly applied interests can take known principles of economics or psychology, or known techniques of statistics, and use them to solve practical business problems. The business school can be an exceedingly productive and challenging environment for fundamental researchers who understand and can exploit the advantages of having access to the 'real world' as a generator of basic research problems and a source of data. (Simon, 1967, p. 5)

The preceding account of hyperspecialisation and disunity illustrates that achieving consilience is a scientific, as much as a social, enterprise to bridge the entrenched differences between the different camps. Collective action is required to put Humpty together again. Many commentators therefore prescribe institutional measures to facilitate contact between researchers from different disciplines.

Jacobs and Frickel (2009) identify university research centres and laboratories as increasingly common channels for interdisciplinary work. Their survey of research centres identified these are often expressly interdisciplinary and/or focused on perennial or topical, applied issues, rather than on particular methods or disciplines. Instead research centres can serve as a bridge between disciplines and build alternative communities and social identities for researchers that can enhance their research. In this way they serve as links in the "chains and networks of overlapping neighbourhoods" that aggregate specialist scientific opinions (Polanyi, 1962). They also provide an organisational solution to the problem of marshalling resources into interdisciplinary initiatives. Additional institutional routes to foster consilience involve interdisciplinary contact in the course of education or engagement with policymakers who may turn social science research into practice. Area and topic-based studies provide examples.

However, by far the biggest opportunity has arisen in the shape of the business school, another institution that originated in the Second Industrial Revolution. The same scientific instinct that created and then professionalised social science was applied to business management, which was confronted with its own turmoil. Larger and more complex production processes required new management principles (such as Taylorism) that, in turn, needed technocrats able to implement them. Society looked to the fledgling social sciences for the answer. Universities rolled out their existing discipline areas relevant to managing businesses (Simon, 1967) and created new business disciplines based on them (see Fig. 2.2). The result was a business school divided into very different disciplines, each made up of professionals sharing

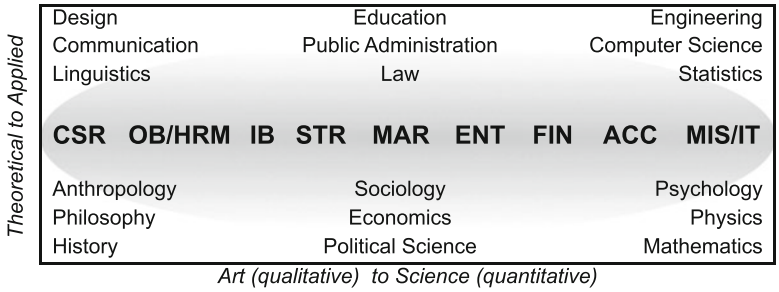

Fig. 2.2 Business school disciplines and their origins in older university departments: corporate social responsibility, organisational behaviour, human resource management, international business, strategy, entrepreneurship, marketing, finance, accounting, management information systems and information technology

identity and ethos who engaged in research and teaching. Business schools therefore perpetuated the division of the social sciences within their own corridors.

As a purveyor of professional education, the business school is different from other social science departments in that public and practice engagement is not only common, but expected in the form of executive education and consultancy projects that lend to its legitimacy. It is different also in its diversity: The business school houses not only the full breadth of the social sciences but also engineers, computer scientists, accountants and lawyers. This diversity of ideas, goals and stakeholders has also been its Achilles' heel. Business schools have been in perpetual crisis for failing a diverse set of stakeholders.[9] Business maligns poorly-skilled graduates and practice-irrelevant research. Society complains about the business school perpetuating a 'greed-is-good-culture' and poorly preparing graduates for citizenship. University peers see business school researchers as lacking rigour and originality, and instead cynically chasing blunt journal ranking metrics.

A potential explanation for this malaise is the precarious position of business schools at the cusp of two stakeholder dimensions harbouring plenty of potential for contradiction (see Fig. 2.3). One is the gulf between the respective demands of science and practice. Business and society lurk at one end; academic peers at the other. The other dimension traverses the gulf between serving the commercial interests of business and students, and the public role of universities as educators and thought leaders. Business schools needed to please everyone but pleased no-one and ended up publicly quartered.

However, in Zen-like fashion, the greatest problem of the business school may contain the key to its salvation, while doing a service to the disunited social sciences as a whole. Business schools provide opportunities to bring social scientists of different disciplines together with each other and the end users of their research

[9] See Conn (2019), Bennis and O'Toole (2005), Pfeffer (2007), Starkey and Tiratsoo (2007), Morsing and Rovira (2011), Pfeffer and Fong (2004), Thomas et al. (2013), Ghoshal (2005).

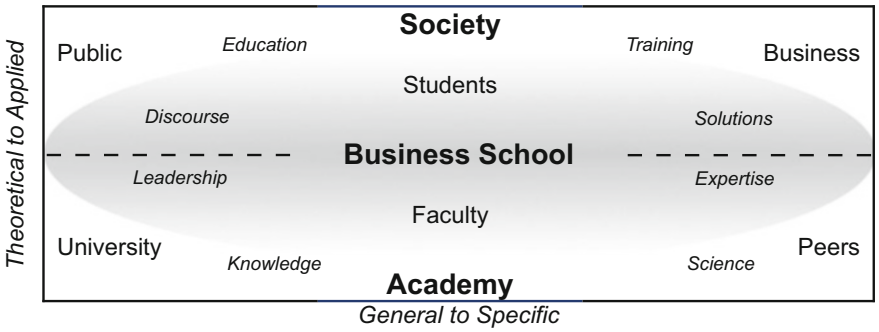

Fig. 2.3 The business school at the cusp of two stakeholder dimensions. One extends from the academy (business school faculty, their discipline peers and the university community) to society, including business, students and the general public. The other dimension straddles these stakeholders, from special interest groups to those representing the collective interests of wider and more diverse communities

to help build a consilient and relevant social science. What is required to ignite this mix is managerial willingness to promote and reward interdisciplinary endeavours that would be, by their nature, more risky and harder to performance measure than the counting of outputs published in discipline-specific journals.

2.8 The Behavioural Revolution

> The various disciplines within the behavioural and social sciences should make themselves mutually consistent, and consistent with what is known in the natural sciences. A social science theory that is incompatible with known psychology is as dubious as a neurophysiological theory that requires an impossible biochemistry. Nevertheless, theories in the behavioral and social sciences are rarely evaluated on the grounds of conceptual integration and multidisciplinary, multilevel compatibility (Barkow et al., 1992, p. 4).

Integration requires more than an institutional push to provide opportunities for the divided camps to meet and become dislodged from their entrenched conventions. It also requires scientifically common ground. Choice, at the centre of all social science, is the natural target for a common foundation. This opportunity arose, for the first time, with the cognitive revolution starting in the 1950s, which ushered in a *science* of the mind that classic behaviourism thought was impossible (Pinker, 2002). The methods included the maturing of experimental psychology and psychometrics, and later neuroimaging tools and advances in computer science to simulate mental processes and the complex systems that result from the interactions of purposeful, interdependent individuals. The many proposals that have been made to integrate the social sciences into a coherent whole therefore typically advocate a common basis in human evolution and resulting psychology (Barkow et al., 1992;

Camerer, 1999; Gintis, 2007; Mesoudi, 2011; Gordon, 2002; Capra and Rubin, 2011; Lopreato and Crippen, 2001, p. 4).

The application of cognitive science and psychology to the different social sciences and business disciplines has enjoyed a great deal of publicity as a 'behavioural revolution' (Berg, 2003; Brooks, 2008). The greatest impact was on the 'separate science' of economics (Hausman, 1992; Tomer, 2007), which was greeted with customary aplomb due to the traditional preference for the mathematical modelling of choice.[10] A new field of behavioural economics has since outgrown premature hype and established itself as a recognised part of the mainstream.[11] Bruni and Sugden (2007, p. 146) call it "one of the most significant developments in economics over the last two decades." Several Nobel Prizes have already been awarded to its practitioners. Behavioural economics has also received much policy interest (and controversy) for its 'nudging' agenda to promote paternalistically benevolent behaviour change (Chuah et al., 2017).

Similar initiatives have been made, albeit more quietly, in several other disciplines, including accounting (Birnberg, 2011), operations management (Loch and Wu, 2007; Croson et al., 2013), strategic management (Bromiley, 2009; Powell et al., 2011), finance (Barberis and Thaler, 2003), law (Baron, 2000; Jolls, 2007) and business ethics (De Cremer and Tenbrunsel, 2012), where named behavioural subfields now exist. On the other hand, many others were less obviously affected owing to a greater traditional affinity to psychological and behavioural thinking, including sociology, anthropology, marketing, human resource management and organisational behaviour.

The term 'behavioural' may be an unfortunate choice for such a high-profile movement (Heukelom, 2014). It has at times been confused with the diametrically opposed school of classical behaviourism: Behavioural research is decidedly not behaviourist. To others, as applied to the social sciences, behavioural seems merely tautological to the extent that all (should) have behaviour at their centre. Most commentators take behavioural as a reasonable synonym for 'psychological'. Behavioural approaches to social science and business in this sense of the term share two features. First, they rest on insights into the psychology of real people (how they act, think, decide). Second, behavioural approaches use an eclectic set of empirical methods to observe human behaviour from psychology, social and non-social sciences (e.g., biology, cognitive and neuroscience). Behavioural business , the topic of this chapter, simply covers any behavioural approach to economic and business behaviour (i.e., examining how people make resource-allocating decisions using insights and methods from psychology and related areas).

[10] For a dissenting view, see Heukelom (2014) and Fumagalli (2016) who argue that the separation between psychology and economics has been overstated.

[11] See Rabin (2002), Weber and Dawes (2005), Weber and Camerer (2006), Pesendorfer (2006), Hargreaves Heap (2013), Laibson and List (2015).

2.9 Engaged Scholarship

> The time has come to give the familiar and honorable term "scholarship" a broader, more capacious meaning, one that brings legitimacy to the full scope of academic work. Surely, scholarship means engaging in original research. But the work of the scholar also means stepping back from one's investigation, looking for connections, building bridges between theory and practice, and communicating one's knowledge effectively to students. (Boyer, 1990, p. 16)

The behavioural revolution and the business school thus provide scientific and institutional opportunities for the integration of the social sciences. However, external factors of this kind are unlikely to do the trick alone. What is also needed is a paradigm shift in the mindsets of individual social scientists (including business school academics) who were trained and socialised into the prevailing ethos of academic publish-or-perish in their separate and specialised domains. What is needed, in addition to opportunity/ability, is the motive/willingness of academics to be more interdisciplinary. This is far from easy. The faith society put into science generally also boosted the standing of research at the expense of the other two traditional roles of the academic: Teaching and service to society. University missions and performance rewards followed suit. Despite growing social issues, academics' engagement with students and wider society waned as a consequence.

This state of affairs and its deleterious consequences were exposed in a 1989 study by the Carnegie Foundation for the Advancement of Teaching that surveyed over 5000 American academics (Boyer, 1990). The finding was a perception that output-focused academic research was short-changing students but also neglecting more broadly-minded academics, society's more general needs and, arguably, science itself (Van de Ven, 2007). The result was declining spirit in and legitimacy of the university. The author of the Carnegie report, Ernest Boyer (1990) prescribed a remedy in the form of a less narrow conception of scholarship. This *engaged* scholarship not only includes generating knowledge but also, explicitly, passing it on to students through teaching, its practical application and contextualisation through interdisciplinary perspectives: The scholarship of discovery, application, teaching and integration.

Boyer's argument goes beyond the relatively uncontroversial assertion that being an academic ought to involve discovery as well as teaching, practice and intellectual synthesis. He claimed that each of these four are integral components of successful *research*. Teaching and practice and a broad intellectual horizon help the researcher to better develop new knowledge that is fit for purpose (i.e., useful) (Van de Ven, 2007). In the words of Robert Oppenheimer (1955), "it is a proper to the role of the scientist that he teach." Both Simon, Herbert (1996) and Ronald Coase (1991) won Nobel Prizes in economics based on personal observations of business and policy practice made as young men. In short, engaged scholarship assumes that because any specialist knowledge is partial, complex research problems are best solved

through the interaction between and participation of different researcher stakeholders (i.e., researchers with different perspectives, practitioners and students).[12]

Boyer proposes nothing less than a complete re-orientation of the university to promote engaged scholarship. Engaged scholarship is both a matter of somehow engaging an individual academic's intrinsic motivation and changing the extrinsic incentives that institutional policies provide. Institutions have a role to play in their missions and the performance criteria they employ. But academics, as the gatekeeper of academia, have a professional responsibility they can exercise at the grassroots level (e.g., through syllabus and examination design).

In addition to engagement with students, business and policy stakeholders, an often overlooked fact is that academics ought to engage with each other. For example, Svorenčík (2018) documents persuasively how the fortunes of behavioural research centres do not depend solely on individual ability or equipment (such as state-of-the-art laboratories) but on 'social infrastructure'—how researchers relate to one another as part of a community.

2.10 Discussion

> The various business disciplines are invariably described as scientific, professional, applied, and concrete. No wonder that some business professors struggle daily to assert their identity. We believe that the experimental methodology can provide partial relief to these split personality syndromes. Experiments can provide the link as well as the justification for the scientific inquiry in the business discipline. (Rapoport and Zwick, 2002, p. x–xi)

Let's draw together the main arguments of the preceding sections that provide the puzzle pieces needed to arrive at the picture of behavioural business. We saw that the social sciences were separated at birth into relatively arbitrary departments of specialised and professionalised research workers that became self-reinforcing organisational units and social communities. We saw that the disunity between them harmed their ability to meet scientific and public goals. We also saw opportunities for their revival in consilience based on psychology and biology, and in the business school as a platform for engaged scholarship involving researchers, students, practitioners and society.

This is the context of behavioural business—interdisciplinary social science scholarship of human behaviour in business and economy; scholarship that embraces the empirical facts about human psychology as well as the methods that have brought them to light. It is often practiced from an engaged perspective

[12] A test of the notion of engaged scholarship may lie in correlating teaching with research performance. Although a host of empirical studies exist in this direction, they are plagued with seemingly insurmountable issues including how to measure research and teaching quality, direction of any causation between them, and levels of analysis (individual or institution) among others. No consensus exists whether teaching promotes research or vice versa (see Elton 2001).

involving collaboration with students, practitioners and researchers from diverse disciplines. The above quotation from Rapoport and Zwick (2002) is one of the few calls for a similar approach. They introduced 'experimental business research' for many of the same reasons outlined in this chapter. Experiments are the central method of the behaviouralist.

The strategy of the preceding sections was to provide a rationale for behavioural business based on the context of the history of social science and higher education. Seen from a historical perspective, behavioural business (and similar initiatives) seems like a logical conclusion to simultaneously serve several stakeholder needs, including promoting science, the legitimacy of the university and the needs of students and practice. A historical perspective is important because assessing the state and potential future of social science thinking requires context. Any assessment invariably involves comparing what is with the alternative routes and the reasons they were not taken.

I conclude with some qualifications. First, it is hard to see how any scientific endeavour today can involve a return to the renaissance ideal of the polymath who is master of a broad range of diverse topics and methods. The reason is not that the scale and sophistication of social science has gone too far, but that specialisation is necessary for science to progress and will remain so. Interdisciplinary work will complement rather than replace the disciplines.

Much of the inspiration for an integrated social sciences comes from the natural sciences. The question arises to what extent this is the right role model, because of some fundamental differences between the social and physical worlds.[13] Human beings are intentional and (at least some of) the laws that govern the social world, if they exist, change with humans' attempts to adapt to their environment. This type of co-evolutionary process is well-known to have some perplexing properties. It leaves social science much more prone to the social equivalent of the Heisenberg principle (i.e., the Hawthorne effect where observation affects the observed).[14] Further, intentional and reflective human behaviour may also be more context-specific than that of the physical world. Our decision making in the spheres of business, private life and politics may activate different motivations and be governed by different laws. This could, to an extent at least, justify a division of labour in social science that reflects these contexts.

Another difference is the role of ideology. The subject matter social scientists deal with engages their deep moral sentiments, values and tribal instincts to a much greater extent than is typically the case in the natural sciences. Is objectivity possible or even desirable to the same extent? It is likely that these issues contribute strongly to the current state of social science. In short, it is not at all clear that

[13] See Fish (1989), Dupré (1995), Nissani (1997), Rhoten and Parker (2004), Sarewitz (2014), Cat (2017).

[14] An example is the nudge programme where policymakers benignly exploit human reasoning fallibilities for behaviour chance. If behavioural science is widely taught at universities and enters public discourse it may well be that these fallibilities eventually recede, rendering the intervention theories and insights redundant.

natural scientists would fare any differently if tasked to make progress in our understanding of the social world. Ideology may be a particular issue associated with interdisciplinary work when a holistic approach is adopted. According to Sarewitz (2014), when consilient approaches abandon the artificial boundaries between disciplines to address systemic problems, the equally arbitrary distinction between normative and positive science becomes collateral damage.

In addition to these general issues, there are more practical ones. It seems clear that interdisciplinary work in general requires a concerted paradigm shift that involves researchers and the makers of the policies they respond to. Anyone brave enough to cross disciplinary lines needs to wrestle with mutually incomprehensible epistemologies and ideologies, a discipline-based incentive system in professional research and the very tribalism that holds the discipline system together. These incentives would need to change and match the remaining hurdles.

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Part II
Concepts and Approaches

Chapter 3
Culture and Economic Behaviour: Evidence from an Experimental-Behavioural Economics Research Programme

Swee-Hoon Chuah and Robert Hoffmann

3.1 Introduction

One of the few things most social scientists can agree on is that culture matters (Harrison and Huntington, 2000, p. xiv). Despite their disunity, the different social sciences still share the fundamental objective to explain human social behaviour (Elster, 2015, p. 9). And they agree, in their own ways, that culture is an important explanation, precisely because culture is what makes us human. But this is where the consensus ends. Cultural influences on behaviour have been looked at through the lenses of different epistemologies and methods, ultimately impeding the use of culture as a unified explanation of human social behaviour.

Culture not only provides an illustration of the disunity of the social sciences, but also of how behavioural research may promote their integration (e.g. Tooby and Cosmides, 1992). Much potential for harnessing culture as a powerful explanation in an integrated social science exists and will be explored in the following. This chapter is about just *how* culture matters for human social behaviour from a behavioural-experimental perspective. We review our own research programme in culture, one which followed the course of behavioural business research to a large extent: A programme where a business school brought together researchers, as well as practitioners, from different disciplines to pursue a relevant and consistent explanation of culture's role, based on behavioural insights and methods.

In this programme, we examined behaviour, from the vantage point of economic science, using a behavioural approach combined with the specific experimental methods economists have developed. When coupled with behavioural approaches to culture from outside of economics, this approach, used by ourselves and many

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others, has produced much insight into the question at hand, as we explore in the following chapter.

In the next two sections we outline the two main variables in the research: culture (Sect. 3.2) and economic behaviour (Sect. 3.3), and in particular how behavioural-experimental research casts them. Section 3.4 summarises the findings in five stylised effects of culture on economic behaviour that have been demonstrated in the behavioural-experimental economics approach to culture. Sect. 3.5 concludes.

3.2 Culture

Culture is a deceptively familiar concept—all around us yet notoriously hard to pin down (Chuah, 2006). In early discourse culture was high civilisation (i.e., the state of being cultured). However, for social scientists, the use of culture in explanation requires not only a more precise definition but also workable measures. A distinct lack of consensus on both counts inhibited the use of culture beyond use as a vague, catch-all term for unexplained differences in the behaviours or outcomes of different groups (Frederking, 2002). The different social sciences, especially anthropology, sociology and psychology, brought their own epistemologies, methods and objectives to the definition of culture. Kroeber and Kluckhorn (1952) painstakingly examined no fewer than 164 definitions of culture to promote 'agreement and greater precision'. They identified several common aspects: Culture is the totality of typical, learned ways in which people in a given society tend to think and do things as well as their resulting ideas and artefacts. While Kroeber and Kluckhorn's work provided a great service to the scientific community, it highlighted not only a proliferation of seemingly relevant aspects of culture but also systematic differences in emphasis between different social sciences that served to retard the development and use of culture as a scientific concept (see Triandis, 1995; Chuah, 2006; Jahoda, 2012). To use culture in social research effectively requires not only a workable definition but also ways to measure it.

3.2.1 The Behavioural Approach to Culture

The emergence of behavioural science afforded an integrated approach to culture (Beugelsdijk and Welzel, 2018), including definition and measures, that is now shared across many social sciences. By the late 1950s, the cognitive revolution and computer programming offered a working analogy that allowed researchers to make the transition away from a *behaviourist* concept of culture as observable behaviour and artefacts to a *behavioural* one. It also allowed culture to be treated as a phenomenon that exists at the individual as well as at the group level. In the new, cognitive view, human beings acquire culture as their 'software of the mind' (Hofstede, 1984; Hofstede et al., 2010) via socialisation. It is this software that

is responsible for creating a society's behaviour patterns, ideas, institutions and artefacts that were simultaneously part and parcel of earlier definitions. In particular, culture is now commonly defined as a socially-transmitted set of values and attitudes that members of a particular group share (e.g. Hofstede, 1984; Inglehart, 1997; Smith and Schwartz, 1997). Viewed in this way, culture is an important source of societal institutions, the "humanly devised constraints that shape human interaction" (North, 1989, p. 3): Culture contains society's *informal* constraints; those unwritten codes, conventions and customs that are not formally enforced.

The focus on culture as attitudes and values allows it to be studied through these two well-developed concepts that could not only be (reliably and validly) measured (Kline, 2014) but promise to explain behaviour. Both are tendencies—evaluations of objects of thought (e.g., people, things, situations or ideas) that are manifested in a person's typical response to these objects (Bohner and Dickel, 2011). While attitudes are more specific to particular objects and momentary, values are more enduring, higher-level, general evaluations (Rokeach, 1973, p. 124). Attitudes are more numerous and lower-level and result from the application of a general value to specific objects. They form the link between values and behaviour.

The behavioural definition of culture as shared attitudes and values has enabled researchers to use a myriad of existing scales to 'measure' culture. Although most of these comprise a single value dimension that is elicited typically using multiple questionnaire items, a number of scholars have made attempts to capture the full range of human values. For example, Rokeach (1973) developed a system consisting of 36 values: half expressing a person's goals, and the other half, her desirable behaviours. It is these encompassing value systems that can potentially capture cultures in their entirety and therefore may be used to compare them.

However, Rokeach's system was designed for American culture rather than to compare different ones (Hofstede and Bond, 1984). Other researchers have designed value systems that are, in principle at least, general to all cultures to compare them. These can then be administered to different cultural groups to identify differences in their responses at the aggregate level of their cultures (for overviews, see Schwartz, 2002, 2006; Minkov, 2011; Ralston et al., 2011; Gorodnichenko and Roland, 2011; Minkov, 2012). These cultural differences are then used as explanations of differences in behaviour or outcomes between the groups concerned. We now look at the key cross-cultural survey instruments that have been developed and used to capture and measure cultural values across different cultures.

3.2.2 Triandis' Individualism-Collectivism Dimension

One of the most venerable and best-known values that differentiates cultures is a scale ranging from individualism to collectivism, or the extent to which the individual is integrated in the group. Triandis (1995) identifies four dimensions of the construct, including the extents to which (1) the individual is interdependent with others, (2) individual goals are aligned with collective goals, (3)

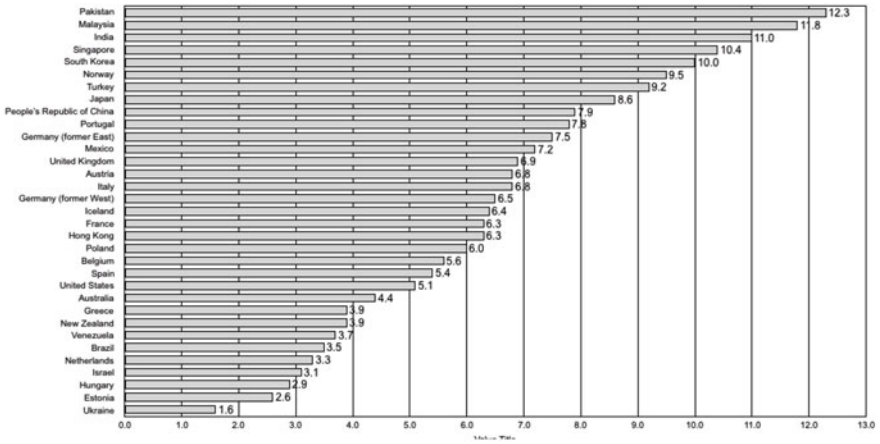

Fig. 3.1 Tightness across 33 nations. Data sourced from: Gelfand et al. (2011)

individual behaviour is constrained by these, and (4) maintaining relationships is more important than individual advantage. A closely-related cultural value is the tightness-looseness spectrum, or the strength of social norms and intolerance of deviance. It measures the extent to which a culture specifies correct behaviour, expects it from members and sanctions those who violate these norms (Triandis, 1995; Gelfand et al., 2011).

Several studies have measured collectivism and tightness-looseness across multiple countries, standing proxy for cultures, and produced aggregate country-level scores. Figure 3.2 (top panel) shows a collectivism world map based on the data collected by Hofstede et al. (2010). The results of tightness in Gelfand et al.'s (2011) sample of 33 nations are shown in Fig. 3.1. Casual inspection of both seems to suggest that higher levels of looseness and individualism are associated with Western nations and higher levels of economic development.

Such hunches require formal statistical falsification. A number of studies have used sophisticated econometric techniques to explain economic outcomes of different countries using individualism and looseness. The evidence suggests that individualism is associated with a country's quality of its institutions (Klasing, 2013), and, controlling for the latter, with long-term economic growth and innovation (Gorodnichenko and Roland, 2011, 2017), as well as development (Beugelsdijk and Welzel, 2018).

3.2.3 Hofstede's Cultural Dimensions

Hofstede (1984), a management scholar, conducted a colossal cross-national survey consisting of 60 core questions with over 116,000 IBM managers from 72 countries.

In addition to individualism-collectivism, Hofstede identified three new dimensions on which national cultures differ, to which a further two were added in later work with collaborators (Bond et al., 1987; Hofstede et al., 2010). Power distance is the extent to which the less powerful expect and accept the unequal distribution of power. Masculine societies are those in which social gender roles are clearly distinct, whereas they overlap in feminine societies. Uncertainty avoidance is the extent to which people feel threatened by uncertain and unknown situations. Long- versus short-term orientation is a more dynamic stance that values future outcomes through behaviours such as thrift and perseverance. Indulgence/restraint is the acceptance of others' hedonistic lifestyle as opposed to strict social norms constraining individual expression.

Again, the data collected by Hofstede allowed the creation of world maps for each of the value dimensions that was identified (Figs. 3.2 and 3.3). They illustrate cultural difference across different regions of the world that appeal to intuition. And again, there is some evidence that Hofstede's cultural dimensions affect economic outcomes at the aggregate level. For example, Gorodnichenko and Roland (2011) find that uncertainty avoidance is negatively related to worker productivity. Klasing (2013) found that in addition to the result for individualism, acceptance of power distance and uncertainty avoidance are negatively related to institution quality at the country level.

3.2.4 Schwartz' Universal Human Values

Schwartz, a psychologist, created a universal human value survey to measure culture both at the level of the individual and of the cultural group. To measure individual cultural values, Schwartz (2001, 2002) identified 10 motivationally distinct responses to 3 universal requirements of human existence: sustaining biological functions and coordinated social interactions. In Schwartz' system, actions taken in the pursuit of one value have consequences that may either conflict or cohere with another, forming a circular structure (see Fig. 3.4). Closer values are more compatible in their underlying motivations. According to their positions in the structure, the values are aligned along two dimensions. The first dimension, *openness to change vs. conservation*, emphasises novelty and personal autonomy at the expense of stability, certainty, and social order. The values belonging to the openness to change dimension are stimulation (excitement, novelty and challenges in life) and self-direction (independent thought and action, the freedom to choose, create and explore). The conservation dimension includes the values of tradition (submission of oneself towards authority and past ideas) and conformity (self-restraint to submit to others). Both openness to change and conservation share submission to external expectations. The second dimension, *self-enhancement vs. self-transcendence* emphasises self-interests, such as wealth and success, at the expense of the welfare of others. Self-enhancement consists of the values of power (prestige and dominance over people and resources), achievement (social approval

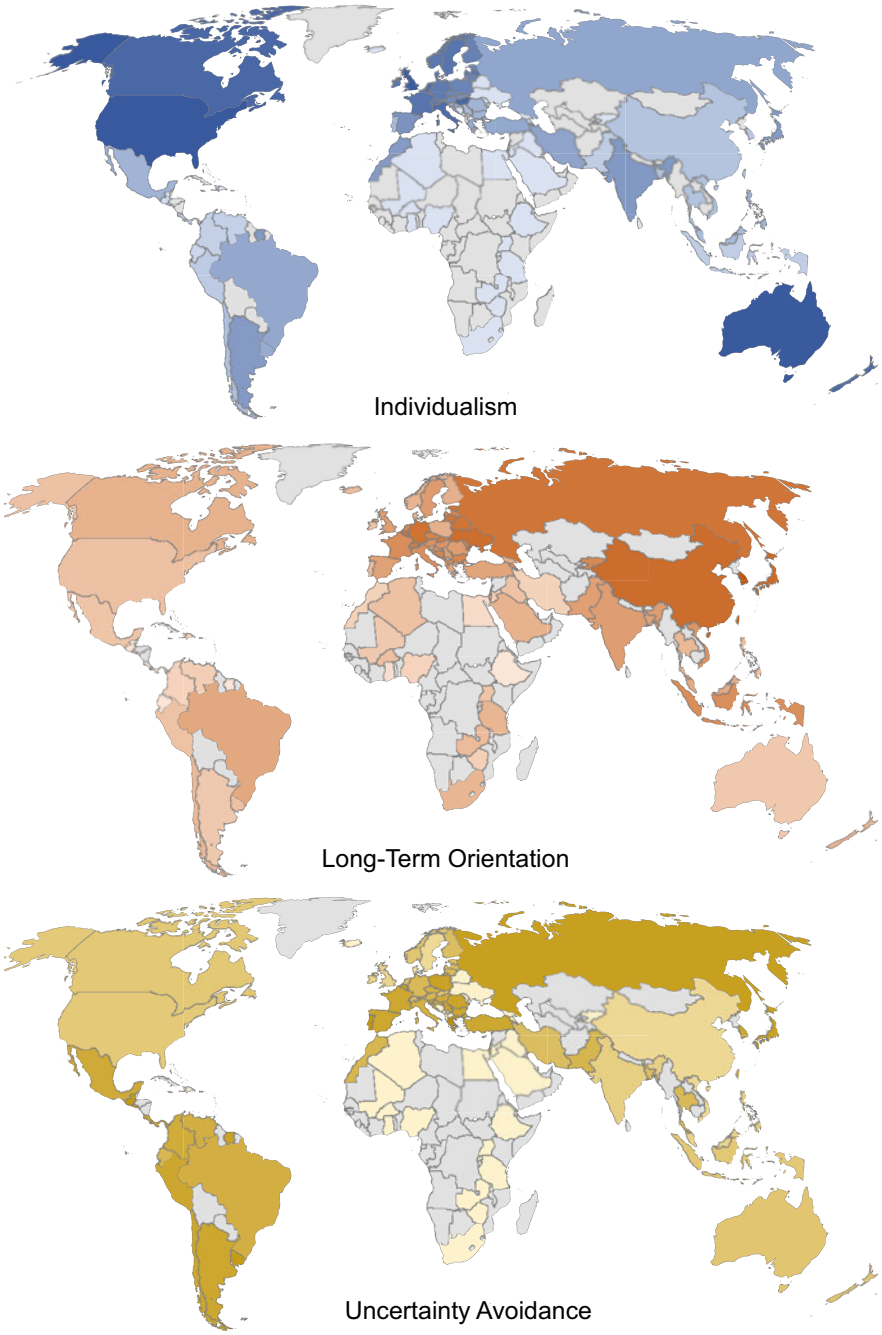

Fig. 3.2 World maps for three Hofstede dimensions. Darker shades indicate greater average scores for the dimension concerned. Data source: https://geerthofstede.com/

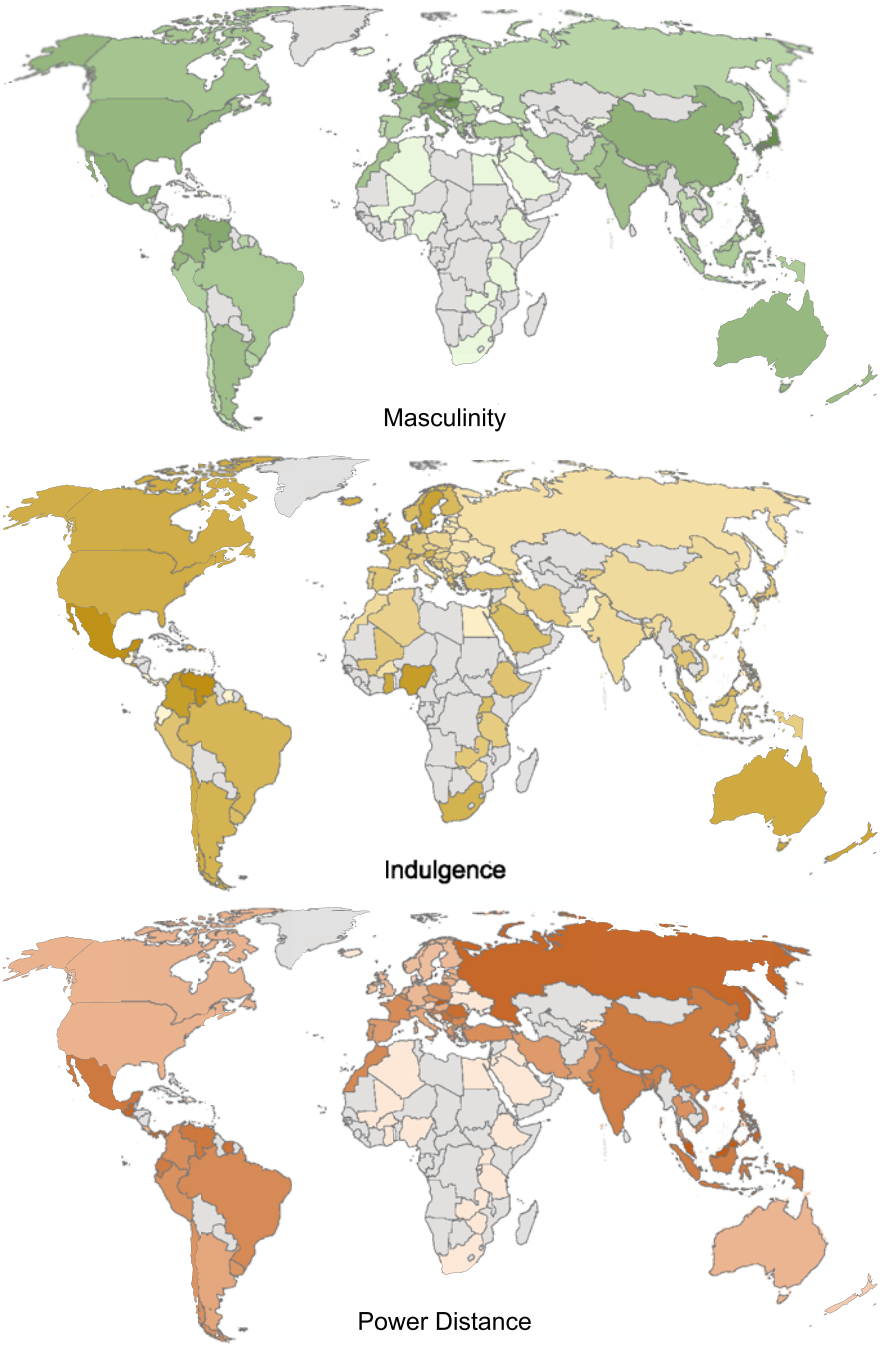

Fig. 3.3 World maps for three Hofstede dimensions. Darker shades indicate greater average scores for the dimension concerned. Data source: https://geerthofstede.com/

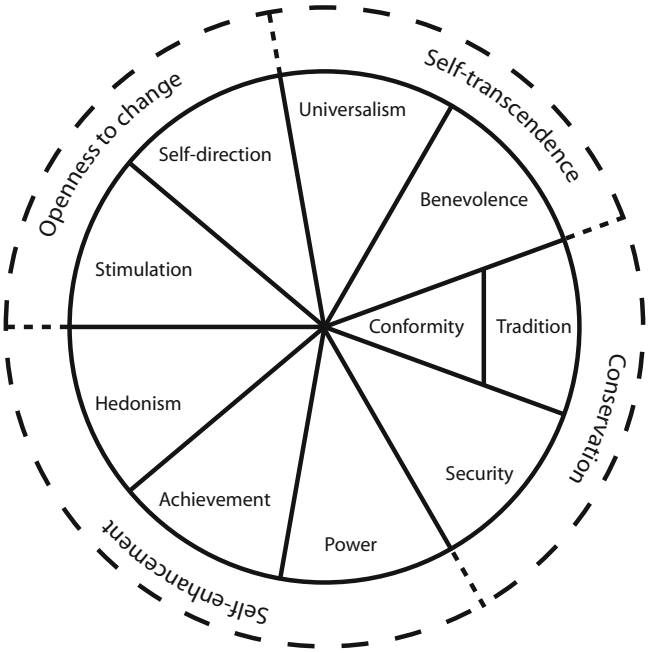

Fig. 3.4 Schwartz universal human values

through competence) and hedonism (pleasure and sensual gratification). Self-transcendence consists of universalism (understanding, appreciation, and protection of all people and nature) and benevolence (welfare of close others).

Schwartz (2006, 2014) used the individual-level values data to derive a system of seven value dimensions that characterise cultures (i.e., culture at the level of the group).[1] These capture the value emphases that societies set to regulate behaviour and address their basic survival. The dimensions are based on multidimensional scaling of data from the same individual values questionnaire where country-averages for each of the items are taken. Again, they form pairs of inversely related constructs.

Schwartz's seven dimensions again provide a visual way to compare nations in terms of cultural values (see Fig. 3.5) that appeals to intuition. And, as with the previous cases, these cross-country data allow econometric work to relate these values to economic outcomes at the national level to see if culture matters. Schwartz (2006, 2014) finds that autonomy, egalitarianism and harmony are positively related (the latter marginally) to per-capita GDP, freedom and low corruption. Gorodnichenko and Roland (2011) find that (affective and intellectual)

[1] Note that this changes the emphasis in the definition of culture from an individually-held set of values to the characteristics of a group's value system.

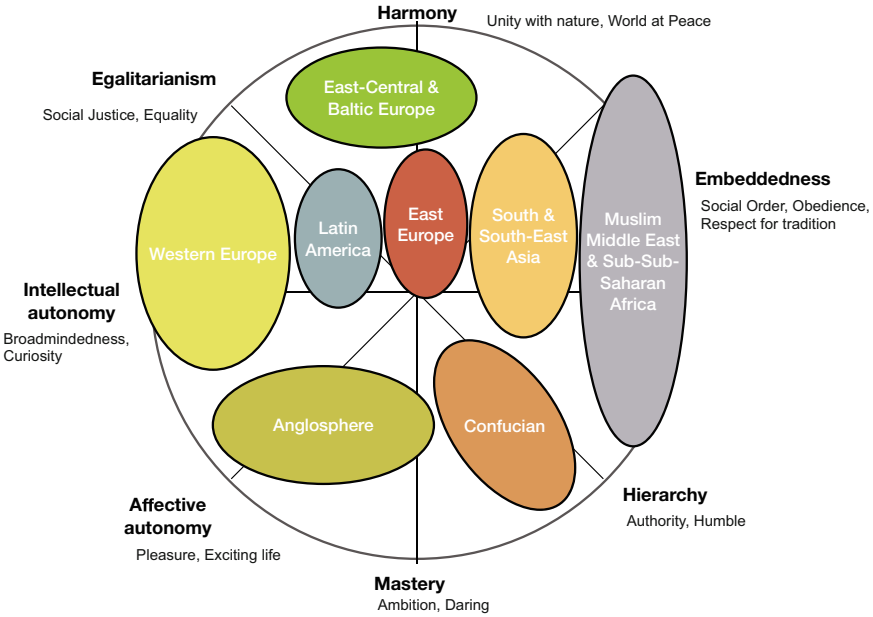

Fig. 3.5 Schwartz cultural map of world regions. Source: Adapted from Schwartz (2014)

autonomy as well as egalitarianism are positive, and embeddedness as well as hierarchy are negative significant explanators of per-capita output. Similarly, Liñán and Fernandez-Serrano (2014) find no relationship between per-capita GDP and mastery, but that embeddedness and hierarchy are again negative and significant.

3.2.5 Inglehart's World Values Survey

Inglehart (1997, 2018), a political scientist, and collaborators (e.g., Inglehart and Baker, 2000; Inglehart and Welzel, 2005) have collected a comprehensive World Values Survey (WVS) dataset in over 7 waves since 1981 across more than 100 countries. Their objective is to investigate the changes in individual attitudes over time and how they propel nations though different stages of political and socio-economic development: Traditional societies focus on acceptance of authority because of the limited scope for individual advancement. Industrial society is associated with progress and bureaucratisation. Post-modernisation (also known as post-materialism) means that society no longer focuses on physical and economic security, but on individual autonomy and self-actualisation.

Inglehart identifies two basic value dimensions that capture 50% of differences between societies. *Traditional vs. secular-rational* encompasses values concerning

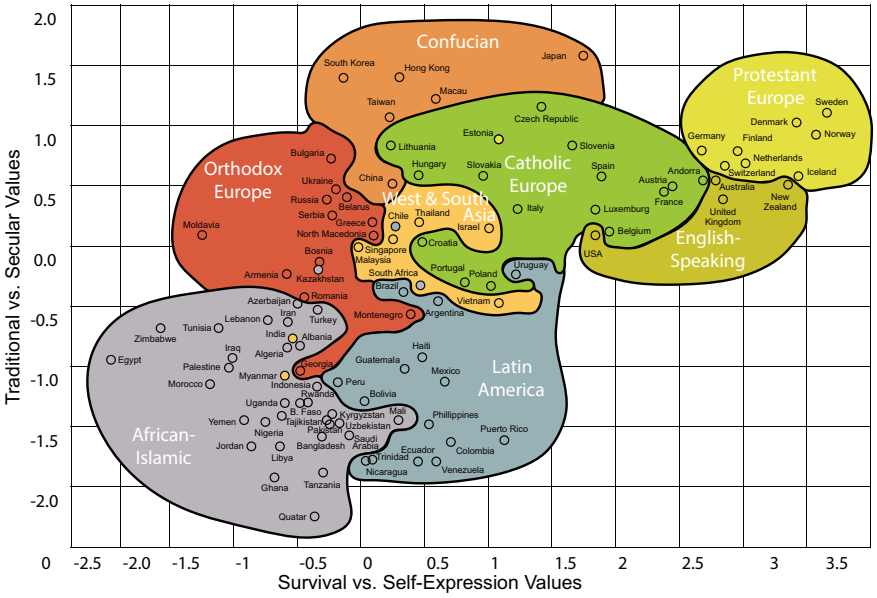

Fig. 3.6 Inglehart-Welzel world cultural map. Source: Adapted from Inglehart and Welzel (2005)

religion, national pride, the ideal number of children, respect for authority, political interest, attitudes towards divorce and the role of women, sexual norms, and economic incentives. This dimension captures the shift from traditional to modern societies, and captures some 20% of the inter-society difference. On the other hand, *survival vs. self-expression* reflects a shift to post-modernisation, capturing 30% of the difference. Key factors are subjective well-being, health, tolerance and imagination rather than hard work, respect for parents and authority, trust in science or ecological motives.

