

Moral Licensing and Cleansing Theory: A Study in Decision-Making, Morality and Interaction

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Declaration

This thesis is the result of my own, original work carried out over the course of the program. All experiments, analysis and other elements of this thesis were carried out individually.

Signed David Llewellyn Reeves

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Table of Contents

| | |
|--|------|
| Declaration | ii |
| Acknowledgments..... | iii |
| Table of Contents | iv |
| Abstract | viii |
| Introduction | 1 |
| <i>Early Normative Theory</i> | 2 |
| <i>Later Descriptive Models and Links to Morality: Regulatory Focus</i> | 3 |
| <i>A Question of Morality</i> | 5 |
| <i>Basis in Religion</i> | 7 |
| <i>Models of Morality</i> | 8 |
| <i>Morality v Altruism</i> | 9 |
| <i>Moral Behaviour and Morals in Decision-Making</i> | 11 |
| <i>Motivators of Moral Behaviour</i> | 11 |
| <i>Social Stigma</i> | 12 |
| <i>Moral Cleansing Behaviour</i> | 13 |
| <i>Moral Licensing and Cleansing Theory (Moral Self-Licensing)</i> | 14 |
| <i>Moral Licensing Credits v Credentials</i> | 19 |
| <i>Some Limited Criticism, and a Justification of, Moral Self-Licensing Theory</i> | 21 |
| <i>Emotions in Decision-Making</i> | 23 |
| <i>A Case for Gratitude</i> | 25 |
| <i>Gratitude as a Guide for Action</i> | 28 |
| <i>A Criticism of Gratitude Behaviour Research</i> | 29 |
| <i>Gratitude v Indebtedness</i> | 30 |

| | |
|--|----|
| <i>Stigma in Moral and Gratitude Scenarios</i> | 31 |
| <i>The Repeat Offender</i> | 33 |
| <i>Can We Assume Similarities to Gratitude Violations?</i> | 34 |
| <i>Risk-Taking in Morality and Gratitude</i> | 35 |
| <i>Controlling for Social Comparison in Risk-Taking</i> | 37 |
| <i>Morality and Gratitude</i> | 38 |
| <i>An Initial Proposed Criticism</i> | 40 |
| <i>Experiment 1</i> | 42 |
| Experiment 1 Method..... | 43 |
| <i>Participants</i> | 43 |
| <i>Design</i> | 43 |
| <i>Materials</i> | 44 |
| <i>Procedure</i> | 48 |
| Experiment 1 Results | 49 |
| <i>Data Screening and Cleaning</i> | 49 |
| <i>Initial Descriptive Analysis and Confidence Intervals</i> | 50 |
| <i>Repeated Measures</i> | 52 |
| <i>Bayesian Analysis</i> | 52 |
| Experiment 1 Discussion..... | 53 |
| <i>Failure of Priming?</i> | 55 |
| <i>Moral Self-Licensing Prime</i> | 55 |
| <i>Gratitude Prime</i> | 56 |
| <i>Lack of Moral Self-Licensing – Gratitude Interaction</i> | 57 |
| <i>Flaws in Situation Designs</i> | 59 |
| <i>Scenario 1</i> | 59 |

| | |
|---|----|
| <i>Scenario 2</i> | 60 |
| <i>Scenario 3</i> | 61 |
| <i>Absence of Risk as a Factor</i> | 62 |
| <i>“Safe” and Whole Number Anchoring</i> | 63 |
| Experiment 2 Introduction | 64 |
| <i>Revision of Scenarios</i> | 64 |
| <i>Plant Manager Scenario</i> | 65 |
| <i>Further Environmental Scenarios</i> | 66 |
| <i>Interpersonal Relationships</i> | 66 |
| <i>Moral Self-Licensing: Single Focus</i> | 67 |
| <i>Revision of the Priming Tool</i> | 70 |
| <i>Measure of Risk</i> | 70 |
| <i>Experiment 2</i> | 71 |
| Experiment 2 Method | 72 |
| <i>Participants</i> | 72 |
| <i>Design</i> | 72 |
| <i>Materials</i> | 72 |
| <i>Procedure</i> | 74 |
| Experiment 2 Results | 75 |
| <i>Data Screening and Cleaning</i> | 75 |
| <i>Initial Descriptive Analysis</i> | 76 |
| <i>Univariate and Repeated Measures</i> | 82 |
| <i>Simple Effects Analysis</i> | 83 |
| Experiment 2 Discussion | 84 |
| <i>Comparison of Effect Sizes</i> | 86 |