These two dimensions can also be mapped (Fig. 3.6). Again, intuitively appealing (in terms of common perceptions of culture as well as history) groups of similar nations arise. Nations are plotted along the two dimensions to reveal their cultural similarities and progression from traditional to industrial and post-modernised society along the diagonal (Inglehart and Welzel, 2005). In terms of statistical analysis, Inglehart finds that increasing secular-rational authority and well-being values are positively correlated with per-capita GDP. Further, a group of attitudes under the umbrellas 'achievement motivation' and 'post-materialism' are better explanators of economic growth than standard economic growth models. In contrast, Klasing (2013) finds that traditional and survival dimensions are insignificant explanators of the quality of countries' institutions. Welzel et al. (2003) find that several aspects of the WVS's post-modernisation orientation that measure 'emancipative values' (tolerance, trust, liberty aspirations, life satisfaction, irreligiosity) are positively

associated with individual resources, a measure that includes both physical and intellectual resources as well as their distribution in a country.

3.2.6 *Bond et al.'s Chinese Culture Connection*

A number of authors have worried whether the identification of individual value dimensions in the systems discussed so far may be the result of their origin in Western research and thought. If not only values but cognitions (the way people perceive, process and recall information) are culture bound, then entirely different value perspectives may result from non-Western research (Bond et al., 1987; Hoffmann and Tee, 2006). There is some evidence for cultural effects on thinking. Nisbett (2003) argues that different world views and thinking styles developed in the West and East Asia, suited to different historical environments and economic practices, such as individualist herding, fishing and trading in ancient Greece compared with collective irrigation and agriculture in ancient China. However, the vast majority of insight into the human psychology (at least historically) stems from experiments with Western participants, mostly recruited as undergraduate university students (Nisbett, 2003; Henrich et al., 2010; Lonner and Malpass, 1994, p. ix).

A group of cross-cultural psychologists, Bond et al. (1987, see also Bond 1996a) redress the balance for universal values through a comprehensive opinion poll among Chinese social scientists that identified 40 of the most important traditional Chinese values. China is the obvious test for the universality of Western research owing to the long history and contemporary importance of Chinese culture (Chuah et al., 2014a; Bond, 1996b). These authors identified 4 dimensions within the 40 values through factors analysis: Integration (harmony, tolerance, filial piety, conservativeness), Confucian work dynamism (thrift, persistence, face, respect), human-heartedness (kindness, patience, courtesy, righteousness) and moral discipline (moderation, prudence, adaptability, disinterest).

Many of these have been identified in other work as key Chinese traditional values. Filiality accepts the authority of generational and social seniors within and beyond the confines of the family (Ho, 1996). Harmony guides horizontal (peer) relationships and cooperation, reciprocation, harmonious social interaction, tolerance of others, kindness, forgiveness and compassion (Bond et al., 1987). Face (Earley, 1997) is one's positive public and self image and consists of good moral standing (lin 脸), as well as prestige (miàn zi 面子). Maintaining one's face integrity is an important value to maintain good relations with others. Competitiveness is composed of fear of losing out (kiasu 怕输) and calculating pursuit of materialistic objectives (Chuah et al., 2014a, 2016b). Many traditional values are still reflected in contemporary Chinese societies (Wu, 1996).

Chinese and/or Confucian values have been identified with the success of the Tiger economies and the overseas Chinese Diaspora across the world (Reischauer, 1974; Redding, 1990; Weidenbaum and Hughes, 1996; Kotkin, 2010). Bond et al.

(1987, see also Hofstede and Bond 1988) find high correlations between Confucian dynamism and per-capita GDP as well as economic growth.

3.3 Economic Behaviour

So far we have made the case (1) that culture is an important construct in all the social sciences, (2) that culture can be measured behaviourally both at the individual and group levels using attitude and value systems, (3) that different cultural values differentiate people at the level of their countries, and (4) these values seem to relate to aspects of their economic outcomes. It is tempting to leave the story at that. However, an important methodological issue with (4) stops us concluding that culture matters economically speaking: Maybe culture is the result rather than the cause of economic performance? Or maybe both are attributable to another, underlying cause such as history or geography? And, even if culture is the cause of economic outcomes, what is the mechanism by which it has this effect, which is crucial to policymakers?

This important issue of endogeneity motivates our own programme of research focusing not on the effect of culture on economic outcomes at the aggregate level but on individual economic behaviour. We first outline this issue and then explain how experimental-behavioural economics harbours the potential to make important additional contributions here (i.e., to understand how culture affects economic outcomes through economic behaviour). This is a behavioural approach where economic experiments are used to advance our understanding of the effect of culture on economic behaviour within the spirit of economic analysis.

3.3.1 The Trouble with the Classicists

The endogeneity issue associated with culture and other economic phenomena lies in the particular scientific methodology and epistemology of economics. Traditionally, economists are mostly concerned with the efficiency of economic *outcomes*. In this endeavour, economists hold themselves to the same scientific standards as the natural sciences. However, owing to the head start economics had among the social sciences, no scientific account existed of human decision making that early economists could use to explain the economic outcomes they were interested in. Economics took a behaviourist turn, in that the mental processes that generate decisions were not deemed a suitable topic for the economic method. Consequently, economists adopted Friedman's (1953) doctrine and tend to care

more about prediction than the explanation of economic outcomes to inform welfare-enhancing policy.[2]

Among the social sciences, economics was the last to apply its methods to the study of culture as a potential factor (Beugelsdijk and Maseland, 2010).[3] Science, in economics and elsewhere, customarily consists of two types of research: empirical data analysis and theoretical modelling based on logic. The two go together: Theory informs empirics and, at the same time, is falsified by it. The first, empirical part of economic science is based on both empiricism and positivism in that economic approaches are entirely quantitative. Econometrics consists of statistical analyses of secondary data where hypothesised relationships between observable economic variables (identified in modelling and theory) are confirmed when statistically significant. It is this type of empirical approach where economics first made progress in the analysis of culture. A large number of careful correlational studies, some mentioned in the previous section, conclusively documented statistically significant relationships between various measurable, overt proxies for culture (such as nationality, language or religion) and various aspects of economic performance (growth, productivity, trade) at the level of nations and regions (e.g. Hall and Jones, 1996; Knack and Keefer, 1997; Zak and Knack, 2001; McCleary and Barro, 2006; Guiso et al., 2009, 2003; Algan and Cahuc, 2010; Tabellini, 2010; Gorodnichenko and Roland, 2011, 2017; Buggle, 2020).

The problem that approaches of this type have to address is one of endogeneity (e.g. Frederking, 2002; Hoffmann, 2013; Acemoglu and Robinson, 2012). Cultural explanations of economic outcomes tend to be causal—a statistically significant relationship is interpreted to mean that cultural change effects change in economic outcomes. However, significant correlations at the aggregate level leave open the question whether culture affects economic outcomes, whether economic outcomes affect culture, whether they mutually reinforce each other, and/or or whether a third influence underlying both may be responsible. Further, the mutually reinforcing relationship may become path dependent, meaning it sets a cultural group's fate on a trajectory that is hard to break away from (Hofstede 1994, p. 453; Inglehart in Harrison and Huntington 2000). These are problems that the authors of the big value surveys are obviously aware of and attempt to address (Inglehart 1997, p. 222; Welzel et al.; Inglehart; 2003; 1997; Schwartz 2006, p. 161; Hofstede 1994, 132, 85).

Several approaches exist to tackle endogeneity. One solution, often taken by economic approaches, is to use prior hypotheses and theoretical links as a reason to interpret correlation as causality. However, in the case of culture not only theoretical arguments but empirical evidence suggest that the relationship between culture and economic outcomes can go either direction. Careful econometrics may help

[2] Paraphrasing John Cale and Lou Reed, the trouble with the neo-classical is he looks at an outcome, that's all he sees, he models an outcome. He doesn't ask why.

[3] This strand of research is often confused with another economics of culture—an entirely separate sub-discipline that applies economic tools to the arts and cultural industries. One is based on culture as individually-held and shared values and attitudes, while in the other, culture consists of artistic works, artefacts and practices (see Coate and Hoffmann, 2022).

establish the direction of causation between using instrumental variable or Granger causality approaches. But the issue remains: What is the mechanism that turns values into economic outcomes (or vice versa)? This question is important for policy, which needs to be targeted to be successful.

Let's illustrate these issues using a well-known cultural explanation that began with Max Weber, the pioneer of cultural approaches to economic outcomes (Weber, 1905, 2001, 1968). He proposed the Protestant work ethic as an explanation for the early economic success of European nations, while Confucian values were to blame for the simultaneous 'backwardness' of China. As we have already seen (Sect. 3.2.6), when East Asian Tiger nations and the Chinese Diaspora started to economically outperform not only their neighbours but also Western nations after World War 2, Confucianism was again used as the explanation, but this time for progress, not retardation (Wong, 1996). Conversely, evidence now exists that the Protestant Reformation in Europe was itself the result (and not just the cause) of changing economic conditions. Greater affluence of the merchant and artisan class resulted in better education and a desire to conduct business unimpeded by Catholic doctrines (Ekelund et al., 2002; Becker et al., 2016). Undoubtedly, the resulting Reformation then provided further impetus to affluence and education.

3.3.2 Behavioural-Experimental Economics

Untangling the endogeneity issue invariably involves resorting to the analysis of individual behaviour, the micro-foundations on which group outcomes are based. In economics, these are examined using the second part of scientific method, formal theoretical model building and analysis to render generalisable explanations. Economic variables and models need to be tractable to allow them to be incorporated into such analysis. This part of economic method rests on methodological individualism (i.e., takes individual reasoned action as the basic unit of analysis and explanator of social phenomena). Individual economic behaviour means resource-allocating decisions that affect economic aggregate outcomes, including different aspects of the performance of a business, region or nation. Economics is in this sense is a science of individual choice—to predict and explain how individual human decisions allocate resources.

Tractable models rendering humans predictable resulted in the *homo economics* assumption of instrumental rationality, where agents make optimal decisions based on perfect understanding of all relevant information and the consistent and stable system of preferences they happen to have. For economists, this obvious caricature is not meant as a realistic representation of human decision making but an idealised representation shaped by methodology, and is instead intended as a benchmark to compare actual behaviour against. Culture does not expressly feature in this model. Human behaviour is universal—the same everywhere (Henrich, 2000). Although cultural values may in theory reside in an agent's preferences, these are typically assumed to be exogenous rather than self-generated and systematically correlated

with those of others, as in the case of culture. In short, neo-classical microeconomics has little to offer to explain culture's effect on economic outcomes (or vice versa).

In the scientific spirit of falsification, economic approaches began to adapt to the challenges that culture and other observed 'anomalies' posed for economists. The opportunity came with the cognitive revolution starting in the 1950s that provided the methods to study mental phenomena scientifically. Behavioural economics began as the initiative to import methods and the insight these generated in the sciences of human decision making, such as psychology and cognitive science, while staying true to the original objectives and spirit of economics.

Among those methods, by far the most common is the experiment. Experiments are a data collection method where a potential influence on an outcome variable is systematically manipulated (while all other factors are controlled) to establish its causal effect. In human participant experiments, the outcome is behaviour, and its potential causes typically include characteristics of the decision maker, features of the decision and the social environment in which it is taken (Chesney et al., 2018). *Economic* experiments are a methodological development of the human experiment paradigm (that was first developed in psychology) suited for economic analysis (Hertwig and Ortmann, 2001; Croson, 2005; Ariely and Norton, 2007). The tasks are usually abstract to make results general rather than context specific. Participants, similarly, are intended to be representative of the general decision maker.

Economic experiments have two features that distinguish them from practice in psychology and elsewhere. Both are meant to elicit participants' true decisions that reflect how they would respond to real-life situations. First, participants receive (usually financial) rewards not only for participating but based on the particular outcomes their decisions have in the experiment. This feature of *incentive compatibility* is meant to ensure valid responses when participants put their money where their mouth is, in contrast to hypothetical or inconsequential responses in standard questionnaire surveys. The second feature, non-deception, means that participants are not misled about any part of the experiment, including through omission. Here the aim is to instil participant confidence and trust that their decisions will result in outcomes in line with the information they were given.

In standard experiments, participants are individually seated at partitioned computer terminals in a neutral laboratory environment to ensure privacy, and anonymity with regard to the other participants they interact with. While most experiments have been conducted in laboratories with university students, experimental economics continues to evolve to allow for greater realism to make results more extrapolatable (Chesney et al., 2018). These innovations include conducting experiments in field settings, using online panels and virtual multi-player environments to recruit wider segments of society, and to administer more contextual and realistic tasks. This is done while attempting to preserve the control and generality that abstract lab experiments afford. Some (but not all) experimentalists see the spectrum from the abstractness of student lab experiments to concrete field experiments as a trade-off between control and external validity.

The key findings of behavioural methods in the social sciences paint a picture of human decision making that differs from *homo economicus* in several significant

respects. In addition to predictably rational behaviour, people's behaviour is often the result of their emotions, intuitions and the influence of others. They often fail to optimally collect, process and respond to relevant information. They are motivated not only by their own material gain but by what happens to others and their own non-pecuniary, intrinsic motivations. In addition to universally human responses, people differ in their behaviour from one person to another but also from one group to the next. It is the latter finding that reflects the role of culture identified in the other social sciences. Together these insights point to regularities in human behaviour that allow researchers to treat humans as *predictably irrational* (Ariely, 2008). Behavioural economics thus claims to be the best of both words: more at ease with the reality of human behaviour without sacrificing one of the key objectives of economics.

The most promising economic approach to culture thus combines economic experiments with a behavioural perspective—an approach that might, for methodological precision's sake, be termed *behavioural experimental economics* (see Fig. 3.7). It is an approach within the aims and spirit of economics, but one that utilises the methods and insights of behavioural science, and in particular, the human participant experiment as adapted for economics. It is this approach to which our programme reported in the next section belongs. It is useful to delineate it from other approaches as shown in Fig. 3.7. Economic experiments exist that are not behaviourally inspired (Loewenstein, 1999). Similarly, not all behavioural economics work uses experiments. An example is the previously-

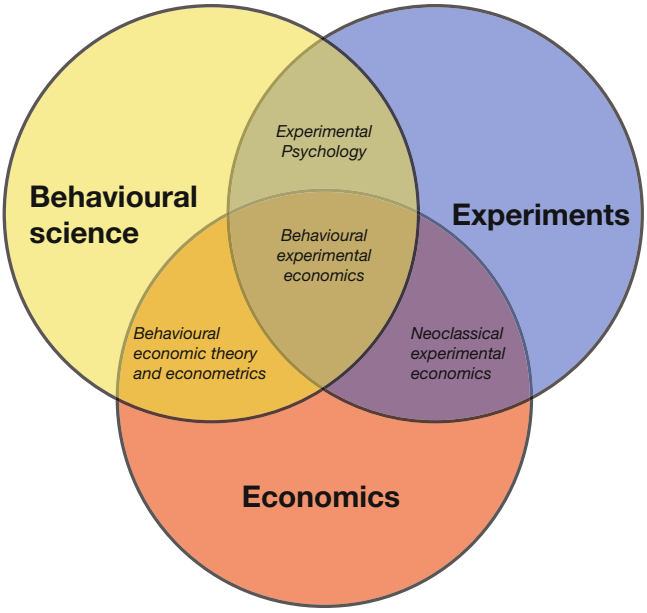

Fig. 3.7 The behavioural-experimental economics paradigm

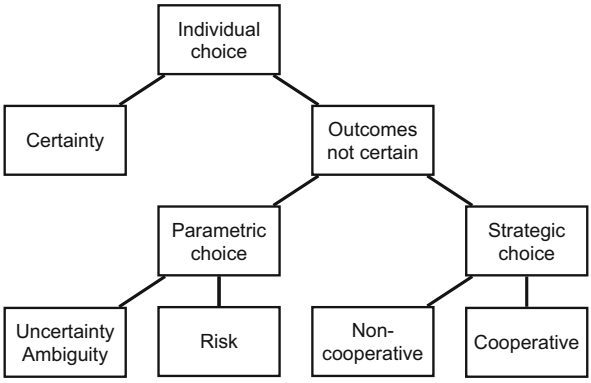

Fig. 3.8 Classification of individual choice situations

discussed secondary data literature that uses behavioural variables, such as culture, to explain macro-economic outcomes.

3.3.3 Experimentally Measured Economic Behaviour Types

Behavioural experimental economics examine individual human decisions in three broad types of choice situation (Fig. 3.8). One is *certainty*, when the outcomes of decision alternatives are known. Certain decisions may nonetheless be difficult when information about the quality of these outcomes may be scarce, costly to come by or complex (think consumer information overload, e.g., Schwartz, 2004). In the two other cases, the outcomes of one's action are not certain. *Parametric* (sometimes called probabilistic) situations are those where each action has multiple potential outcomes depending on the action of an impersonal other decision maker, such as nature or chance. When objective probabilities can be assigned to these outcomes based on objective information, then the situation is one of risk. When the information is unreliable or conflicting then uncertainty or ambiguity exist.

Finally, *strategic* situations are those where the other decision maker is an intentional force who has motivations and will anticipate and respond to one's actions. Both parametric and strategic decisions involve outcomes co-determined by outside forces. But the fundamental difference between intentioned and random outside forces requires different decision making processes. In strategic situations, the decision maker cannot assume fixed probabilities of the other taking certain actions but needs to engage in a regress of mutual anticipation and outguessing with the other decision maker. Game theory, the economic study of these situations, further subdivides strategic situations in terms of whether players can communicate to make binding agreements (cooperative games) or not (non-cooperative games).

Choice under certainty has been used to study culture in several ways. One is patience, or the degree to which a participant prefers a larger gain now over larger gains paid at later stages. Paying out the chosen amounts at a time according

to the participant's preference generates an incentive-compatible measure of a phenomenon known as time preference, deferred gratification, present bias or future orientation. Patience relates to a number of beneficial behaviours, such as saving, and investing in education and healthy lifestyles.

Another certainty task is the die-in-the-cup task. The participant is asked to throw a die privately and to report the number of points, where each point receives a reward that is paid out for incentive compatibility. While a purely selfish person would over-report the die roll, concerns for norms of honesty constrain over-reporting. Because the non-deception injunction prevents observing dishonesty at the individual level (the die rolls are really private), probability laws allow researchers to make such an inference at the group level (i.e., to what extent a group's average report exceeds the statistical average of 3.5). Dishonesty is an undesirable type of behaviour not least because it raises the economic costs of transacting with others (Williamson, 1993).

We now turn to parametric choice. Risk is a much-studied type of situation. Individuals, firms and nations need to respond to their impersonal economic environments consisting of continuous change in technology and consumer tastes as well as macroeconomic conditions. While excessive individual risk taking is harmful (such as reckless lending and borrowing in the 2008 Financial Crisis), some amount of it is key to business entrepreneurship. Individual risk attitudes can be measured by questionnaire items asking about preparedness to take risks in general and specific situations, such as financial matters, health and recreation (Dohmen et al., 2011). However, to achieve incentive compatibility, behavioural economists have devised lottery gambles where more certain but smaller amounts of experimental reward can be traded off with less certain but greater rewards (e.g. Eckel and Grossman 2008).[4] The point of trade-off for these gambles, which are played and paid out, measures the participant's risk attitude. In these experiments, risk attitudes have been found not only to differ between people (e.g., by gender, age, education and even physiological traits) but by cultural background.

Strategic situations have been implemented in countless experiments using games where two participants are matched and allocate their endowment (a stake of money given to them by the experiment) among each other. The chosen allocations are paid out to participants afterwards, typically in cash. These games therefore measure participants' 'social' preferences over the allocations to themselves and others in both absolute and relative terms under incentive compatibility (Camerer and Fehr, 2004). Behaviour in the games draws on the same underlying motivations as cultural values, such as individualism and self-transcendence.

In three of the most popular such games, the first player (called the *sender*) decides how much of their experimental endowment to send to the second player (the *receiver*) (Fig. 3.9). In the trust game, what the sender sends gets tripled by the experiment before the receiver decides how much to send back. In the ultimatum game, the receiver has a veto to accept or reject the sender's offer and rejection

[4] There is a debate to what extent economists' measures of time and risk preferences are related. See Andreoni and Sprenger (2015).

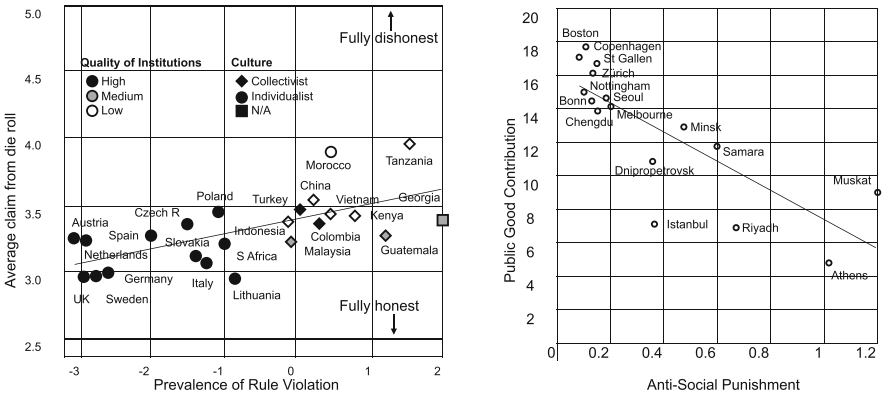

Fig. 3.9 Anti-social behaviour across societies. Left panel: Average die-in-the-cup task claims and societal prevalence of rule violations (political fraud, tax evasion and corruption). Source: Adapted from Gächter and Schulz (2016). Right panel: Cooperation measured as public good contribution and anti-social punishment. Source: Adapted from Herrmann et al. (2008)

ends in zero payouts for both. In the dictator game, the receiver has no decision to make. Each of these games pits self-interest against social preferences. In the trust game, a self-interested receiver would never return anything, causing a foresightful sender to send nothing. In the ultimatum game, an unfairness-averse receiver might reject positive but unfair offers at both players' expense, causing the sender to curb their greed. In the dictator game, the sender's self interest clashes with any concern she might have for the receiver. In each game, the observed decision is taken as a measure of different kinds of social preference. In the trust game, the sender's decision measures, trustfulness, while the receiver's measures trustworthiness. In the ultimatum game, both players' decisions reflect fairness preferences, tinged with an additional selfish motive for the sender. The dictator game decision of the sender measures altruism.

Another set of strategic games measures reciprocity among pairs or small groups of players. In the prisoner's dilemma, one of the most important models of human cooperation in the social sciences (Hoffmann, 2000), two players can either take an action that benefits both (cooperation) or one that benefits only themselves (defection). Whatever the other does, the pro-self action achieves better payoffs but people may cooperate out of pro-social motivations.

The public good game is a version of the prisoner's dilemma with four to five players rather than pairs, such that group versus individual motives become more salient (Fig. 3.10). Each participant chooses how much of their endowment to contribute to the group (i.e., to cooperate), again multiplied by the experiment. Each receives a share of the resulting total group kitty in addition to what they kept, meaning each has a selfish incentive to free-ride on the cooperativeness of others while holding on to the entirety of their own endowment. Other versions of this game involve participants' opportunity to altruistically punish these free riders

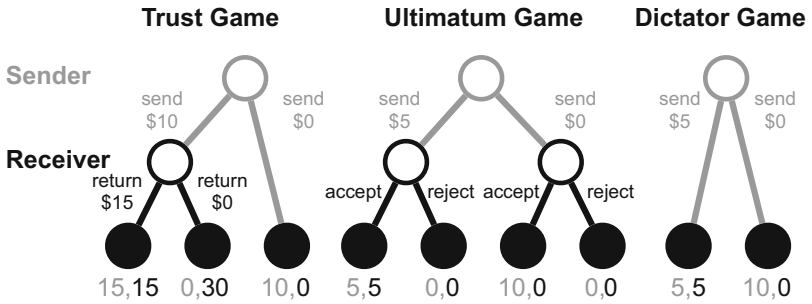

Fig. 3.10 Game trees showing the three classic two-player experimental games in (simplified) extensive form. While senders and receivers can make any split they see fit, their choices are shown here as binary choices. The sender's payoffs are before the comma; those of the receiver are after

at a small cost to themselves, a mechanism that has been shown to significantly raise cooperation within the group (Fehr and Gächter, 2000). On the other hand, participants may use the punishment mechanism anti-socially to spite cooperators (Herrmann et al., 2008).

Pro-social behaviour in these different types of strategic situations is important to economic and social outcomes as 'social capital', most commonly defined as the social institutions (i.e., norms, cultural values) that create cooperative networks between people and lubricate their interactions without recourse to costly enforcement (Fukuyama, 2001).

Throughout all these tasks, participants' actions in experiments are commonly interpreted by economists not as actual behaviour (although they technically are, see Plott 1982) but as measures of underlying preferences (Camerer and Fehr, 2006; Croson and Gächter, 2010). This concept is the economist's equivalent of behaviour tendencies, values and attitudes, as used in the other social sciences. The simple nature of many of these preference-measuring tasks means they can be rolled out not only in lab or field experiments but also in large, international questionnaire surveys conducted online. These methods have allowed economists to create their own cultural maps—this time based on economic preferences (rather than values) measured as behaviour in these tasks under incentive-compatibility.

One of the earliest such experiments across multiple cultures was reported as an interdisciplinary project between anthropologists and economists who conducted different games in 15 traditional societies (see Henrich et al. 2004, also Henrich et al. 2006) that differed from each other as well as from the Western university participants (see Fig. 3.12). Herrmann et al. (2008) found that both cooperation and anti-social punishment to spite cooperators differ significantly across the 16 societies where they conducted their experiment (see Fig. 3.11). Gächter and Schulz (2016) show how dishonesty varies across 23 societies as the average number reported in the die-in-the-cup task (see Fig. 3.11). Dishonesty, at the cultural level, is positively related to the quality of institutions as well as collectivism (Fig. 3.12). The comprehensive worldwide survey by Falk et al. (2018) produced maps of the

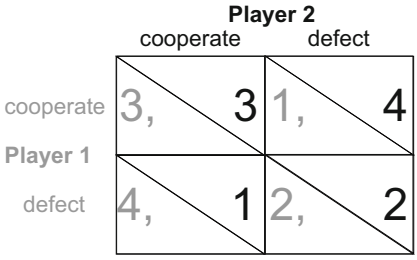

Fig. 3.11 The Prisoner's Dilemma. Player 1's payoffs are before the comma; those of player 2 are after

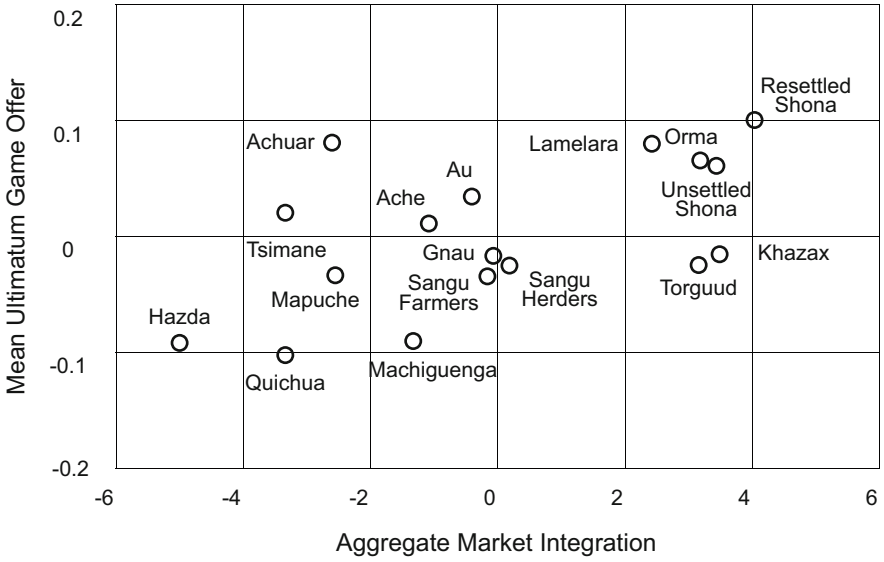

Fig. 3.12 Average ultimatum game offers and market integration of 15 traditional societies shown as dots. Source: Adapted from Henrich et al. (2004)

world for patience, risk attitudes, (negative and positive) reciprocity, altruism and trust (see Figs. 3.13 and 3.14).

3.4 Five Effects of Culture in the Economy

We have seen how behavioural-experimental methods in economics afford the measurement of individual behavioural tendencies. In this section, we will go on to demonstrate that these tendencies, in turn, can be related to the individual's cultural values. Such relationships allow us to identify values as causes of behaviours that

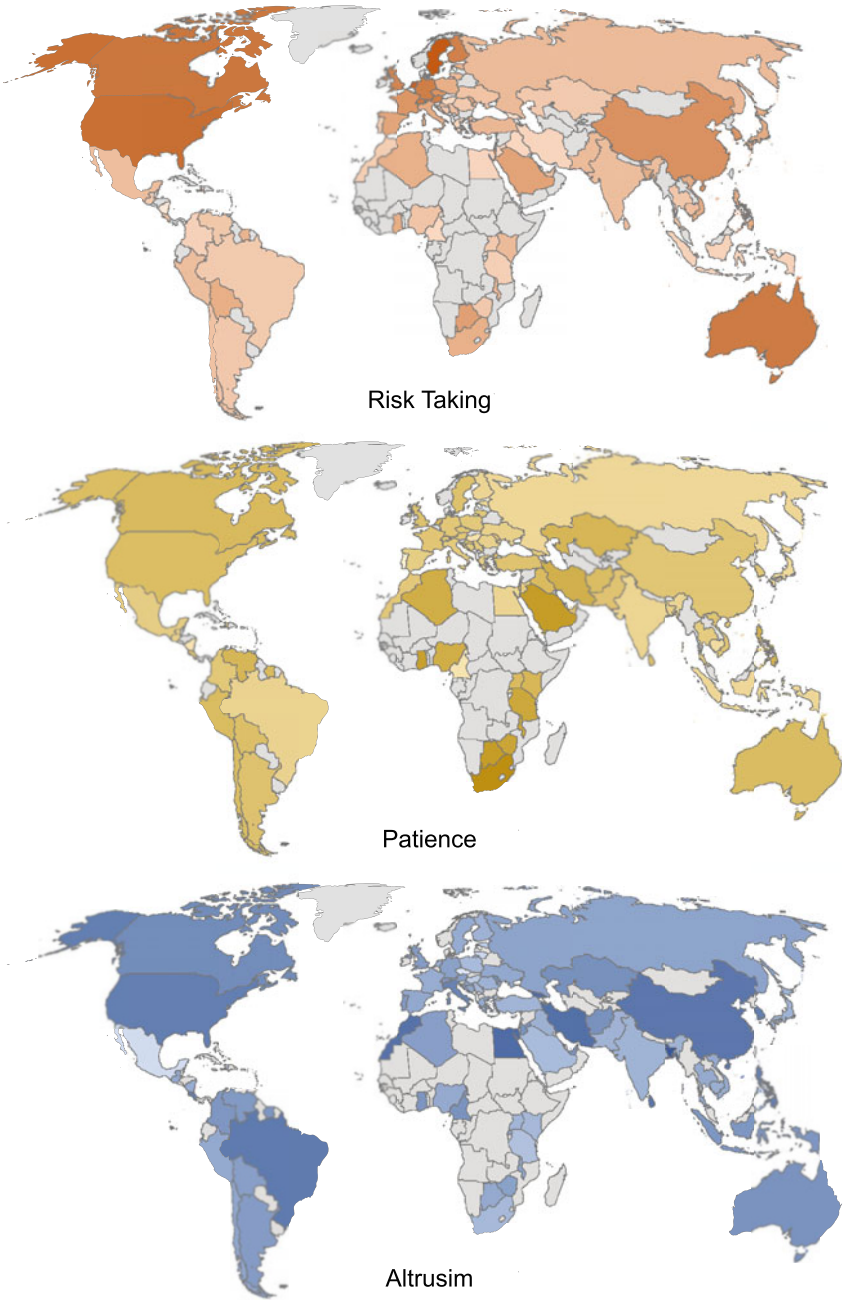

Fig. 3.13 Economic preferences across the world (Falk et al., 2018). Darker shades indicate greater average scores for the dimension concerned. Data source: https://www.briq-institute.org/global-preferences/home

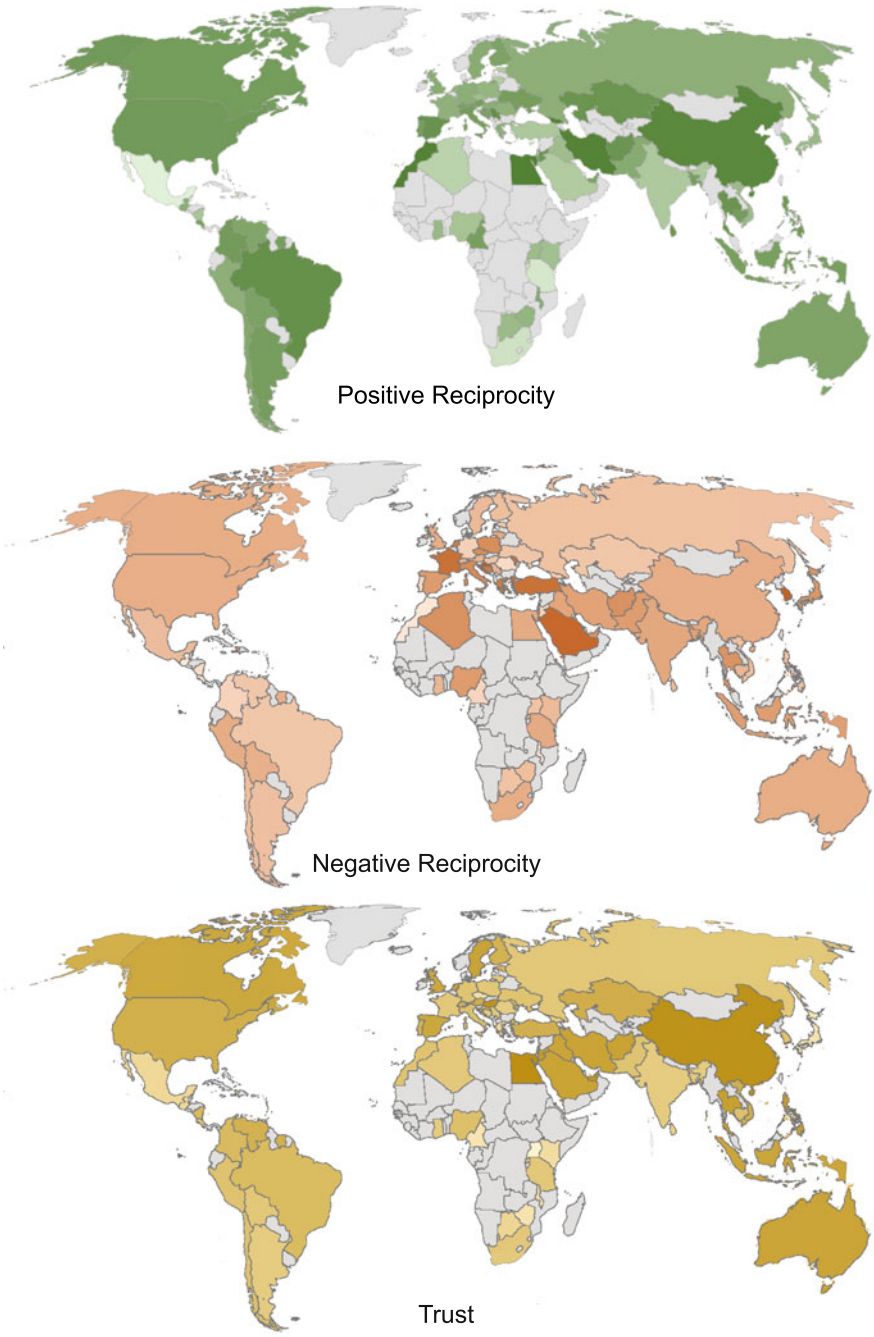

Fig. 3.14 Economic preferences across the world (Falk et al., 2018). Darker shades indicate greater average scores for the dimension concerned. Data source: https://www.briq-institute.org/global-preferences/home

contribute to beneficial or harmful economic outcomes. We do this by outlining our own research programme following this agenda. We first outline our research approach before presenting the results of the programme organised by the five ways in which we (and others) found culture to affect economic behaviour.

3.4.1 Research Approach

The studies described here were conducted by a team of researchers, most of whom at the time worked at the International Centre for Behavioural Business Research (ICBBR) at Nottingham University Business School. This research programme was the result of a research environment that proved highly conducive for interdisciplinary cultural research for several reasons. The first was that the University of Nottingham had just begun establishing branch campuses in Malaysia and China, partly populated with academics and students from the home campus in the English Midlands. Differences between local staff and students and those from the UK made culture highly salient. Malaysia in particular is a multi-cultural country with significant representation of the three largest Asian cultural groups: the Austronesian, Indian and Chinese cultures.

A second factor was a rigorous international MBA programme where genuine business experience was an entry requirement, allowing students to bring practical issues into the teaching. MBA students conducted significant research projects that counted for a third of their degrees and allowed a meaningful application of theory to practice. A third factor was the origin of the school as a merger between a department of industrial economics and a management school, allowing for multi-disciplinary research and integration of economics as core subjects in all business programmes.[5]

The result was that MBA students and their teachers were able to connect personal and professional experience with concepts and methods from all the social sciences that were part of the syllabus, in the shape of the different business, economics, law, engineering and accounting- and finance-related courses. Several students undertook dissertations that produced published academic research. One of the present authors, Swee-Hoon Chuah, was one of these students, who connected management theories with behavioural economics methods to explore the cross-cultural issues she was aware of from her own work experience in business and law in multi-cultural Malaysia. It is her subsequent PhD thesis that provided the basis of the research described in this chapter.

The programme was inspired by the question, *how does culture affect economic behaviour?* The fundamental research paradigm we used belongs to behavioural

[5] Commercial pressures akin to a 'race to the bottom' have led other business schools to reduce the required work experience of MBA students and the economics content of their programmes, much to everyone's long-term disadvantage.

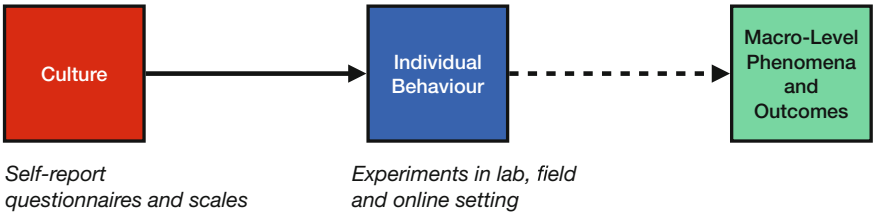

Fig. 3.15 The Behavioural-experimental economics approach to culture

experimental economics as outlined in Fig. 3.15. In this paradigm, culture is a latent and directly unobservable construct. While culture is shared and therefore a characteristic that can describe groups, it is also individually held and therefore may be measured indirectly at the level of the individual. Because culture is transmitted, it consists of several potential dimensions in the conduits that allow the transmission to take place. These dimensions are aspects of social identity, or the ways in which people see themselves as belonging to groups—language, nationality, religion and ethnicity are among the most important examples. Other such group identities that may create sub-cultural groups include social class, sexual identity, occupation, age and interest groups. These types of identity may be measured as demographics using self-report questionnaires.

While demographic and social identity variables are proxies for the conduits of cultural transmission, the substance of culture can be psychometrically measured as the attitudes and values that culture is defined by. We discussed the major dimensions currently used in Sect. 3.2.1, but many more exist that researchers can adopt depending on the cultural group(s) or behaviour(s) under investigation. Recently methods have been proposed to measure norms incentive compatibly, where participants receive rewards by correctly guessing what others believe normative responses are (Krupka and Weber, 2013).

Once cultural proxies and/or cultural values are measured within individuals, their behaviours can be observed experimentally. As discussed, a raft of experimental measures exist that can be used to measure behavioural tendencies. The final step is to relate experimental participants' cultural values to their measured behaviours. Such links are then used as explanation for the macro-level outcomes that are known from other areas of research in economics.

We used this research approach in a series of studies published over the last 15 or so years based on experiments we conducted in Asia and Europe, summarised in Table 3.1. In these experiments, we observed the behaviours of participants from different cultures in several choice tasks and measured many relevant values to explain these behaviours. We now outline the fruits of this programme organised around five central findings we (and many other researchers) made about the connection between culture and economic behaviours.

Table 3.1 The studies of the authors' behavioural-experimental research programme on culture surveyed in this article

Project	Location	Cultures	Data Collection	Behaviour	Individual Characteristics
Malaysian-British Bargaining	Malaysia and UK	Malaysian Chinese and British	Lab	Ultimatum game	World Values Survey
Intra-Malaysian Cooperation	Malaysia	Malay, Chinese Malaysians and Indian Malaysians	Lab	Prisoner's Dilemma	World Values Survey; religiosity, fundamentalism
China-Malaysia-UK Trust	PR China, Malaysia, UK	Chinese, Malaysian and British	Lab	Trust game	Political conservatism, religiosity
Chinese Negotiation	PR China	Chinese	Lab	Escalation bargaining game	Face, harmony, competitiveness, trust
Chinese Ethnocentrism	PR China	Chinese	Field	Product choice task; dictator game	Global, consumer ethnocentrism, patriotism, nationalism
Indian Fractionalisation	Mumbai	Indian Hindus and Muslims	Field	Trust game	–
Intercultural Persuasion	UK	Chinese, British, Indian	Lab	Sender-receiver game	Machiavellianism
Indonesian Conflict	Villages in Aceh	Acehnese	Field	Money-burning game	–

3.4.2 People From Different Cultures Behave Differently

For behavioural-experimental economists, the first place to look for cultural effects is in behavioural differences between people of different cultures in comparable situations. If no such differences existed, then culture would not provide a potential explanation different group-level outcomes that economists are trying to explain. A cultural explanation demands not only that attitudes and values differ across cultural lines, but also that they affect behaviour correspondingly.

Behavioural game tasks provide the opportunity to compare behaviour of participants from different cultures under incentive compatibility and control of confounding factors. Culture is established as the causal factor causing those differences, to the extent that any other explanation is excluded or controlled. A number of studies using this approach have found cultural differences when comparing experiments conducted in different countries, where all participant have the same culture. Different games have been used, including the public good game (Weimann, 1994; Hemesath, 1994; Hemesath and Pomponio, 1998; Burlando and Hey, 1997; Ockenfels and Weimann, 1999; Fan, 2000), the trust game (Buchan and Croson, 2004; Carpenter et al., 2004; Holm and Danielson, 2005) and the ultimatum game (Roth et al., 1991; Buchan et al., 2004), mostly conducted in different industrialised countries. Henrich et al. (2004) compare behaviour in a range of games across traditional rather than industrialised societies and also found significant differences.

We also had several opportunities to examine the behaviour of participants from different cultures in comparable situations. In our *Malaysian-British Bargaining* project (see Table 3.1), we compared the ultimatum game behaviour of 366 Malaysian Chinese and UK participants (Chuah et al., 2009). These Overseas Chinese are the second largest of multiple cultural groups in Malaysia that resulted from immigration beginning mainly during the British colonial era. In sessions conducted in Malaysia, Malaysian Chinese sent 49% of the stake to their own kind; in the UK-based sessions, British participants sent only 44% to other Brits (see Fig. 3.16, right panel). Malaysian Chinese also sent more overall, that is to receivers of both British and Malaysian Chinese background, in experimental sessions conducted in both countries.

We also compared Malaysian Chinese people to other ethnic groups in their own country: the Malay and Indian communities of Malaysia. In the *Intra-Malaysian Cooperation* project we observed 96 student participants from the 3 Malaysian ethnic groups playing 10-round prisoners dilemmas with people of their own and other cultural groups (Chuah et al., 2016b). We found that when looking at purely intra-ethnic behaviour, Chinese Malaysians cooperated more with each other (in 44% of the 10 rounds) than did members of the two other ethnic groups (Indian Malaysians: 34%; Malays: 17%).

These cultural differences between groups within a single country exists elsewhere. In the *Indian Fractionalisation* project, our enterprising MBA student Reema Fahoum invited 129 Hindu and Muslim denizens of Mumbai, India, to play trust

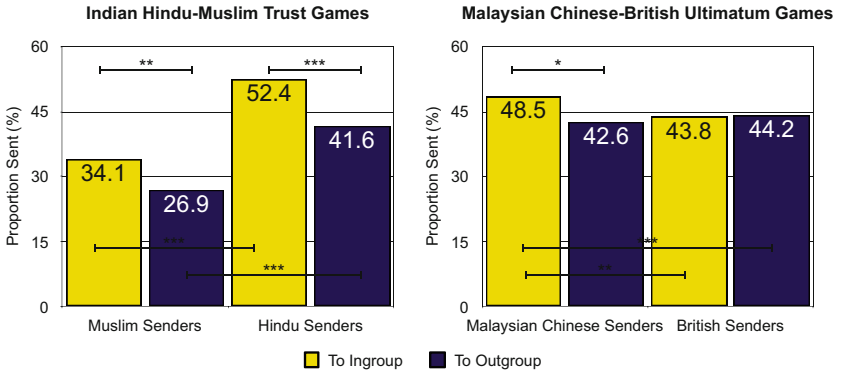

Fig. 3.16 Sender behaviour in inter- and intra-cultural games. Stars indicate statistically significant differences at the 10% (*), 5% (**) and 1% (***) levels

games with people of their own and other religious groups (Chuah et al., 2013). Reema found that the amounts sent by Hindus were greater than those by Muslims, both to their own Hindu group (52% of the stake) and to the Muslim group (42%). Muslims sent significantly less: 34% to fellow Muslims and 27% to Hindus (see left panel of Fig. 3.16).

On the other hand, we could find no significant differences in either trustfulness or trustworthiness between UK, Malaysian and Chinese university students (Chuah et al., 2016a). In this *China-Malaysia-UK Trust* project, we recruited 545 students at the 3 international campuses of the University of Nottingham in these 3 countries. Each participant played trust games with other students from all three campuses. In one condition, each sender participant made a binary (send or not send) trusting decision against a co-participant about whom nothing was known; each receiver decided to return (or not) against a similarly unidentified other. There were no significant differences between the decisions of participants from the three campuses. The results also did not clearly separate Asian and Western participants. While around 38% of Chinese and UK receivers returned, only 33% of Malaysians did. On the other hand, 57% of Malaysian senders sent, while only 45% of Brits and 49% of Chinese senders did.

On the whole, our results suggest that some cultural differences in behaviour exist not only between but also within countries when they are composed of different cultural groups. These results are remarkably pronounced given that they come from abstract games where participants receive money based on their decisions. In all these cases, the participants were comparable in regards to characteristics other than culture. In many of our experiments all participants were students. In India, they were urban dwellers from the same city and ethnicity, separated only by religious affiliation. These differences point to differential social capital of certain cultural groups, in that behaviours, such as cooperation and trust, are beneficial for macro-level economic outcomes, as previously discussed.

3.4.3 People From Different Cultures Are Treated Differently

So far, we have seen how culture causes differential behaviour of people in similar situations. We now look at how the same or different cultural identity of one person affects the behaviour of their interaction partners. Such intergroup effects are among the most robust and best-documented effects in social interactions generally (for the classic studies see Sherif, 1966; Tajfel, 1970). They have two dimensions: People treat others of their own group better (in-group favouritism) than those of other groups (out-group rejection). When nations interact, cultural difference can influence who trades with whom (Rauch and Trindade, 2002; Guiso et al., 2009). Countries that share religion, language or history have greater affinity, culturally as well as economically. The opposite is also true. Some have as gone as far as to diagnose an international 'clash of cultures' (Huntington, 1996).

While intergroup effects are well-known in social psychology, behavioural experimental economists are interested whether these effects can apply to behaviour under incentive compatibility and using the abstract tasks designed to strip away confounding context. A number of early authors used the ultimatum game to examine whether the generosity of offers and the costly decision to reject unfair offers are affected by cultural difference or similarity. Fershtman and Gneezy (2001) and Burns (2006) looked at cultural differences between different cultural groups of one country, in Israel and South Africa respectively.

The advantage of studying cultural differences within individual countries is that travelling around the world to conduct experiments is expensive business. Our own cross-cultural research was aided by our university's presence in several countries. Malaysia's multi-cultural society afforded us the same opportunity to invite people from different cultural groups within a single one country to interact. The added advantage of such a comparison is that we can hold constant (to a degree) many of the other characteristics that differentiate people from different countries—such as level of development, language, national institutions and history. Further, additional campuses in the UK and China allowed us to match people from different cultural groups to interact internationally.

Our *Malaysian-British Bargaining* showed intergroup effects clearly (Chuah et al., 2007). We asked participants to play games not just with people of their own culture, but also those with the other cultural group. The Malaysian Chinese offered, as senders, significantly more to receivers (48% of the stake) of their own group than to Brits (43%, see Fig. 3.16). Similarly, back in India, Hindus sent 42% to Muslims, and Muslims 27% to Hindus—much less than what their sent to their own groups (52

Intergroup effects can, in principle, occur based on any of a person's multiple 'cross-cutting' cultural and social identities, such as ethnicity, religion, language, nationality and more (Stangor et al., 1992; Hewstone et al., 1993; Stangor, 2016). Our *Intra-Malaysian Cooperation* project allowed us to compare the first two of these (Chuah et al., 2014b). Malaysia is multi-cultural in terms of ethnic and religious groups and therefore allows fine-grained intergroup behaviour to be

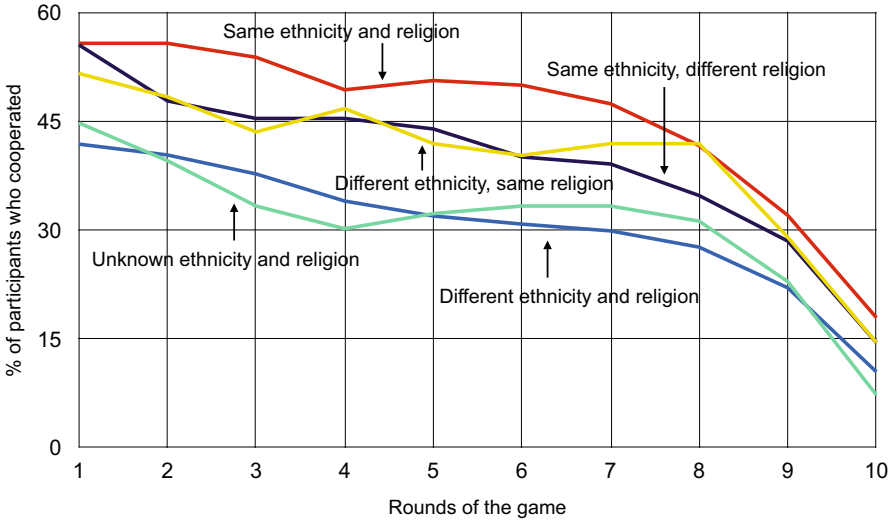

Fig. 3.17 Cooperation in multi-cultural Malaysia. The five conditions vary the two players' difference in terms of ethnicity and religion. In condition 5, players were told nothing about others' ethnicity or religion. The declining cooperation towards round 10 is a standard result in this task, known as the endgame effect

observed (See Fig. 3.17). Ethnic Malays are Muslim while ethnically Indian and Chinese can be Hindu, Buddhist, Muslim or Christian. Cooperation was greatest in the double ingroup condition—when both players shared ethnicity and religious affiliation. When either religion or ethnicity was shared between two participants, cooperation was lower. Cooperation was lowest in the double outgroup condition (different ethnicity and different religion).

A debated issue in intergroup research is whether the relatively better treatment of ingroup members is active hostility towards the outgroup or merely preference for the ingroup (Brewer, 1999). In this experiment, our participants made no differentiation between a double outgroup member and one who was unidentified in the experiment—when participants were told nothing about the person they were matched with. This suggests that outgroup behaviour is neutral rather than hostile, at least in this case, while ingroup behaviour is active favouritism for those who are similar.

This experiment also revealed a cause of the strength of intergroup behaviour: How much the ingroup is favoured relative to the outgroup depends on how much an individual identifies with the group identity concerned. In this experiment, personal religiosity, the strength of someone's affiliation to their religion, raised the degree to which that person favoured others belonging to their own faith.

The strength of cultural intergroup effects also depends on the particular cultures involved. Certain cultures are more collectivist and, potentially, more wary of outgroups. To measure this, we might be tempted to compare how much two

interacting groups discriminate against each other. However, experimentally the problem is that we may not be comparing like with like: For example, how Americans treat Liechtensteiners cannot be compared with how Liechtensteiners treat Americans to measure both groups' ingroup favouritism. Their relationship is asymmetric—for people from the smaller country, the bilateral cultural relationship is more significant, and they tend to know more about the other culture.

The *China-Malaysia-UK Trust* project was designed to obtain a more reliable measure of intergroup effects. We measured how much each participant was willing to pay (from their endowments) to make their trust game decision dependent on 11 different cultural identities of the other—including ethnicity, nationality, religion and others. We took the average of these 11 'investments' as a measure of a participant's discriminatory tendencies. When we compared them across groups, we found that they differed significantly between Malaysian, Chinese and British participants. In general, our Asian participants, who were associated with high collectivism, were willing to discriminate significantly more.

Intergroup effects can also be more pronounced based on historical conflict between different cultural groups. Our then-PhD student Ryan Sanjaya conducted an impressive field experiment in Aceh Province, Indonesia, with the money burning game (the *Indonesian Conflict* project, Chuah et al. 2019). This game measures *negative* social preferences (in this case spite), in that participants can spend a little of their endowment to destroy a larger amount of someone else's. Ryan went to dozens of local villages on his motorbike and played this game with local residents who were matched with both Javanese and Acehnese co-participants. These two ethnic groups within Indonesia's Aceh province have a history of mutual violent conflict. Ryan found that the Acehnese villagers were slightly more likely to use this option when the co-participant was Javanese (19%) than Acehnese too (16%). Thankfully this is only a modest level of outgroup discrimination considering the history between the two groups. Using the burning option was also much more common (34

3.4.4 People From Different Cultures Have Different Values

Why do people from different cultures—groups based on shared ethnicity, religion or language—behave differently in comparable situations? Why do people from certain cultures exhibit stronger ingroup favouritism? One reason is that the attitudes and values that drive their behaviour differ. We have already seen that the definition of culture as shared values and attitudes put forward by Hofstede (1984), Inglehart (1997) and Smith and Schwartz (1997) is based on the empirical finding that there are systematic value differences between different cultural groups.

Our projects provided the opportunity to contribute to this kind of evidence. While collecting attitudinal data by questionnaire is economical compared to experimental data, doing so across cultural lines entails significant logistical effort that is commonly undertaken in large international studies of the sort described

in Sect. 3.3.3. Again our research team's presence in multiple campus locations (UK, China, Malaysia) coupled with the emergence of online sampling methods allowed us to not just replicate some of the previous findings but to add new specific attitudinal measures and cultures to the canon of findings.

Participants in the *Malaysian-British Bargaining* project played ultimatum games with co-participants of each national group and also also answered the battery of 216 questions from the 1999–2000 wave of the WVS, which included items relating to issues including attitudes to religion, the management of the economy, the role of the state, individual freedom and outgroups. Factor analysis of each of the thematic groups of items revealed 19 reliable (Cronbach $\alpha > 0.6$) dimensions. Malaysian and UK participants' scores differed significantly in 11 of these: Malaysian Chinese were significantly less participative and confident in the democratic process yet trusted private organisations more. They cared more about extrinsic motivations in their work, including achievement and leisure. Malaysian Chinese were more religious and critical of outgroups, the freedom of individual expression and gender rights. Overall, we found that UK participants were more post-materialistic than the Malaysian Chinese. This is in agreement with Inglehart's theory that societies undergo cultural transitions from traditional to materialistic and finally post-materialistic, with corresponding improvements in social and economic development.

Although cultural differences between Westerners and Asians are relatively well understood, much less is known about how Asian cultures differ from one another, and, more precisely, to what extent they constitute different cultures at all. We had the opportunity to explore this question in multi-cultural Malaysia because its three largest domestic ethnic groups represent the three major cultures of Asia: Malays belong to Austronesian culture; the Chinese and Indian immigrant communities represent their original cultures. In the *Intra-Malaysian Cooperation* project (Chuah et al., 2016b), we were interested in whether cultural differences between these groups can explain the economic dominance of the Chinese Diaspora here and elsewhere in South-East Asia. While accounting for only 5% of South-East Asia's 600 million people, estimations of their wealth range between 25

Again we were able to use the WVS; in particular the first ever wave conducted in Malaysia, by the University of Nottingham in 2005. This time we used the survey responses of 1047 Malaysian participants to test whether a complex of values previously hypothesised to be responsible for the Chinese Diaspora's success does indeed distinguish this group from Malaysia's other two ethic communities. We examined Confucian thought (conformity, collectivism and tradition), trust in others and the state, ethnocentrism, opportunism, progress, work ethic and enterprise (see Fig. 3.18). Our results surprised us. The Confucianism explanation for Chinese Diaspora (e.g. Redding, 1990) success failed to show up, in that Malays and Indians were no less Confucian than the Chinese!

We also examined whether the comparative strength of religious values of our Malaysian cultural groups explains the greater economic success of the Chinese. Religiosity, attachment to one's religion, is a multi-dimensional construct that consists of religious knowledge, belief, experiences, practice and their impact on secular

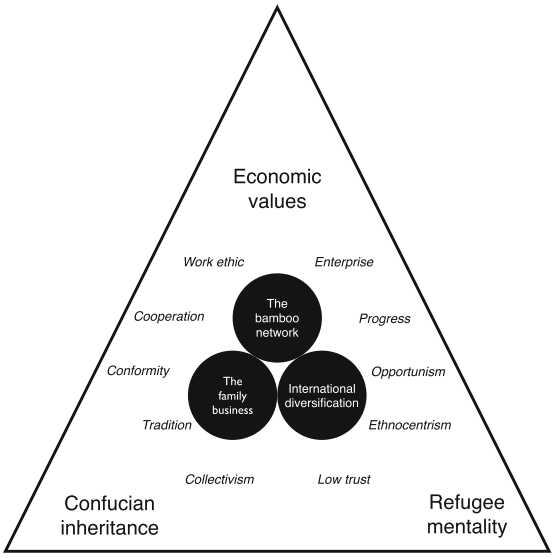

Fig. 3.18 The Spirit of Overseas Chinese Capitalism

behaviour. Fundamentalism is the exclusive commitment to one's religion and its exclusive truth. Both differed significantly by religious group (Muslims, Hindus, Christians and Buddhists) and between the associated ethic groups. However, we dismissed this as an explanation because the Chinese and the Indians, an economically disadvantaged group in Malaysia, were less religious and fundamentalist than ethnic Malay participants. We finally discovered the explanation for the Overseas Chinese economic miracle in economic values. The Malaysian Chinese displayed greater self-reliance and hard work/enterprise ethos than the other two groups, pointing to an alternative explanation based in their refugee and minority identity that propels them forwards.

3.4.5 People's Cultural Values Shape Their Behaviour

These differences in attitudes and values across cultural lines are, in a sense, true by the definition of culture. Identifying them does however serve to validate this behavioural definition. But it serves another purpose. The ultimate usefulness of culture as a concept in the social sciences rests on the extent to which it explains social and economic phenomena. Do these differential values explain differential behaviour? If so, which values explain what behaviour types?

We found evidence that cultural values generally are, to an extent at least, predictive of participant behaviour in experimental game tasks. In our *Chinese Negotiation* project, we measured the traditional Chinese values of face, harmony and competitiveness in Chinese participants in the People's Republic playing

negotiation games within their culture (Chuah et al., 2014a). We found that all these values predicted their decisions. The less concerned participants were about harmony and face, and the more concerned they were with competitiveness, the more assertive were their final negotiation decisions.

In all our studies where cultural values were collected and found to differ by cultural group, the differing values also significantly explained the differential behaviour of these groups. One way this link manifests is when, in statistical analysis, the variable standing proxy for the cultural group (e.g., nationality) loses significance when specific cultural values are added to the estimated model. The values now do the explanatory work and leave nothing for the cultural identifier to explain. Another indication is when a particular value that contributes to behaviour is more pronounced in a cultural group that also displays the same behaviour to a greater extent.

For instance, the lower British ultimatum offers in *Malaysian-British Bargaining* were associated with specific cultural value differences (Chuah et al., 2009). Our less generous Brits had greater post-materialism, individualism and lesser leisure motivation than their Malaysian counterparts—all tendencies that generally contribute to lower offers. In the *Intra-Malaysian Cooperation* project, the higher fundamentalism and religiosity of Malays compared to Chinese and Indians explain their lower cooperation. These latter results are in line with seemingly counter-intuitive findings in other studies that religious sentiment is associated with lower pro-social behaviour in a range of contexts (Schoenfeld, 1978; Hoffmann, 2013). The effect could be due to particular religious doctrines (e.g., regarding human sin or predestination).

Values, including religious ones, also affect intergroup behaviour—the degree to which people prefer ingroup members at the expense of those from cultural outgroups. We saw how, in our *Intra-Malaysian Cooperation* project, more religious people discriminated more based on the religion of the co-participants they were matched with (Chuah et al., 2014b). In the same study, more fundamentalist participants displayed greater discrimination in cooperating less with religious outgroup members. But neither religiosity nor fundamentalism affected cooperation per se.

We made a similar finding with *China-Malaysia-UK Trust*. When it comes to trusting others, a person's religiosity enhances ingroup favouritism based on the other's same or different religious affiliation (Chuah et al., 2016a). We also found that more religious people were willing to pay more for the ability to discriminate based not only on the other's religious affiliation, but in general, over all 11 characteristics (Chuah et al., 2021). The same result held for a right-leaning political orientation, a value that tends to be positively associated with religiosity. A reason might be a fearful and closed mentality that underlies both religiosity and conservatism (Altemeyer and Hunsberger, 1992). In short, more religious people were not generally more or less cooperative per se, just more discerning with whom to cooperate. Religious doctrines, especially fundamentalist ones, draw clear distinctions between 'us' and 'them' (Altemeyer and Hunsberger, 1992; Altemeyer, 2003; Hunsberger and Jackson, 2005).

3.4.6 *People From Different Cultures Are Stereotyped Differently*

These kinds of effects raise the important question why members of one culture should treat others based on the cultures they belong to. Economists often distinguish two different reasons for such discrimination (Anderson et al., 2006; Bertrand and Duflo, 2017): One is a 'taste' for discrimination, or essentially preferring to deal with certain kinds of people. The other, statistical discrimination, means that we find it hard to predict others (especially people different from us) and therefore fill in the gaps with stereotypes about them.

Related terms, such as discrimination, stereotypes and prejudice, have enjoyed different definitions over time and across different disciplines. All three are motivated by social (e.g., cultural) identity. Discrimination means treating individuals differently depending on their social identity; prejudice means negative attitudes towards a particular social identity. In contrast, stereotypes are characteristics associated with people of a social identity (Stangor, 2016).

We found much evidence for the stereotypes that participants held about others depending on their cultural identities. These can be measured experimentally by asking people about their expectations of co-participants' behaviour in the task. For example, in our own *Indian Fractionalisation* experiment, Hindus (correctly) believed that their Hindu co-participant were more likely to return their trust than Muslims co-participants. It is also possible to incentivise participants based on how close these expectations are to the actual behaviour as it eventuates in the experiment.

Cultural stereotypes are not the same as ingroup favouritism. They are based on expectations of others' behaviour and may not fully guide behaviour towards them. More importantly, stereotypes are not always self-serving in ascribing positive behaviours to the ingroup. For instance, in a trust game experiment in South Africa, Burns (2006) found the black participants believed in the greater trustworthiness of co-participants from other ethnic groups. Similarly, Fershtman and Gneezy (2001) found that Asian and African-origin Israeli Jews were mistrusted more not just by other Jewish (American or European) ethnicities in Israel, but also by members of their own group. In *China-Malaysia-UK Trust*, all participants, including non-religious ones, (wrongly) expected more religious co-participants to be more trustworthy.

Of course stereotypes themselves are evaluations of a sort, and therefore are culturally transmitted. Do stereotypes regarding a certain group themselves differ by the culture of the stereotype holder? The most comprehensive insight into stereotypes came from our *China-Malaysia-UK Trust* project, where participants were confronted with multiple cultural identities of others. For each, they stated their (incentivised) expectations that a co-participant of such a cultural identity would behave in a trustworthy manner. To look at one example of these rich data, consider the expectations of senders of different ethnic groups that receivers of different ethnic groups would be trustworthy and decide to return (Table 3.2).

Table 3.2 Trust game sender expectations (by ethnicity) as probability (in %) that receivers of different ethnicities (in columns) would be trustworthy

	Receiver is						
Sender is	Black	Chinese	Indian	Malay	M. Eastern	White	Average
Black	49.5	61.8	49.1	40.36	47.7	39.3	48.0
Chinese	30.8	31.4	40.1	29.01	40.2	27.2	33.1
Indian	37.3	33.2	30.5	32.91	33.6	30.5	33.0
White	28.4	30.7	29.4	29.42	29.8	29.1	29.5
Average	36.5	39.3	37.3	32.9	37.9	31.5	35.9

These particular data do not evidence culturally different stereotypes. There seems to be remarkable agreement, across cultures, on a stereotype of white participants as the most untrustworthy (that is held also by white people), whereas Chinese and Middle Easterners are seen as trustworthy. Interestingly, no members of any ethnic group deem their own ethnicity the most trustworthy. Are these stereotypes justified by the facts? Not really. Overall, senders were remarkably accurate in estimating the return probability over all groups (35.9% when 33.4% returned), but their ethnic stereotypes were off. While we did not have enough receivers from all the ethnic groups to estimate a reliable measure of their average behaviour, the difference in trustworthiness of Chinese and white senders is actually rather small (37.7

3.5 Three Issues With Culture for Economic Policy

In the age of globalisation, the differences between people of different cultures have become conventional wisdom. They have also been extensively documented. But are they real and do they causally affect the outcomes that researchers and policymakers care about? And can we incorporate culture meaningfully in scientific analysis? We have tried to answer these questions with a tentative 'yes' using the data we collected from a series of behavioural experiments within and between different cultures. Five related effects of culture on economic behaviour materialised from the research we and others conducted in this area.

But even if culture matters in this way, there is a final requirement that social scientists would make of it. It has to be useable for policy to improve the outcomes they care about. For behaviouralists, policies tend to work in two ways. Nudge interventions are based on nature (i.e., how humans universally respond to the different parameters of a choice), such as the way information is presented (Camilleri et al., 2019a). Nurture-based policies target culture. For example, Porter (2000, p. 22) suggests that "sustained development will require that productive beliefs, attitudes, and values spread to workers, institutions such as churches and universities, and ultimately to civil society [...] Social policy choices can have a strong influence on economic culture."

In this final section, we turn to this last question in the kind of research we presented: To what extent can culture be used as a target in policymaking to promote better economic outcomes? Even if culture matters, can it be used to design economic policies to improve outcomes in a feasible way? We conclude this chapter by raising three issues related to this question.

3.5.1 Culture Matters, but How Much?

Clearly the potential of policies targeting culture depends, in turn, on how important an influence culture is. To what extent do cultural values explain economic behaviour and outcomes?

A danger in relying on culture as an explanator of behaviour (and therefore policy target) is succumbing to a tempting cultural determinism—to suggest it is the only or even the most important determinant. The attitude-behaviour inconsistency debate in social psychology demonstrated that individual behaviour has many causes, and culture is at best only one of many other including a person's individual psychological characteristics, experiences and the particular situation in which they act (Sheeran, 2002). This debate started following the seminal LaPiere (1934) study. For two years, LaPiere travelled the US by road with a Chinese couple, who were refused service in only 1 out of 251 hotels and restaurants they patronised. In response to a subsequent letter, 91% of the 128 establishments responded negatively to the question "Will you accept members of the Chinese race as guests?"

LaPiere's finding kindled a vast literature because of the importance of the attitude concept when used to explain, predict and change behaviour at low cost (McBroom and Reed, 1992). This literature not only replicated the gap between attitude and behaviour found by LaPiere (1934) but identified reasons in individual attributes and other attitudes of the discriminator (Gross and Nimann, 1975), situational factors and perceived norms (Schuman and Johnson, 1976). In addition, this research separated different cognitive responses to a situation into beliefs, intentions and behaviour (Fishbein and Ajzen, 1975) that correspond only under certain conditions (Ajzen and Fishbein, 1977). In these models, attitudes and values, the constituents of culture, are only one set of factors to explain a person's behaviour.

3.5.2 Culture Exists, but at What Level?

Using culture in policy also assumes it is possible to target particular cultural groups or values. Do cultures exist objectively as distinct and delineated aggregate-level units to which people can be said to belong? Is there such a thing as Asian or German culture out there or is it mere stereotype? Triandis (1979) defines different cultures as identifiable *cultunits*, groups of people who share a language, time and geographical location that make them similar. In contrast, he argues that

nationality, race, gender, class and religion do not provide distinct culture as too much heterogeneity exist within them. However, there are several reasons why such a cultunit may not exist.

First, while people undoubtedly differ, the variation between individuals that culture explains may be small compared to the variation due to their individual differences. There may be more values and behaviour variation within the same culture than between members of different ones. An analogous argument has been made for biological race by Lewontin (1972). He claimed that most of the genetic variation between two individuals occurs within and not between race, a concept which therefore has social but not biological meaning. Race, he argued, is a social construction that shapes people's identity (for themselves and others) and is used to justify treating people differently. Can the same be said for culture?

Second, cultures overlap to the extent that a person belongs to many parallel cultural groups based on nationality, religion, ethnicity, language or even political affiliations and personal interests. Each of these identifiers provides a channel for the social transmission of values, attitudes and even thinking styles (Nisbett, 2003). These multiple cultures pull people into different directions and further increase the variation within any given cultunit.

Third, while cultural value and behaviour regularities have been conclusively demonstrated at the individual level, it is not clear to what they extent they can be extrapolated to the aggregate level. This is due to the ecological fallacy, when characteristics of individuals are incorrectly attributed to their group or vice versa.[6] Because cultural values are measured at the individual level, the ecological fallacy calls group-level value characteristics into question such that some researchers do not recognise culture as a group-level construct (Brewer and Venaik, 2014).

This methodological issue relates to other instruments and methods behavioural-experimental economists import from other disciplines in their interdisciplinary endeavours. Cross-cultural psychology grapples with the measurement of values that is full of pitfalls, including culturally-sensitive types of value dimensions and participant response styles that make this kind of work difficult. Space prevents us from discussing these intricate issues here (see Berry et al., 2011; Lonner and Malpass, 1994; Triandis and Lambert, 1979) but they also undermine the faith we can place in culture as a clear-cut, group-level construct. This matters because policies can feasibly only be targeted at groups and not individuals. For policymakers, culture reduced to values that differentiate individuals is not a helpful concept.

[6] There are different sources behind this fallacy. One is that a correlation that holds for individuals (e.g., immigrants are more likely to be illiterate) does not hold for the group (US states with more immigrants have *higher* literacy rates, see Robinson 1950). The reason for this incongruence is the different direction of causation at the two levels. Immigrants are more illiterate but also attracted to more affluent states where literacy is high. Another source is the aggregation mechanism. A candidate may win the popular vote despite losing in the majority of electoral constituencies.

3.5.3 *Culture is Learnt, but to What Extent?*

To use culture in policy assumes that it is, to a degree at least, malleable. There is no doubt that culture changes. Culture is powerful to social scientists precisely because it varies (over time and between groups), and these variations explain varying outcomes. If not, culture would reduce to universal human nature, which provides no explanation for differential outcomes. At the group level, variation comes from socialisation because of the genetic similarity of all humans (Haidt and Joseph, 2004). The question becomes, to what extent is culture socialisation? A number of approaches based on evolutionary psychology have made the case for an innate component in culture. Evolutionary psychologists believe that inherent human psychology evolved as adaptations to problems our ancestors needed to resolve in the environments they faced.

For instance, Haidt and Joseph (2004, 2005) argued that all humans innately possess five fundamental moral instincts or 'taste buds', each of which develop into a person's moral virtues, based partly on individual experience and partly on cultural socialisation. These are care, fairness, loyalty, authority and sanctity (Haidt, 2012a). Moral instincts are spontaneous, crude emotional gut reactions to a situation; virtues provide the socialised moral competence to respond in a sophisticated way. Different groups socialise virtues out of the innate moral instincts into different cultures depending on the different interpretations and emphases put on different moral instincts at the expense of others.

Another innate source of culture goes under the term *gene-culture co-evolution* (Gintis, 2011). The idea is that both the human genome and culture change through "curiously parallel"[7] evolutionary processes, and that these evolutions influence each other. Cultural ideas ('memes') replicate over time by selective reproduction (socialisation) and mutation (experimentation and innovation) (Dawkins, 1989; Creanza et al., 2017). Cultural evolution shapes the complex social environment to which human genetic evolution adapts our species. An example is language, a cultural innovation that allowed societies to become more complex but also caused the evolution of physiology to make increasingly complex vocalisations possible. Food culture, such as dairy farming, and lactose tolerance, provides another. These adaptations stimulate further cultural evolution when certain memes become better matched to the changing human physiology.

Both accounts of culture therefore include a biological element that is significant to those who would use culture as a target for policy. These types of policy have limits *to the extent* that culture is biologically determined though moral instincts or stuck on an particular trajectory in gene-culture co-evolution (e.g. Inglehart, 2018, p. 141).

We have illustrated that even if culture matters economically, three issues can hinder the use of this insight in designing policy to improve economic outcomes.

[7] As Darwin noted in the context of the evolution of species and languages in *The Descent of Man*.

Policy may be difficult to target because of the cultural heterogeneity of cultural groups; policy may have limited impact because values are but one determinant of behaviour, and because culture has, to some extent at least, a biological determinant. None of these obstacles are insurmountable but need to be taken into account when designing policy.

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Chapter 4
The Detective Mindset: Forensic Approaches to Detecting Behaviour

Ahmed Skali

4.1 Introduction

Antoine-Laurent de Lavoisier, born in Paris in 1743, is often described as the father of modern chemistry. One of his best-known scientific accomplishments was a series of experiments which supported the law of conservation of mass. That law, sometimes known as Lavoisier's law or Lavoisier's principle, states that although physical matter may change shape, its mass remains the same. Lavoisier summarised this insight as "Nothing gets lost, nothing gets created, everything is transformed" (Lavoisier, 1793).

What does chemistry have to do with human behaviour? This is where Sherlock Holmes meets Lavoisier. Sir Arthur Conan Doyle's famous detective has an uncanny ability to inspect the crime scene and spot clues. In this chapter, we get in Sherlock's mindset and use Lavoisier's key insight. Remember: nothing gets lost, nothing gets created, everything is transformed. As we will see, Sherlock and Lavoisier will tell us something about problems that span political corruption, racial bias in capital punishment, and the misreporting of official statistics. Hence, the same way that analysis of crime scenes is commonly known as *forensics*, we will think of the traces that humans leave in data as evidence of past actions. In doing so, we will term the endeavour of studying those traces as *forensic* approaches to studying behaviour.

A natural question that arises is why forensic approaches are needed at all. Why not study human behaviour using the more common behavioural research methods and settings described throughout this book? The answer is simple: forensic approaches deal with behaviour that people or organisations would rather

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not have in plain sight, because the behaviour is of an illegal nature, or at least of an ethically questionable nature. Thus, it is necessary to think about how to spot evidence of misbehaviour *after the fact*. This is the strength of forensic approaches to detecting behaviour. As we will see, sometimes we will find a smoking gun; in other instances, we may not, but the patterns we see will are strongly suggestive that an illicit behaviour has taken place.

This chapter provides an overview of forensic-behavioural approaches, with some proposed general principles for detecting hidden behaviour. For an earlier review of the field, the interested reader should consult Zitzewitz (2012), which provides a very thorough review of the literature up until that point in time. This chapter proceeds as follows: first, we discuss some general principles in thinking like a detective. These principles will guide our analysis as we proceed through our three case studies, which are discussed in the three following sections. The final section provides some conclusions and recommendations as to what the reader can do to deal with illicit behaviour.

4.2 General Principles

4.2.1 Normative Expectations versus Positive Observations

How do we know whether something illicit is happening? To fix ideas in mind with clarity, it is important to think up a well-defined statistical model of the world. In other words, we first need to think about what the world would look like (the **normative expectation**) if everyone is behaving as they should be, and no illicit activity is taking place. Then, we will compare the normative expectation to a **positive observation**, and check whether the two match or not. Terminology is key here: **normative** refers to what we should observe, according to our model of the world, and **positive** refers to what we actually see in real life.

The idea behind the specialised jargon is actually quite simple. Here is a neat example drawn from the study of Fischbacher and Föllmi-Heusi (2013). They conducted an experiment where participants were asked to roll a standard six-faced game die, like the one you may have used to play Monopoly (yes indeed, a reference to a business game in a business book, how original). Then, each participant was asked to report what number they rolled.

What is the **normative expectation** for the average number rolled by participants? Well, if you are using a standard die, then each of the six faces numbered from one to six is equally likely. The average die roll is therefore $(1+2+3+4+5+6)/6 = 3.5$. Now, how much did participants actually report?

The participants knew in advance they would roll the die in private, and would receive more money from the experimenters when they reported bigger numbers. You can probably guess what happened as far as the **positive observation**. The average reported die roll was 4.5. Does the positive observation match the normative

expectation? Clearly, it does not. Thus, there is possibly something illicit going on, but we cannot be sure just yet.[1]

4.2.2 Follow the Money

What have we learned so far from the die roll example above? People report a different number than what we would (statistically) expect them to if they were telling the truth. What is interesting is that the *error* (the discrepancy between normative and positive) is correlated with the *incentives*. In other words, observing an error alone is insufficient to conclude that illicit activity is happening. The error needs to be correlated with the reasons why people might *want there to be* an error. In the die game, people are reporting higher numbers than they are really rolling because higher numbers mean higher payoffs. This may seem like a trivial point in this simple example, but in practice, it is not always obvious, as we will see in the case studies below.

Thus, in summary, if we want to discover illicit behaviour, we need to figure out: (1) whether there are differences between normative expectations and positive observations, and (2) we need to Follow the Money, or better put, follow the incentives. Armed with this thought process, we can tackle problems as diverse as political corruption, racial bias in capital sentencing, or the manipulation of Gross Domestic Product (GDP) statistics.

4.3 Case Study I: Political Corruption

As far as activities that involved parties do not want you to find out about, there are few better examples than political corruption. It is extremely important, and also very difficult, to find out about instances of corruption. One cannot simply ask politicians "Are you corrupt?" and expect to learn the truth. It is also difficult to ask the general population how much corruption they think is taking place, given that perceptions of corruption can differ markedly from reality (Olken, 2009). As it turns out, the devil is in the data, and we will find it in Suharto's Indonesia .[2]

Suharto (who like many Javanese people only had one name) was President of Indonesia from 1967 to 1998. In 2004, he received the dubious honour of being named the most corrupt world leader in modern history by Transparency

[1] In addition, we need to be sure that we have enough observations to conclude that normative expectations and positive observations are in fact different for the average die roll. The interested reader should seek to learn about statistical significance and power.

[2] This case study is adapted from Fisman (2001) and Fisman and Miguel (2010), which the interested reader can consult for more background.

International. Suharto himself accumulated an immense amount of wealth during his reign, as did his children. In particular, one of his sons, Bambang Trihatmodjo, had amassed a fortune of about 3.5 billion US dollars as of 1998. How did Bambang get so wealthy? Did he receive undue favours because he was the president's son? Or is he perhaps a competent businessman who simply happened to be related to the man in charge? How would we know for certain?

From 1981 to 1998, Bambang was CEO of a very lucrative company called Bimantara Citra, and its commissioner from 2001 to 2012, after the company was renamed Global Mediacom. Bimantara Citra specialises in investing in media and telecommunications companies. On the face of it, we cannot completely rule out that Bimantara Citra was a well-run company that had a nose for investing in the right companies and reaping rewards. As we will see, however, Bimantara Citra derived a large fraction of its value from its connections to Suharto. What do investors really think of Bimantara Citra?

Enter the stock market. We can tell what investors are thinking by analysing what they are doing with their money. Without needing to know a lot about the precise workings of the stock market, the key intuition is that movements in share prices tell us something about the expected future profitability of a particular firm. For example, if you receive some credible information suggesting that natural gas is going to be very profitable in the future, you go to the stock market and buy shares in natural gas companies. If others are thinking the same thing or have access to the same information as you, they also buy shares in gas companies. As a result, share prices for gas companies go up.

On 4 July 1996, it was announced that Suharto would fly to Germany for a medical check-up. At that point in time, Suharto was 75 years old. When a person this age flies all the way from Indonesia to Germany for a check-up, people are very likely to ask themselves questions about whether his health is failing for good, and whether his days as leader are numbered. If investors think Bimantara Citra is a valuable company in its own right, which just happens to be led by the President's son, then bad news on Suharto's health should not matter very much. On the other hand, if investors think Bimantara Citra derives a large portion of its value because of its connection to President Suharto, then the company's share price would be expected to drop.

How did the stock market actually react? Figure 4.1 shows the daily percentage change of Bimantara Citra's share price (the dark line), and of the Jakarta Composite Index (the light gray line), which measures the overall performance of Indonesia's largest companies (you can think of it as the Jakarta Stock Exchange's equivalent to New York's Dow Jones or Tokyo's Nikkei). The movements in the two indices will tell us what investors think.

The Jakarta Composite Index dropped by a small amount after Suharto's trip was announced on 4 July. The Bimantara Citra share price dropped by quite a large amount in comparison. This tells us that, as soon as the news about Suharto's health became public, large numbers of people sold their Bimantara Citra shares. Why? Because they clearly thought, "if Suharto dies soon, this company will no longer be very profitable". The sub-text to that train of thought is, "if Suharto dies, Bambang

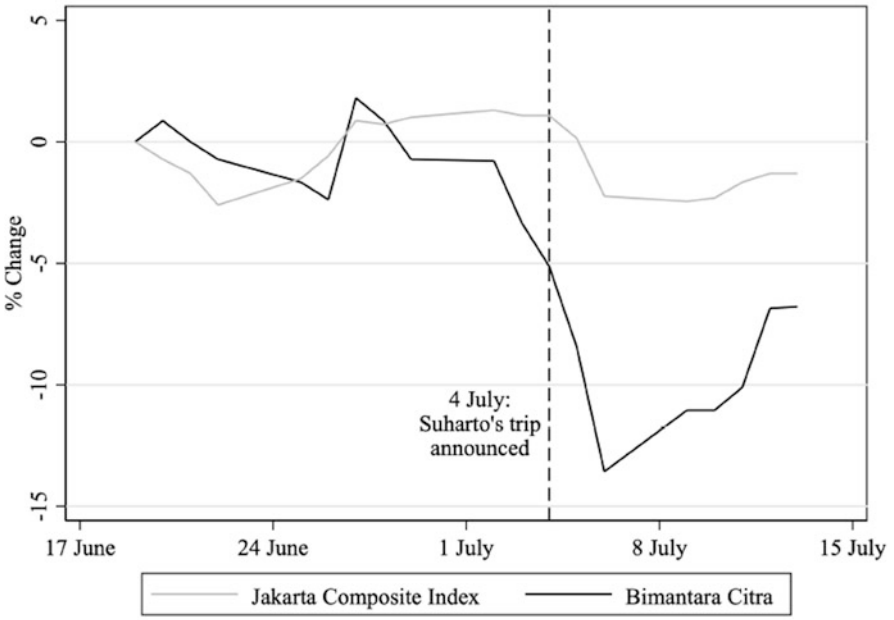

Fig. 4.1 Change in the value of Jakarta shares during Suharto's 1996 trip to Germany. Source: Fisman and Miguel (2010)

becomes useless, as someone else will lead the country—certainly not his recently deceased father, so I don't think there's any point in holding on to my Bimantara Citra shares." There we have it: that is evidence of political corruption. Bimantara Citra is valuable largely because Bambang is Suharto's son, not because of anything particularly business-savvy Bambang was doing as CEO.[3]

How big an effect are we talking about? The effect is very large indeed. Consider what happened to Suharto-connected firms due to news about his health, including other news besides the trip to Germany, as detailed by Fisman (2001). Suharto-connected firms, as indicated by the actions of investors in the market, were believed to derive about 25% of their value from their connections to the president. This is similar to a person in your workplace doing the same job as you (probably not

[3] Let us play devil's advocate, for a moment, which is a very useful way to jog our minds into thinking about causal questions. What else might be happening? For example, one could speculate that investors thought Bambang might become the next President, and thus could not dedicate the necessary time to running the business as efficiently as he hypothetically was beforehand. That would be a reasonable thing to think; however, Bambang was not speculated to become the President—the most politically active of Suharto's children was his daughter Tutut, who was speculated to be in training to take over from her father. The finding from Fig. 4.1 also generalises to other firms connected to Suharto through other ways than Bambang; see Fisman (2001), who shows that connections to Suharto really do matter for political reasons.

as thoroughly) receiving a 25% bonus on their paycheck merely because they are connected to the CEO!

In the end, Suharto's health did recover. Was the loss of value for Suharto-connected firms only temporary, with things returning to normal once the President was known to be fine? Let's revisit Fig. 4.1. Bimantara Citra share prices tumble rapidly at first, then start to recover as good health news emerge. But the recovery was never complete; the share prices never did return to their pre-bad news levels. This tells us that investors were likely reminded that the Suharto regime would not last forever (remember also that Suharto was already 75 years of age at that point).

As we mentioned earlier, the devil is in the data, and there is one more devil to be uncovered from the data in Fig. 4.1. Notice that the Bimantara Citra share price started dropping *before* the news of Suharto's trip to Germany became public. So even before the news went out, there were investors selling their shares in Bambang's company, presumably because they had heard that Suharto would soon travel for his medical check-up. Who were these investors? We cannot say for sure, but it is not hard to imagine that these are people close to the president's entourage (friends and family, for example), who would have been more likely to hear the news about Suharto's trip before the general public. This is evidence of insider trading, which is the practice of buying or selling stocks based on information that is not available to the public. Insider trading is illegal.

So far, we have shown that one large company in Indonesia was connected to Suharto and derived a large part of its value from that connection. That firm is of course not alone in that situation; several other firms depended on Suharto (Fisman, 2001), and several firms around the world benefit from connections to political leaders. Why should we care about what politically connected firms do? There are at least two reasons. First, politically connected firms receive benefits they have not earned in any meaningful sense, which is unfair to everyone else. Second, even if you are not remotely interested in fairness, politically connected firms divert resources away from other firms, including government bailouts (Faccio et al., 2006) or access to credit (Khwaja and Mian, 2005a), among many other examples. In a world of finite resources, this means that politically connected firms prevent better firms (with higher quality goods and services) from thriving, or from existing altogether. Everyone loses out—the non-connected firms, taxpayers (whose taxes go to firms which are not adding value to society), and consumers, who end up with worse goods and services. If you are not convinced, just ask yourself the following: if you were a young tech-minded entrepreneur in Indonesia in 1990, would you have worked hard to start an investment firm seeking out the best Indonesian inventors and funding their companies to make the best products for the market? Chances are, you would have seen how powerful Bimantara Citra was, and its connection to Suharto, and would have decided your time would be better spent pursuing a business activity that did not compete with the corrupt presidential family. To be sure, we need not speculate here. Research has shown that politically connected firms are worse firms in many ways, including more workplace fatalities (Fisman and Wang, 2015), worse accounting standards (Chaney et al., 2011), and less innovation (Akcigit et al., 2018).

The use of stock market data has provided lots of insight as to illicit behaviour. In another fascinating study using declassified information from the CIA (Dube et al., 2011), researchers have shown that US-backed coups against foreign governments lead to abnormally high returns for corporations that stood to benefit from the coup. As in the Indonesia example, the study was able to detect abnormally high returns as soon as the coup authorisation was given and *before* the actual coup, again suggesting insider trading. Other great examples of papers using the forensic approach as applied to stock market data have looked at the value of political connections to Hitler in Nazi Germany (Ferguson and Voth, 2008), to Dick Cheney in the US. (Fisman et al., 2012), or to the two major parties in US politics (Goldman et al., 2009) But there are many more applications, including to the detection of illegal weapons trading DellaVigna and La Ferrara (2010), stock option backdating (Heron and Lie, 2007), or price manipulation by financial intermediaries (Khwaja and Mian, 2005b).

Stock market data are far from the only way forensic approaches are used. In the next case studies, we talk about applying forensic thinking to two very different problems: detecting racial bias in judicial behaviour and detecting misreporting of official statistics.

4.4 Case Study II: Racial Bias in Capital Sentencing

Forensic approaches to thinking about human behaviour can help us detect phenomena that literally have to do with life and death. One prime example of this is the study of Alesina and La Ferrara (2014) on racial bias in the application of the death penalty in the US. This is an issue for which it is very difficult to find a 'smoking gun'. How would we know for sure if judges and jurors are racially biased? The same way we cannot simply ask a person "Are you corrupt?" and expect to learn the truth, we also cannot learn much from asking judges and jurors whether they behaved in a racially biased manner when they sentenced a defendant to death—if it were the case, they would certainly not tell us the truth. But we can learn whether judges and jurors are biased by comparing our normative expectation of how they would behave if they were unbiased, to how they actually behave.

This particular behaviour concerns the most serious judicial decision of all, the death penalty, which applies disproportionately to ethnic minorities in the US, and particularly to African Americans. Amnesty International (2003) states:

> African Americans are disproportionately represented among people condemned to death in the USA. While they make up 12 percent of the national population, they account for more than 40 percent of the country's current death row inmates, and one in three of those executed since 1977.

Here, we are dealing with a very important problem that affects a large number of people. While we have good reason to think, before we look at the data, that the judicial system discriminates against minorities, some might argue that since

minorities tend to have lower incomes (e.g., due to worse economic and educational opportunities), it is possible that minorities are less able to afford good (expensive) lawyers. For that reason, one could speculate that differences in income might explain some portion of the high proportion of African Americans sentenced to death according to Amnesty International's findings. Let us use some forensic reasoning to check whether we can find evidence of discrimination.[4]

First, we need to understand some important background information on the judicial process in the US. All cases are first tried in a local or state court. If the accused person receives the death penalty, an appeal of the verdict automatically goes to the state high court. This is called the *direct appeal* case. If the state high court upholds the death penalty verdict, a new appeal is made to a federal court, which is called a *habeas corpus* appeal.

What is the problem an unbiased state high court or federal court should be attempting to solve? Well, an unbiased court certainly should not want to sentence an innocent person to death. We will think of sentence reversals (cancellations of the death penalty) as a court taking the step of 'fixing' the error made by the previous court. These are the errors we are interested in; let's have a close look at those errors and see if they are systematic.

Can appeal outcomes be different for defendants of different races? As we have seen above, conviction rates can vary across races without necessarily implying discrimination—possibly because minority defendants are, on average, less wealthy and thus might have worse lawyers. The same is true for appeal outcomes—if you could not afford a good lawyer at the first trial, then is likely that you still cannot afford one at later trials. A first look at the data suggests there are notable disparities in appeal success rates across white and African-American defendants; this is true for both *habeas corpus* appeals and state high court appeals (Fig. 4.2). This is not a smoking gun showing evidence of discrimination, but it certainly indicates that there are differences we should be investigating.

Should the race of the victim matter? Should a non-racist court care who you are alleged to have committed a crime against? The answer is no. A court that does not discriminate against defendants on the basis of race should *not* care who the defendant is alleged to have committed a crime against. In other words, if courts are unbiased, then the probability that a non-white defendant has a successful appeal should be the same regardless of whether they are accused of having committed a crime against a white person or against a non-white person. This is our key

[4] It is extremely important to keep in mind that if we do not find discrimination, that does not mean we can safely conclude that there is no discrimination. That approach really only works where the phenomenon in question is easy to observe and measure. For example, if we find that two baseball players of different ethnicities with the same playing statistics (runs batted in, on-base percentage, etc) earn the same salary, we can safely conclude that there is no discrimination, because player performance is relatively easy to quantify in baseball. Now consider the same scenario for two association football (soccer) players; it is much harder to offer a firm conclusion, because it is difficult to quantify performance.

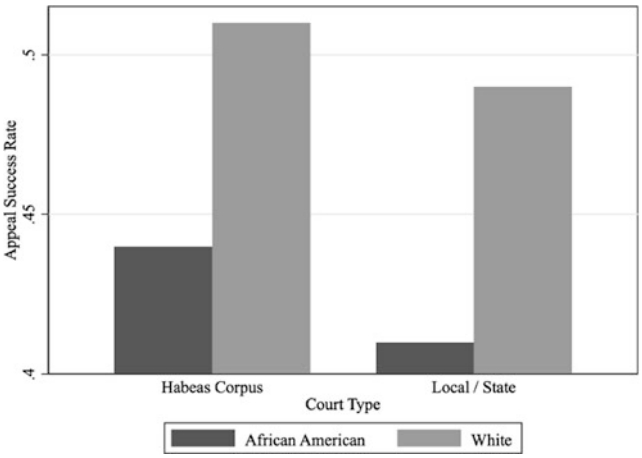

Fig. 4.2 Appeal success rates by defendant race and appeal type. Source: Adapted from Table 1 in Alesina and La Ferrara (2014)

Table 4.1 Appeal success rates, victim race, and defendant race

	Habeas corpus			Direct appeal		
Victim: ⇒	White	Non-white	*p*-value	White	Non-white	*p*-value
Defendant: ⇓						
White	0.36	0.47	0.81	0.37	0.40	0.67
Non-White	0.38	0.28	0.08	0.38	0.35	0.10

Notes. The *p*-value is the probability of observing different appeal success rates for different combinations of defendant race—victim race, under the hypothesis that courts are unbiased. It ranges from 0 to 1. A small *p*-value means that it is very unlikely that courts are unbiased
Source: Table 2 from Alesina and La Ferrara (2014)

normative expectation, against which we will compare the data we actually observe from the courts.

Table 4.1 shows the appeal success rates for defendants of different races (in different rows), depending on whether the alleged crime involved a white or a non-white victim (in different columns). The success rates are broken down by appeal type: *habeas corpus* cases (federal courts) are on the left-hand side, while direct appeals (state high courts) are on the right-hand side. Let's bring our attention to *habeas corpus* cases first. The first row of Table 4.1 shows that alleged crimes involving white defendants and White victims have an appeal success rate of 36%. This means that federal courts fix the error made by the state high court for white-white cases about 36% of the time. What about cases involving white defendants and non-white victims? Those death penalties are overturned 47% of the time, which is slightly higher. At this point, we briefly introduce the concept of the *p*-value, which is also shown in Table 4.1. A *p*-value is the probability that different combinations of victim-defendant race can be found under the hypothesis that courts are unbiased.

For example, the comparison between the appeal success rates in the first row of Table 4.1 (36% for white-white vs. 47% of white-non-white) has a p-value of 0.81. That means it is 81% likely that we can observe such a difference in appeal success rates when courts are unbiased. Eighty-one percent is a large number; on the basis of this number alone, although it initially seems that courts might be more lenient on white defendants when the victim is non-white than when the victim is white, we cannot rule out that courts are unbiased.

Now let us consider *habeas corpus* outcomes for non-white defendants, in the second row of Table 4.1. Appeals are successful (the death penalty conviction is quashed) in 38% of the cases involving non-white defendants and white victims. Cases with non-white defendants and non-white victims have *fewer* successful appeals (28%). The difference between the two has a p-value of 0.08. What does the p-value tell us? That it is only about 8% likely to observe such a difference under the hypothesis that courts are unbiased. That is very unlikely, and we can thus conclude that the courts' behaviour constitutes evidence of racial bias in the application of the death penalty.

What about the state high courts, which judge direct appeal cases? Death penalties for white defendant- white victim cases are overturned 37% of the time compared to 40% for white defendant-non-white victim cases. The difference is again not significant, with a p-value of 0.67. But death penalties for non-white defendants are again different depending on whether the victim is white or not, with a p-value of 0.10. Thus, we have again found evidence of racial bias.

As you can imagine, since we found bias for the most serious decisions in the judicial system, there are other great studies documenting other important biases, including biases in bail decisions (Arnold et al., 2018), length of prison sentences (Cohen and Yang, 2019; Eren and Mocan, 2018), or naturalisation decisions (Ilić, 2018).

4.5 Case Study III: Do Governments Lie About Official Statistics?

The historical record contains a great many compelling stories of autocratic governments fabricating official statistics of many kinds.[5] Perhaps most infamously, Mao Zedong's insistence on very high levels of rice production prompted officials to over-report how much rice was actually produced, which, in turn led China to sell large amounts of rice to foreign countries, causing widespread famine and the deaths of approximately 30 million people, as documented by Harari (2016) and Ashton et al. (1992). Stalin was also displeased by the population figures reported in the 1937 census, and thus had census officials executed or exiled to Siberia (Acemoglu and Robinson, 2012). The new census officials heeded the warning: the population

[5] This case study is partially based on Chan et al. (2019).

of the Soviet Union was larger by nine million people at the census conducted in 1939, just two years later.

The examples above are clear, but are they systematic? Does the average dictator exaggerate statistics, or are Mao and Stalin extreme examples in a world of dictators who generally report statistics accurately? As before, the devil is in the data, and this time, we will need two sources of data to compare and contrast. Using two sources of data that aim to measure the same phenomenon is a very powerful approach, which researchers have applied to many problems, including figuring out whether importers lie on their customs declarations forms about what goods they are importing (Fisman and Wei, 2004), whether ski resorts claim they have more snow than they really do (Zinman and Zitzewitz, 2016), or whether baseball card sellers on eBay over-report the quality of the cards they sell (Jin and Kato, 2006).

Here, we need a second, unbiased source of data for economic activity, other than official GDP. By *unbiased*, we mean one that cannot be manipulated by the entity in charge of producing GDP statistics (the government, in this case). Fortunately, some ingenuous social scientists (Chen and Nordhaus, 2011; Henderson et al., 2012) have noticed that richer areas use more electricity at night, which produces light that is visible from outer space.[6] Night-time luminosity is thus the second source of data we need: it captures the same underlying phenomenon as GDP (economic activity) but cannot be manipulated, as government cannot control how much light citizens emit into outer space (at least, they cannot control it quite so easily).

This insight has allowed social scientists to first show that autocracies lie about how much economic activity is taking place (Magee and Doces, 2015; Martinez, 2018). On average, relative to democracies, autocracies report GDP growth rates that are one percentage point higher than what can be inferred by looking at night-time luminosity. This means, for example, that the average autocracy that experiences a true GDP growth of 2% in a given year will report 3% instead. That is quite a big lie, which should give us pause for thought before declaring that authoritarian modes of government are good for the economy, as many commentators have (Halper, 2012), dubbing the supposed goodness of autocracy for economic growth the "Beijing consensus". At any rate, let's check whether our general principles of thinking like detectives are able to make sense of this pattern. First, did we find a discrepancy? Yes. Is the discrepancy correlated with incentives? Yes, undoubtedly. Autocratic governments are not under-reporting growth; on the contrary, they are over-reporting it, presumably with the intention to make everyone believe that the government is doing a better job than it really is.

What have we learned so far? Extreme authoritarian governments lie about statistics (such as Stalin), but they are by no means isolated cases—the average authoritarian government also does lie. Do democracies lie about statistics? How would we know? Instead of comparing reported GDP to night-light across regime types (autocracy versus democracy), Chan et al. (2019) look at whether the

[6] NASA weather satellites have been taking photographs of the Earth at night for decades; see https://ngdc.noaa.gov/eog/index.html.

GDP-lights discrepancy is bigger or smaller when elections are approaching and depending on whether the incumbent government currently enjoys support in the general population. Their results show that when an election is near and the government has low popular support, over-reporting is higher, which makes sense given the re-election problem the government is trying to solve. On the other hand, when an election is near and the government has high popular support, there is a bit less over-reporting, which suggests that the government does not think it needs to manipulate GDP statistics as much. It gets worse, however. Chan et al. (2019) also find that overstating GDP growth leads to *increases* in popular support in democracies. When a government over-reports growth by one percentage point for two consecutive years, about 2% more of the electorate report that they intend to vote for the incumbent government if an election were to be held immediately. Considering that many elections are lost and won by very small margins (sometimes under 1%), you can see how costly GDP manipulation is to the democratic process, and why it so important to tackle the problem with a forensic-behavioural approach.

4.6 Conclusion

This chapter has provided an overview of forensic approaches to detecting human behaviour of an illicit nature in secondary data, using key case studies and some general principles. In summary, one must always have in mind a normative expectation of what would happen if no one were behaving in an illicit fashion, and compare the normative expectation to the observed data. The existence of discrepancies between the expectation and the observation is not in itself sufficient to conclude that something unusual is going on; as we saw, the 'error' must also be systematic in a way that correlates with the incentives and motivations to 'commit' such errors in the first place. In the third case study, we also discussed the usefulness of using multiple sources of data that aim at capturing the same phenomenon, to identify potential discrepancies. Again, those errors must be systematic in order to constitute evidence of wrongdoing.

Why should you care? As the world produces more and more data, the behaviourally minded person has an opportunity to detect more behaviour that would not be taking place if everyone were behaving in a legal and ethical fashion. Thus, data extraction and analysis are useful skills for the behaviourally minded person now more than ever, and this is not a trend that is likely to go away. The more people are vigilant and data-trained, the less likely it is that perpetrators of illicit behaviour can get away with it, and so the less likely they are to commit illicit behaviour in the first place.

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Chapter 5
Gender in the Workplace

Ananta Neelim

5.1 Introduction

In many aspects of social life, there is evidence of significant gender gaps in outcomes in the workplace. Among them, the two most prominent are in earnings and representation in leadership positions. Figure 5.1 plots the unadjusted gender earnings gap in OECD countries and shows that the gap is pervasive: In all but one in country in this sample, women earn less than men on average. Similarly, Fig. 5.2 shows that around the world, female representation in leadership positions in business organisations is less than 20%. More importantly, in no part of the world are women close to achieving 50% representation in top management in businesses.

Given the inherent equality (and efficiency) concerns with gender gaps in the workplace, significant research has been conducted in economics (and other social science disciplines) to quantify the extent of and identify the factors that lead to gender gaps in earnings and leadership. Earlier works in economics investigated whether supply side factors, such as human capital investment (education, work experience) and labour market choice (labour force participation, occupation, and industry choice) varied across gender and contributed to the gender earnings gap. Similarly, demand side factors (such as discrimination) were also considered. In a recent paper, Blau and Kahn (2017) conduct a review of the US labour market to investigate the importance of these factors between 1980 and 2010. They decompose the gender earnings gap and show that the scope of human capital variables in explaining the gender gap in earnings has greatly diminished: from 30% of in 1980s to only 15% in 2010. In contrast, explanatory power of labour market choice variables increased from 23% to 47% between the same

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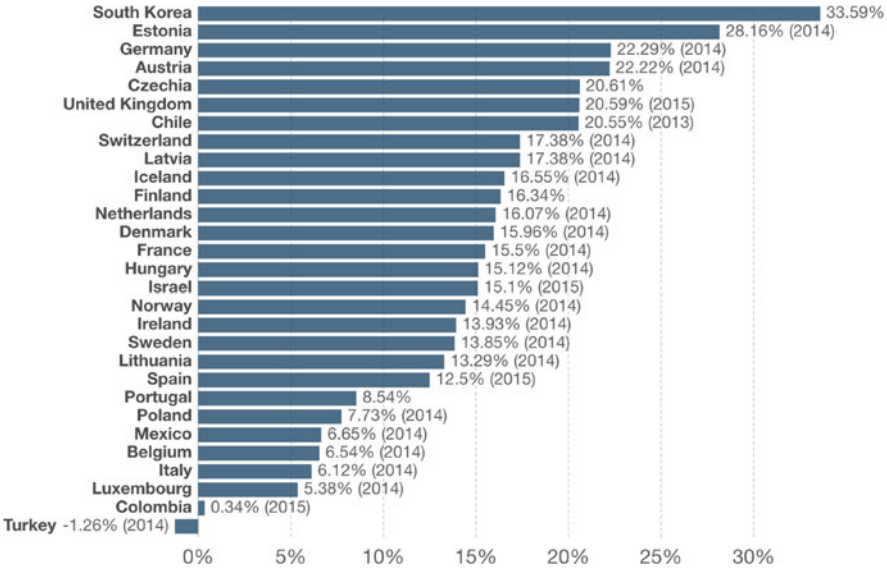

Fig. 5.1 Gender gap in earnings in selected OECD countries. Data presented is that of unadjusted gender wage gap, which is calculated as the difference between average hourly earnings of men and average hourly earnings of women expressed as a percentage of average hourly earnings of men.Data source: ILO Stat, years in parenthesis. Graph generated using template from Our World in Data

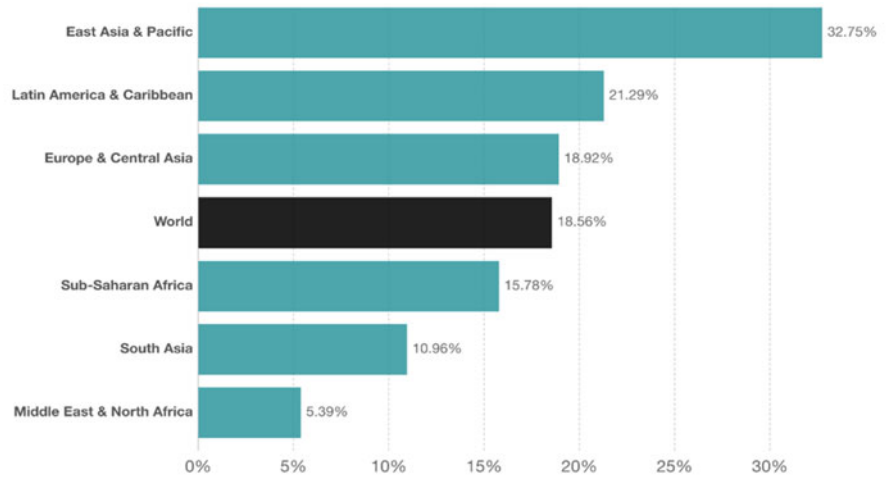

Fig. 5.2 Gender gap in leadership positions in businesses across the World. Data interpretation: % refers to the % of total firms with top female managers. Data source: World Bank World Development Indicators. Graph generated using template from Our World in Data

two time periods. Finally, about a third of the gap in earnings across gender could not be explained by the supply side factors. Traditionally, this unexplained component has been interpreted as a measure of discrimination. While the presence of such discrimination has been later corroborated by subsequent causal studies which show significant discrimination against women in the workplace (Goldin and Rouse, 2000; Reuben et al., 2014), attributing the entire unexplained component to discrimination is inappropriate as there might be variations across gender in attributes (such as behavioural preferences and psychological attributes) that are usually not captured in labour market survey measures.[1]

Relatedly, for centuries social scientists have debated and investigated whether men and women behave differently in social contexts. Starting with the seminal work of Maccoby and Jacklin (1974), psychologists systematically reviewed and quantified existing empirical evidence and identified various domains of social interactions where there were similarities and differences across sex. Several theories were developed that organise these empirical findings. The first set of theories appeal to evolutionary psychology mechanisms to explain sex differences in behaviour (Buss and Schmitt, 1993; Buss, 1995; Kenrick, 1992, for example). According to these theories, differences in behaviour arise because males and females are required to utilise different strategies to improve their chances in the sexual selection process. In contrast, theories appealing to differences in social roles across gender argue that the intra-household division of labour dictated by the biological constraints men and women face lead to different social roles across gender (Eagly and Wood, 1999). Psychological differences arise across gender from individuals responding to the restrictions and opportunities these gendered roles provide.[2]

The differences in the psychological, social and economic incentives available across gender play important roles for choices individuals make in the labour market. Accordingly, over the past two decades behavioural economists have pursued a research agenda to bridge the literature on gender gaps observed in the workplace and gender differences in behavioural characteristics shaped by the above mentioned incentives. As a starting point, this research stream acknowledges the importance of behavioural preferences, psychological attributes and Non-cognitive skills in influencing productivity and, as a result, earnings and career progression in the workplace. In line with the demand-supply framework used in the early labour economics literature, this research agenda focused on investigating gender differences in the behavioural traits exhibited by workers (supply side factors) and the existing stereotypes and discrimination (demand side factors) with an aim to explain gender gaps in the labour market.

[1] For a detailed review of the early labour economics literature, we ask the readers to see Altonji and Blank (1999); Azmat and Petrongolo (2014).

[2] A detailed review of the literature is beyond the scope of this chapter and we refer readers to various to the following articles that discuss these issues in detail Hyde (2014); Ellemers (2018).

Early experimental work, mostly conducted in the lab, focused on identifying gender differences in preferences (for example risk, competition, and prosociality) that could explain choices made in the labour market. For example, in motivating their research, Niederle and Vesterlund (2011) write, "If women are more reluctant to compete, then they may be less likely to seek promotions or to enter male dominated and competitive fields" (p. 601). Thus, it is plausible that significant parts of the gender gap in earnings and representation in leadership positions can be driven by gender differences in these behavioural dispositions. With improvements in elicitation methods in experimental economics, increasingly research has branched out to identify gender differences in psychological attributes and Non-cognitive skills (confidence, personality, propensity towards negotiation and self-promotion) more broadly. More recently, a set of studies directly link gender differences in behavioural preferences and psychological attributes to labour market outcomes in longitudinal studies.

In this chapter, I primarily draw on research conducted in behavioural and experimental economics to illustrate some of the key issues related to gender gaps and earnings and leadership. I acknowledge that other social science disciplines, particularly psychology, have conducted research that complements and supplements the research I present in this chapter. It is important to note that only a few (from many) gender-related issues in the workplace have been chosen. The omission of certain issues does not imply that they are any less important than the issues covered in this chapter. Finally, this chapter is *not* intended to provide a thorough review of the existing literature, but to introduce readers to some of the key issues in this area. In relevant parts of the chapter, I provide references to more thorough reviews for enthusiastic readers.

In terms of organisation, this chapter has four main sections, excluding the Introduction. In Sects. 5.2 and 5.3, I discuss gender differences in behavioural preferences and psychological attributes and their impact on gender earnings and leadership gaps. Subsequently in Sect. 5.4, I present the role of gender stereotypes and discrimination in differential outcomes achieved across genders in the workplace. Section 5.5 provides a summary.

5.2 Gender Differences in Behavioural Preferences: Risk, Competition and Altruism

5.2.1 Risk Preferences

Risk preference measures the degree to which individuals are tolerant towards risky prospects. Generally, this is measured in terms of the amount of monetary payoffs individuals are willing to forego to reduce risk. There is now robust evidence of

women exhibiting higher aversion to risk than men across survey and experimental measures.[3]

There are at least three ways in which risk preferences can affect gender gaps in the workplace. First, risk averse individuals are less likely to invest in risky human capital and choose occupations that offer higher uncertain income and career paths leading to leadership (Shaw, 1996; Belzil and Leonardi, 2007). In a recent study with US undergraduate students, Reuben et al. (2017) provide suggestive evidence that the lower tolerance for risk exhibited by female students can predict their higher likelihood of choosing of Humanities majors (deemed to have both lower mean and uncertainty in earnings) over Business majors (deemed to have both higher mean and uncertainty in earnings). In another study, Buser et al. (2014) show that gender differences in risk preferences in high school students can explain about 18% of the overall gap in choice of prestigious STEM tracks of education across gender.

Second, once in the labour market, risk averse individuals are more likely to choose lower value contracts to compensate for risk (Grund and Sliwka, 2010; Bonin et al., 2007). One of the most prominent examples of gender differences in risk aversion affecting contract choice is that from US soccer. The Women's National Team's enterprise bargaining agreement chose a contract that provided a higher level of certainty in compensation relative to that of the Men's National Team leading to a gender gap in earnings between players. Given the various factors that affect wages in the real-world, we cannot dismiss risk-aversion as the only factor for this gap. In a more controlled setting, Jung et al. (2018) show that in an experimental labour market, women are more likely to choose secure jobs, which can account for 40–75% of the gender wage gap observed. Further evidence is provided in Maitra et al. (2021), where the authors show gender differences in risk aversion can explain about 18% of the gender wage gap of manufacturing workers in Vietnam .

Finally, in the world of business venturing (or entrepreneurship), having higher tolerance towards risk has been shown to be correlated with entry and success (Arenius et al., 2021; Maitra and Neelim, 2021). However, in a recent study, Berge et al. (2015) show that enterprise training that reduced gender gap in risk tolerance did not predict gender differences in entrepreneurial success. Instead, it was preferences for competition (a measure of risk tolerance in a social context) that was more predictive of entrepreneurial success across gender.

5.2.2 Preferences Towards Competition

Preference towards preference towards competition measures the degree to which an individual chooses to participate under competitive incentive schemes. In their seminal work, Niederle and Vesterlund (2007) devised an experiment to examine

[3] For a review, we refer readers to the following articles Croson and Gneezy (2009); Niederle (2016); Filippin and Crosetto (2016).

gender differences in preference for competition and the various factors that contribute to it. In their multistage experiment, participants had to complete an effort task under different incentive schemes. In the first stage, no gender difference in performance was found under a piece rate scheme. Similarly, in the second stage, no gender difference in performance was found under a tournament incentive scheme. In the third stage, participants were asked to choose the between the two incentive schemes—it was found that men were twice as likely more likely to choose the tournament scheme. The authors collect information on beliefs and show that gender difference in these beliefs, which they term as overconfidence, can account for a third of the gender difference in choice into tournament incentive scheme. Finally, Niederle and Vesterlund (2007) show that even after accounting for all possible factors that can affect entry choice (such as risk, overconfidence, and aversion to feedback), the aforementioned gender gap persists indicative of as gender differences in attitudes towards competition. The main findings of Niederle and Vesterlund (2007) have been largely replicated in the lab (Cason et al., 2010; Dreber et al., 2014; Sutter and Glätzle-Rützler, 2015) as well as in the field (Buser et al., 2014; Flory et al., 2015; Samek, 2019).

A logical next question is whether these abovementioned gender in differences affects choices individuals make in the workplace. Flory et al. (2015) provide compelling evidence in a field experiment consisting of 9000 participants with associate degrees in the US labour market. They show that women disproportionately shy away from workplaces that provide competitive compensation. However, the nature of their experiment does not allow them to clearly show whether it is gender difference in preference towards competition or preference towards risk that drives this gender gap in job applications. In a more recent study, Samek (2019) replicates the work with Flory et al. (2015) using an undergraduate student sample from the US. She shows that gender differences in job applications in her study are not driven by preference for risk, but preference towards competition. In another strand of this literature, researchers have measured preference for competition in the lab and examined whether gender differences in these preferences are correlated with subsequent labour market choices. Buser et al. (2014, 2017) show that gender difference in competition can explain around 15% of gender difference in choice of STEM subjects in high school. Using a similar set up, Reuben et al. (2017) show that individuals who are overconfident and overly competitive expect to earn significantly more. They also show that gender differences in overconfidence and competitiveness explain a fifth gender earnings gap. In another concurrent work, Reuben et al. (2019) show that seven years after graduation from MBA programs, gender differences in preference for competition can explain 10% of the overall wage gap. Finally, Kamas and Preston (2018) show that preference for competition and confidence of college seniors in the US has impacts for compensation for women, but not for men.

5.2.3 *Social Preferences*

Social preferences describe the level to which an individual cares about the material well-being of others or society in general. Social preferences arise due to many factors, such as pure altruism (Becker, 1974), warm glow (Andreoni, 1989), fairness and inequity-aversion (Fehr and Schmidt, 1999) and reciprocity (Rabin, 1993). The research in economics with regard to gender differences social preferences is inconclusive. However, there is suggestive evidence that women are more other regarding than men. For example, in a recent meta-analysis of dictator games, Bilén et al. (2020) show that women exhibit slightly more altruism than men. However, the gender gap in altruism is higher when the anonymous recipient is a charity. Similarly, Andreoni and Vesterlund (2001) show that women are expected to be more inequity averse than men, who are more likely to exhibit preferences for maximising social welfare. In another study, Babcock et al. (2017) show that women are more likely to take on non-promotable volunteering tasks relative to men. Economists have used behaviour of second movers in the trust game (Berg et al., 1995) and the gift-exchange game (Fehr et al., 1997) to measure reciprocity. In both these games, the first mover is provided with an endowment that they can pass on the second mover (in an act of trust), who then has to decide on reciprocating that trust by returning (a portion) of the endowment passed on. Just as in the case of altruism, the evidence of gender difference in reciprocity is mixed. In some instances, women show higher levels of reciprocity and in others, men do so.

There are at least a few ways in which social preferences can affect labour market outcomes. Additionally, there is now ample evidence that some individuals choose lower paying jobs that are focused on helping others. In that regard, Besley and Ghatak (2005), provide a framework based on motivated reasoning. According to their model, a match with the mission of the organisation one works in and one's social preference can motivate individuals to forego a part of their wages in favour of the intrinsic happiness generated from this match. This can explain why individuals often work in non-profit organisations or in professions such as teaching and nursing, which are usually not as well paid. Lanfranchi and Narcy (2015) provide evidence of an over-representation of females in public and non-profit sectors in France, which would suggest gender differences social preferences affecting the earnings gaps through choice of occupation. Finally, in the business world, the ability to monetise innovations can have significant implications on earnings. In their review, Ding et al. (2006) provide evidence that women are 40% less likely to patent than men. While there are many factors that contribute to this gap, women's higher levels of social preferences can be one such factor.

5.3 Gender Differences in Other Psychological Attributes and Non-cognitive skills

5.3.1 Negotiation

The ability to negotiation effectively is an important skill in the workplace and is very relevant in determining salaries and career progression of individuals. For example, the inability to negotiate starting salaries can have a profound impact on earnings over the lifetime of an individual. The literature investigating gender differences in negotiations has broadly focused on two related parts of the negotiation process: (1) the propensity to initiate negotiations and (2) performance in terms of outcomes.

In terms of the former, across many studies, it has been shown that women are less predisposed to initiate salary negotiations relative to men (Laschever and Babcock, 2003; Hall and Krueger, 2012). However, the gender difference varies across contexts. For example, Eriksson and Sandberg (2012) show that women are less likely to initiate negotiations when the counterpart is female, but not when he is male. Similarly, it has been shown that gender differences in initiating negotiation arises in situations where prospects of negotiation are not obvious. In a field experiment, Leibbrandt and List (2015) show that gender differences in salary negotiations arose only when the job advertisements did not explicitly state that negotiation is possible. In a similar vein, Maitra et al. (2021) conduct a lab-in-the-field experiment with factory workers in Vietnam using the method developed by (Exley et al., 2020) to investigate gender differences in propensity to negotiate. In this design, participants had to decide on how to split a jointly produced output. Initial split was always randomly generated by a computer and could be either be more than or equal to the individual's contributions towards the produced output. They show that when the initial offer was lower than the individual contribution, there was no gender difference in initiating negotiation. However, when the offer was more than or equal to the individual contribution, men were more likely to initiate negotiations. The authors show that gender differences in initiating negotiations can explain around 13% of the gender gap in earnings for the sample studied.

Several studies, across many settings, have investigated performance in negotiations. We start with lab-based studies, which observe behaviour in the most controlled of settings. To investigate participant performance, early studies in this literature used the ultimatum game. In this two-player game, the first player (the *Proposer*) has to make an offer to split an endowment between herself and the second player (the *Responder*). If the offer is accepted, the endowment is split as per the offer, but if the offer is rejected, each player receives zero payoff. In this situation, the offers made to female *Responders* and the rejections to female *Proposer* offers can provide some insights into performance. In two of the early studies, Solnick (2001) and Eckel and Grossman (2001) show that women *Responders* received lower offers. However, they find mixed results with regards to

rejection of offers made by female *Proposers*. Solnick (2001) find female offers are rejected more frequently, while Eckel and Grossman (2001) find female offers are rejected less frequently.

Given the simplicity of the decision environment, which often bars participants from communicating outcomes, ultimatum game experiments are hard to tie to gender differences negotiation performance. In a more recent study, Huang and Low (2018) investigate gender difference negotiation performance in a battle of the sexes game where (1) gender of the participants are revealed, or not; and (2) communication via online chat is allowed, or not. In the game, the two players have to agree to divide a $20 endowment, where one player receives $15 while the other receives $5. Failure to agree leads to a both players receiving nothing. The authors find that allowing for communication increases possibility of agreement irrespective of whether gender is revealed or not. They also find that evidence that men exhibit chivalry towards women (i.e., they use aggressive negotiation strategies with lower propensity). Additionally, they show when males negotiate with other males, their payoffs are significantly lower. The authors interpret this result as evidence of toxic masculinity. In another paper, Exley et al. (2020) investigate gender differences in negotiation performance and find that women are no worse than men in terms of identifying situations where entering negotiations leads to positive profits and avoiding negotiations leads to negative profits.

Several authors have also investigated gender differences in negotiation using field experiments, which, unlike lab studies, provide higher ecological validity. Typically, in these studies, confederates of different sex are asked to engage in negotiations with others in real-life situations. In one of the earlier studies, Ayres and Siegelman (1995) analysed 300 paired audits at a new-car dealerships and found that white male confederates were quoted lower prices by car dealers relative to white female confederates when using identical scripted bargaining strategies. However, another such study conducted by Castillo et al. (2013) with taxi drivers in Peru find the opposite effect. They find that male passengers who use the same bargaining script as the female passengers face higher initial and final prices and rejection rates.

In light of mixed results in lab and field experiments with regard to gender differences in propensity to negotiate and negotiation performance, it is important to understand some of the main factors that drive these gender differences. The first factor that can influence gender difference in negotiation propensity is risk. Negotiation is inherently a risky endeavour—there is always a possibility of reaching a costly impasse. Given the gender differences in risk preference, it is quite plausible that women's lower risk tolerance drives the gender differences in negotiation. The second factor that impacts negotiation predisposition and performance across gender is that of social norms, which are often gendered in nature. In response to these norms, individuals are socialised at an early age to develop preferences that align with gender prescriptions. Therefore, individuals face psychological and social-image costs when they engage in behaviour that is incongruent to gender prescriptions. The presence of psychological costs allows for others in the society to engage in statistical discrimination when negotiating with women. Ayres and Siegelman (1995) provide an account of how the behaviour of car dealers in

quoting higher prices to female customers was consistent with the belief that they have higher valuations of cars relative to male customers. Andersen et al. (2018) provide further evidence of gender norms affecting negotiation behaviour of males and females. In a bargaining experiment conducted across matrilineal (*Khasi*) and patriarchal (*Kharbi*) societies in India, they show that the less empowered gender in their society performs worse in negotiations.[4]

5.3.2 Confidence and Self-Promotion

To progress in one's career and to elevate oneself to leadership positions, individuals often need to compete with others. One important factor that affects individuals' inclinations to compete is their confidence about performance, especially relative to others. In that regard, the study by Niederle and Vesterlund (2007), introduced in Sect. 5.2.2, provides evidence about gender gaps in beliefs about relative performance. They show that the percentage of men expecting to be ranked first in their group was 75% in contrast to 43% for females. However, only a quarter of the men and around half of the women who indicated that they would be ranked first actually ranked first. The authors interpret this as overconfidence, which is more pronounced in men. The gender gap in confidence accounted for a third of the tournament entry decisions found in the study. The gender gap in confidence have been shown to be influenced by gender-orientation and the stereotypes associated with the task performed (Bordalo et al., 2019) and Coffman (2014) show how this impacts behaviour in terms of contribution to ideas.

Given the importance on stereotypes in determining one's own self-confidence as well as others beliefs about performance (described in Sect. 5.4), it is also important to have the ability communicate one's achievements and good deeds to others. That is, self-promotion can be useful. self-promotion is defined as the active choice made by individuals to make actions and achievements visible to others. The goal of self-promotion is to acquire higher social image to alter beliefs of peers, colleagues and superiors about oneself. Effective self-promotion can influence one's career success. For example, in salary negotiations, establishing professional networks, and finding mentors, scholarship and grant applications, presenting oneself as having desirable characteristics ensures increased odds of being successful.

Self-promotion requires making visible one's good deeds and achievements and therefore is inherently constrained by social norms and prescriptions that dictate how others will receive it. Thus, social modesty norms become relevant and researchers have argued that these norms disproportionately affect women (Rudman, 1998). A second layer of constraint that individuals face stems from

[4] For a more thorough review of gender differences in negotiation, we refer readers to the excellent reviews by Mazei et al. (2015) and Hernandez-Arenaz and Iriberri (2019) summarising the psychology and economics literature respectively.

the underlying characteristic/achievement that is being self-promoted. Men and women are expected to present themselves differently in public in line with social norms and gender stereotypes. From the psychology literature, we know an ideal man is associated with having agentic qualities, such as being assertive, boastful, independent and ambitious and an ideal woman is associated with having communal qualities, such as being selfless, other regarding and modest (Eagly and Kite, 1987).

Early research from psychology has indeed shown when women present themselves in public, they are likely to undersell their achievements relative to men (Gould and Slone, 1982; Daubman et al., 1992). Subsequent studies (Rudman, 1998; Moss-Racusin and Rudman, 2010) show that although self-promoting women are viewed as more competent, they are less socially liked as a consequence of violating gender-specific prescriptions. Further, there is also evidence that women feel uncomfortable when engaging in self-promotion, which they do not experience when promoting others (Smith and Huntoon, 2014). Recent research in economics has also validated these findings (Exley and Kessler, 2019; Mancuso et al., 2017). Specifically, Mancuso et al. (2017) show that the gender differences in self-promotion is driven by women's social-image concerns of being perceived as immodest and not because of an underlying preference for modesty.

5.3.3 Personality Traits

Over the years there have been many studies that have documented the links between non-cognitive traits of individuals and productivity and earnings in the workplace. One of the main models that used to measure personality is the Five Factor Model of personality structure (Digman, 1990; Goldberg, 1990), which breaks down personality into the following five traits: *Extroversion* (the orientation of an individual interests towards the outer world of people and things, characterised by being active, sociable, and talkative), *Agreeableness* (the tendency to act in a way that is cooperative, tolerant, forgiving, trusting, altruistic, compromising, and unselfish), *Conscientiousness* (the tendency to be organised, dependable, responsible, hard-working, and efficient), *Neuroticism* (the degree to which an individual's emotional reactions are consistent and predictable, demonstrated by calmness and even-temperateness) and *Openness/Intelligence* (the tendency to be open to new intellectual, cultural, or aesthetic experiences, characterised by being creative, curious, imaginative, and broad-minded). It is important to note that these models have a hierarchical structure (i.e., many facet scales belonging to two broad domains sit below each of these five traits).

Over the years, researchers have conducted reviews to investigate gender differences personality based on the personalityFive Factor Model. Women report higher scores than men in relation to *Neuroticism* and *Agreeableness*, as well as in many facet scales. In terms of *Conscientiousness*, women score higher relative to men in only some facets, such as order, dutifulness and self-discipline, with no gender difference found in the trait level. In terms of *Extroversion*, gender differences are

only found at the facet level: women rate higher on facets related to enthusiasm and men rate higher on facets related to assertiveness and excitement seeking. Finally, in terms of *Openness/Intelligence*, opposing gender differences are observed at the facet level. Women have been found to score higher on the facets marking openness whereas men show higher self-estimates on facets marking intellect. (Costa Jr et al., 2001; Weisberg et al., 2011; Feingold, 1994).

Do personality personality traits affect earnings? Using longitudinal data from Wisconsin between 1957 and 1992, Mueller and Plug (2006) show that all five personality traits significantly affect earnings and, taken together, the effect of these traits is similar to that of cognitive skills. In a recent paper, Cubel et al. (2016) summarise the literature related to personality traits as measured by the Five Factor Model: (1) *Neuroticism* and *Agreeableness* are negatively correlated with lower earnings and (2) more *Conscientious* individuals achieve better labour market outcomes. In terms of gender differences in returns to these traits, Mueller and Plug (2006) find that *Agreeableness* had the greatest effect on women earnings, with women not receiving any positive returns when they behaved antagonistically (opposite of agreeable). Subsequently, it has been shown that women's lower level of *Agreeableness* relative to men is a big predictor of the gender wage gap (Nyhus and Pons, 2012; Risse et al., 2018). In terms of the other factors, the evidence is mixed.

5.4 Gender Stereotypes and Discrimination

In the previous section, we demonstrated the differences across gender in behavioural preferences and psychological attributes and their impact on labour market outcomes. In this section, we focus on the demand side factors that negatively affect women in terms of labour market outcomes. The two relevant and related factors are stereotype and discrimination.

Stereotypes based on gender reflect general expectations of the society about the behaviour of men and women (Ellemers, 2018). These expectations can profoundly impact outcomes achieved across gender for individuals possessing similar preferences, attributes and talents. As mentioned in the introduction, gender stereotypes arise due to evolutionary processes or social institutions that generate different expectations across gender. Engaging in behaviour that is incongruent to these prescriptions or stereotypes triggers social disapproval, shame and guilt (Elster, 1989; Young, 2015), which makes expectations persist over time. More importantly, stereotypes can accentuate or exaggerate true differences in preferences and attributes across gender. For example, Eckel and Grossman (2002) and Cason et al. (2020) show that women are believed to be more risk averse and more prosocial that they are. Relatedly, women have been shown to have lower confidence about their ability if it is not in line with gender expectations. Numerous studies have shown that women are less confident about their performance relative to others in

math-based tasks, which are generally associated as being male-dominated domains (Niederle and Vesterlund, 2007; Bian et al., 2017).

The presence of gender-based stereotypes can lead to situations where biased beliefs about the productivity differences across gender leads to (statistical) discrimination. Typically, in male-oriented domains, women are expected to perform worse than men on average and therefore face the prospect of being discriminated against because of their gender. In a study investigating statistical discrimination in a math-based task in a lab experiment, Reuben et al. (2014) show that without any information about past performance on the task, men were twice as likely to be hired in an experimental labour market. They also show that the decision to hire more males was detrimental, as better performing females were not hired in favour of poor performing males. Similarly, in an audit study, Moss-Racusin et al. (2012) investigated whether the gender of an applicant for identical applications had an impact on being chosen into a lab manager position. They found that both male and female participants were likely to prefer male applicants as they perceived them to be more qualified than their female counterparts. However, the nature of the task is important in whether discrimination is observed. Bohnet et al. (2016) conduct an experiment where individuals perform a math (male-oriented) or verbal (female-oriented) task and are evaluated. They show that the evaluations made about performance are significantly influenced by gender and its congruence with the task (i.e., males (females) are evaluated to have performed better in the math (verbal) tasks).

Gender stereotypes can also bias evaluation of individuals already in or seeking leadership power. In a study looking at effectiveness of leaders aiming to achieve coordination in teams, Grossman et al. (2019) show that even when leaders are using semi-scripted speeches, female leaders are awarded lower bonuses and assessed more negatively than equally-effective male leaders. In a similar vein, Sarsons et al. (2021) show that women receive less credit for group work when employers cannot fully observe their contributions. Similarly, Erkal et al. (2020) show that individuals are more likely to attribute good outcomes achieved by women to luck.

5.5 Summary

The objective of this chapter was to introduce readers to some of the key behavioural business issues that contribute to gender gaps in earnings and leadership. We discussed the relevant literature in behavioural and experimental economics and provide evidence of gender differences in behavioural preferences (risk, competition, other-regarding), psychological attributes (negotiation, confidence, self-promotion and personality) and how these differences influence outcomes achieved by men and women in the workforce. We also discuss how stereotypes based on gender affect individuals' self-confidence and how they are perceived by others. These stereotypes are often misguided and the discrimination that ensues is inefficient (i.e., not based on merit).

Given the efficiency and equality concerns associated with gender gaps in the workplace, policy interventions have been developed. These interventions can be classified into three broad categories. The first set relates to affirmative action policies (such as quotas), which generally mandates/recommends an increase in female representation in leadership positions. Examples include the 40% female representation targets in boardrooms of publicly-listed companies in Spain and Norway. Quotas are obviously good for achieving higher representation, but may generate backlash from peers (Leibbrandt et al., 2018). However, if the need for a quota is communicated effectively to increase acceptance, the possibility of negative consequences can be reduced (Balafoutas et al., 2016; Ip et al., 2020) The second set relates to changing the preferences of women to align them to achieve success in the workplace through encouragement or training. The results of these interventions are not very promising. There is evidence women face backlash when they behave more assertively in the workplace (Bowles et al., 2007; Exley et al., 2020). The final set involves changing institutional arrangements to reduce the impact of stereotypes and barriers that hinder career progression among women. Examples include higher paid maternity leave and debiasing hiring and promotion processes. Some of the policies have shown promising results. For example, Goldin and Rouse (2000) show that blind evaluations reduce the gender gap in hiring decisions. For further reading, we refer readers to Bohnet (2016), which provides a review of the literature and a list of behavioural policies that work in reducing gender gaps in the workplace.

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Chapter 6
Behavioural Business Design

Janneke Blijlevens

6.1 Introduction

After reading about behavioural business and its subset, behavioural economics in the previous chapters, one might be inclined to define 'behavioural design' as the design of interventions/applications for behaviour change informed by or leveraging well-known heuristics, biases and fallacies. While behavioural economics is concerned with more than identifying heuristics, fallacies and biases that explain our decision making (e.g., they also consider other psychological principles and insights such as, for example, emotions and perceptual processing), in the translation of behavioural economics to the general public the focus has mainly been on this narrow interpretation of what behavioural economics does. Indeed, Nudge (Thaler and Sunstein, 2009) provides a list of heuristics and biases. Even a quick Google search will provide such lists (e.g., in a Wikipedia entry).[1] As a result, for those wishing to apply behavioural economics insights to design for behaviour change, we have seen an influx of tools and guides aiding in the translation of heuristics, biases and fallacies from behavioural economics research into bite-size strategies for behaviour change (e.g., tools in Bridgeable, 2021; Brains, Behavior & Design Group, 2021; Artefact Group, 2018).

With such a definition we take a narrow lens of behavioural design that is driven by methods of application or approach rather than intent or objective of the approach. When we look at the objective of behavioural design we might come

[1] https://en.wikipedia.org/wiki/Behavioral_economics.

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to a broader definition: The design of interventions with the intent of influencing people's behaviour. We will take a broader definition as the basis for our efforts in defining behavioural business design, which is behavioural design pertaining specifically to the behavioural business paradigm (as outlined in Chap. 1). We argue that the narrow stance is more suitable for a subset to be called behavioural economics-based design (with above disclaimer noted). While in reality behavioural business designers (e.g., policy makers) will not only rely on heuristics and will also employ other psychological insights (indeed Bridgeable, Brains & Behaviour and Design Group, and Artefact group do also include other psychological insights), departing from this narrow view and juxtaposing it with the other side of the spectrum allows us to define behavioural business design more effectively. We choose to call the other side of the spectrum 'human-centred design for behaviour change' and this approach in behavioural business design will be outlined in more detail later on in this chapter. Before we juxtapose these two, we discuss some general terms in design and behavioural business to help us define behavioural business design as a practice within the behavioural business paradigm.

To start, we should clearly distinguish behavioural design from social design. Social design is an area of research and practice within the design discipline that has gained significant traction in the design literature in the past 10–15 years, but many design practitioners and policy makers will tell you they were social designers well before it became a thing. Social design is not easily defined, as it has its origins in different areas (e.g., social innovation, action design, service design), but it can broadly be captured as design "to do good for society" (Tromp et al., 2011, p. 1). The intent behind social design lies in a wish to make socially desirable change happen in society, where society is viewed as a large network of interactors, a community, or smaller organisations. Social design often includes interventions that lead to change in society. This is where it is easy to confuse social design and behavioural design, as behavioural design also includes interventions with a goal of making change happen, and many designers will wish those changes to be positive ones within society. Indeed, some researchers even define behavioural design as "the process of transforming our better understanding of human behaviour into innovative practical solutions that promote social benefit" (King et al., 2014, p. 1).

However, what sets behavioural design apart from social design is that in social design, in its essence, the change intended is socially desirable, for the benefit of human society as a social system and not focused on individuals themselves. Behavioural design sees change in behaviour happen at the individual level, even if they do affect many individuals. This distinction is very much similar to what distinguishes psychology and sociology as disciplines. Psychologists focus on the individual without regard for how these individuals are related to others in terms of power, dependencies or hierarchical structures (even social psychology looks at the effects on/of the individual), while sociologists study individuals in relation to others within a social structure (Thoits, 1995). For example, when trying to tackle binge drinking among teenagers, knowing that perceived social norm is an important causal factor, behavioural designers (with behavioural meaning it has its theoretical underpinning in psychology) could try to target an individual's addiction through

an app that focuses on increasing a teenager's self-esteem and on empowerment to say 'no', while a social designer (with a theoretical basis in sociology) would introduce a community engagement initiative or employment program that gathers teenagers around a different social norm. Hence, social design interventions can incite behaviours that are socially desirable, but do not necessarily have the aim of changing individual behaviours (i.e, they target social systems or structures). However, one must always keep in mind that any design will influence individual behaviours automatically.

Further, change from behavioural interventions can be economically, financially (e.g., which superannuation investment plan do I choose?), and psychologically desirable (e.g., mental well-being), as well as socially desirable. In contrast, social design mainly focuses on creating benefit to society. Hence, there are two clear distinctions between behavioural and social design. One is that social design targets society, while behavioural design targets individuals, and the other is that social design has the goal of having a positive impact on society, while behavioural design includes outcomes beyond the social. Our take-away is that we may define behavioural design as the design of interventions that aim to change individual behaviours that could be socially beneficial, but do not need to be.

While this is, in practice, often not the case, behavioural design as defined above would theoretically include designs with the intent to change behaviours that are not necessarily based on psychological insights (e.g., designing portion packaging for potato chips to tackle an obesity problem). For example, they could be based on physiological insights (e.g., designing a potato chip that has a higher protein content resulting in the stomach signalling it is full quicker: myprotein.com) or financial insights (e.g., introduce a saturated fats-tax like that implemented in Denmark Jensen and Smed, 2013). Although these interventions may influence individuals' behaviours, they are not necessarily based on insights on how human psychology influences behaviour. Since we define behavioural business as the application of psychological insights to business practice and public policy making, behavioural business design would therefore have to be based on psychological insights.

Finally, behavioural economics is concerned with decision making, or choice making, while behavioural business, as an interdisciplinary paradigm, acknowledges that choice making is only one part of human behaviour: An organism's activities in response to external or internal stimuli, including objectively observable activities, introspectively observable activities (covert behaviour), and non-conscious processes (Van den Bos, 2007). Hence, behavioural business design should be defined to include all behaviours, and therefore a broader definition under which behavioural economics-based designed interventions are subsumed is more appropriate.

Accordingly, we define behavioural business design as the application of psychological insights to design interventions with the intention of changing individual humans' activities in response to external and internal stimuli within business or organisational contexts. We believe that behavioural business design includes a spectrum of approaches and applications of psychological insights to change

behaviours, which extends between what we will label as behavioural economics-based design and human-centred design for behaviour change.

6.2 Behavioural Economics-Based Design

As previously highlighted, it is important to note that behavioural economists encourage the application of psychological insights that include more than just heuristics, fallacies and biases that have been identified in behavioural economics research to influence decision making. They include other insights taken from fundamental psychological sciences, such as perceptual and cognitive psychology. However, to provide an overview of behavioural business design approaches by juxtaposing two sides of a spectrum, we will take a narrow view of behavioural economics-based design, in that it utilises heuristics, fallacies and biases as its basis for influencing individual decision making.

This specific subset of behavioural business design has a strong basis in what can also be called nudging. "A nudge [...] is any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives." (Thaler and Sunstein, 2009, p. 6). Nudging quite narrowly focuses on choice making and does not necessarily include the full spectrum of behaviour change. Traditionally, insights that are applied are based on heuristics, biases or fallacies that have been identified in behavioural economics research. Often, they are applied in Information Architectures (the organisation, structure and labelling of information content). For example, website forms can be designed such that the default is already ticked, or pop-ups are introduced in the design to break mindless scrolling behaviour. Food energy labels can present information in such a way that you can make well-informed decisions about food energy emissions leading you to choose lower energy emission foods (Camilleri et al., 2019c). They can also be applied in other types of applications; for example, the design of an opt-in or opt-out policy for organ donation leveraging the default heuristic (Johnson and Goldstein, 2003), or framing a bonus as a loss rather than a reward (Hossain and List, 2012), leveraging the framing heuristic.

Because behavioural economics-based designs are based on established heuristics they are grounded in scientific knowledge of cause and effect. Hence, this means that any interventions are evidence-based to such an extent that we can assume that if a certain heuristic is leveraged correctly, it is likely that the desired behaviour will occur. Especially in policy making, but also more frequently in other business practice, evidence-based interventions are important—we want some assurance that the investment into an intervention will pay off. Of course, the heuristic may not be applied correctly, and thus basing behavioural interventions on heuristics is not a completely fool-proof approach. However, not only do behavioural economists have knowledge on cause and effect, they also have an understanding of what psychological principles explain the cause and effect of certain heuristics, if they ground their research in fundamental psychology. For example, the default heuristic

has been shown to be explained by cognitive effort (Gigerenzer, 2008) in such a way that consciously weighing options takes effort that we can then not expend on other cognitive tasks. Choosing the default allows us to save our cognitive effort and energy for tasks that we (our brains) deem more important. Another explanation for the default heuristic is that defaults change the meaning of options; for example, that we perceive them as if they are endorsed by an unknown entity such as an expert, or we perceive these defaults as the more moralistic choice (Davidai et al., 2012). Having this knowledge of the underlying principles or mechanisms that explain how heuristics influence behaviour provides behavioural intervention designers with some sort of guidelines that help decide which heuristics can be applied in which contexts to have the desired effect. For example, the default might work really well to help someone make difficult financial decisions about retirement investment packages (Camilleri et al., 2019b), because the default can be perceived as coming from a financial expert (rather than an arbitrary choice by the interface designer). And, why would you put in the cognitive effort to become an expert in financial investing? However, the default heuristic might not work so well when wanting to sell a specific pair of jeans. After all, do we really trust advertisers to be experts about what we should wear, or are we guided more by social and status concerns? Perhaps an application of the herding heuristic would be a better choice in this context.

Indeed, some of the behavioural design models that describe the approach of using behavioural heuristics or biases in interventions, highlight the importance of starting with a clear understanding of human behaviour based on existing evidence and knowledge in the literature. For example, Wendel (2013) describes a process in his book "Designing for Behaviour Change" that starts out with the 'understand' phase, wherein he advocates for the designer to first get well acquainted with existing knowledge about human behaviour. Similarly, Cash et al. (2017) outline a process for behavioural design, after analysing successful behaviour change projects in depth, in which the first phases are heavily focused on existing scientific knowledge and then hypothesis testing any assumptions before designing an intervention.

Unfortunately, this benefit of knowing the underlying psychological principles and theories in guiding which heuristics are more suitable to apply in certain contexts is more of a theoretical rather than practical reality. Often, behavioural designers, for example policymakers, will not have access to this level of information as it is hidden in academic journals that are not easily accessible and/or they do not always have the necessary background in psychology to successfully interpret scientific knowledge on a practical level. Similarly, many tools that are available to the general public rely on the use of heuristics, fallacies and biases as quick fixes, rather than that these tools provide a solid understanding of the psychological mechanisms that explain behaviour in accordance with these heuristics, fallacies and biases (e.g. Bridgeable, 2021; Brains, Behavior & Design Group, 2021; Artefact Group, 2018). Such tools are easy to use and provide some structure to the design process; however, as a result, one often sees trials taking place that test multiple, more or less arbitrarily chosen heuristics on which one works best, rather than

that the decision for heuristics to trial is based on theoretical reasoning about why a particular heuristic might work best in that context. Interestingly, this reality is further exacerbated by the highly applied nature of behavioural economics research itself, as well as the tradition of incentivised experiments in behavioural economics specifically.

In applied research, we want to know what works and does not work, and often understanding why it works is secondary. In applied research we are interested in the main cause-and-effect relationship of the lever (e.g., a heuristic) with the actual observed behaviour first, and will only try to understand the underlying principles that explain this cause and effect once the main effect is well and truly established. Understanding the underlying psychological mechanism of that specific cause-and-effect relationship is more a focus in consumer behaviour (a sub-branch of marketing) than in behavioural economics due, in large part, to the research methods acceptable in these disciplines. In behavioural economics, only incentivised experiments (your payout for participating in an experiment depends on the choices you make in that experiment) are considered a good indication of cause-and-effect as measuring cause-and-effect in that way is shown to be a better predictor of actual behaviour than 'the intent' that is often measured in consumer behaviour research (Bertrand and Mullainathan, 2001; McBroom and Reed, 1992). While predictive validity (the ability to make claims that this effect will indeed influence actual behaviour) is higher for incentivised experiments, it also restricts the ability to tap into psychological principles or mechanisms that are covert. And often, the psychological principles that explain why a certain heuristic influences specific behaviour are covert (e.g., felt emotions, personality types, risk perceived). To measure covert psychological principles, consumer behaviour researchers rely on psychometric scales that have been tested to reliably and validly measure these covert constructs. These cannot be incentivised. Indeed, consumer research has a much stronger tradition of establishing the principle, or *why*, of a cause-and-effect relationship. The top academic journals in this field will require a demonstrated cause-and-effect relationship of a lever to behaviour to be empirically explained by an underlying psychological mechanism before that cause-and-effect relationship is deemed a contribution to knowledge.

Because behavioural business design finds its basis in behavioural business as a paradigm that includes marketing as a discipline, this vast knowledge on the why, the underlying principle, is included in the knowledge bank that allows for theoretically-based decision making in practice. Hence, behavioural business design entails more than behavioural economics-based design and allows for a stronger evidence-base and more guided direction for the application of heuristics, fallacies, and biases in interventions.

Another way in which behavioural business design entails more than what the narrow focus of behavioural economics-based design might include is that the latter usually targets choice behaviour of one person at one moment in time, while the former would also include long-lasting behaviour change (e.g., addiction behaviour) or habit formation (e.g., changing eating patterns). The impact of behavioural economics-based design could be perceived as minimal, and for designers with

a desire to change the world for the better, this type of design may not seem so satisfying in the beginning. However, the impact can be very large as it can target many people at the same time due to its cost effectiveness and that way it substantively affects change in society. For example, a little default nudge of opt-out of organ donorship can save billions of lives across the globe, even when it is a 'simple fix' (maybe not politically) aimed at swaying individual choices at one moment in time. A behavioural business design approach that has a strong focus on longer-lasting behaviour change and habit formation is that of human-centred design for behaviour change.

6.3 Human-Centered Design for Behaviour Change

Human-centered design was aptly defined by Van der Bijl-Brouwer and Dorst (2017) as follows (p. 2): "a group of methods and principles aimed at supporting the design of useful, usable, pleasurable and meaningful products or services for people. The main principle of these methods is that they describe how to gain and apply knowledge about human beings and their interaction with the environment, to design products or services that meet their needs and aspirations." Hence, what lies at the heart of human-centered design is a focus on the people for whom the product, system or service is being designed (Giacomin, 2014); specifically, an understanding of human physical, perceptual, cognitive and emotional characteristics, followed by progressively more complex, interactive and sociopsychological considerations. Hence, human psychological insights are what first drives human-centered design, followed by more sociological and phenomenal insights. Human-centred design for behaviour change then focuses specifically on changing people's behaviours through designed interventions based on these psychological insights. Hence, this branch of design falls neatly under the bracket of behavioural business design, in that it uses psychological insights as its basis, and has the goal of affecting behaviour change in individuals.

In particular, it is clear how human-centred design for behaviour change falls under the bracket of behavioural business design if we consider how prominently human-centred design is now positioned in business contexts. Often this specific contextual application is referred to as strategic innovation. Although strategic innovation is historically emergent from business practices and human-centred design is historically emergent from design as a practice (Van der Bijl-Brouwer and Dorst, 2017), when applied in business contexts they follow similar processes. In recent years, it has become clear that a human-centred approach to business strategy has a positive effect on innovation success (Verganti, 2017). As a result, we have seen an influx of Design Thinking emerge in business practice. When following IDEO's CEO, Tim Brown's, definition of design thinking, we see that design thinking is a process, while human-centred design is a mindset that over-arches or blankets this process: "Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people,

the possibilities of technology, and the requirements for business success".[2] Often companies that successfully employ the Design Thinking process, as described here, acknowledge that innovation is only successful if next to feasibility and viability, innovation is also desirable—what people want and need (Brown, 2009). Notably, Design Thinking specifically emerged as a business practice when designers became more heavily involved at the strategy level of a company (Calabretta et al., 2016); however, design practitioners will tell you that these methods, practices, and tools, or 'thinking' are no different from what they have always done: To design products and services, and perhaps intuitively rather than consciously, after many years of training and experience in practicing design.

Design thinking or the human-centred design approach to innovation itself is not the same as human-centred design for behaviour change, as strategic innovation does not always aim for behaviour change. However, the commonality lies in the strong consideration of the human affected or specifically targeted by an intervention, and applying such insights to an intervention within the business context. Incidentally, this is also where behavioural economics-based design and human-centred design for behaviour change are similar to each other and fall under the same bracket of behavioural business design. What distinguishes human-centered design for behaviour change from behavioural economics-based design is how insights are identified, the nature of the knowledge that underlies these insights, the approaches to applying these insights as levers in behaviour change interventions, and the scale of intended behaviour change.

The human-centred design approach to behaviour change typically follows these distinct phases of the design process: empathise, define, ideate, prototype, test (Stanford d.school).[3] The 'empathise' phase often starts out very context specific, in that there is a large portion of time spent on gaining human behaviour insights within a specific problem space, often through qualitative observation and ethnographic methods. So instead of relying on established principles identified in academic literature as a starting point, as behavioural economists would, the designers start from 'scratch' with a conception that all behaviour is context specific, and psychological experiments or user-based experiments (having users test prototypes) are not well generalisable to all user-contexts (Beyer and Holtzblatt, 1998; Krippendorff, 2004; Suchman, 1987). However, this does not mean that the levers or behavioural insights used in designed interventions are very context specific, because the tools and methods utilised in this empathise/understand phase are aimed at uncovering those generalisable deeper psychological insights that drive these more context-specific behaviours.

What human-centred designers do in that very first phase is described in the (design) literature in layered models (Hekkert and Van Dijk, 2011; Jantsch, 1972; Max-Neef, 2005; Van der Bijl-Brouwer and Dorst, 2017) where "levels build up from a practical empirical level (what exists), via a pragmatic and normative level, to

[2] See https://designthinking.ideo.com/.

[3] See https://dschool.stanford.edu/.

a purposive or value level: the level of meaning" (Van der Bijl-Brouwer and Dorst, 2017, p. 8). The psychological levers that the human-centred design approach to behaviour change might use are identified by designers immersing themselves into the lives of the humans within the specific problem space at hand. The insights that follow are of a hierarchical nature where they first identify needs or wants in terms of specific characteristics of the intervention, then how people want to interact with the intervention, and finally why people need the intervention, where insights are gained about the underlying principles, needs, concerns and aspirations that explain why people behave a certain way. The latter are completely context-void and generalisable principles that explain human behaviours in general. These deeper level insights form the basis for designed interventions that are ideated in the 'ideate' phase. When you are able to tap into these general needs, concerns, and motivations, and leverage these within your intervention, then your chances of being successful in changing behaviour are highly likely, as these principles are universal: Everyone has these needs, concerns and desires at some point in their lives. When humans successfully fulfill their needs, concerns, and aspirations they have pleasurable feelings (e.g., need for social contact, need for independence, and a desire for order, Reiss, 2004) and thus if you, as a designer, are able to fulfil these through the intervention, these pleasurable feelings are attributed to the change in behaviour that you triggered allowing for habit formation. This process of identifying a psychological lever for your intervention is backwards from how behavioural economists typically approach the design of interventions, as they would start out with psychological insights as identified in the literature and then test which work best in a specific practical context. However, while behavioural economists and human-centred designers take a different approach to identifying insights that could be utilised as levers in a behavioural intervention, they both acknowledge the importance for deep understanding of human psychology and human behaviour beyond specific behaviour within a certain context if one wishes to successfully change individuals' behaviours (Fig. 6.1).

Fig. 6.1 Aware puzzle switch by Loove Broms and Karin Ehrnberger

A good example of a behavioural intervention that has emerged from the more human-centred design approach is the Aware Puzzle Switch by Loove Broms and Karin Ehrnberger (da Silva et al., 2014). This light switch taps into people's inherent need for order and to be in control. The light switch is two-colour toned such that when an appliance is on, the visual of the light switch is asymmetrical and disordered, while if the appliance is switched into its off-state, the visual is symmetrical and order is restored.

This design has the purpose of making people aware of their energy use and encouraging them to actively control their energy use. This approach to changing peoples' energy use behaviour is different from a behavioural economics-based approach to this same problem. Here, we have the example of an energy bill showing how much energy we saved compared to other families of similar sizes in our neighbourhood. This intervention clearly leverages the heuristic of 'conforming' or 'following the herd' to help people change their behaviours.

Another example where the two different approaches lead to different solutions to the same behavioural problem is when trying to move people to take the stairs instead of the elevator. A typical behavioural-economics based approach would be to break mindlessness (an established heuristic) and stop people in their tracks by putting a motivational poster message on the elevator door encouraging people to take the stairs, and burn energy rather than electricity (Kerr et al., 2000). A typical human-centred design solution, however, is that of 'piano stairs', where the stairs present in a train station next to the escalator are painted to look like piano bars and you are physically able to play a tune fed back to you within the public space by walking up the stairs (Peeters et al., 2013). Here, designers lever people's nature to explore and create and the need for accomplishment to change their behaviour. As you can see, while both approaches leverage basic human psychological insights and behavioural principles in their interventions to tackle the same behavioural change, the insights utilised and resulting applications are vastly different in practice.

The main difference in impact between these approaches is that behavioural economics-based interventions can target many individuals at once to create large-scale behaviour change, while the human-centred approach taps into longer lasting behaviour change through changing habits in situ. Indeed, imagine this scenario: When I leave the subway station on my way to work I am triggered into action by seeing the musical stairs next to the escalator, I decide to play a tune, and get quite some enjoyment out of it—it is a rewarding experience. Now, the next time I am on my way to work and exit the subway station to see stairs next to the escalator, my mind is triggered into taking the stairs because the last time I did that, it was pleasurable and rewarding. The cycle described here is the cycle of ingredients needed for lasting behaviour change (trigger, action, reward) as described by Fogg (2009). Similarly, an asymmetrical light switch first triggers an action that is rewarded by order being restored (my brain signals pleasure) and my brain now connects 'light switch' to 'switching it off is rewarding', and in that way instilling a habit to switch off the light as you leave the room, whichever room it is, and whichever light switch it is. While these solutions may only reach a few people, they are targeted at longer lasting behaviour change, rather than the one choice or

decision at that one time. This way, the human-centred design approach can also have a large, positive impact in society.

6.4 Summary

While this chapter discusses two approaches to designing interventions for behaviour change as separate, they should be seen as two ends of a spectrum. Some solutions designed for behaviour change will fall between these approaches. For example, stickers in the shape of foot steps towards the stairs instead of the escalator builds on insights from behavioural economics (following the herd) but also works well to form habits because the action triggered satisfies our sense of curiosity (where is this path leading me to?). Another example is the design of a more difficult-to-read typeface that aids memory retention for written text (Banham et al., 2018)—see Fig. 6.2. This typeface breaks mindless reading behaviour, by stopping us in our tracks and making us pay more attention to what we read. It is potentially also a rewarding experience when one is able to successfully read and remember the text (e.g., ''solving the puzzle" triggers pleasurable arousal in the brain; Venkatesan, 1973, p. 245), potentially triggering our brain to engage in more attentive reading in the future.

Further, many behavioural business designers (whether they are trained designers or policymakers) are more than happy to include approaches and insights from the other discipline in their applications. Indeed, approaches exist that seem to combine some elements of each more disciplinary-focused approach to behavioural business design. As we already outlined, for example, Wendel's book "Designing for Behaviour Change" (Wendel, 2013) includes three different strategies for behaviour change: The use of heuristics and biases, which he calls 'cheats'; changing or creating habits; and finally, supporting conscious action. His design stages also seem to overlap with the stages used in human-centred design: Understand, discover, design, refine. While the 'understand' phase seems to be very much related to the 'empathise' phase in Design Thinking as described earlier, this phase is still approached from looking at existing knowledge about human behaviour, rather than the starting point being studying the human in the specific context. While the human is studied in situ, this happens at a later stage and no longer serves to gain deep insights about human behaviour, but rather to place these deep insights in context. This is similar to the approach in Cash et al. (2017) where deep insights taken from scientific knowledge drive hypothesis testing within a specific context, rather than the other way around. Nonetheless, these approaches do consider the need to look at humans in context, and apply methods and tools that human-centred designers would apply in their empathy phase, such as observation, interviewing, and the creation of personas, as a result. Combining behavioural economics and human-centred design approaches is highly beneficial to provide that 'evidence-base' that behavioural economics approaches naturally have, but would allow for design for

Fig. 6.2 Sans Forgetica, the font to remember

behaviour change beyond a nudge, or the 'implicit' as Cash et al. (2017), would describe them.

The examples described throughout this chapter seem to primarily focus on changing people's behaviour for the benefit of society. Although, indeed, many designers of interventions, whichever approach they take, would prefer to use their powers that way, not all behavioural interventions are designed with that purpose in mind. Think for example of the Heinz ketchup bottle label, placed on the bottle at an angle, that plays on the desire for order to increase consumption of ketchup by Heinz; this clearly has a commercial incentive behind the design. Similarly, while the urinal fly is a great example of behavioural business design, it was designed with the intention of cutting costs of cleaning public bathrooms in Schiphol airport; however, we can argue a great societal benefit was the side-result!

To summarise, this chapter defines behavioural business design as the application of psychological insights to design interventions with the intention of changing

individual humans' activities in response to external and internal stimuli within business or organisational contexts. We believe that behavioural business design includes a spectrum of approaches and applications of psychological insights to change behaviours, that extends between what we label as behavioural economics-based design and human-centred design for behaviour change. Best results are achieved if insights and approaches of both are combined in any behavioural business design endeavours.

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Chapter 7
Behavioural Organisational Strategy

Joanne Peryman

7.1 Introduction

The underlying theme for this chapter is the distinction between neoclassical economics and the behavioural theory of the firm. To understand this distinction, imagine you are making an important organisational decision, such as who to hire as a manager. You have placed an advertisement and now must choose from a pool of candidates who have applied.

In the neoclassical world, you have full information about your potential candidates, such as their personality and skills. You can also see into the future and know the exact costs and benefits of hiring each candidate. As an organisation, your only goal is to maximise profit. Perhaps mostly importantly, everyone in the world is instrumentally rational. This means that people respond to incentives in a predictable way, by calculating and choosing their best options. Knowing the candidates are instrumentally rational means that the organisation can predict how they will respond to the wages offered and can work out the best course of action accordingly. Therefore, you only need to weigh-up the costs and benefits of each candidate and choose whoever will lead to the highest profit for the organisation. Easy.

Now back to the real world. There is asymmetric information, where the candidates know more about their motivation, character and skill-set than you do as an employer. You can only make judgements based on their CVs and job interviews. Humans in the real world also lack perfect foresight and can only estimate the costs and benefits of hiring each candidate. Even if you could figure out the most profitable candidate, how do you know profit maximisation is the most appropriate

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goal for your organisation? Organisations in the real world have multiple, competing goals, based on the desires of their stakeholders. We also know that sometimes humans make poor decisions and candidates may not respond as hoped when offered a certain wage. For example, a candidate may decline a good wage offer based on an overly optimistic reference point. This makes it impossible to work out an optimal offer. Instead, hiring managers (or anyone faced with a negotiation) tend to rely on gut feelings about how the other will react. Welcome to the behavioural theory of the firm.

7.2 Behavioural Theory of the Firm

The neoclassical view has become dominant among economists, largely due to its strong predictive power and ease of application. However, some economists have become dissatisfied with the neoclassical view's unrealistic assumptions about human behaviour. Three such economists were Richard Cyert, James March and Herbert Simon March and Herbert (1958), Cyert et al. (1963). These economists developed the behavioural theory of the firm. While the neoclassical view treats the organisation as a 'black box' that transforms inputs (land, labour, or capital) into useful outputs (goods and services), the behavioural view seeks to look inside the black box and answer important questions, such as why organisations exist and how they make decisions. The behavioural theory of the firm contains three main steps: goal setting, forming expectations and making decisions.

7.2.1 Goal Setting

In the behavioural view, organisations are defined as coalitions of stakeholders. Some common stakeholders include shareholders, managers, workers and customers. As you can imagine, these stakeholders tend to have diverse, competing goals. For example, shareholders might be concerned with profit maximisation, managers concerned with productivity, workers concerned with wages and employment conditions, while customers are focused on product quality and value for money. According to the neoclassical view, all stakeholders are assumed to share the goal of profit maximisation, which means there is no need for goal selection. In contrast, the behavioural view describes goal formation as a 'continuous bargaining-learning process' between the stakeholders (Cyert et al., 1963).

In practice, this goal formation process involves negotiations between the stakeholders over payments they receive for their contributions, such as wages. As this bargaining process is constrained by humans with limited capacities and time, budgets and allocations of functions become default over time, meaning that goals are more stabilised than a pure ongoing bargaining process would suggest (Cyert et al., 1963). However, goals can change in response to changing aspiration levels

of the stakeholders, often in response to a reference point shift, such as a pay rise for other employees in a similar industry. Similarly, goals may change in response to recent events, such as health and safety goals becoming highly salient in the wake of the COVID-19 pandemic.

7.2.2 Forming Expectations

Because organisations do not have perfect foresight in the real world, they need to form expectations about the state of the world. For example, organisations need to estimate their future costs, productivity, sales, and pricing strategies of other firms. In the behavioural view, expectations are gathered through 'directed search activity' which involves looking for information to help you form an expectation. For example, an organisation might conduct market research to help forecast future demand.

In the neoclassical view, organisations continuously and accurately scan alternatives to maximise profits. We have perfect information and our expectations line-up with reality. However, in the behavioural view our expectations can be biased. For example, when deciding how much to spend on advertising, a manager might look for data that compare advertising spend to sales. When noticing that organisations who spend a lot on advertising tend to make high sales, a manager might expect that sales will increase if we advertise more. However, this observation is biased by the correlation fallacy (i.e., the belief that one variable causes another variable to change because they follow a similar pattern). In reality, the causality might run in the other direction, with organisations who make high sales having more money to spend on advertising.

7.2.3 Making Decisions

Making decisions in the behavioural view is much more complicated than in the neoclassical view. While neoclassical organisations can simply make decisions to maximise profits in a world of full information and rationality, behavioural organisations need to carefully select their goals, forecast unknown variables, re-examine their plans and expectations, and finally reach a decision. Even after a decision has been made in the behavioural view, the organisation's goals and expectations are constantly changing in response to changing demands of stakeholders and newly discovered information. Often organisations form rules of thumb to help them make complex decisions, which are developed into a set of standard operating procedures. Managers and employees can refer to these policies when faced with uncertainty or a novel decision.

In summary, according to the behavioural theory of the firm, organisations exhibit multiple, changing goals, limited and biased ability to form expectations, and standard operating procedures to help with decision making. Critics of the behavioural view argue that the theory is mostly descriptive, rather than predictive, which might limit its use in economic analysis. The behavioural view certainly adds a layer of complexity to organisational decision making, but this layer is needed to better understand decisions in the complex, imperfect world we live in.

7.3 Employee Strategy

Employees are the lifeblood of any organisation. Attracting the right people and motivating them to achieve their potential can be crucial for organisational success. Most organisations have invested large sums of money in their employees in the form of salaries, training and other benefits, with some investments yielding higher returns than others. Behavioural business offers simple cost-effective solutions for a successful employee strategy, towards which organisations are increasingly turning.

7.3.1 Attracting Employees

Economists have traditionally solved the asymmetric information problem with signalling and screening. Signalling is an action undertaken by the informed party (potential employees) to signal their ability to the uninformed party (employer). The downside is that signals can be very costly, such as education, and uninformative if everyone does it. Screening is an action undertaken by the uninformed party (employer) to illicit information about the informed party (potential employee). Screening can also be costly and time consuming, such as interview days or psychometric testing.

Behavioural business offers opportunities for cost-effective solutions to attract the right employees. For example, visual stimuli, such as colour, logo design, or font type, could be used to nudge high quality employees towards your organisation. Similarly, the language used in recruitment advertisements could be tailored to attract certain types of people. Organisations can test and validate these ideas using controlled experiments, to discover what works.

7.3.2 Motivating Employees

There is a plethora of subtle influences on our motivation every day. For example, you can probably recall a time when you gave up at a task because you seemed to be getting nowhere, while other tasks you stuck at for a long time. The two relevant

concepts here are learned helplessness (Maier and Seligman, 1976) and positive reinforcement (Skinner, 2019). After repeatedly failing at a task, people often learn they are no good at that task and give up, even when the reason they are failing might be unrelated to their abilities. Similarly, when people experience a reward, such as feeling good after a recent success, they are more likely to try hard at similar tasks in the future. The lesson for organisations is that keeping employees encouraged with positive feedback can lead to higher effort.

Social identity theory (Tajfel et al., 1979) suggests that people categorise themselves and others in terms of social groups, such as students, economists, or Justin Bieber fans. This categorisation helps us make sense of a complex world and make faster decisions, even though those decisions are often based on stereotypes. Naturally, we care more about those we share a common group identity with. We also tend to conform to the social norms of our groups because this strengthens our feeling of belongingness. Organisations can use social norms to motivate their employees by making desirable norms salient. For example, a statement such as '90% of economists publish at least 2 academic papers per year' may encourage economists to publish more.

7.3.3 Employee Interactions

Sometimes employees choose to compete with each other, rather than working cooperatively towards the organisation's goals. If you grew up in Australia or New Zealand, you will no doubt be familiar with the term 'tall poppy syndrome', which is the tendency to criticise or 'cut-down' high achievers or 'tall poppies'. This behaviour can arise from jealousy or fairness concerns. Tall poppy syndrome presents a challenge for organisations as employees may want to undermine the efforts of their tall poppy colleagues. One way to tackle such behaviour and improve employee interactions could be to use social identity theory (Tajfel et al., 1979) to shift employees' focus to their shared organisational identity, rather than their individual differences.

The dual identity model (Dovidio et al., 1998) suggests that making both superordinate and subordinate identities simultaneously salient may enhance cooperation. In a workplace context, the superordinate identity is seen as the entire organisation, while the subordinate identity is seen as groups within the organisation. Making the organisational identity salient reminds employees they all share a common interest in the organisation's success and that working together will be beneficial for all. Meanwhile, keeping the individual group identities salient will minimise any risk of identity threat, which happens when individuals feel their unique identity is being subsumed within a larger group. In practice, this idea can be implemented by drawing attention to the organisation's goals and successes in employee communications, while celebrating each team's individual contribution.

7.4 Consumer Strategy

Organisations would not exist without consumers. Many organisational goals depend on the behaviour of these important stakeholders. For example, sales or market share rely on consumers purchasing products. In neoclassical economics, consumer preferences are captured in a demand curve that represents willingness to pay. The demand curve can shift for external reasons, such as a weather shock. However, preferences are largely taken as given, rather than within the organisation's control. In contrast, the behavioural view sees preferences as flexible and dependent on many factors, some of which the organisation can influence. For example, many shops play upbeat music to try to enhance the mood and purchase likelihood of their customers. The behavioural view also recognises many biases that consumers face, some of which organisations can use to their advantage, despite potential ethical issues.

7.4.1 Consumer Biases

Imagine that you go to a store to buy a lamp at $50. At the store, you are told the same lamp is on sale at another branch 5 min away for $25. Would you go to the other store to buy the lamp? Now imagine that you go to a store to buy a dining table and chairs at $1500. At the store, you are told the same set is on sale at another branch 5 min away for $1475. Would you go to the other store to buy the table and chairs? Most people say 'yes' in the first instance and 'no' in the second. This is a bias because a $25 saving should be treated the same in both cases, at least by an instrumentally rational person. However, the $25 saving seems large in comparison to the $50 lamp, but small in comparison to the $1500 table and chairs. The relative price difference matters more than the absolute price difference.

This bias is called relative thinking and was recognised by Nobel Prize winning economist Thaler Richard (1980) and tested in lab experiments by psychologists Tversky, Amos and Daniel Kahneman (1981), the latter of whom also won the economics Nobel Prize. Organisations can benefit from relative thinking by heavily discounting cheaper items while keeping higher priced items expensive. They can also offer extras when an expensive item is purchased, as the extras seem cheap in comparison to the expensive item. For example, when a consumer buys a new lounge suite for $2000, why not throw in damage insurance for an extra $100?

Most of us are myopic consumers, which means we do not have perfect foresight. If you have ever bought a printer, you might recall the initial purchase price and perhaps even thought you were getting a good deal. Now think about how much you have spent on ink cartridge refills over the printer's lifespan. Chances are the total cost of ink cartridges is far higher than the initial purchase price of the printer. This is because consumers often do not think about the future running costs of a product, instead focusing on the initial purchase price, which is highly salient at the

time of purchase. Organisations know this and take advantage by making the initial purchase price cheap and the running costs expensive, often locking in the consumer to substantial future purchases. This is one reason why printing companies design printers to be compatible only with the same brand of ink cartridge. You will see printers on sale with eye-catching advertisements to draw you in, while the costs of these ink cartridges are largely hidden.

Nobody likes to be wrong, including consumers! Confirmation bias is the tendency to search for and believe evidence that backs up your viewpoint while ignoring evidence to the contrary. The effect is caused by people trying to avoid cognitive dissonance; an uncomfortable feeling we get when faced with inconsistencies in our reasoning. Cognitive dissonance can trigger motivated reasoning; biased reasoning to reach a conclusion you desire to be true (Stone and Wood, 2018).

The confirmation bias means that organisations can use a foot-in-the door technique to encourage sales and up-selling of their products. Even the act of walking into a shop means that you initially thought the shop might have something for you. Salespeople know this and are usually willing to 'help' you find that product. You then choose to try on a piece of clothing, while hoping to like it and salespeople only need to reinforce that idea with 'that shirt looks great on you!'. Confirmation bias can also explain brand loyalty, as consumers feel inconsistent if they switch between brands. Similarly, consumers might be reluctant to return products or write negative reviews, if it makes them feel like they made a mistake.

7.4.2 Ethical Concerns

Organisations frequently take advantage of the biases discussed here, along with many others, to try and reach their goals. The question arises over whether they are behaving unethically or just doing their job. While behavioural insights can be used to encourage us to make better decisions, some organisations use these tactics to encourage us to spend money, which may not be in our best interests. This phenomenon is known as 'nudge vs. sludge' (Thaler, 2018).

Many governments have set up dedicated commissions to protect consumers against unethical conduct by organisations. However, often the line is blurry as to what constitutes unethical conduct. For example, banks are required by law to disclose their account fees but often hide these in the small print so that people miss them. Fortunately, many consumers are becoming aware of the tactics employed by organisations and sometimes even take advantage themselves, such as credit card customers who never pay interest. In this section we have focused on consumer biases, but organisations consist of people and are therefore subject to their own biases. We will address some of the ways in which organisations can overcome inherent biases later in this chapter.

7.5 Competition Strategy

Large organisations with market power can affect the outcomes of other organisations in their industry. For example, petrol stations and supermarkets are constantly trying to undercut each other's prices and win customers. Although it would be better for these organisations to collude and set high prices, the rationality assumption of neoclassical economics drives self-interested organisations to compete, which hampers their profits. However, we do sometimes see collusion in the real world, along with other 'irrational' behaviours such as price wars and predatory pricing. Often these behaviours are not penalised by antitrust agencies, as the regulators still take a neoclassical view that rational organisations would not engage in them. Behavioural business puts the rationality assumption to the test and discovers under which conditions firms are likely to collude in the real world.

7.5.1 Collusion

In the neoclassical view, an agreement to collude is difficult to maintain, because an organisation can often do better by cheating on the agreement and taking customers from their competitors. In the behavioural view, sometimes organisations keep their promises to collude. Specifically, organisations should collude if the expected benefits of collusion outweigh the expected costs. Policymakers focus on the costs as the benefits of collusion are outside their control. Expected costs E(C) are made up of two parts: probability of detection and the amount of fine if caught, such that $E(C) = pF$. The Beckerian proposition (Becker, 1968) states that p and F are perfectly substitutable, which means that a low probability with a high fine will achieve the same deterrence as a high probability with a low fine, provided E(C) remains the same.

However, a high fine with a low probability of detection may be more effective for policymakers. Firstly, detection is costly because it requires monitoring of organisational behaviour. Fines also cost money to administer. Detecting a smaller number of colluders but charging them each a higher fine is likely to be more cost effective than detecting a higher number but charging a smaller fine. Secondly, evidence from behavioural economics suggests that fines are easier to understand than probabilities (Simon, 1955; Spiegler, 2011). People can imagine getting charged a fine and suffering the consequences, but have a harder time conceptualising the likelihood of getting caught. People may therefore place a higher weight on fines than probabilities when deciding whether to collude. Finally, people tend to overweight small probabilities, which suggests that small probabilities may be just as effective as larger ones (Kahneman and Tversky, 1979).

Leniency programmes are where organisations can report collusion while maintaining immunity from punishment. Chowdhury and Wandschneider (2018) ran a lab experiment to test the Beckerian proposition, with and without leniency

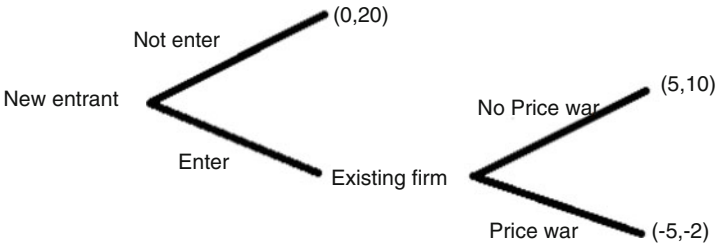

Fig. 7.1 Market entry game

programmes. They found that less cartels were formed under a low probability, high fine scheme, but only in the presence of leniency programmes. The authors suggest that under a high fine, more people may be expected to take advantage of leniency, which inflates the perceived probability of being caught. Countries with leniency programmes may benefit from implementing a low probability, high fine scheme.

7.5.2 Price Wars

When faced with competition from a new entrant, an existing organisation may choose to engage in a price war to maintain their market share. In Fig. 7.1, we represent a simplified market entry game with a potential price war using a game tree. Each branch represents a decision. Payoffs are given in the form (New entrant, Existing firm).

Using backward induction to solve the game, a rational existing firm would never engage in a price war. Knowing this, a rational new entrant will always choose to enter. However, we do see price wars in real life. We also see predatory pricing, which is where an organisation sets a low price to drive out competitors. Sometimes organisations even drop their prices below cost, which harms their profits in the short term, but this can be compensated by future gains to profits when there are fewer organisations in the market.

7.5.3 Behavioural Antitrust

Under the neoclassical view, collusion, price wars, and predatory pricing are all irrational. However, in the boundedly-rational world of behavioural business, all these behaviours can be profitable business strategies. Organisations can achieve collusion by trusting each other and living up to their promises. Organisations may fight new entrants by engaging in costly price wars. They may also predatory price, even if it hurts them. Several real-world cases show us that regulators tend to take

a neoclassical view in antitrust cases, which means that cases may be dismissed prematurely, ultimately permitting anti-competitive behaviour and higher market prices. For example, in the Brooke Group versus Brown and Williamson cigarette manufacturing case, the court ruled that the antitrust case needed to prove not only that Brown and Williamson's pricing was below cost, but that the future benefits to Brown and Williamson would compensate for the temporary losses (Martin, 2018). Proving another organisation's manufacturing cost is difficult. Proving the future benefits to that organisation of below cost pricing is impossible. Therefore, the case did not proceed.

In another case against Japanese TV manufacturers, US producers claimed that the resulting monopoly profits would be more than enough to compensate the Japanese producers for the temporary losses incurred through predatory pricing (Martin, 2018). However, the court eventually ruled in favour of the Japanese producers, stating that the claim made no economic sense. When was the last time you bought a US-made TV?

7.6 Overcoming Biases

Just like consumers, organisations are subject to a host of biases in their decision making. After all, organisations are run by humans, each with their own attitudes and biases. Sometimes these biases hurt organisations, other times they help them. There are steps organisations can take to alleviate some of the negative biases. Looking to behavioural business, particularly the MINDSPACE framework (Dolan et al., 2010), which is described below. This MINDSPACE framework can help organisations make better decisions, ultimately improving their efficiency and profits.

7.6.1 Organisational Biases

According to prospect theory (Kahneman and Tversky, 1979), people tend be loss averse. Losses loom larger than gains and people try harder to avoid losses than they try to secure gains of the same amount. After experiencing a recent loss, decision makers may become risk seeking as they try desperately to recoup that loss. These risky decisions could potentially lead to further losses for an organisation. This combined with sunk cost bias can be a disaster for organisations, as stakeholders continue throwing good money after bad.

Reference-dependent preferences (Kahneman and Tversky, 1979) can also affect the organisation's risk attitudes. Whether an outcome is seen as a gain or loss depends on the stakeholder's reference point. For example, if you expected to make more sales than your largest competitor, but came in just under, you would feel like you have suffered a loss, even if you made positive profit. This feeling of loss can lead to risk seeking behaviour, such as engaging in a price war. Alternatively, if

you surpass your competitor, you may become risk averse and hold production at a conservative level to try and retain your strong position.

In addition, most of us are overconfident. When asking a room full of people to raise their hands if they are an above average driver, typically around 90% of people put their hands up. Overconfidence can affect organisations in a number of ways, one being excessive production or business entry (Just and Cao, 2018). Consumers benefit from higher production levels as the increased competition lowers equilibrium prices. Producers may be better or worse off, depending on their risk attitude. Very risk averse producers are likely to suffer, as they misperceive risks and take actions they would rather not take (Just and Cao, 2018). Less risk averse producers may benefit from overconfidence, as it encourages them to take risks and survive rather than leaving the market. Whether society as a whole benefits depends on the risk attitudes of producers.

Another common organisational bias is the tendency to ignore statistical information. As discussed by Lewis (2004), hiring managers in major baseball leagues often hire based on intuition or physical characteristics of players, while performance statistics are largely ignored. This happens even though statistical information has been shown to better predict player performance than the manager's picks (Hakes and Sauer, 2006). Confirmation bias is one likely explanation for this behaviour. When a hiring manager gets a good feeling about a player, perhaps based on arbitrary characteristics such as looks or voice, they look for information to back up their original viewpoint, while ignoring information to the contrary.

7.6.2 Overcoming Biases

Nudging can be employed by organisations to try and overcome some of their inherent biases. A nudge is an aspect of how a choice is presented to decision makers, which encourages them to take a certain action, without altering the decision makers' freedom or incentives (Thaler and Sunstein, 2009). Based on the idea of nudging, the UK Behavioural Insights Team developed a framework for influencing behaviour through public policy. They called this framework MINDSPACE (Messenger, Incentives, Norms, Defaults, Salience, Priming, Affect, Commitment, and Ego). Although originally developed for public policy, MINDSPACE can be applied by organisations wishing to overcome biases.

We are more likely to believe and act on information when that information is presented by people we see as experts, people we see as having authority, people with similar demographic characteristics to ourselves, our peers, or people we like. Organisations can benefit by carefully selecting the right messenger.

Our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses, forming reference points, overweighting small probabilities, allocating money to mental accounts, and present-biased preferences. Organisations can use these to their advantage. For example, by focusing on loss aversion when trying to prevent workplace accidents.

Norms are the behavioural expectations within a society or group. We are usually inclined to follow norms to strengthen our identity as a group member. Organisations can use norms to influence behaviour by making desirable norms salient, such as '9 out of 10 people wash their hands after using the bathroom'.

Defaults are pre-set options, which are implemented when an individual does not make a choice. We tend to 'go with the flow' of pre-set options, as making a choice requires effort and sometimes expertise. Organisations can use defaults to their advantage. For example, by automatically signing employees up to a social club when they join the organisation, in an attempt to build a strong team spirit.

Our attention is drawn to what is salient. People are more likely to pay attention when stimuli are presented in novel ways that are accessible, simple, recent, and related to their personal experiences or to an initial anchor. Organisations can use salience to attract the attention of customers or employees.

Similarly, priming is where our acts are influenced by unconscious cues, such as words, sights, smells, and sounds. For example, organisations can prime their customers or employees to take a certain action by choosing the right background music.

Affect is the act of experiencing emotion. Our emotional associations can powerfully shape our actions. Organisations can use affect by focusing on the associated emotion of a behaviour, rather than the behaviour itself. For example, a sense of pride induced by an employee of the month award might be a stronger motivator than giving employees targets to meet.

We seek to be consistent with our public promises and reciprocate acts. Commitment can be a powerful tool to overcome present-biased preferences. For example, exercise goals combined with reciprocity, such as a team step counting challenge, can enhance the likelihood of goals being fulfilled.

Finally, our ego means we act in ways that make us feel better about ourselves. We also like to be consistent with the expectations of others. Organisations can encourage desirable behaviour by setting and communicating their expectations accordingly.

Coventry et al. (2014) apply MINDSPACE to the cybersecurity industry to help organisations promote best practice. Maintaining cybersecurity relies on a range of human behaviours. The authors decided to focus on the use of personal computers to carry out work in public places, using insecure wireless networks. Human biases, such as selecting the first network, or going with familiar networks, are relevant here.

After considering several nudges, Coventry et al. (2014) decided to prototype an application that re-orders the list of available networks in order of security preference. The network options were also colour coded with red signifying danger and green indicating safety. Results from a lab experiment suggested that colour could be a very effective nudge for selecting safer networks (Briggs and van Moorsel, 2014).

7.7 Summary

Recognising that organisations do not usually conform to the assumption of instrumental rationality can feel like opening a can of worms, compared to our straightforward neoclassical alternative. More precisely, we are opening a 'black box' of worms. Looking inside the black box of the firm raises many questions, such as what an organisation's goals, expectations, and standard operating procedures are. Even when these questions are answered, they are subject to change. We know that organisations consist of human stakeholders, who are biased, imperfect, and constantly changing their demands as aspiration levels change. It can be hard to keep track.

However, the behavioural view also recognises that organisations have scope for improvement. As we are seldom in long-run equilibrium; markets are constantly subject to change, some of which the organisation has control over. For example, an understanding of consumer preferences and biases can help an organisation increase demand for its product. Similarly, an organisation can improve the productivity of its employees using ideas from behavioural business, and perhaps even sustain collusion with its competitors while dodging antitrust cases. One key advantage of behavioural business methods is their simplicity and cost effectiveness. For example, simple nudges, such as colour and music, can have powerful effects on behaviour, ultimately helping organisations to reach their goals, whatever those goals may be.

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Part III
Applications

Chapter 8
Charitable Giving for International Development: Insights from Behavioural Economics and Other Disciplines

Simon Feeny

8.1 Introduction

By any measure, private donations to charitable organisations are huge. In 2018, Americans alone donated $427.71 billion to charity, accounting for about 2% of the country's GDP. Even though the percentage of the US population that donate money to charity has fallen in recent decades, it still stands at over 50% and those who do give are donating larger amounts (Giving USA, 2019). The propensity to donate and the amount donated clearly varies greatly across and within countries. According to the Charities Aid Foundation's latest index (Charities Aid Foundation, 2019), the five most generous countries are the US, Myanmar, New Zealand, Australia and Ireland. The five least generous countries are the State of Palestine, Serbia, Yemen, Greece and China. Given the diversity among these countries, the reasons why people give and how much they give are, *prime facie*, far from obvious.

This chapter draws on the vast literature examining why people give to charitable organisations to provide insights for the fundraising efforts of International Non-Government Organisations (INGOs). Although most charitable donations are made to domestic organisations, a significant share is provided to INGOs and other organisations working in international development. Major INGOs include Action Aid, BRAC, CARE, Médecins Sans Frontières, Oxfam, Plan International, Save the Children and World Vision. The motivations for donating money to domestic charities may differ vis-a-vis donations for international development.

Although INGOs receive considerable support from governments, they must also raise funds from the public through their advertising campaigns and appeals. They therefore need to identify the text and images that positively influence giving, or

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design specific nudges that initiate donations. At the same time, they must adopt strategies that are consistent with the values and reputation of their organisation.

Private donations to INGOs symbolise prosocial behaviour. People donate money in the hope of benefiting others. Target beneficiaries might be specific individuals or society as a whole through the funding of global public goods (e.g., investments in peace and stability, improved health, and a cleaner environment). However, as this chapter makes clear, people don't necessarily donate for purely altruistic reasons. There are many different motives at play. Moreover, people can be 'nudged' in certain ways to elicit a donation or to donate more to a specific cause. There are many examples of what appears to be unusual behaviour. People don't always give to the most-worthy causes or to the most effective organisations.

This chapter summarises the insights that behavioural economics, as well as psychology and marketing, have provided into why people donate (or don't donate) to charitable organisations and campaigns as well as why some people donate more than others. Since the literature is so large, the review is by no means exhaustive. Key studies are highlighted as are the main motivations for giving, particularly from the more recent literature. Implications for INGOs are provided, together with suggested directions for future research.[1]

The remainder of this chapter is structured as follows. Section 8.2 summarises the experimental approaches adopted by the empirical literature examining charitable giving. Section 8.3 presents the main motives for why people donate to charities and discusses some of the findings from literature. Section 8.4 provides other factors that influence giving and some of the frames and nudges that can be adopted by organisations to raise donations. Finally, Sect. 8.5 concludes.

8.2 The Approach of Empirical Studies

Many studies use laboratory experiments to explore charitable giving. In these experiments, researchers adopt variants of the 'dictator' game, typically with university students as participants. In a dictator game, one player (the dictator) receives an endowment (often money or tokens). They must then decide how to split this endowment between themselves and another player (the receiver). They can provide the entire endowment to the other player, a portion of it, or none at all.

In the charitable giving version of the dictator game, participants are provided with an initial endowment, which they can keep or donate (either some part or all) to a specified charity or recipient. Using actual charities in experiments ensures that the findings from a laboratory setting will more closely reflect actual charitable giving

[1] Interested readers should refer to Kahneman et al. (1986), Guala and Mittone (2010) and Engel (2011) for the origins and applications of the dictator game and the approach of studies and to Vesterlund (2006), Bekkers and Wiepking (2011) and List (2011) for more extensive reviews of the charitable giving literature.

(Eckel and Grossman, 1996; Eckel et al., 2005). An increasing number of studies use field experiments to examine charitable giving. Field experiments take place in natural settings, outside of the laboratory, and ask participants to make actual donations to real charities. Often researchers team up with charities and conduct the experiment using direct mail, door-to-door knocking or emails.

In these experiments, researchers can control the information that participants receive, such as how much others donate. Treatments, randomly assigned across the participants, might include variations in endowments and requests for donations, and can be framed in different ways such as using alternative texts and images. The charity might receive a share of the endowment in some experiments. In some experiments, participants might be asked about their feelings or emotions before and after the experiment. Priming might remind participants of their previous behaviour as a donor and various tasks might be undertaken to influence emotions prior to request for a donation.

8.3 Altruism Versus Egoism: The Continuum of Motives for Donating to Charity

The motivations for charitable donations are often classified into two groups lying at opposing ends of a spectrum. At one extreme is 'pure altruism' and at the other is 'pure egoism'. This section discusses each in turn before presenting other motivations for donating in Sect. 8.4.

8.3.1 Pure Altruism

Pure altruism exists when people are motivated only by a desire to help others with no consideration of personal gain. The donor receives no financial or non-financial benefit. Whether pure altruism exists is contested. Even when an act of giving appears to be totally unselfish, there might be hidden intentions. Donors might even be unaware that they have self-serving motives. As discussed below, non-altruistic motives are numerous and include a good feeling from helping others, a desire for recognition, an improvement in self-image, the wish to reveal their values to others, to win prestige, or to show wealth or generosity. Moreover, donating might be motivated by a fear of public shame or the feeling of guilt in not giving. By donating, someone can relieve their guilt as they feel they have helped with a cause. In this context, donating to a charity is self-serving.

There is an important implication if donating is motivated only by altruism. Pure altruists have concern only for the cause. They are only interested in the level of funding allocated to the cause and are indifferent as to whether the funding comes from the public sector (through tax revenues) or through private donations. If this

is the case, public grants should completely 'crowd out' private donations (Warr, 1983; Crumpler and Grossman, 2008). In other words, increases in donations from a government will reduce private donations by the same amount. A donor's own donations and those from others are perfect substitutes. Some studies, discussed below, have therefore examined altruism by investigating the extent of crowding out.

8.3.2 Pure Egoism

At the other end of the spectrum is pure egoism, whereby people are entirely motivated by the satisfaction that they receive from giving. 'Warm glow' theory, in its purest form, asserts that charitable acts are motivated only by a desire to make oneself feel better (for any of the reasons noted above). The impact on the recipient is irrelevant (Andreoni, 1989). Pure egoism also has important implications for charitable giving. First, it implies that public giving will not perfectly crowd out private donations. They are no longer perfect substitutes. Donors will continue to receive private benefit from donating regardless of how much a government provides. Second, providing people with incentives to donate might actually thwart donations. Pure egoists will not want their own motivations being conflated with incentives and might therefore reduce their donations in response. Evren and Minardi (2017) demonstrate that having the freedom to be selfish increases the perceived value of giving.

Crumpler and Grossman (2008) tried to isolate the warm glow motivation from other motives for giving. In their experiment, any donation by the participant was offset by a reduction of the same amount by the experimenter. In other words, donations perfectly crowded out (dollar for dollar) the giving by the experimenter. The implies that a participant's only motivation to donate relates to a warm glow. The study found that participants still donated 20% of their endowment in these circumstances, refuting the concept of pure altruism.

8.3.3 Impure Altruism

Impure altruism recognises that both altruistic and warm-glow motivations exist in the context of charitable giving. Many studies find evidence of partial, but not full, crowding out and this is itself evidence of impure altruism and warm-glow (Andreoni, 1993; Chan et al., 2002; Eckel et al., 2005; Crumpler and Grossman, 2008; Gronberg et al., 2012; List et al., 2019). In their meta-analysis of charitable giving studies, De Wit and Bekkers (2017)find that about two-third of estimates suggest crowding out, while a third suggest there is crowding in (higher government donations are associated with higher public donations). However, this latter finding is far more common in non-experimental settings. Since there is not full crowding

out, factors other than altruism must motivate donations. Anecdotal evidence also suggests that this is the case. For example, the cuts in government funding to INGOs during times of austerity are rarely compensated for by increases in private donations.

Studies also identify that the degree of crowding out can depend on factors, such as the information provided on government actions, sensitivity to social cues and the receipt of endowments (De Wit and Bekkers, 2017). Moreover, crowding out can operate through different channels. For example, Andreoni and Payne (2003) find that crowding out occurs mainly through reduced fundraising by charitable organisations rather than from reduced giving by donors because they had already contributed through their taxes.

Ribar and Wilhelm (2002) demonstrate that in large countries with multiple donors, the donation of a single individual will have very little impact on the provision of a public good and therefore any altruistic motive should be very small. Yet charitable contributions still prevail, implying there must be a warm glow motivation. Ottoni-Wilhelm et al. (2017) demonstrate this more formally. In their model, when donors are impurely altruistic, the degree of crowding out depends on the output level of the charity. As a charitable organisation's output level increases (measured, for example, by lives saved, schools built, clean water supplied, or increases in gender quality), the marginal utility from further increases will fall. As this situation arises, the donor starts becoming less altruistic and more influenced by warm glow and the degree of crowding out falls. Using a laboratory experiment with undergraduate students in the US, their findings are consistent with this model.

Other findings indicate that participants (dictators) donate less money when they earn their endowment in the experiment rather than it simply being bestowed upon them (Oxoby and Spraggon, 2008). That is, participants become more self-interested when their endowment is earned (through a dull or mentally taxing effort task). Conversely, Luccasen and Grossman (2017) find that donations increase when the endowment is earned, possibly because this is viewed by others as more of a sacrifice and therefore results in more of a warm glow for the donor.

8.4 Other Motivations for Charitable Giving

This section discusses other motivations for donating to charitable organisations as well as factors that might influence the two main motivations of egoism and altruism discussed in Sect. 8.3.

8.4.1 Effective Altruism

A recent concept receiving increasing attention from researchers is 'effective altruism' (Sol and Liket, 2016; Singer, 2015). Effective altruism arises when

people are motivated to maximise the impact of their donation. For example, they might see how a particular charity is rated by organisations such as GiveWell or Charity Navigator that evaluate performance according to different criteria. There is, therefore, recognition of the opportunity cost of donating whereby giving to one charity comes at the expense of not giving to another, and individuals must make assessments on the relative impact their donation might have. One way that studies have examined this issue is to provide participants in experiments with information on the administrative costs and impact of INGOs and other charitable organisations. Administrative costs take a fraction of a person's donation away from the cause for which it was given, to cover the costs of overheads, such as the salaries of staff.

Studies find that information on an organisation's administrative costs is more important for donors than information on its impact. Caviola et al. (2014) find that participants in their online experiment had a preference for charities with low overhead costs but not for charities with higher levels of cost-effectiveness (measured using the number of lives saved per dollar donated). Their explanation for the finding is that information on overhead costs is easier for participants to evaluate, relative to cost effectiveness. In a laboratory experiment, Gneezy et al. (2014) find that donations fall as administration costs increase when participants have to pay for these costs themselves. In a subsequent field experiment, they demonstrate that when overheads have already been covered (by other donors) people are far more likely to donate and donate higher amounts. Metzger and Günther (2019) find that people are less likely to demand information on the impact of aid, relative to information on the type of recipient and administrative costs. Moreover, while participants donate more in response to information on recipient type and less to information on administration costs, there is no impact on donations with respect to providing information on aid impact. Similarly, Karlan and Wood (2017) randomly added information about the evidence of the impact of aid to marketing letters that were posted out to past donors of an international poverty charity. They found that, on average, the information had no impact on giving. However, donors who had made larger donations in the past responded positively to such information while smaller prior donors responded negatively.

This finding is confirmed by another (non-experimental) study that found that while 85% of survey participants cited the performance of non-profits as an important criterion for their donations, only 3% actually used performance data in deciding which charity to donate to (Hope Consulting, 2010). It appears that people are more likely to support causes to which they feel a personal connection, even if their donation could be more effectively spent elsewhere. While people still care about impact, they don't care enough to sacrifice their own personal preferences for it. People will often choose to donate to charities that address an illness that they have experienced, either themselves or through a family member or friend (Berman et al., 2018).

Interestingly, a common finding from academic studies is that the more information people are given about a charity, the less money they donate. If pro-social behaviour is largely instinctive and spontaneous, donations might be deterred when people have time to deliberate and ponder. These findings suggest that when people

enter a deliberative mindset, assessing the desirability and feasibility of different alternatives, they become less altruistic.

8.4.2 The Identifiable Victim Effect

Another prominent finding from the literature on charitable donations is the identifiable victim effect. People are much more likely to donate (and donate more) to appeals that speak to a specific individual victim that potential donors can relate to, rather than one relating to multiple victims or highlighting a need using statistics—however alarming those statistics might be. Identifiable victims evoke sympathy and an emotional response, whereas people turn their emotions off when considering the plight of many (Jenni and Loewenstein, 1997). The popularity of child sponsorship supports the identifiable victim effect. Often a sponsor can decide on the child they would like to sponsor and pledge monthly donations. In return, they receive letters and photographs from the sponsored child who benefits from the donation. Child sponsorship has become a hugely successful way of raising funds for international development. More than US$3 billion is donated annually, to support an estimated 9.14 million children and their communities worldwide (Wydick et al., 2013).

In a study undertaken by Small et al. (2007), student participants were randomly provided with one of two letters requesting a charitable donation. One of the letters featured a story about a seven-year-old girl in Africa who is facing severe hunger or even starvation. The other letter informed the participant of food shortages and the millions of people facing starvation across parts of Africa. In another experiment, a third group received the information from both letters. After reading the letter, participants were asked to make a donation to charity using the five-dollar endowment they received for taking part in experiment. The study found that the student participants who received the letter featuring the poor girl donated more than twice the amount of money than the participants who received the letter providing the statistics on mass starvation. Further, the participants who received a letter with information on both donated less than those who received information on the child alone. This indicates that even when emergencies and natural disaster impact large numbers of people, charitable organisations are likely to raise more money through appeals that feature individual stories rather than appeals that emphasise the scale of the disaster and the number of people in need of assistance. Burdening donors with lots of information is likely to be counter-productive in these situations.

Kogut and Ritov (2005) examine whether the identifiable victim effect is stronger for single individuals than for small groups of individuals, and explore the role that identifiable information plays in people's willingness to contribute to save the lives of the children. They recruited undergraduate students who were provided a story describing a sick child or a group of eight sick children. They were also told that a new drug had recently been developed that could save the lives of the children, but that it was very expensive. Unless money was raised soon it would not be

possible to save the lives of the sick children or the sick child. The story was varied according to whether it was a sick child or a group of sick children and according to the degree of identifiable information of the subjects (name, age and their picture). The participants were then asked if they would make a donation. Results suggest that the identified victim effect is strongest for single victims and that providing identifying information elicited considerably more donations. The identification of individuals within a group did not impact donations. The findings suggest that providing information on identifiable victims can intensify emotional responses and raise donations but only for individuals and not for groups of 'victims'.

8.4.3 Positive Versus Negative Appeals

Of particular importance to INGOs is the type of appeal that attracts the most donations. Erlandsson et al. (2018) examine whether people donate differently to negative versus positive charity appeals. Negative appeals, sometimes referred to as 'sad' or 'guilt' appeals, elicit negative emotions and focus on the poor circumstances in which people live and the bad consequences associated with not donating. Positive appeals, also known as 'altruistic' or 'warm glow' appeals, elicit more positive emotions by focusing on the good consequences of donating and the difference a person's money can make. They might include pictures of happy, flourishing children. The authors used appeals related to different causes (famine in Africa, child cancer in Sweden and a refugee crisis in Europe). Their results suggest that positive appeals are more effective in inducing favourable attitudes towards the appeal and the organisation but that negative appeals are more effective (or at least equally effective) in eliciting actual donations. Negative appeals can make people upset or guilty and this provides the motive to help by donating.

This finding is confirmed elsewhere and poses a challenge for INGOs. Running negative appeals is a contentious issue. Arguably, appeals based on guilt might be effective at securing one-off donations but are unlikely to spur long-term giving. Critics argue that negative appeals containing 'poverty porn' exploit the people they are supposed to be helping, portraying them as victims and stripping them of their dignity to attract sympathy and raise financial support. INGOs need to find ways that positive appeals become at least as effective at raising funds for development. Hudson et al. (2019) find that while negative imagery and text can garner donations via guilt, hope is the most important pathway through which appeals can increase the willingness to donate.

8.4.4 Happiness and Charitable Giving

Some studies have sought to induce feelings of happiness prior to assessing the donating behaviour of recipients. For example, Aderman (1972) asked participants

to read out statements that were designed to favourably alter their mood. Isen and Levin (1972) found that people in a treatment group that received cookies or found money left in payphones were more likely to help others. Other studies, such as Konow and Earley (2008), measure participants levels of happiness prior to them playing the dictator game. They found happier people were more likely to share their endowment.

Anik et al. (2009) find that happiness and giving operate in a circular fashion, whereby happier people give more, which makes them happy and so they give more. However, they also find that persuading people to give to make themselves happy through advertising campaigns can actually backfire. Over time, the motivation of donating to feel happy or good about yourself crowds out or overrides the desire to help for altruistic reasons. It "may have the perverse consequence of decreasing charitable giving, crowding out intrinsic motivations to give by corrupting a purely social act with economic considerations" (Anik et al., 2009).

In their experiment Dunn et al. (2008) examined whether causality runs the other way around; this is, whether donating money to others causes happiness. Some of the (randomly assigned) participants were provided with an endowment and told to spend the money on themselves. Other participants were asked to spend their money on others (in a prosocial manner). Participants in the latter group reported higher levels of happiness at the end of the day, providing causal evidence that spending money on others can lead to happiness.

While altering someone's mood for the better might induce prosocial behaviour, it could also be the case that inducing feelings of sorrow and guilt might do the same. To examine this, Small and Verrochi (2009) recruited a sample of university staff and students that were each given a $10 endowment. Participants were randomly allocated photos of children with different emotions (happy, sad or neutral). Photos related to advertisements for a children's cancer research foundation. Participants were then asked to donate some or all of their endowment to the foundation. The study found that people are more sympathetic and more likely to donate if charitable appeals advertise victims with sad expressions. An image evoking sadness facilitates sympathy and giving. This presents INGOs with the same challenge discussed above. Negative campaigns can be more effective at raising money but might not be in congruence with the values of the organisation.

8.4.5 Social Information and Social Pressure

Social information informs people of how others behave. It can be used to evoke donations to charitable organisations (Shang and Croson, 2009). Rather than donations from others crowding out the donations of a pure altruist, people can be more willing to donate when they know that others are. This could be due to social pressure, the desire to conform to social norms or rewarding others pro-social behaviour and is known as 'competitive co-operation' (Frey and Meier, 2004). It

might also act as a signal with people perceiving that a particular charity is reputable if they observe other people donating.

DellaVigna et al. (2012) argue that some people don't like to donate money to charity but will do so anyway due to social pressure, particularly in public. To examine this issue, they implemented a door-to-door fundraising experiment in which some households were informed in advance of the exact time they would be approached for a donation (via a flyer on their door) and others were allowed to opt out altogether. The study found that the advance-warning reduced the share of households opening their door by up to 25% and providing an opt out reduced donations by up to 50%. Similarly, Andreoni et al. (2017) found high levels of avoidance with respect to charity collectors at a supermarket.

Findings from the laboratory experiment of Reyniers and Bhalla (2013) with student participants also lend support to this finding. The control group comprised individuals who had to make just a single donation decision. The treatment group comprised paired participants who had to make two donation decisions. Before deciding on their first donation, each paired participant was informed that their donation would be revealed to their partner. They were then allowed to revise the amount they donated. Paired participants donated more than the individuals in the control group but felt less happy with the amount they donated. Further, if a participant's partner donated more than them in the first round, they increased the amount they donated in the second round and vice versa. These findings suggest there are significant peer effects in the context of charitable giving.

8.4.6 Time Preferences and Reminders

Since people value their money more today than in the future, asking people to commit to donations in the future rather than immediately can be more successful in raising donations. Breman (2011) used field experiments with supporters of a Swedish charity and randomly varied the timing of when people were asked to raise their recurring donation. Findings suggest that donations were higher when donors were asked to commit to future donations. This type of donating behaviour is confirmed by Andreoni and Serra-Garcia (2016) using a laboratory experiment in which participants were asked to give $5 to charity today or in one week's time.

Forging a future commitment at a specified time is likely to be important in ensuring the donation is realised. Knowles et al. (2015) invited by letter, a random selection of New Zealanders to undertake a five-minute survey on charitable giving. If they completed the survey, $10 would be donated to their choice between two charities. Some letters did not specify a deadline, while other letters specified a deadline of one week or one month from the date they were sent. More participants completed the survey when there was no deadline. The least completions were for those that were given the one-month deadline. The authors interpret the finding as deadlines allowing people to procrastinate, with people proceeding to forget about completing the task. This highlights the importance of reminders, which have been

shown to be important elsewhere (Sonntag and Zizzo, 2015). However, in their field experiments with prior donors of a Danish charity, Damgaard and Gravert (2017) find no effect of deadlines on the likelihood of donating, concluding that people donate immediately or not at all. Yet for those that do give, a longer deadline increases the amount donated.

8.4.7 Matching Gifts

A matching gift represents a commitment by an organisation to match an individual's donation. The match is usually specified at a given rate and up to a maximum amount. Challenge gifts are donations in which a large contribution is promised by a donor if a fundraising goal is achieved. Rondeau and List (2008) use both laboratory and field experiments to examine the relative impact of these gifts. The study found that challenge gifts, already contributed to an appeal, outperform matching gifts in terms of raising donations.

Karlan and List (2007) use a natural field experiment to examine whether matching funds promote giving. Key findings indicate that simply announcing that a match is available increases the amount donated as well as the likelihood of donating. Interestingly, more generous matches made little difference to donations. A $2 or 3$ match for every $1 donated had no additional impact relative to a dollar to dollar match. Karlan et al. (2011) confirm this finding on aggregate but that past donors respond more favourably to matching funds than people who haven't been asked to donate before.

Interestingly, the name and perception of the donor providing a matching grant can make a big difference to donations. Karlan and List (2019) conducted two matching grant experiments. In the first, participants were promised a matching grant from the Bill and Melinda Gates Foundation. In the second, participants were informed of a matching grant from an anonymous donor. Far more money was donated in the first experiment, which the authors attribute to a quality signal mechanism.

Using the charity website GlobalGiving.org, Anik et al. (2014) demonstrate that contingent matching can significantly raise donations. This is where the amount matched is contingent on the percentage of others who give. In various experiments, the authors found that the most effective approach was to offer a 75% contingent match. That is, the donor will match the contribution if 75% of participants donated. The finding holds in the context of recurring (monthly) and one-off donations.

8.4.8 Recognition

Finally, providing donors with some form of acknowledgement can also assist in evoking donations. Samek and Sheremeta (2017) utilise a field experiment to

identify the importance of selective recognition in charitable giving. They identify two mechanisms through which recognition impacts on donations. Recognition of the largest donors initiates a desire for prestige, while recognition of the smallest donors triggers the desire to avoid shame. Identity primes can also be used to encourage donations. Using field experiments with the American Red Cross, Kessler and Milkman (2018) find that people are more likely to donate when their previous generosity is primed in an appeal. Appeal letters were sent out to supporters, a random selection of which reminded the donor of their previous donation. These reminders evoked more donations from supporters.

8.5 Conclusion

People are clearly motivated by altruism when it comes to donating to charitable organisations including INGOs. Yet, other motivates also exist. There is little evidence of pure altruism. Non-altruistic motives for donations can include feeling good about oneself, public recognition, prestige, avoiding guilt and shame, signalling status, wealth and generosity. What does this mean for INGOs and how they should design their appeals to attract donations?

From the literature, there is strong evidence that people are more likely to donate and donate more when they can identify with or connect with an individual subject. This suggests that if INGOs want to maximise donations they should devise appeals consistent with this, providing images and stories based around the plight of individuals and refraining from appeals based on multiple victims and disconcerting statistics. There is also evidence that negative appeals are more effective at attracting donations. Such appeals seek to induce action by evoking negative emotions such as sadness and guilt using images of distraught children who might be starving or suffering greatly. That is not to say that INGOs should use such imagery since it is subject to strong critiques with the international development community. Instead, INGOs could experiment with different types of positive appeals with texts and imagery to examine which types of positive campaigns work best.

Other findings from the literature point to other strategies that might successful for INGOs. Appeals should be kept as simple as possible with a limited amount of text. Too much information can lead to potential donors adopting a deliberative mindset, which has been shown to reduce charitable giving. Interestingly, including information on administrative costs rather than on INGO impact and effectiveness is also more likely to evoke donations, as is providing information on the positive donating behaviour of others. Where possible, matching donations and providing donor recognition are other strategies that should be adopted since they have been shown to be successful at increasing donations.

In terms of future research, there is clearly heterogeneity in charitable giving. Different donors have different motives and respond in different ways to the same appeal or treatment. Gaining further insights into this heterogeneity is required to assist INGOs with their future appeals. The motives for one-off donations versus

longer-term funding commitments should also be explored. Finally, there should be a focus on using field experiments rather than laboratory experiments. If prosocial behaviour such as donating to charities is largely impulsive then people are likely to act very differently in a controlled laboratory experiment in which they are provided with an endowment and given the time to deliberate over their decisions. List (2007) argues that by restricting participants to only being able to give (as in the standard dictator game) is likely to engender expectations for donations since not donating anything at all would be viewed as entirely selfish. This is particularly true when participants are simply provided with an endowment and specific requests for whether or not they would like to give.

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Chapter 9
Unite and Conquer? Behavioural Pitfalls in Australia's Response to COVID-19

Meg Elkins

9.1 Introduction

> Communities that will do this. There's no magic bullet. There is no magic vaccine or therapy. It's just behavior. (Dr Deborah Birx, White House COVID-19 response taskforce co-ordinator)

As well as being a major public health threat, the COVID-19 pandemic has had enormous impacts on the lives and livelihoods of billions of citizens around the globe.[1] When there was no vaccine or clear treatment available, many governments around the world were using behavioural interventions to increase compliance with the recommended guidelines (Taylor, 2019). Research finds that two critical elements for increasing compliance in health messaging are the (1) perception of risk and (2) the trust in authority. The Australian government's role in framing of messages on managing COVID-19 responses provides an important insight into how governments promote or deter behaviours to prevent the spread of the disease.

A pandemic is a social phenomenon that therefore has behavioural solutions. Equally, COVID-19 is a perfect storm for irrational choice—the stakes are high for making the wrong decisions. Taking risks can cost lives, which can lead to panic, and the health information can be complex to navigate. Behavioural science can help to manage psychologies that can go beyond rational behaviour.

[1] Joint statement by ILO, FAO, IFAD, and WHO https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people%27s-livelihoods-their-health-and-our-food-systems.

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This chapter reviews the role of government and behavioural science in encouraging the promotion of behaviours of mask wearing, hand washing and social distancing. It also explores three government responses policing these behaviours and gaining public trust. I use a case analysis of Australia's response to COVID-19 in the following steps: first, I evaluate the use of persuasion and influence in nudging behaviour; second I assess the standard external incentives response, policing); third, investigate the internal incentives required to gain compliance; fourth, conduct an assessment of how the government's credibility is crucial to illicit compliance; and last, I provide a case study on anti-maskers to demonstrate alternative behaviourally-inspired policy responses. Each of these components can be applied in a broader context of understanding what does and does not resonate in the messaging and policy suggestions to prevent the spread of the diseases with a focus on governments handling national crisis.

9.2 The Australian Context

The first confirmed case of COVID-19 was detected on 25 January 2020. As of 25 October 2021, there have been 158,547 cases and 1637 deaths. The state of Victoria accounts for 80,152 of these cases. On 20 March 2020, all non-residents were banned from entering Australia when the borders were closed, and on 21 March 2020, social distancing measures were put in place. Figure 9.1 shows three distinct spikes in numbers: March to April 2020, July to September 2020 and July to October 2021. The second and third spikes in numbers provide an interesting case of how the government used fines and lockdown restrictions to contain the virus. The lockdown measures introduced in Victoria, while among the strictest in the world, have been successful in containing the numbers.

In Victoria, there were harsh lockdowns and fines for non-compliant behaviour to slow down the spread of the virus. Fines targeted behaviours including not wearing a mask, breaking curfew between 5 a.m. and 8 p.m., leaving home without a valid reason, and travelling beyond a 5km limit of the house. Some would argue that these measures worked, but they did come at a cost to the economy and individual's mental health.

The Australian government's communication to the public has been focused on the following: keep your distance, wear your mask, and adhere to the guidelines, such as hand washing. Here, what is obvious is that most of the messaging to protect people from the COVID-19 virus has to do with human behaviour.

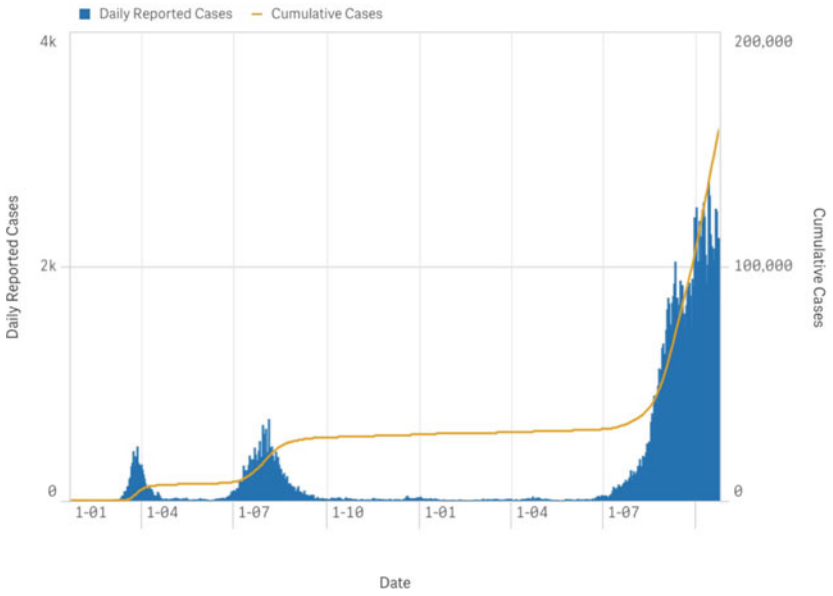

Fig. 9.1 Daily and cumulative number of reported COVID-19 cases in Australia from January 2020 to October 2021

9.3 Persuasion and Influence: How To Use Behavioural Science To Deliver the Message

The government has the means of eliciting compliance by using persuasive tactics, and COVID-19 offers no exception. In the case of the Victoria, we can scrutinise their messaging using influence and persuasion research. The behavioural techniques employed in government communications draw on theories of persuasion, social norms, social identity and framing effect. This chapter draws on behavioural research to systematically use these behavioural insights and apply them to Australia's persuasive messaging in a pandemic.

Public health agencies face challenges in framing messages as there are clear emotional reactions, such as fear, anxiety and distress, associated with pandemic. In 2014 and 2015, during the Ebola outbreak in West Africa, fear was worse than the epidemic itself in terms of the people affected (Hofman and Au, 2017) In some communities, there was a deep distrust around the disease and government agencies, which lead to a suspicion of and reticence to seek treatment. In some instances, there were issues of violence towards Ebola response workers attempting to implement treatments (Sams et al., 2020). What is evident in this case is that messaging should strike a balance of building people's understanding of the seriousness of the implications of disease spread, without increasing the level of panic.

For public health agencies to persuade and influence, the main factors are not only financial or material but also social. Robert Cialdini's (2009) influential work on persuasion finds getting people to compliance depends on six factors he nominates as weapons of persuasion. These are: (1) Reciprocity—intuitively we like to return favours; (2) consistency—we attempt for our actions and our thinking to be the same; (3) social proof—looking to our peers to decide what is acceptable and desirable; 4) authority—we also look to those who are in charge; (5) liking—messages are more palatable when we feel good about the person; and (6) scarcity—we want what is rare. In regard to COVID-19, this means that the message should be from a reliable source, be consistent with previous actions and messaging, and delivered by a person who the general public believe represents social validity. Consistency is particularly important for the long game, especially as the government chops and changes on regulations around border controls, mask wearing and lockdowns. If the goal posts change too frequently, citizens can become fatigued by the measures to stop the spread. Perhaps the wildcard in the mix of persuasive tactics and COVID-19 messaging is that of reciprocity. Evidence can be seen in the ask: If you are asking your population to sacrifice their freedom of movement, then the government undertaking a commitment to offer minor concessions goes a long way.

During times of uncertainty, social norms play an important role in adopting health behaviours. What is or is not acceptable is driven by how we see others behaving (Cialdini and Goldstein, 2004); we are social animals and fitting in is an important driving factor in establishing compliance. Perhaps where social norms are most important are in the context of peer-to-peer influence. Indeed, it is clear how these influences can change behaviours. The more we see individuals behaving in a certain way, the greater we replicate those behaviours. Following mask regulations is a clearly visible instance of social norms: When you enter a venue where everyone is wearing a mask you are more likely to follow this behaviour. Recycling, littering and tax evasion are other examples of norms in social behaviours (Cialdini, 2009). The desire to conform is deep rooted in human nature (Van Bavel et al., 2020). Compliance and the impact of social norms has more to do with eliciting norm congruent behaviour—not just for the immediate circumstance but for the future as well. Importantly, the digital age has seen peer-to-peer influence and social norms extend to social media.

One of the most common messages highlighted in billboards and social media has been the government's messaging around calls to comply. One message form the Victorian government reads 'we are all in this together'. Another the tailored messaging reads 'Staying Apart Keeps Us Together' is further evidence of behavioural messaging (Fig. 9.2).

This is a deliberate attempt to prescribe a group-like behaviour and shape our attitude towards others in the group to develop social identity. Hogg (2016) describes social identity as our sense of ourselves as group members. It is how we identify with others in the group that then influences behaviour. What we know is when these messages are delivered by people similar and familiar to us the more likely we are to believe and respond to those messages (Cialdini, 2009). See the messaging in

Fig. 9.2 Government messaging on compliance. Source: https://Coronavirus.vic.gov.au/coronavirus-covid-19-victoria

Fig. 9.3 Australian Government messaging on COVID-19 safe behaviours. Source: https://www.its.vic.edu.au/coronavirus/what-is-social-distancing/

Fig. 9.2 on how to implement social distancing. Note, the message is clearly focused not just on the individual's prevention of the spread of the disease, also on an onus to protect others. Interestingly, the term being used in more recent communication is 'physical' distancing (rather than social distancing). Social distancing implies a local of social interaction—not ideal when people are feeling isolated in a crisis (see Fig. 9.3).

Fig. 9.4 Framing messaging to focus on saving lives not preventing deaths. Source: https://www.coronavirus.vic.gov.au/

The framing effect is when our decisions are influenced by the way information is presented. Equivalent information can be more or less attractive depending on which features are highlighted. Kahneman and Tversky's (1979) paper on prospect theory, outlining the concept of loss aversion, is one of the earliest papers in behavioural science. The prospect theory states that how you frame the message will influence compliance to guidelines. Daniel Kahneman (2011), in his book *Thinking Fast and Slow*, finds two systems of thinking. System one is fast, automatic and intuitive, while system two requires a slower, more deliberate and analytical style of thinking. The numbers of a scenario can be the same; however, depending on the way information is presented, we will either respond intuitively or rationally depending on which system thinking we use. Simplifying information is a good way to improve communication and increase the motivation to follow directives. People are more influenced by numbers of lives lost (death rates) in a scenario than the number of lives saved (survival rates). See the emphasis on in the message in Fig. 9.4, focused on saving lives (and not preventing deaths).

Understanding persuasive messaging is the first step of managing a response. The second step is to impose standard external incentives in the form of fines, restrictions and policing to ensure compliance.

9.4 What Matters in Getting Citizens To Act?

Extrinsic motivators are key to creating positive behaviours. Beyond the message, the government has other, more direct tools available to inhibit the spread of COVID-19. Fines and arrests are employed to deter unwanted behaviour. Requiring citizens to isolate after testing can also be motivated by other extrinsic incentives, such as offering government payments.

Traditional economic responses, as described in 1940s textbooks, refer to incentives and deterrents to motivate behaviour. Rational behaviour can be explained by social optimisers who seek to maximise their self-interest. Behavioural economics, however, looks to explain the irrational responses as to why people do not behave as expected but are motivated by psychological and social factors. As behavioural economists, we are interested in what drives cooperative and non-cooperative behaviour.

Nobel laureate economist Gary Becker was the first to use economic theory to describe why people commit crimes and how they should be punished (Becker, 1968). He explained how a 'rational' individual weighs up the expected gains or losses from committing a crime and compares them to gains or losses of not committing a crime. Expected means working out probabilities.

The framework assumes that most people have an aversion to risk, and large fines do deter people from committing a crime. A large fine signals that the harm of transgression is high and is priced as such. If the fine is set too high, then it is left to the judicial system to counter the severity of a fine. In these cases, as the penalty increases, the likelihood of conviction falls (Andreoni, 1991). The assumption here is that 'penalty should fit the crime' and the final penalty is determined by jurors and judges, not the government.

Conversely, a fine set too low can signal to individuals that the harm of the transgression is small. In this instance, some individuals are willing to 'pay the price' of the fine to continue their behaviour. In Gneezy and Rustichini's (2000) experiment with an Israeli childcare centre, parents were issued with fines fines for late pickups. Some parents took this an opportunity to pay for the convenience of a late fee rather than see it as a fine, and as a result, late pickups increased.

On 27 October 2020 the Victorian government moved away from the severe lockdown restrictions. The main solution was to ensure adherence to the more complicated rules for 'COVID-normal' social interactions by increasing penalties for breaches. Citizens of Victoria can be fined $200 for not wearing a face-covering in public, and up to $1652 for most stay-at-home order breaches. Fines of up to $4957 apply for unlawful gatherings, as well as COVID-positive people or close contacts who fail to self-isolate.

Laws are necessary, but philosophers since Plato have told us that societies only function when people comply with social norms when no one is looking. It is impossible to maintain social order solely through the deterrent effect, by detecting and punishing wrongdoers. This is especially true when policing resources are limited, and monitoring behaviours can be imperfect.

Not everyone is inclined to follow the rules, regardless of fines. Those who follow social or prescribed rules do so irrespective of the likelihood of punishment and reward. The critical factor is whether an individual sees the laws as being legitimate. Some scholars argue that citizens believe authority is legitimate when they view the state as competent and fair in the exercise of its authority (Tyler and Bies, 1990; Dickson et al., 2015). Dickson et al. (2015) demonstrate legitimacy using the public good game (see Sect. 3.3.3) where participants have to decide whether to give a stake of money to the group or keep it for themselves. In this study, one group member

was the leader and could punish free riders. The finding was that leaders were 10–12% more effective in raising group contributions when using fairer procedures to accurately identify who contributed and who did not. The lesson: You can only carry people along if you are seen to lead justly.

9.4.1 Optimism Bias and Risk Aversion: Not Getting Caught

Fines are government's way to deter people from flouting the rules because total enforcement of the rules is impractical. The idea is that the higher the fine and the greater the chance of being caught, the more a rational person will obey the rules when no one is looking. This is what we call optimism bias. Those who break the rules tend to underestimate the probability of something bad happening to them; that is, they do not perceive they will be caught. Research suggests that 80% of us are prone to optimism bias when assessing personal risk to avoid negative emotions (Sharot, 2011). People tend to underestimate the likelihood of experiencing bad events such as divorce, being in a car accident, the likelihood of contracting a disease such as COVID-19, or getting caught not following the rules. We learned from previous pandemic that individuals underestimate their own risks of contracting the virus or transmitting it to others and most think that they will not catch the virus.

The real problem with the economic rationale is that people tend not to consider probabilities. Rule breakers tend to underestimate how likely it is they will get caught. Emotions often drive the perception of risk (Loewenstein et al., 2001) sometimes more so than factual information. People's involvement in breaking the rules is generally influenced by their assessment of the risk of getting caught—those who assess the risk of being caught as higher, tend to commit crime less frequently.

Another reason we believe we will not get caught is 'cognitive dissonance', which is where we bend our beliefs to make ourselves look better when we face inconsistencies in our reasoning. In one classic experiment (Freedman, 1965), two groups of kids were threatened with either mild or heavy punishment if they played with a desirable toy. Those who obeyed in the mild condition were much more likely to obey later when they were no longer observed. The reason: They had to explain to themselves why they chose not to play with the desired toy. Accepting the rule as legitimate was their way. The kids who obeyed because of the severe punishment had no reason to internalise the rule—the threat of punishment was enough. Although these will have some effect, research suggests 'deterrence perceptions' depend on an individual's pre-existing 'crime propensity'. That is, most people may not be inclined to commit crimes such as theft, vandalism and assault, so deterrence perceptions are largely irrelevant.

Focusing on the extrinsic motivators, such as fines, may reduce people's intrinsic motivation to act for the collective good. However, these explicit incentives can only go so far. What is more effective is to use social motivators.

9.4.2 *Crowding Out Intrinsic Motivators*

As we have witnessed, with over 39,000 people receiving fines in Victoria up until mid June 2021 (many of these as yet are unpaid),[2] people do not always follow the punishment theory. Some people flout the rules even when the risk of significant punishment is high. The reasons lie in our psychological make up. Many people are intrinsically motivated to comply with rules and act for the common good. When we find governments only focusing on fines and monetary rewards, this can undermine people's natural intrinsic motivation to comply.

Much of what we do is for its own sake rather than because of reward or punishment. This includes doing right and helping others. In the classic experiments, participants asked to solve an interesting puzzle for money stopped earlier than others who were not paid.

> Because extrinsically motivated behaviours are not inherently interesting and thus must initially be externally prompted, the primary reason people are likely to be willing to do the behaviours is that they are valued by significant others to whom they feel (or would like to feel) connected, whether that be a family, a peer group, or a society. (Deci and Ryan, 1985)

The concept of crowding out of intrinsic motivation by extrinsic incentives has been identified by Bénabou and Tirole (2006). Rewards and punishments can create doubt when true good deeds are observed. Other intrinsic motives include doing right and helping others. Fines deny people the opportunity to virtue signal that they are doing the right thing. Others seeing someone wearing a face mask will assume the reason is the rule undermining the intrinsic reason for wearing them. This effect of external motives works for rewards as well as punishment punishment. Titmuss (1972) famously argued that paying for blood donations paradoxically reduced supply because people thought of blood as an opportunity to give, rather than an opportunity for monetary reward.

Akerlof and Dickens (1982) suggested that imposing harsher penalties could act against citizen's natural justification for obeying the law. In practice, most cognitive dissonance reactions stem from peoples' view of themselves as 'smart, nice people'. Information that conflicts with this image tends to be ignored, rejected, or accommodated by changes in other beliefs. When we feel trusted and empowered, we are more likely to obey the law. Additionally, people commonly perform good deeds due to social pressure and avoid bad deeds due to social shame. Frey et al. (1997) examines social interactions with economic incentives and finds dysfunctional effects of explicit incentives. A fine says the opposite—again taking away a reason for acting voluntarily. People consider their competence and self-determination diminished and respond through inactivity.

Given the COVID-19 virus is likely to be with us for foreseeable future, the question is: If harsh fines are not working are there other nudges that can work?

[2] Source: https://www.sbs.com.au/news/millions-of-dollars-in-fines-for-breaching-australia-s-covid-rules-haven-t-been-paid/.

Fisman and Miguel (2010), in their book *Economic Gangsters*, illustrate how in the 1990's, Antanas Mockus, the new mayor of Bogata Columbia, was able to reduce the crime rate using cultural persuasion. The council employed theatre students to act as mimes to enforce traffic rules, mimicking and ridiculing unsavoury behaviours. The mimes carried cards—like soccer referees—to rate behaviour, in part issuing social sanctions. Civilians joined in and within a matter of months there was limited jay walking; and this approach went on to reduce more serious issues of violence and crime—within a decade traffic deaths were halved. Other novel strategies helped cut Bogota's homicide rate by 70% (Fisman and Miguel, 2010). As Mockus explained, this initiative was "focused on changing hearts and minds—not through preaching but through artistically creative strategies that employed the power of individual and community disapproval" (Dundjerovic and Bateman, 2006, p. 467). As behaviouralists, we can apply a similar principle to those who refuse to wear masks.

9.5 Crisis Management and Government Credibility

Leadership during a pandemic, at panic levels never experienced in modern times, is challenging. Mistakes are going to be made and questions of responses are going to be asked. It comes as no surprise that we are quick to assign blame during a crisis, particularly to those in positions of power. While blame serves a purpose, it could also be counterproductive if the government starts to lose credibility in the public's eye.

As the folklorist Jon D. Lee (2014) explains in his book, *An Epidemic of Rumours*, blame is a normal reaction to epidemics or other calamities. Fear activates powerful psychological mechanisms that allow us to cope. And blaming others is a common coping strategy. It is not just those in authority authority who bear the brunt of scapegoating. Foreign powers, unseen conspiracies and minorities have all become targets in the past.

Blaming and periods of economic hardship go together. Historically, marginalised groups that are considered drains on communities have been targeted as the source of the blame. During the Black Plague in the mid-fourteenth century Jews faced persecution as the likely carriers. In mid-seventeenth century, during the coldest winter in Massachusetts, the young women of Salem were being persecuted in a witch hunt. More recently, Miguel (2005) found expendable older women of Tanzania were accused of witchcraft during a period of extreme drought.

9.5.1 Trust and Accountability

Trust is an important mechanism to get people on board with following COVID-19 guidelines. Some of the reasons for following guidelines are entirely justified

and well-intentioned. Freedom of expression, for example, is an essential part of functioning democracies. Our institutions can only remain strong and effective as long as people stay engaged in public life—and hold the powerful to account.

The World Bank has also listed 'voice and accountability' as one of six dimensions it examines as part of its worldwide governance index (Kaufmann et al., 2011). The index looks at the perception of citizen engagement in selecting their government, as well as freedom of expression, association and media. What is key here that it is not the *actual* behaviour but the *perception* that is critically important.

The management of the pandemic has highlighted weak and strong governance systems around the world. Norway and New Zealand rank at the top of the 'voice and accountability' index, so it's no surprise they have received high praise for their COVID-19 responses. Australia is also very high, in 10th position. Other countries that have not done so well on the pandemic are further down the list. The US is 37th and Brazil is 74th.

In Victoria, the government has become the main villain. COVID-19 has come at a time when trust in government in Australia has never been lower (Cameron, 2020). As a result, compared to other countries and other times in our history, government has become an easy target.

When done in the right way, casting blame also has an important social function. Holding perceived transgressors, including those in positions of power, to account for their failures and mistakes reinforces society's rules and acts as a deterrent against those who would flout them (see Ziyanak and Williams, 2014). Blaming is also a normal psychological process that allows individuals to manage stress and fear when faced with life-threatening upheavals. One of the most powerful human needs is to feel we have some sense of control over our environment—and COVID-19 has undermined our sense of what we previously believed to be under our control. The sense of control we have includes the ability to explain why things happen. And pointing fingers at an easy scapegoat, such as the government, can sometimes provide the answers we need to regain control.

Some people may also feel partly responsible for their country's inability to contain COVID-19, yet unable to personally make a difference. Blame helps reconcile these feelings. If someone else is at fault for the pandemic spiralling out of control—for instance, our leaders—that absolves the rest of us from blame and the burden of responsibility.

Rallying around a common cause, even an innocent scapegoat, can bring people together. But this should never be a reason to participate in a witch hunt. Generations of wrongly blamed minorities are a powerful reminder of how social injustice can become entrenched.

More important is to hold those in power to account through social activism, as epidemiologists Quick and Fryer (2018) argue in *The End of Epidemics*. Bureaucracies can suffer from inertia, they argue, and ignore the long-term strategies needed to make us better prepared in the future. But a government that has lost credibility because of unjustified finger-pointing will struggle to marshal the collective resources needed to effectively fight the pandemic. Research shows credibility is hugely important when it comes to the power of persuasion—and this

is the main lever the government has right now to get people to behave the right way.

Previous pandemic have seen riots and civil unrest. In his book *The Psychology of Pandemics*, Steven Taylor (2019) describes how health professionals and local officials were attacked when visiting communities in Africa and Asia during the Ebola and SARS outbreaks. He argues civil disobedience happens when people share a belief that the authorities are to blame in some way.

The reasons for the pandemic are complex and evolving. No simple scapegoating narrative can change that. But if we hold onto anger and continue to point fingers, it could prevent society from doing what is necessary to win the fight.

9.5.2 Dealing with Political Polarisation

Political polarisation has a role to play in people's response and resistance to the restrictions. It can lead to different segments of the population arriving at different conclusions about the threat and appropriate actions to take. Socio-political systems, public (trust in governments and experts, and previous experience with pandemic are also key. The Bakshy et al. (2015) study shows, for instance, how political polarisation can impede a government's ability to provide a coordinated response.

As news consumers, we exercise unprecedented choice, sometimes at our own peril. A broad menu of diverse news is easily accessible, much of which is polarised or partisan echo chambers (Bakshy et al., 2015), catering for the most unlikely beliefs and persuasions. People come with their own confirmation bias inbuilt. Reduced social interaction due to COVID-19 restrictions also limits the exchange of information between different viewpoints (Minozzi et al., 2020). These interactions increased a shared understanding—sorely missing when we are communicating only through our screens.

To combat this political polarisation, it is important to focus on common medical risks, and social as well as economic consequences that we all share. Social psychologists know that common fate is what forges separate people into a social group. But it is also important to be aware of other factors that can influence behaviour beyond fines. The next section applies the use of social norms and behavioural nudges to the case of anti-maskers and their issue with compliance.

9.6 Case Study of the Anti-Maskers: How To Motivate Those Not Conforming

Behavioural nudges emphasise that what you do matters. Everybody counts. Evidence shows that people remain passive when they feel anonymous or too insignificant to make a difference.

Governments need policies to overcome people's powerful mechanisms, to 'inoculate' them against threatening views of information. If citizens are also overconfident and overly optimistic in their thinking with statements such as 'it will not happen to me' then they will interpret information to reinforce their thinking. Our desire to condemn and punish non-cooperative behaviour is strong. One of the key insights from behavioural economics over the past few decades is that people are willing to punish others at a cost to themselves, and this helps increase cooperation—to an extent.

The 'new normal' is a key message to move people who are deeply entrenched in the status quo. Here, it is important to acknowledge masks as uncomfortable and inconvenient. Previous campaigns around mandatory wearing of bike helmets (Vulcan et al., 1992) and seatbelts (Jochelson, 2006) to save lives that initially required some level of discomfort and personal sacrifice—these behaviours are now normalised. The same can be said for public health campaigns for wearing condoms in the eighties. What we have learnt from these campaigns is that at a point of 'critical mass' of people complying, those not wearing seat belts and bike helmets look like the 'odd person out'.

Condemnation and punishment can also reinforce resistance among the uncooperative. We must also try to understand the complex emotional motivations of those refusing to wear masks.

It is hard to say how many people are opposed to mandatory mask wearing. But the evidence suggests social media channels, such as YouTube and Facebook, have increased the popularity of conspiratorial theories that governments want people to wear masks as some form of mind control. Conspiracy theories indexconspiracy theories flourish during times of uncertainty, and misinformation spreads when people isolate themselves (Van Bavel et al., 2020). The COVID conspiracy movement is a broad church, but there appear to be two fundamental traits among its adherents. First, a belief in their own intuitive ability to know the truth. Second, a deep and cultivated distrust of government and other institutions (Van Bavel et al., 2020). They do not believe the mainstream media, and there is no shortage of alternative media narratives to sustain them. It is difficult to shift people who believe conspiracy theories to abandon their beliefs.

Many moral judgements are simply intuitions we are born with (Haidt, 2012b). One that has been identified as significant in the context of COVID-19 is authority versus subversion. The extent to which we voluntarily submit to the power of others is different from person to person. Some are rebellious and suspicious of power by nature—but make up ideological reasons why violating an order is right. As the era of misinformation, people are increasingly suspicious of who to trust.

Distrust in authority grows when mixed messages undermine how credible and competent officials seem. The initial advice against face masks was well-intentioned to safeguard supplies for health professionals but may have harmed the influence official messages have now.The change in tune has helped entrench anti-masker beliefs the government is not truthful. Periods of uncertainty and threat provide ideal conditions for conspiracy theories to bloom.

Trust or distrust in authority, and whether one is more obedient or rebellious, has been shown to be an innate tendency, shaped by experience and culture. It is very difficult to shift. One that has been identified by researchers is authority authority vs subversion- the extent to which we voluntarily submit to the power of others is different from person to person. As social psychologist Jonathan Haidt (2012b) notes in his book *The Righteous Mind: Why Good People Are Divided by Politics and Religion*, our minds were designed for groupish righteousness:

> We are deeply intuitive creatures whose gut feelings drive our strategic reasoning. This makes it difficult – but not impossible – to connect with those who live in other matrices.

9.6.1 Cooperation and Dissent

The important issue is not whether we can change anti-masker or COVID-19 sceptics' beliefs but whether we can change their behaviour. Traditional economic theory, which assumes people are rational and follow their self-interest, would emphasise carrots and sticks. Behavioural economics, which understands that decisions are emotional, would also recognise that people are quite ready to take a hit just to express their disgust about being treated unfairly.

Psychological reactance is a motivational response to rules regulations or attempts to threaten autonomy or freedom of choice (Rosenberg and Siegel, 2018). Paradoxically, persuading someone with a high level of reactance can have opposite to the desired effect—it can actually strengthen their view. For example, if someone's self-image is that of a non-conformist with an anti-science belief, consensus views to health warnings will be met with resistance to or opposition to the message (Rains, 2013). This has been repeatedly demonstrated by a staple experiment of behavioural research—the ultimatum game (see Sect. 3.3.3). It involves two players and a pot of money. One person (the proposer) gets to nominate how to split that money. The other (the receiver) can accept or reject the offer. If it's a rejection, neither gets any money. A 'rational' receiver would accept any offer over nothing. But studies have consistently shown a large percentage of participants opt for nothing when they consider the money split unfair. This sense of is a deep evolutionary trait shared with other primates. Brosnan and De Waal (2003) demonstrate this in their experiments with capuchin monkeys. The authors have shown that two monkeys offered the same food (cucumber) will eat it. But if one monkey is given a sweeter treat (a grape) for performing a particular task, the other will reject the cucumber.

Other types of games show this innate sense of fairness leads to a desire to penalise 'selfish' people in some way. Most of us are 'conditional co-operators', and punishment of non-cooperative behaviour is important to maintain that cooperation. But punitive measures may paradoxically reduce compliant behaviour.

Fig. 9.5 Face mask messaging to signal dissent

9.6.2 Need to Express Dissent

If a rule jars with one's beliefs, following the rule can cause huge emotional turmoil and distress, particularly if disobedience is the only way to express disagreement. Xiao and Houser (2005) demonstrated this possibility in a variation of the standard ultimatum game (see Sect. 3.4.2). Normally, the game only allows receivers to express their feelings through accepting or rejecting a proposer's offer. Xiao and Houser (2005) allowed receivers to express their feelings about an unfair offer by sending a simple message. The result: They became much more likely to accept an unfair offer. Some enterprising types seem to have cottoned on to this idea by selling face masks enabling wearers to signal their conspiracy convictions. Messages such as 'I refuse to wear a mask' or 'this is a mind control device' have appeared popular in this space (see Fig. 9.5).

To have anti-maskers cooperate, we will need to tolerate them expressing their dissent in other ways. Ostracism and ridicule will just increase their resistance and resentment and reinforce the 'us versus them' mentality.

9.7 Summary

A pandemic is a social phenomenon, and, therefore, has behavioural solutions in nudging people's social behaviour. But we also know that rationality does not necessarily work. COVID-19 provides rare combination of circumstances for irrational choice; the risks of spread are high, the information is complex, the fears associated with getting the disease are real, the dangers are society wide, and the stakes of getting it wrong are high (Taylor, 2019).

The requirement to contain the spread of COVID-19 ultimately falls on how governments manage the psychology of the compliance requirements. If the social norm is to comply with the government edicts, then the role of government becomes less important. If there is resistance and misinformation to health measures, then getting the tone of the messaging 'we are all in this together' and 'your behaviour protects others' is vitally important. Resorting to rational measures such as fines to control behaviour is not conducive to long-term compliance, as it is not possible to monitor everyone who breaks the rules. However, the introduction of vaccine

mandates in certain occupations have also been an interesting case of where compliance has been applied, with some electing to leave positions rather than take a vaccine.

Ultimately, complying with the rules is less an issue of comparing the cost and benefits than accepting the legitimacy of leaders of the groups we identify with. Once groups lose coherence or splinter, then obeying by the rules goes out the window.

Policymakers in this instance need to beware. Every misstep reduces what you can ask people to sacrifice. As George Soper (1919) found investigating lessons from the Spanish Flu, it goes against human nature for people to shut themselves away in rigid isolation as a means of protecting others. Equally, he found people unconsciously act as a danger to themselves and to others. Balance in getting 'the ask' right is critical—otherwise it is easy to assign blame and not follow directives.

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Chapter 10
Unlocking Creativity for Business Potential

Bronwyn Coate

10.1 Introduction

The importance of creativity is recognised as central to innovation within business (Amabile, 1996) as well as to the broader economy (Heunks, 1998). From a firm-level perspective, creativity plays an essential role in differentiating competition and has been identified by executives as a major factor contributing to firms' achievement of higher profits and market share (Research, 2014). This is especially the case for firms located in knowledge-based economies where creativity and innovation are inextricably linked. Yet while the importance of creativity is well accepted by firms, on a more practical level, how organisations can actually generate a culture and environment that enables creativity to flourish is less clear cut. In this chapter, we explore how business can harness creativity and overcome common barriers that can hinder it.

While creativity is typically conceptualised at the level of the individual as an innately human skill,[1] it can also be understood at an organisational level. Our focus in this chapter is on the latter. There are many reasons why firms prize creativity. Chief among these is that creativity is linked to firm innovation (Gurteen, 1998; Amabile and Pratt, 2016; Mumford and Todd, 2019) and overall firm performance (Weinzimmer et al., 2011; Gong et al., 2013; Imran et al., 2018). In recognising the importance of creativity, business leaders rank creativity as one of the most

[1] Developments in artificial intelligence (AI) augment human creativity to produce novel approaches in a range of fields (see Du Sautoy, 2019).

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important attributes firms look for in their employees.[2] Creative managers and workers are typically comfortable with ambiguity and able to adapt to changing business conditions, which, as the recent pandemic has shown, is vital (IBM, 2021).

In this chapter, we cast light on creativity at a business organisational level, where its application may be expressed in solving problems or harnessing opportunities through some combination involving new processes or products that are approached in novel ways. In this sense, we focus on what is termed structural creativity (see Sawyer, 2006) where creativity exists as part of a "sociocultural model which locates individual creativity in a network of relationships" (Bilton, 2010, p. 259).

Recent scholarship has focused on the antecedents of creativity within business and how firms can foster a creative milieu to advance business objectives (see Bilton and Cummings, 2010; Hotho and Champion, 2011; Blomberg et al., 2017). Creativity in business represents a way of thinking and approaching problems that can drive innovation as problems are solved and new opportunities are realised. Beyond trait-based theories of creativity, such as heroic models linked to individual genius, theories of creativity in business tend more to focus on the collective and processes related to structure. For instance, creativity is recognised as playing a central role in positively shaping organisational culture that not only promotes a team ethos but also instils a sense of shared responsibility and loyalty among employees (Florida and Goodnight, 2005). In this respect, business creativity aligns comfortably with traditional business and management models with Bilton (2010) noting this gives rise to interest in teams, networks and organisational environment as sources of innovation.

Yet, despite its obvious appeal, creativity in business is often thwarted. On its flip side, creativity entails risk as boundaries are pushed and new ideas are tried, including some destined to fail. Drawing on observations garnered during her impressive career (Amabile, 1998, p. 77) notes that she has more frequently observed "creativity being killed within organisations than getting supported". As such, business needs to find a way to embrace creativity while also attending to pressing imperatives, including those related to risk management that poorly managed may inadvertently 'crush creativity'. As Amabile has shown, the key to business creativity is the development of a collective organisational mindset that plans for and is genuinely accepting of creative risks. Risks may come from different sources, including shifts in technology that effectively change the basis of competition within a market giving rise to what Christensen (2013) refers to as the 'innovator's dilemma', whereby firms need to innovate their business models to seize opportunities and solve problems in new ways.

Ultimately, a creative mindset reflected across an entire organisational structure (from the CEO and management to their subordinates), places business in the best position to be proactive in driving innovation. Furthermore, fostering creativity to drive business innovation is not only good for firms but also generates far-reaching benefits. Employees in organisations that are noted for their creativity are

[2] For example see IBM Institute for Business Value (IBV) Global C-suite studies.

typically more satisfied and loyal to their organisations (see Andriopoulos, 2001; Duxbury, 2012). Beyond the firm and its employees, synergies between creativity and innovation are of relevance for society more broadly. In the face of different crises from the recent pandemic, to financial instability, to dealing with climate and environmental change, creativity and innovation will be vital to the discovery of new approaches to knowledge and institutional organisation that will be essential in helping solve such pressing problems.

In what follows, the chapter explores what makes a business organisation creative in the first place. Here we focus on the determinants of creativity within individuals and consider how organisations can leverage this through the business processes and structures they create. We follow by addressing how creativity contributes to business success and identify strategies business can implement to enhance their creative capacity. Finally, we draw some conclusions to close the chapter.

10.2 What Makes a Creative Organisation?

While this chapter focuses on how businesses can be creative, it is important to understand that business creativity derives first and foremost from the people that make up a business enterprise. As such, before we can understand what determines business creativity, we first must understand what determines individuals' capacity for creativity. Beyond the benefits of a creative workforce for individual workers, creativity ranked in the top three skills needed to thrive in the future workforce according to the Forum (2020).

10.2.1 Determinants of Individual Creativity

While different behavioural approaches have contributed to the extensive scholarship and understanding on individuals propensity for creativity (see Guilford, 1950; Becker, 1995; Sternberg, 1999; Sternberg and Kaufman, 2018), in this section we focus on three key themes, namely expertise, thinking style and motivation. These determinants have also been extensively covered by (Amabile, 1998, p. 2021) in investigating the psychological components necessary for an individual to produce creative work. Each of these three determinants are discussed in turn.

10.2.1.1 Expertise

Expertise refers to one's knowledge that is technical, procedural and intellectual in nature and is the "foundation of all creative work" (Amabile, 1996, p. 5). The possession of domain specific expertise is, in many cases, a prerequisite to thinking about and sensing problems falling within or relevant to the domain.

Furthermore, for wicked problems that fail to sit neatly within any one particular domain, experts from different areas and parts of an organisation may form cross-functional teams that offer multiple perspectives that can drive innovation and new discovery. As (Newell et al., 1972, p. 82) note expertise presents a "network of possible wanderings" that enable a creative response to problem solving.

10.2.1.2 Creative Thinking Styles

Creative thinking is the result of both cognitive style and personality characteristics that are conducive to the manifestation of traits, such as risk-taking, openness and independence, that when applied often result in demonstrations of creativity. Creative thinking skills determine the flexibility and imagination people bring to approach problems, irrespective of the specific domain(s) in which their individual expertise is located. In this respect, creative thinking is like an X-factor within the creative process: It can deliver solutions that upend the status quo within an organisation and/or its market to drive change. Creative thinkers demonstrate tolerance (or even seek out) ambiguity as an environment that enables them to be challenged and test out new ideas. As (Amabile and Pillemer, 2012, p. 4) describe, creative thinkers "break out of perceptual and performance scripts".

10.2.1.3 Motivation

Motivation can manifest in distinct ways in response to seeking either external or internal rewards or some combination of the two. Extrinsic motivation is driven by the desire to reap extrinsic rewards, such as monetary remuneration and performance bonuses, that provide a strong incentive driving employees' behaviour. As well as the obvious importance of extrinsic reward, other evidence points to the importance of intrinsic factors, particularly for jobs located within the knowledge-based economy (Kryscynski and Morris, 2020; Stiglitz, 1999). Intrinsic motivation relates to the satisfaction and reward associated with pursuing one's inner passion. Psychologists have long identified a link between intrinsic motivation and a sense of life purpose that contributes to individuals' overall well-being and the satisfaction of higher order needs (Maslow, 1946). Importantly, firms can foster both extrinsic and intrinsic motivations. While the former is obvious, intrinsic motivation is influenced by what Frey and Osterloh (2001) refer to as the 'relational contracts' that exist within organisations. Extending beyond social niceties that occur within the office, employee satisfaction and performance has been linked to inclusive management practices that foster autonomy while empowering leadership and co-worker support (Feng et al., 2018; Hon, 2011).

10.3 Leveraging Individual Creativity at an Organisational Level

From a business perspective, regardless of what industry a firm operates in, creativity is essential. Looking beyond the creative industries, our use of the term creative business (as an adjective) describes business practices rather than business product. In this respect, all business can be creative in practice. As evidenced across a range of industries, creativity in business can manifest in a variety of different ways—from influencing the design and development of new products, to finding new approaches to delivering products to reach new markets, to harnessing digital technologies to co-create products and experiences with customers and end-users. A critical question facing organisations is how they can unlock the creativity of their workforce to gain competitive advantage and drive innovation.

While the benefits of creativity to the firm are apparent, fostering a workplace culture that enables creativity to flourish involves enabling worker and team autonomy and risk taking—which can challenge managerial control. Furthermore, extrinsic incentives, such as performance bonuses, may crowd out intrinsic motivations if they inadvertently direct worker behaviour towards the pursuit of safer and more certain outcomes at the expense of more risky initiatives that push boundaries (see Welpe et al., 2015). Beyond the challenges of designing incentives to motivate workers towards the desired behaviours that are sought by firms, other work-related environmental factors can block creativity. For instance, in the wake of the recent COVID-19 pandemic, a survey by Company (2021) found that only 47% of executives were satisfied with their firm's innovation performance. From this research by McKinsey, the source of the problem was linked to the obstacles found embedded within the day-to-day routines and internalised business processes that stifled innovation rather than as a result of a lack of spending to support initiatives, such as internal venture capital and incubators. In this respect, narrow workplace perceptions on how best to approach processes and problem solving can inadvertently reinforce the status quo and may effectively institutionalise outmoded processes and opportunities for inclusion and creativity. Research by Berns (2010) has shown that firms can encourage creativity through workplace culture. The antithesis to what Berns proposes can be seen in many workplaces where employees are pushed to feel excessive time pressures, norms of harshly criticizing new ideas squash employee empowerment and sense of autonomy, office politics undermine a team ethos, and a conservative low-risk attitude among top management pervades.

In identifying the everyday internal behaviours that stifle creativity, we can flip them to understand the drivers of workers creativity. For instance, Neto et al. (2019) link creativity and innovation within the firm to an organisational mindset that truly believes there can be a better way to do things. Central focus is also given to deeply understanding customer and stakeholder needs that also brings collaboration across and beyond the organisation through information sharing and knowledge transfer. Importantly, these behaviours all reinforce the sense of a shared workplace culture that recognises success comes from experimentation, where it is accepted that

failure will frequently be encountered but that such failures on course to innovation provide valuable opportunities for learning. In this sense, workers are empowered to take considered risks, to voice dissenting opinions and seek the resources and support they need.

Beyond bringing benefit to the organisation, providing opportunities for creativity and innovation is strongly linked to enhanced worker well-being and satisfaction. Research has found that workplaces that foster creativity provide employees with a sense of positive challenge as well as a higher degree of freedom that is linked to employee satisfaction (Guest, 2017; Bryson et al., 2014). In addition, creative work teams tend to be more collaborative, diversely skilled, and idea-focused (Hawlina et al., 2019). Furthermore, initiatives to inspire creativity and innovation at a grassroots level within organisations have broader implications to generate spill-over effects for the rest of the economy (see Potts, 2011) making creativity not simply a priority for individual firms but also for policymakers.

10.3.1 Valuing a Creative Mindset to Gain a Competitive Edge

Creativity makes business competitive and ultimately sustainable. Firms need to be responsive and flexible as well as able to adapt to changes, otherwise they will fail in the face of competition. With the growth of the knowledge-based economy facilitated by the advances in digital and communication technologies heralded by the Fourth Industrial Revolution, creativity has been described as 'the new competitive advantage' (Shcj, 2020). Reflective of this, there has been an explosion in experiential- and design-based product offerings compared to the past. For many products, it is not enough to compete only on price terms by lowering prices to capture market share. Increasingly, business needs to find smarter ways to engage with and keep the interest of their customers. Social media dedicated to brand building is partial evidence of firms taking a creative approach to customer relations. Yet business creativity is so much more than simply creating a brand identity and connecting with customers. Before this, business needs to discover unique ideas that will keep their customers (and users) interested and engaged to become a vital part of business success. In this respect, business is tasked with staying one step ahead of customers and competition to uncover what customers actually need before they realise it themselves. In this way, business can push the boundaries but also retain their own style and identity that generates value and customer loyalty. As a recent example, many businesses have needed to pivot their operations during the recent pandemic. From fashionable cafes and upmarket restaurants offering gourmet home delivered meals as a way to continue operating during lockdowns, through to cultural events shifting to connect with audiences online rather than physically; creative responses to the constraints imposed by the pandemic have driven innovation.

10.3.2 Embedding Creativity within Business Workplace Culture

Abundant research has established that expressing creativity generates intrinsic rewards and enhances well-being (e.g., Ryan and Deci, 2000; Kuvaas et al., 2017). Within organisations, high levels of creativity nurture company culture, including employee and customer loyalty (see Shamsudin et al., 2019). Furthermore, creativity may itself become imbued with company brand and identity, as major tech companies, including Apple and Google, demonstrate.

While technology and artificial intelligence can be programmed and used as tools for creativity, human ingenuity remains the driving force underlying creativity. Within organisations, business creativity is dependent on the people employed as well as the freedom and acceptance employees have to express new ideas and search for creative solutions. In this respect, firms exert significant influence over their capacity for creativity through the workplace culture that exists. Businesses that understand the importance of creativity as a quality to be nurtured rather than imposed reflect this understanding within their corporate or managerial *modus operandi*. At the most senior levels within organisations, executives can commit to creativity through strategising and goal setting that support innovation through a clearly articulated, creativity-encouraging vision and appropriate recognition for creative work. At a practical level, supervisors who encourage the development of new ideas and provide mechanisms for developing and actively sharing ideas across the organisation play a vital role. Initiatives that enable employees to share their creativity in different ways without fear will stimulate collective intelligence that builds trust, making experimentation and curiosity welcome, which will ultimately generate creative solutions. Furthermore, by demonstrating organisational values that make employees happy, firms also have a much better chance of satisfying their customers too (e.g., Carree and Verheul, 2012); hence, reinforcing the good business sense it makes to value creativity.

10.3.3 Rewarding Creativity Regardless of Pay-Off

Embracing risk and trying new approaches is central in driving creativity yet often appears at loggerheads with other important business imperatives. In organisations where creativity thrives, risk is acknowledged, and it is accepted that on the path to innovation creative mistakes will happen. In such organisations, mistakes are easier to accept and provide opportunities to learn from that can boost workplace morale and sense of purpose as new approaches and responses are then sought in the course of pushing towards a new perspective.

However, if business instead takes a narrow and short-term view in its approach to important issues such as risk management, co-ordination, productivity and control they may “inadvertently design organisations that systematically crush creativity”

(Amabile, 1998, p. 77). While creativity may fall victim when other seemingly competitive demands are prioritised by the firm, there is growing evidence that shows how well-designed managerial processes can enable the firm to enjoy the best of both worlds. Even the firm following the simple practice of being transparent with their employees at all levels within the organisation can provide clarity to help mitigate the downside of creative risk. Sharing stories of both success and failure and examining the role that creativity played in shaping project outcomes can assist employees in understanding how they can approach relevant project criteria reflected in the projects they contribute towards.

For creativity to thrive, employees need to feel challenged to take risks while at the same time feeling safe to fail and not necessarily fall in line with everyone else. Striking a balance where employees are pushed outside their comfort zone without being overwhelmed or feeling overstretched can present a fine line for managers to navigate that is further complicated by individual differences that mean a 'one size fits all' approach from management is doomed to fail. For creativity to flourish, work environments need to be conducive to experimentation that is actively supported by workplace practices and culture. Evidence that employees who are given freedom and license to be creative in their approach to work are typically more satisfied is hardly surprising (e.g., Rego et al., 2009); however, a further benefit from the firms' perspective is that employees who feel valued and have autonomy to creatively express themselves will typically be more productive as well (see Barik and Kochar, 2017). In this respect, employees are intrinsically motivated to do their best and push themselves to the next level in a rewarding manner that generates a win-win outcome benefiting themselves individually as well as their organisations.

10.3.4 Own Creativity to Make it Part of Brand and Organisational Identity

Organisations that effectively make creativity part of their brand and organisational identity can reap benefits stemming from how this is favourably viewed by customers and stakeholders. This is about organisations doing more than simply investing in creativity by setting resources aside, adopting new technologies early, harnessing the power of social media and establishing incubators (although clearly these initiatives can all help). By crafting brands that engage with their customer base and are responsive to the broader societal context in which they operate, organisations can build a more loyal customer base (see Chaudhary and Akhouri, 2018).

Beyond corporate social responsibility, perceptions about how organisations respond to drive innovation through creativity contribute to brand identity and customer loyalty. From really getting to know their audience, including customers and stakeholders, organisations can build a reputation in which their creative credentials provide more than simply cache. For instance, organisations can demonstrate how

their creativity manifests in a number of ways, including how the organisation innovates, how it produces and markets its products, how it responds to social issues, as well as the actual products it produces. (Research, 2014, p. 6) show that brands perceived to be more creative "generate price premiums, have more customers who speak on their behalf and are also more likely to disrupt their traditional markets with new ideas or approaches".

As a source of competitive advantage, organisations need to be seen as open in their experimentation with new approaches, even when this might in some instances fail given the risky nature of creative. The way in which creative solutions are evaluated is often subjective and may be judged harshly if advances are too fast or radical compared to what the market is ready to accept, and as such may not be consistent with profit maximising, in the short run at least. For organisations that use creativity to address problems that matter to society (such as addressing global warming and carbon emissions), innovative solutions that underpin the development of new business models create spill over effects that enhance organisations status as good corporate citizens.

10.4 Summary

Creativity is a factor influencing a broad range of decisions made by governments, business and individuals (as both consumers and workers). From how business can best attract talented workers that will drive the innovation agenda of tomorrow, to questions of how urban renewal can be generated through creative economy strategies, the importance of creativity is paramount. As an intangible resource associated with human capital, creativity enables business to solve problems and improve processes and products to align with business objectives. Furthermore, creativity is increasingly being fused with technology that has heralded major shake-ups in business practices and models to cause and respond to disruption.

As creativity fails to conform to one-size-fits-all and manifests in unexpected ways, the policies and paths to achieving it hinge on a multitude of factors—some of which this chapter has examined. While creativity generates many benefits, it is also risky, and its pursuit provides no guarantee of success in terms of achieving the goals desired by business. This chapter has explored how behavioural insights and approaches to business can assist in understanding creativity and how it is best nurtured through strategising and policy development.

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Chapter 11
Behavioural Aspects of Financial Advice

Daniel Richards

11.1 Introduction

Many parts of the world have experienced deregulation of financial systems and a decrease in state-provided pensions (Holzmann, 2013). These changes have increased the complexity of financial products and also an individual's responsibility for planning and funding their own retirement. In light of these changes, people are seeking financial advice to guide them through the large financial decisions that they must make. Thus, demand for financial advice, especially in Australia, has increased over the past two decades. Concurrently, the financial planning vocation emerged as the leading discipline to provide financial advice to clients (Cull, 2009; Richards et al., 2022a). Financial planning is in the process of becoming a profession and it separates itself from cognate professions, such as accounting, and occupations, such as stockbroking. To professionalise, financial planning needs to build a body of knowledge about financial advice to create a clear jurisdiction of expertise. To this end, financial planning professional bodies, educators and regulatory authorities are incorporating aspects of financial planning into their curriculum.

In this chapter, I review pertinent behavioural research, which can be applied to financial planning or the process of providing financial advice. This is completed in two sections. The first section focuses on financial planners' knowledge of clients. Financial planning is defined as "the process that takes into account [a] client's personality, financial status and the socio-economic and legal environments and leads to the adoption of strategies and use of financial tools that are expected to aid in achieving the client's financial goals" (Warschauer, 2002, p. 204). This quote illustrates that financial planning incorporates the client's personality into the finan-

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cial advice recommended. Accordingly, knowledge in financial planning curricula is being built on insights from behavioural research to understand exactly what a client's personality entails. The first section of this chapter reviews behavioural finance and behavioural economics research, which highlights behavioural biases that influence people's financial decision making.

The second section of this chapter investigates behavioural research on the adviser (financial planner) and advisee (client) relationship. This area of research area receives less attention from financial planning curricula and, therefore, is less likely to be incorporated into developing the financial planning profession. However, behavioural research in this area shows great potential as it researches common practices adopted by financial planners when interacting with clients. Some of the specific topics that behavioural research highlights are conflicts of interest, disclosure, and persuasion in the adviser to advisee relationship. For financial planning to professionalise, these concepts need to be addressed by a body of knowledge and behavioural research offers considerable insights on these concepts.

11.2 Behavioural Research on Financial Decision Making

There are many books and articles that currently offer behavioural insights into financial decision making and financial planning (Baker and Ricciardi, 2014; Chaffin and Fox, 2018; Pompian, 2011; Statman, 2017). Some of the insights offered by these books focus on inferences of behavioural research to financial decision making. In this chapter, I limit the focus of behavioural concepts to those that meet two criteria. First, there is evidence of the behaviour occurring in behavioural research, such as psychological experiments, and second, there is evidence of the behaviour occurring in real-world data, such as individuals' financial records. The review below covers the disposition effect, home bias, and mental accounting.

11.2.1 Disposition Effect

Imagine you purchase shares in two companies; one purchase is a large financial institution and the other is a large supermarket chain. Following a period of three months, the COVID-19 pandemic occurs, and one share has seen a large increase in price (the supermarket) while the other has an equivalent decrease (the financial institution). Due to the COVID-19 pandemic, you need money and choose to sell one stock. Which stock do you sell? Well, people who chose to sell the supermarket shares because they have increased in price are illustrating a bias called the disposition effect.

The disposition effect is a bias where investors hold shares trading at a loss longer than those trading at a gain. Colloquially defined, the disposition effect is a behaviour where investors "sell winners too early and ride losers too long" (Shefrin

and Thaler, 1988, p. 777). The bias piqued the interest of academics when Odean (1998) analysed investors' brokerage accounts in the US. His research showed that the disposition effect was prevalent among investors and that investors who had more disposition effect experienced worse returns. Specifically, Odean showed that the stocks investors sold at a gain subsequently outperformed the stocks investors continued to hold at a loss. Since Odean's research, additional research using the entire Finland stock market from 1995 to 2003 confirmed a relationship between individual investors' amount of disposition effect and reduced investment returns (Seru et al., 2010).

A key question for financial planners is why do people do this? One argument is that the disposition effect is related to Prospect Theory (Kahneman and Tversky, 1979), which illustrates that people have different risk tendencies depending on whether they face gains or losses. For losses, people increase their risk-taking attitudes (a concept often referred to as loss aversion). When faced with a loss in the share market, investors will continue to hold and take the risk to recuperate this loss. The opposite occurs for gains where risk-taking attitudes decrease and people will sell that stock to crystallise the gain. An alternative and complementary explanation is the emotion involved in making investment decisions (Richards et al., 2018; Shefrin and Statman, 1985; Summers and Duxbury, 2012). When people purchase a share that subsequently decreases in value, regret is invoked, and this emotion inhibits the action of selling a stock (Summers and Duxbury, 2012).

There is a lot of evidence of the disposition effect occurring throughout the world. Research has shown that this bias occurs in many culturally different countries, from Taiwan (Shu et al., 2005) and the United Kingdom (Richards et al., 2017) to Estonia (Muhl and Talpsepp, 2018). It is also observed in trading experiments run by researchers at universities (Summers and Duxbury, 2012; Weber and Camerer, 1998). Academics are now turning their attention away from proof of this concept and focusing on the factors that make a person more or less susceptible to this bias. This new wave of research offers further insight relevant for those who work in financial planning or provide financial advice.

Some research suggests that investors can learn to reduce their own susceptibility to this bias. However, learning to avoid this bias is a very long and gradual process (Seru et al., 2010) that can be accelerated by turbulent market conditions (Muhl and Talpsepp, 2018) or among highly educated investors who trade frequently (Vaarmets et al., 2019). Other research suggests that investors who are better able to regulate their emotions, and therefore handle the ups and downs of investing, have less disposition effect (Kim and Ha, 2016; Richards et al., 2018). The research suggests that experience, combined with emotional awareness, can lead an investor to alleviate this bias. For those more prone to the disposition effect, a direct method to inoculate against the disposition effect is the use of stop losses (Fischbacher et al., 2017; Richards et al., 2017). Stop losses are automatic trading devices that sell stocks when they decrease in value. These are free to use and have been shown to be very effective at eliminating this bias. Finally, those investors who receive advice from experienced financial advisers show less disposition effect than those who do not (Shapira and Venezia, 2001). The financial adviser needs to have experience, as

inexperienced advisers have been shown to increase the disposition effect (Hermann et al., 2019).

11.2.2 Home Bias

A common recommendation that financial planners offer their clients is to diversify their investments. This recommendation is rooted in traditional finance, which shows that diversification is a method of reducing risk. An effective method to diversify and reduce risk is to invest in stock markets in a different country. As different countries will be in different stages of their business cycles, international diversification can offer a reduction of risk compared to investing solely in ones' home country. However, Huberman (2001) identified that investors are very reluctant to do this. Instead, investors invest where they currently live; a bias called the home bias. The home bias has roots in the familiarity heuristic where people favour phenomena they are familiar with to phenomena that they are not familiar with. Research has shown the home bias occurs and that investors are more likely to invest in firms that share the investor's country, culture, or language (Grinblatt and Keloharju, 2001).

This bias can occur due to several different factors, some of which are economic, and others that are behavioural in nature (Riff and Yagil, 2016). The economic reasons include asymmetric information (investors have more accurate and comprehensive data about the firms in their home country), exchange rate volatility, and government regulations that impede international investment. However, behavioural reasons play a prominent role in why this bias occurs, because experimental research that removed the economic factors demonstrated a strong home bias in investment decision making (Lin and Viswanathan, 2016). Riff and Yagil (2016) find that the familiarity bias plays a substantial role in the home bias, where investors who feel acquainted with an asset are more likely to invest in it. This is similar to 'homophily', where people will have social networks that are homogeneous because we connect with other people who share similar sociodemographic, behavioral, and intrapersonal characteristics (McPherson et al., 2001). In addition, Riff and Yagil (2016) found that fluency, which is the extent which to the name of the stock is easy to comprehend, increased the home bias as investors. In summary, the home bias shows that investors are unlikely to invest internationally but are more likely to invest in home stocks because they are familiar with these stocks and the investor can comprehend the stock's name.

The importance of home bias for financial planners is that it illustrates a client's willingness to invest in different products. Research shows that investors believe home assets to be less risky (Wang et al., 2011). That is, when investors have knowledge and comprehension of an investment, they are less likely to view it as risky. This is important for financial planners as it highlights the importance of a client's understanding when recommending certain financial products or advice. If a planner recommends something not understood by clients, the client

will perceive the advice as a risky endeavour. Instead, a financial planner may recommend international diversification through companies with a strong global brand. A strong global brand ameliorates the home bias because they are easily recognised, familiar, and understood by investors (Riff and Yagil, 2021). Second, research shows that this bias is related to investor confidence and competence. When investors feel competent, they are more likely to reduce their home bias and diversify internationally (Graham et al., 2009). Also, investor confidence, which can be influenced by market movements, affects the home bias. The home bias occurs more frequently in a declining bear market (low confidence) than an increasing bull market (high confidence) (Riff and Yagil, 2016). This aspect of the home bias highlights the need for financial planners to offer financial advice within the scope of understanding of a client so they can feel competent and confident about the financial decisions undertaken.

11.2.3 Mental Accounting

The concept of mental accounting was developed by Thaler (1980, 1985) to outline how people categorise money into separate cognitive accounts. Money is fungible, or, in other words, it is a transferable commodity across many aspects of our lives (Thaler, 1999). For example, we use the same money to pay for holidays, buy food and donate to charity. To make financial decisions easier, people create categories for money and assess decisions within categories. These categorisations of money create barriers to fungibility, where certain money is earmarked for the intended purpose (such as funds for children's education) and cannot be used in other areas. Mental accounting is the behavioural economics term used to the categorisation of money and shows unique insights into financial decision making (Zhang and Sussman, 2018a,b).

Mental accounting can be attributed to a broader concept of choice bracketing (Bland, 2019; Read et al., 1999). When faced with decisions, people can choose to *broad bracket* where they assess all consequences of decisions, or *narrow bracket* where each choice is made in isolation. Narrow bracketing is far more common because of the cognitive complexity of weighing multiple consequences across multiple decisions. The use of narrow bracketing can have positive consequences (it increases efficiency), and negative consequences (important facets are not considered). Likewise, mental accounting in personal finance can be an effective and detrimental way of organising money and making decisions. Mental accounting can be a powerful budgeting tool for a financial planner's client as it allows them to make simple decisions and develop a behaviour of saving.

The key determinant of whether mental accounting is positive or detrimental is how money is categorised. One categorisation is by the source of funds; that is, whether the money comes from wages, investments, inheritance, etc. Some money can come from personal exertion or from investment decisions and feel like regular income. Other funds can be perceived as a windfall gain (Zhang and Sussman,

2018b), where the money is not expected or treated like a bonus. Research has found that if money is a windfall gain, then people are more likely to spend it easily and on luxury goods and services (Milkman and Beshears, 2009; Zhang and Sussman, 2018a). As money can come from many sources, a person's categorisation of it as regular income or as a windfall gain has a big influence on whether that money is spent or invested. The Save More Tomorrow campaign (Thaler and Benartzi, 2004) undertook a behavioural intervention where employees committed to putting future pay rises into retirement savings. This serves as an apt example of using windfall gains to increase savings behaviour.

A second categorisation in mental accounting is the purpose of the money. When money is categorised for a specific purpose, money within this category can be spent up rather than transferred to other sources. Hastings and Shapiro (2013) found that when petrol prices decreased, households in the US would buy more expensive petrol (higher octane), rather than utilising any left-over fuel money for a different purpose. That is, people had a certain mental account for petrol money and would spend that money rather than transfer that money. These results highlight a key ramification of mental accounting in financial planning, which is mental accounting use for budgeting. Mental accounting can be used as an effective budgeting tool as it increases self-control and simplicity of how much to spend (Shefrin and Thaler, 1988). However, once set in place, it can lead to suboptimal financial decision making when situations change. Research has found, for instance, that money intended as savings is not utilised in times of a financial crisis and instead people opt for high-interest debt (Sussman and O'Brien, 2016). Financial planners can advise clients of mental accounting techniques for budgeting but should also review the use of these techniques in follow-up sessions with clients to assess if the strategy is still suitable.

A third categorisation of money in mental accounting is a time preference and whether the money is categorised as being in the past, present, or future. A concept related to this is temporal discounting, where people place more value on something being available now rather than in the future (Frederick et al., 2002). The curriculum taught in financial planning is built on the time value of money principle, so the ideology that future money (e.g., savings for retirement) has less value than current money (current expenditure) may be common knowledge among financial advisers. However, behavioural research shows that people vary in the amount they temporally discount, and this is related to how much a person values the perceived reward (Tsukayama and Duckworth, 2010). When it comes to retirement planning, research has shown that people who discount the future heavily and engage in less healthy behaviours will place more emphasis on current gratification (e.g., smoking and sensation seeking) and save less for retirement (Finke and Huston, 2013). This aspect of mental accounting has important implications for financial planning. A financial planner needs to understand how their client discounts the future, or in other words, to what extent the client values future money. This will help the financial planner to develop strategies adapted to the client's preferences. For example, a client who heavily discounts future money may need an investment

product where the money is difficult to access, but a client who discounts less heavily may benefit from the flexibility in easily accessed savings.

11.3 Behavioural Research on the Adviser and Advisee Relationship

This section of the chapter focuses on behavioural research that investigates the adviser and advisee relationship, and I apply the findings to the financial planner to client relationship. This research topic is not specifically included in some financial planning curriculum but offers unique findings into financial planning practices. The review below aims to highlight some behavioural insights into conflicts of interest, disclosure, and persuasion and show how behavioural research on these concepts are applicable in financial planning.

11.3.1 Conflicts of Interest

An aspect of financial planning that falls under scrutiny is conflicts of interest. Financial planners have a duty to act in the interests of their clients and thereby ensure that advice provided is based on the client's circumstances and fulfilling the client's needs (Richards and Morton, 2020). However, financial planners are often working for, or remunerated by, financial institutions that have different interests (Bruhn and Miller, 2014). A fundamental interest of financial institutions is a need for consumers of the financial products they create. Thus, some financial institutions encourage financial planners to recommend their products to clients using various incentives, including commissions. This creates a conflicted market for financial advice, where a financial planner must weigh the interests of their clients on one hand and the interests of financial institutions and their own interests on the other. This is a simplistic depiction of conflicts of interest, and it is important to note that these conflicts vary in different jurisdictions throughout the world (Angelova and Regner, 2013; Chen and Richardson, 2018; Richards et al., 2022b). Nonetheless, behavioural research offers insights into conflicts of interest relevant for financial planning.

Experimental research on financial advice, in addition to other types of research (Chater et al., 2010; Bruhn and Miller, 2014; Richards and Morton, 2020), show that these conflicts of interest are detrimental in financial advice settings. Conflicts of interest are detrimental for the advisee because advisers work in their own interest rather than the advisee's interest (Chen and Richardson, 2018). A common issue is that financial planners will not be honest about their own interests when providing advice. Angelova and Regner (2013) investigate how paying for advice can influence conflicts of interest and how this might affect an adviser to act truthfully. In financial planning, some advisers choose to receive their income by charging

clients (called a fee-for-service model) and others choose to receive commissions from product providers. Thus, Angelova and Regner (2013) investigate differences between voluntary payments and obligatory payments made by clients. They find that larger voluntary payments made by advisees both before and after receiving advice increases adviser truthfulness in advice. Furthermore, advisees are more likely to act on the advice when they make a voluntary payment. Overall, this research suggests the benefits of a fee-for-service model in financial planning where clients pay for the advice they receive. These findings are consistent with field research, which finds that independent financial advisers' advice offers better returns than financial advisers employed by a bank (Hackethal et al., 2012) and that a small percentage of clients take up offers of free, unbiased financial advice with even fewer acting on the advice provided (Bhattacharya et al., 2012).

11.3.2 Disclosure

A common method of handling conflicts of interest in financial planning is disclosure, where a financial planner will inform a (potential) client of the incentives they receive (Richards and Safari, 2021). Advisers disclosing information to advisees became a research topic of interest in behavioural research following a seminal paper by Cain et al. (2005). Cain et al. (2005) found that even though conflicts of interest are disclosed by advisers to advisees, advisees fail to discount the impact of these conflicts on the advice given. That is, advisees failed to adjust their behaviour appropriately in light of the disclosure. This implies that clients of financial planners do not reject the financial advice when conflicts of interest are disclosed. Furthermore, Cain et al. (2005) found that when advisers knew they had to make a disclosure, they would increase the bias in their advice because they thought advisees would adjust their views due to disclosures. This increase in bias due to disclosure is referred to as strategic exaggeration and Cain et al. (2005) suggested that disclosure offered advisers a 'moral license' to bias their advice. However, it is important to note that results on strategic exaggeration and moral licensing are inconsistent. Chen and Richardson (2018) failed to find that strategic exaggeration and moral licensing occurred in an advice-giving experiment. Chen and Richardson (2018) did find that conflicts of interest impeded the advisee's interests and disclosing conflicts of interest reduced adviser's returns in their experiment.

An interesting question to ask is what impact does the practice of disclosing conflicts of interest have on the relationship between the adviser and advisee? Does disclosure build strong relationships between advisers and advisees when information asymmetry has been reduced? Sah et al. (2013) investigated the influence of adviser disclosure on advisee's perceived trust and compliance with the advice provided. The results revealed that when an adviser discloses a conflict

of interest, then the advisees have less trust in that adviser. Interestingly, the results showed that an advisee is more likely to comply with the advice when a conflict is disclosed. Sah et al. (2013) refer to this as the burden of disclosure where advisees feel obliged to comply with advice because the disclosure places the responsibility on the advisee to provide an incentive for the adviser. Similarly, Chen and Richardson (2019) found that disclosure of conflicts of interest did not increase the advisee's rejection of the advice. Thus, even though financial planners disclose conflicts of interest, their clients may still engage with that financial advice.

The context in which disclosure occurs is also a key factor to consider when understanding the influence disclosure has on advisee trust (Richards et al., 2022b). Is trust influenced differently if disclosure occurs in person, through formal documentation, or a combination of both? When disclosure occurs online by an adviser, an advisee's trust in an adviser increases because the disclosure acts as a cue of integrity (Sah et al., 2018). The findings of Sah et al. (2018) appear to contradict earlier research that shows that disclosure decreases advisee's trust in an adviser (Sah et al., 2013). Sah et al. (2018) investigated why the inconsistent results occurred and found disclosure increases trust when the amount of information that advisees receive is high. That is, when advisees have a lot of information to process, disclosure of conflicts of interest acts as a heuristic of trust and therefore persuasion to accept advice. When advisees receive little information, then disclosure of conflicts of interest is salient and the advisee focuses on this, which, in turn makes them sceptical of the adviser. In financial planning, where a high volume of information is provided to clients, disclosure could increase the trust clients have in financial planners as it acts as cue for trust.

Finally, it is worthwhile considering the impact of disclosure of conflicts of interest on the advisers themselves. That is, by disclosing conflicts how do advisers change their behaviour and when does this help improve financial planning? Sah and Loewenstein (2014) show some insights into this topic when they investigate if advisers would avoid conflicts of interest. Participants acting as advisers in their experiment could choose to accept or avoid conflicts of interest and were either forced to disclose or could voluntarily choose to disclose these conflicts of interest (or lack of) to advisees. The results showed the majority of advisers chose to avoid conflicts of interest when forced to disclose these conflicts but also when disclosure was voluntary. This occurred even when accepting a conflict of interest led to a better payout for the adviser. Furthermore, Sah and Loewenstein (2014) found that advisers who chose to avoid the conflict of interest subsequently chose to disclose this absence of conflicts to advisees. Advisees rated advisers as more trustworthy when they chose to disclose the absence of conflicts of interest. Overall, the results show that the practice of disclosure could influence financial planners beneficially when they can choose to avoid conflicts of interest but not when the conflicts of interest are unavoidable. Also, clients may increase their trust in their financial planners if they disclose an absence of conflicts of interest.

11.3.3 Persuasion

A key concept in financial planning is the concept of persuasion. Persuasion is vital in many aspects of financial planning as it can be used by financial planners to obtain clients and then encourage clients to enact the advice financial planners provide them. The concept of persuasion is also of interest to researchers in behavioural sciences. Persuasion can be defined as when a person chooses to change their attitude or behaviour as a result of communication they receive (Hoffmann et al., 2020). Hoffmann et al. (2020) investigated how persuasion changes in the adviser and advisee relationship depending on whether the advice provided is difficult or demonstrable. It is worth reviewing difficulty and demonstrability in more depth.

Difficulty in advice occurs when an adviser has incomplete information and is unable to provide guaranteed advice because they do not have a correct solution to give. A difficulty that occurs in financial planning is investment market returns are never guaranteed, so the solution a financial planner provides to clients cannot be sure to succeed. Demonstrability is the ability to show that your advice provides a correct solution. Hoffmann et al. (2020) reveal how persuasion is influenced by the amount of difficulty and demonstrability in advice. In particular, they show if you can demonstrate your advice, then persuasion increases but if the advice is difficult, persuasion decreases. The authors explain that their results occur because advisers providing advice on difficult topics lack confidence and do not have objective success criteria to fulfil promises.

This research highlights two important elements for providing financial advice. First, financial planners should have mastery of the topics on which they provide advice because this is essential to persuade clients to accept the advice. Additionally, financial planners should not provide advice that is outside of their remit as this will increase the difficulty of advice and decrease persuasion. A second element is to improve the demonstrability of advice, where financial planners need to demonstrate the effectiveness of their advice for clients. Hoffmann et al. (2020) identify three factors involved with demonstrability: the ability to compare advice to alternatives, the ability to logically reason if advice is sound, and the adviser and the advisee sharing the same criteria to identify success in advice. To increase persuasion, financial planners could offer comparisons between their advice and alternatives, explain reasons for the advice given, and engage with clients about how they will assess the value of the advice. Adoption of these factors should lead to financial planners being more persuasive with clients.

11.4 Summary

The focus of this chapter was to highlight how behavioural research can inform financial planning. Financial planning is a vocation moving towards a profession (Richards et al., 2022a) and is building knowledge to establish itself from other

types of financial services. An aspect of creating an area of jurisdiction is knowledge of how people make financial decisions. To this end, behavioural research from behavioural finance and behavioural economics has identified ways that people diverge from rational economic decision making. Financial planners value insights from these fields of research to help understand their clients. This chapter highlighted behavioural insights into a client's way of making financial decisions, including the disposition effect, home bias, and mental accounting. Behavioural research offers more insights into financial planning on topics that are currently not adopted across all financial planning curricula. These additional insights involve the relationship between an adviser and advisee. Thus, this chapter highlighted how behavioural research has investigated conflicts of interest, disclosure, and persuasion. Each of these topics bears relevance for financial planning as it continues to professionalise and should be incorporated more comprehensively while educating financial planners of the future.

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Chapter 12
Behavioural Aspects of the Real Estate Market

Peyman Khezr

12.1 Introduction

Neoclassical decision theory assumes that individuals are rational decision makers who maximise their utility using all the information available to them. However, many other factors could influence individuals' decisions that are not considered as rational by the neoclassical theories. For instance, psychological, cognitive and social factors are shown to have significant influences on peoples' decisions. Behavioural approaches study these psychological aspects that influence individual or group decision making. Due to several unique characteristics, the real estate market is an interesting application of behavioural decision making in business. When people buy or sell homes, various emotional and psychological factors are associated with their decisions. In most cases, the decision about selling or buying a property is one of the largest financial decisions of their lifetime for both buyers and sellers. Other important factors are individuals' lack of experience in these markets, various known and hidden characteristics of properties, emotions that are linked to buying and selling homes, and uncertainty about the future of prices. As a result, the real estate market is a suitable environment for decisions that are significantly influenced by behavioural factors.[1]

In real estate markets, such as many other real-world markets, almost all decisions are associated with at least some level of risk. Therefore, it is critical to discuss the basics of decision making in risky environments. von Neumann

[1] For instance, see Case and Shiller (1989), Clayton (1998) and Watkins and McMaster (2011).

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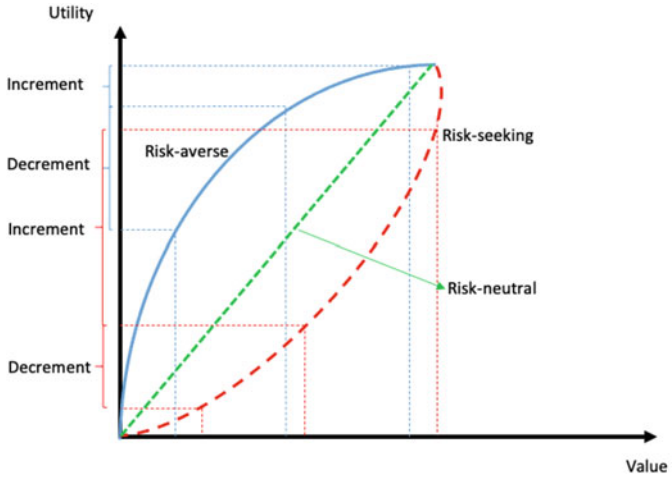

Fig. 12.1 Risk attitude and the expected utility

and Morgenstern (1944) introduce the expected utility hypothesis for the decision making of individuals who face uncertain outcomes. In particular, their theory suggests that in such cases, individuals maximise their *expected utility*. Expected utility theory also considers an individual's different attitude towards risk. In particular, there are three different types of risk preference: risk neutral, risk averse and risk takers. A risk-neutral individual, as appears from its name, is neutral or indifferent towards a risky lottery with the same expected value and a riskless choice. However, a risk-averse person strictly prefers a riskless lottery to a risky lottery that has the same expected value. Therefore, the shape of an individual's expected utility function depends on her risk attitude. Figure 12.1 depicts possible shapes of the expected utility function with different risk attitudes.

As shown in Fig. 12.1, the utility function of an individual with risk-averse preferences is concave because when a risk-averse individual faces a risky choice, the incremental change in her utility is less than the decremental change of a similar value change. In contrast, a risk-seeking individual has a larger incremental change than a decremental change in her utility for a similar change in values. Finally, a risk-neutral individual's expected utility is linear, which means her expected utility is similar to the expected value of the risky choice.

Since the introduction of the expected utility hypothesis, various criticisms have arisen, mainly from the behavioural perspectives that were not considered in the original axiomatic approach. Prospect theory is one of the most famous theories in behavioural economics that provided an alternative approach to individuals' attitudes towards risk. Kahneman and Tversky (1979) show that individuals' attitude towards risk could be different when they lose or gain money. In other words, they introduce the concept of loss aversion rather than risk aversion. A loss-averse individual suffers more from a loss of money compared to the benefit she

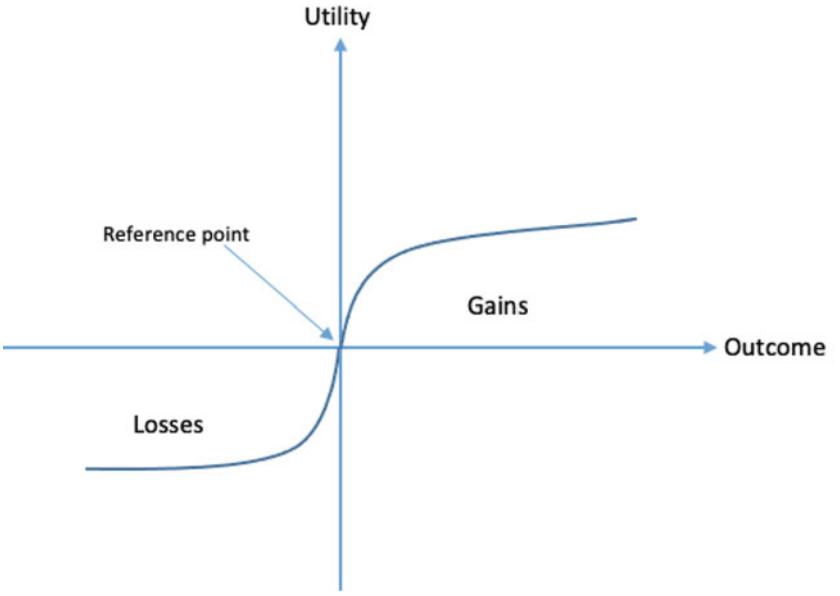

Fig. 12.2 Loss aversion and reference-dependent utility

receives from gaining a similar amount of money (Fig. 12.2). There are significant implications for decision theory once we include the possibility of loss aversion mainly because the preferences over different choices would change. Moreover, according to Kahneman and Tversky (1979), individuals use a reference point to evaluate their utility and to exhibit loss aversion. Since the introduction of prospect theory, it has been applied to many different context and markets, including the real estate market. As we describe in the next two sections, several studies document loss aversion in real estate transactions.

Furthermore, one major consequence of the individual rationality and utility maximisation is a market that performs efficiently, which is also known as the efficient market hypothesis.[2] In the context of the real estate market, the same approach results in a market with efficient outcomes. However, later evidence suggests that real estate markets are suffering from lack of efficiency and individuals in these markets are not necessarily utility maximisers.[3] Therefore, more questions have been raised with regards to the fundamental theories of economics and their applicability to the real estate market. Also, conventional theories in economics consider assumptions that are not necessarily applicable to the housing market

[2] It is important to note that there are other assumptions in addition to the expected utility assumptions that need to hold for this result—perfect competition, complete information, zero transactions costs, etc. See Sharpe (1970).

[3] See Case and Shiller (1989) and Clayton (1998).

because they usually ignore the behavioural aspects of decision making. As a result, these theories fail to explain some fundamental phenomena in the real estate market, such as house price bubbles. However, by adding the behavioural approach to the analysis, the models would be enriched by considering more realistic assumptions (Watkins and McMaster, 2011). While the focus of the current chapter is on the behavioural aspects of the components of the real estate market, it is essential to note that the main consequence of the analysis of each component is to have a better understanding of the whole market and its performance.

12.2 The Market Mechanism

For a deeper understanding of behavioural aspects of decisions in the real estate market, understanding the market mechanism is essential. This chapter starts by providing some preliminaries regarding the real estate market and parties involved. The real estate market usually refers to a market in which people buy and sell real estate property. There are two main types of property traded in these markets: residential and commercial. Residential properties refer to those that are used for living purposes, and commercial properties are those that are used for business-related activities. Real estate agents are intermediaries in the market who facilitate the search and the trade between buyers and sellers. Usually, real estate agents receive a fixed percentage of the sale price as their commission. Thus it is possible to divide the parties involved in a real estate market into three groups: sellers, buyers and real estate agents.

Sellers usually have two main objectives: to sell their properties at the highest possible price in the shortest amount of time. Buyers also care about the price they pay and prefer to pay the lowest possible price for a given property within their budget. Real estate agents are independent parties who receive commissions from sellers to assist them during the selling process. Note first that real estate agents are the only party in the market with substantial experience by being involved in the process of selling homes repetitively. Second, a real estate agent, similar to a seller, prefers to sell a property at the highest possible price in the shortest amount of time. However, given that agent commissions are a small percentage of the sale price, there is a possibility for different trade-offs between time and sale price. More precisely, an agent may prefer to sell a property at a discount sooner than waiting for another buyer who may be willing to pay a higher price.

In real estate markets, the selling process starts when sellers advertise their properties for sale. Before the advertisement, the seller must decide on the selling mechanism. In the conventional format, sellers advertise a list price (also known as asking price) for their properties. The list price is an essential component of the selling mechanism. Usually sellers, on consultation with real estate agents and professional evaluators, decide on the list price of their properties. However, given the market situation and the appraisal they receive from the agents, further restrictions are added to their choices of list prices. After advertising the property

and its list price, potential buyers submit their offers and the seller decides whether to accept or reject them. In most cases, offers would not come to the seller simultaneously. Thus, another crucial point is the timing of offers.

Furthermore, sellers may decide to ask potential buyers to submit their best offers as a bid in an auction. For instance, in the Australian housing market it is common to sell properties in major cities via a traditional English auction.[4] While sellers may have little influence on the selling mechanism and the list price, they are the final decision makers: It is up to a seller to accept or reject any offer received independent of the type of the selling mechanism. For instance, whether to sell a property at auction at a specific time or advertise a list price and wait for offers to arrive sequentially is a choice dictated to sellers by the market situation. However, sellers usually retain the right to accept or reject any offers they receive.

The list price in the housing market is unique compared to other markets. In fact, in most markets, list prices or asking prices act as the upper bound of the transaction price. In the real estate market transaction prices can be lower, equal or above the asking prices in different transactions. There are several different theoretical justifications for the role of the asking price as well as the optimal asking price strategy in the real estate market. For instance, when markets experience a boom, the role of the asking price is more like a reserve price in an auction, while in a recession list prices may act as a ceiling price for transactions.[5] Moreover, sellers have fewer commitments by posting list prices rather than a reserve price. When sellers are uncertain about the offers they receive, committing to a reserve price could be very costly as it excludes a group of buyers from offering. However, the asking price does not exclude any buyer from submitting an offer and at the same time can encourage competition among buyers with high values.[6]

12.3 Sellers

Sellers play a critical role in the real estate market. As noted before, their main objective is to sell their properties at the highest possible price within the shortest period. However, there is a trade-off between time on the market and price. The longer they wait in the market, the higher the chance that a higher offer arrives.[7] Therefore, two main decisions are closely entangled with the sellers' objective. First, the choice of the list price and list price strategy and second, the decision

[4] For an example of how auctions work in the Australian housing market see Khezr (2018).

[5] Han and Strange (2016) discuss the influence of market situation on the selling mechanism and the role of the list price.

[6] Khezr and Menezes (2018) show the asking price plays an important role in the selling mechanism and at the same time reduces the seller's commitment to a minimum level.

[7] Several studies documented the relationship between time on the market and final transaction price in the real estate market. For instance, see Yavas and Yang (1995), Haurin et al. (2010) and Khezr (2015).

to accept an offer or wait for a better offer. As explained in the previous section, several studies use theoretical models to find optimal decisions of sellers in the real estate market. However, they all assume sellers are rational decision-makers and their decisions are not affected by any behavioural element. According to the situation described, the choice of a list price and the decision to accept or reject an offer is compounded by substantial uncertainties. Thus, the first conjecture is an environment where behavioural decisions play an important role.

Loss Aversion

Loss aversion is the primary behavioural aspect of sellers in the housing market that has been documented in real estate research. Several empirical studies provide evidence of loss aversion by sellers in the housing market.[8] Sellers who are at risk of selling their homes at lower prices compared to what they originally paid, set higher list prices on average. Sellers do this to avoid the expected loss due to loss aversion. The empirical evidence shows the resulting selling prices are on average higher and waiting times are longer. However, sellers who are at risk of loss would be willing to wait longer to reduce their loss. One of the consequences of loss aversion is market inefficiency because sellers overvalue their homes due to loss aversion, and must wait longer to sell them. This results in larger transaction costs due to longer negotiation process and higher chances of unsuccessful trades.

The other behavioural bias observed by sellers relates to their equity position. There is a relationship between equity position of a seller and the sale price as well as time on the market (Genesove and Mayer, 1997). Those sellers who have relatively more flawed equity positions with higher debts, sell their homes at higher prices and stay longer in the market. In particular, those sellers with higher loan to value ratios set higher list prices and receive higher transaction prices for their homes. The evidence suggests strictly higher net payoffs for sellers with more debt compared to those with relatively lower debt to value ratios. Once again, similar to the loss aversion evidence, those sellers who are in a worse financial position, make a riskier decision and receive strictly larger payoffs. If these decisions end up with larger payoffs then all other rational sellers must take them. However, larger risks mean larger chance of not receiving an offer. In other words, only those who end up selling their homes receive larger payoffs, but many other sellers wait a long time in the market due to higher expected prices. Therefore, similar to loss aversion, one of the implications of this behavioural bias is market inefficiency.

Anchoring

Empirical evidence shows that sellers who advertise larger asking prices, on average, receive larger transaction prices for their homes due to anchoring bias (Bucchianeri and Minson, 2013). Anchoring bias refers to a situation where potential buyers evaluate an object based on an anchor.[9] The anchor could be

[8] For example, see Genesove and Mayer (2001) and Bokhari and Geltner (2011).

[9] Anchoring bias was first noted by Tversky and Kahneman (1974).

past prices, price estimates or any other piece of information available to buyers. Anchoring happens when individuals place heavier than normal weights on anchors during the decision making process. In the housing market, the asking price could act as an anchor and influence the valuation of buyers. Thus, a higher asking price would result in a higher evaluation of buyers due to the anchoring effect.[10] However, it is important to note that there are other effects that could potentially reduce the transaction price if the asking price is relatively large. For instance, the asking price can signal the seller's value for the property. As a result, a larger asking price would attract fewer offers, *ceteris paribus*. Therefore, there is a trade-off between the positive effect of anchoring and the negative effect of receiving fewer offers or lower competition when a given seller raises the asking price. Furthermore, the asking price affects the negotiation between buyers and sellers because buyers, instead of using solid methods of valuation, use arbitrary reference points for evaluating properties (Black and Diaz III, 1996).

Furthermore, experimental evidence shows how the list price strategies affect the negotiation between buyers and sellers. In particular, lab experiments show higher list prices result in larger transaction prices and surplus for sellers, while low list price strategies result in lower transaction prices and larger percentage discounts (Cardella and Seiler, 2016). Overall, one of the implications of anchoring bias in the real estate market is transaction prices that are larger than expected. This could also lead to unrealistic high prices and price rigidity in the market.

Underpricing

Another possible list price strategy is the case in which sellers post a low asking price to attract more buyers and increase competition at the offer stage. Indeed, underpricing is a common tool during a boom period of a market, and may result in a larger number of participants at the offer stage (bidding wars), which consequently results in higher selling prices for properties (Han and Strange, 2014). In this case, sellers are usually confident about a strong demand for their homes. Therefore, by reducing the asking price they lure more buyers to the offer stage to increase the competition between buyers. As a result, there is a higher chance to receive offers from high-value buyers who are willing to pay a larger premium for the homes. Since there are usually multiple rounds of offers, then high-value buyers would compete with each other and place higher offers, on average.

The underpricing strategy may seem contradictory with other evidence that shows larger list prices result in larger transaction prices. However, a critical point for realising the distinction between the two cases is the market situation. As noted before, the list price has several roles including encouraging buyers to place an offer. When the number of potential buyers is large enough, the anchoring role of asking price becomes less important and the transaction prices are mainly determined by the level of competition between high-value buyers. Thus a lower asking price

[10] See Northcraft and Neale (1987) as an example. In the next section we provide further discussions about anchoring behaviour by buyers in the housing market.

that could attract more high-value buyers can potentially have more benefits than a higher asking price that increases buyers' offers due to anchoring.

Money Illusion

Money illusion is another behavioural bias observed by sellers in the housing market. Money illusion, which is a very well-known behavioural bias in economics, is where people think and decide based on nominal values instead of real values. Studies show owners of properties would consider nominal gain and loss when they sell their homes, rather than real terms.[11] In particular, they are not willing to sell their homes at a lower nominal price compared to the nominal purchase price. Also, they are happy to receive a nominal gain and consider it as a win even if in terms of real prices they make a loss. Ackert et al. (2011) is another study that documents money illusion in the context of real estate markets. Money illusion could have different implications for the market based on the changes in real outcomes. For instance, given that usually nominal numbers are larger than real numbers, as a result of money illusion sellers may be willing to sell their homes at lower prices than what they actually worth. However, if buyers base their evaluation on nominal numbers, it may result in overestimating the return of investment in properties, which consequently results in higher willingness to pay and price bubbles.

12.4 Buyers

Buyers in the real estate market are from various groups of individuals with different incentives. For instance, first home buyers and those who buy homes for their own residence would have different incentives and priorities compared to investors. Unlike sellers who advertise their homes and wait for potential buyers to place offers, buyers must actively search for different properties and evaluate them to be able to place an offer. So, during the search time, buyers dynamically search for properties that have their desirable characteristics. Once buyers find suitable homes within their budget, they place offers based on their evaluation. If an offer is accepted, then the buyer's search is completed. However, if the offer is rejected, the buyer continues the search until one of their offers is accepted. In most cases, the bargaining process involves multiple rounds of offers. The highest offer submitted by a buyer is usually considered as their final offer. From the buyers' perspective, there are uncertainties with regard to the sellers' values for their properties, given that sellers usually do not disclose their values. The seller's value is usually important during the bargaining process, especially when there is only one interested buyer. Also buyers are uncertain about the future trends of the market and, in particular, how much the house price will increase or decline in the future. This would directly influence their willingness to pay and evaluate properties

[11] See Paraschiv and Chenavaz (2011) and Madsen (2012).

because the willingness to pay is partly determined by expectations about the future prices in the market.

Herding Behaviour and Momentum Effect

Herding behaviour refers to a psychologically-motivated response by individuals where they think and decide similar to a group. Herd behaviour could result in the creation of bubbles and mispricing in the real estate market (Shiller, 1995, 2015). There are two main psychological reasons behind herding. First, when people do not have enough experience in a market, they may believe that 'others' know better and decide the way the group decides. Social pressure and the desire to be socially accepted by others can also lead to herding. Irrational exuberance is a psychological bias which is a consequence of herding behaviour, where news with regard to a price increase would encourage investors to invest in properties. Buyers follow each other because of herding behaviour and spread the news further and further, which results in further purchases and speculative bubbles.

The momentum effect is another psychological bias observed by buyers in the real estate market that closely relates to herding behaviour. This bias refers to a case where buyers are motivated to buy properties due to observing an increasing trend in prices. In particular, buyers use existing price trends to form their expectation about future prices. This bias could result in significant over-valuation of returns based on unreal expectation about future market trends.

Theoretical models show herd behaviour is an individually-formed process, which, by transmission to others, results in changing equilibrium outcomes. However, the momentum effect is mostly related to expectations about prices, which is individually formed based on a common belief. Models show herd behaviour and momentum effects can explain bubbles in prices (Lux, 1995). Empirical evidence shows that recent prices in the real estate market significantly influence buyers' beliefs and expectations (Case et al., 2003). The evidence suggests that even when the property market experienced a very high price level after a boom, buyers still expect that prices will rise annually by double digits for the next decade. While the actual data show this was not the case and prices did not increase as much as the amount buyers expected.

Overconfidence and Overoptimism

Overconfidence and overoptimism are two further influential behavioural biases that have been observed in the real estate market. Although confidence and optimism are closely related, they are theoretically distinct from each other (Bazerman and Moore, 2012). Overconfidence refers to a psychological bias where individuals overestimate their own judgement and beliefs about the future of the market. Overconfidence is shown to be one of the most important determinants of individual behaviour in the real estate market (Shiller, 2015).

Overoptimism, on the other hand, refers to a psychological bias where individuals are unrealistically optimistic about the future consequences of their decisions. In real estate markets, overoptimism results in an overestimation of the return of

the property market and underestimation of the risks involved. Empirical evidence suggests that individuals significantly overestimate future house price increase.[12] Unrealistic expectations of buyers about future prices could also result in housing bubbles. In fact, if buyers keep overestimating future prices, the effects would be accelerated and result in prices that are higher than usual, which is known as housing bubbles (Smith and Smith, 2006).

Money illusion could be one of the reasons behind overoptimism. In this case buyers only look at past nominal increases in house prices and use them as the base for their estimates. Experimental evidence show when buyers purchase properties in real estate markets, money illusion plays an important role (Raftery and Runeson, 1998).

Furthermore, the experience of buyers could also be a crucial factor in determining the level of psychological and behavioural biases. Experts and amateurs behave differently when they are purchasing properties. Amateurs are manipulated more easily by list prices while experts' decisions are less influenced by arbitrary changes in list prices.[13] Inexperienced buyers' decisions are more consistent with the anchoring bias previously noted. Most buyers in the real estate market are inexperienced with bounded information about the market. Thus, decisions can be easily influenced by manipulated list prices and buyers can pay higher premiums for properties.

Anchoring

So far we have discussed biases that accelerate price increase in the housing market and create bubbles. The next important point is the behavioural decisions that happen after a bubble burst. Anchoring is the most common bias to observe once a bust happens in the real estate market. As previously noted, loss aversion results in higher asking prices by sellers who expect to sell their homes at a lower price compared to the previous purchase price. If buyers were to act rationally and evaluate properties correctly, then the sellers' manipulation strategies would not work. However, due to anchoring behaviour, buyers respond to the sellers' manipulative strategies by adjusting their valuations for properties based on asking prices. Note that asking prices are usually the best candidate for anchoring and they have a significant influence on buyers' valuations for properties.[14] Thus the loss aversion of sellers is responded to by anchoring and over-valuation of buyers when the housing market experiences a bust. Previous purchase prices could also be used by buyers as a reference point to evaluate properties, which again results in

[12] Case and Shiller (2003) used follow-up surveys in various US cities and asked people about their expectation with regards to the future of house price increase. In all cases the subjects' expectations, on average, were significantly larger than the actual increase in the house price.

[13] Northcraft and Neale (1987) is one of the first studies that document differences in decisions of experts and amateurs using an experimental study in the context of the real estate market.

[14] See for example, Bokhari and Geltner (2011) and Khezr et al. (2018).

misvaluation of properties during a house price decline (Paraschiv and Chenavaz, 2011).

12.5 Real Estate Agents

Real estate agents play an essential role in the housing market. They are experts that not only provide advice to sellers but also liaise with sellers and buyers to facilitate transactions. Since sellers pay their commission, they are known to be on the sellers' side. However, real estate agents have their own motives and objectives that may not necessarily be aligned with sellers'. A critical role of the real estate agent is to facilitate the negotiation process between buyers and sellers. However, experimental evidence suggests the opposite: Intermediaries in the negotiation process reduce the likelihood of attaining an agreement between a seller and a buyer. Also when intermediaries exist, the negotiation process could take longer, although the sale price could increase. Therefore, the real estate agent may increase the sale price and the payoff of a seller through the negotiation process, at the cost of the sale taking a longer time and at the risk of lowering the chance of an agreement (Yavas et al., 2001). The existence of intermediaries could be justified at the matching stage rather than the negotiation process. In a given market thousands of sellers and buyers search for matches at any one time, so agents play an important role in finding suitable matches.

Another role of the real estate agent is to provide market appraisals for sellers. These market appraisals are significant in determining a seller's asking price for their home and whether or not they should accept an offer. While in most real estate markets the actual evaluation of properties is undertaken by independent parties (Salzman and Zwinkels, 2013), the appraisal by the real estate agent is also critical to determining the list price and the selling method. There are some psychological biases related to the appraisal and evaluation processes. Client pressure is known as one of the most popular reasons that result in misvaluation of properties. This happens when the owner of a property is unhappy with their evaluation and pressures the evaluator to revise their valuation. Studies document client pressure in property evaluation and show a significant number of properties are put under re-evaluation because of client pressure (Kinnard et al., 1997). Usually these requests for revision occur without providing any supporting evidence that a reappraisal is required.

Another bias in the appraisal process is confirmation bias, which refers to a situation where appraisers give smaller weights to negative evidence that opposes their own view than to evidence that is supportive of their views (Gallimore, 1994). Also appraisers tend to use available information based on the skills, knowledge and the experience of their human capital. As a result, important information that is unavailable to appraisers would be missed in the valuation of properties (Quan and Quigley, 1991).

One last important point about real estate agents is related to their objectives and interests. Given that real estate agents are paid a fixed percentage of the sale price,

it may seem that they have common interests with the sellers. However, as noted at the beginning of this chapter, due to different trade-offs and since the commission of the real estate agent is a small percentage of the sale price, their interests are not completely aligned. This phenomenon is also known as the misalignment of interests (Salzman and Zwinkels, 2013). To test the misalignment of interests one can observe how real estate agents behave when they sell their own properties. Evidence shows that when real estate agents sell their own properties, on average, the sale prices are higher with on average longer time on the market compared to when they sell properties owned by others (Levitt and Syverson, 2008). This is because the real estate agents' marginal gain from an incremental change in prices is small. At the same time, it is clear that selling properties at higher prices require longer waiting times on the market and higher risk of no sale. A non-linear commission could potentially solve this bias by providing incentives for real estate agents to sell properties at higher prices.

12.6 Conclusion

In this chapter, I provided a review of behavioural and psychological biases that have been documented in the real estate market. The most important bias related to sellers' behaviour is loss aversion. It has been shown that sellers who are concerned about losses advertise larger list prices for their homes and sell them at larger prices on average. Buyers in the real estate market deal with many different behavioural biases. The most critical consequence of psychological biases for buyers' decisions is inefficient markets. For instance, as discussed in Sect. 12.4 housing bubbles are the main consequence of buyers' psychological biases, which deviate from the correct valuation of properties and result in unrealistically high transaction prices. Finally, real estate agents are the experts in the market. Even experts are not immune to psychological biases when it comes to the real estate market. Research shows that real estate agents may not necessarily facilitate the bargaining process between sellers and buyers. However, they play a vital role in formalising the selling process and facilitate the matching of buyers and sellers.

Understanding the behavioural aspects of the real estate market is critical for the market and policy analysis. As mentioned earlier in this chapter, ignoring behaviour could result in theoretical models that fail to represent the real situation and to predict market performance. Therefore, one important conclusion is that behavioural aspects are an essential and non-separable part of any robust market analysis in the real estate market. Moreover, many of the biases explained in this chapter would result in market inefficiencies and price bubbles. Given the significance of real estate markets in every economy, behavioural aspects have crucial implications for policy-makers. In particular, to implement an effective policy or regulation, a sound understanding of behavioural responses by all parties is essential. Otherwise, policies and regulations may not be as effective as they are planned to be.

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