| | |
|---|-----|
| <i>A(nother) Question of Moral Self-Licensing Priming</i> | 87 |
| <i>Deficit v Credit</i> | 88 |
| <i>Assigning Characteristics</i> | 90 |
| <i>Prime v Manufacturing Plant Manager Scenario</i> | 90 |
| <i>Prime Effects and Accessibility of Scenario</i> | 91 |
| <i>Criticism, its Source and Effect</i> | 92 |
| <i>Further Absence of Risk</i> | 95 |
| <i>A Word on Scenario Considerations and Limitations</i> | 98 |
| <i>Morality and Issue Concern</i> | 98 |
| <i>No Moral Effect for the Environment</i> | 99 |
| <i>Limitations of Childhood Hero and other Interpersonal Quandaries</i> | 101 |
| Overall Discussion | 103 |
| <i>Future Research Directions</i> | 105 |
| <i>Concluding Remarks</i> | 111 |
| Reference List | 112 |
| Appendix A: Experiment 1 Materials | 129 |
| Appendix B: Experiment 2 Materials | 140 |

Abstract

The role of morality in the decision-making and behaviour of individuals has a long research history across a wide range of disciplines, and has led to often-competing descriptions and definitions of morality itself. While religious belief has been at the core of some previous work, hedonic models of morality have also been used to explain behaviour and decisions. However, such models leave many common behavioural patterns unexplained, with the theories unable to readily reconcile the conflict between expected outcome and observed reality. One proposal that addresses these failures is moral licensing and cleansing theory, also known as moral self-licensing.

The theory of moral self-licensing, that individuals utilise an almost homeostatic mechanism to balance their internal moral state with either immoral or prosocial acts, has a strong research record in consumer behaviour fields. While a number of leading studies have more recently explored the theory from a psychological perspective, the body of literature covering this theory in the field of psychology remains limited. Over two experiments, this thesis sought to further explore how the theory may explain decisions in an array of situations more varied than previously utilised, and how it may interact with other factors in decision-making.

Across various environmental/economic, academic and interpersonal hypothetical situations, Experiment 1 failed to find a significant effect of the utilised moral prime, nor a hypothesised interaction with the gratitude manipulation. Building on these results, and the theoretical and methodological implications, Experiment 2 replaced the gratitude interaction in favour of an internal feedback

mechanism; with a proposed interaction effect between this and the moral prime. Significant statistical effects were found for both the refined moral prime and the internal feedback mechanism, though in both cases such effects were mixed. In the moral prime, one condition reached significance while the other did not. Similarly, one condition of internal feedback resulted in a statistically significant effect while the other failed to reach significance.

This thesis discusses a number of possible interpretations and implications of the mixed results, including the role of accessibility of scenarios and situations, the complexity of interpersonal relationship decisions and the scope of applicability of the theory in emotive rather than rational scenarios. This thesis also suggests a number of directions for future work on the theory, including the implications of different effects between sins of commissions against sins of omission in the examined decisions, and further work exploring the applicability of theory in more varied situations, amongst others. This thesis concludes by endorsing the theory as an explanation for various effects on individual decision-making and behaviour, though questioning the previously proclaimed pervasiveness of its applicability.

Moral Licensing and Cleansing Theory: A Study in Decision-Making, Morality and Interaction

Human decision-making is a widely explored topic within social psychology. It is also an increasingly diverse topic, with studies examining the ever-increasing dimensions that are involved in human decision-making. In cases where people are assumed to act as rational individuals, seeking out the option that balances risk and reward, normative models have long reigned supreme.

Normative models make use of mathematical equations and principles to predict choices and behaviors. As Moser (1990) states, the first major normative model was Expected Utility Theory (EUT), which stated that people would always choose the option with the maximum expected outcome. However Schoemaker (1982), Starmer (2000) and Harrison and Rutstrom (2009), amongst others, have pointed to patterns of behavior that consistently violate EUT. Such observed violations saw the development of new cognitive theories, such as Prospect Theory (PT), the work of Kahneman and Tversky (1979). PT argues for a discounting model, where both prospective gains and losses are discounted, but losses are discounted more heavily (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992).

However, normative models such as EUT approach decision-making from an outcomes-centric point of view, assuming the individual to be a rational actor. Similarly, “consequentialist” theories such as PT assume that the decision-maker only takes into account consequences that may affect themselves, while ignoring others. Studies have demonstrated this is often not the case. For example, an individual whose decision-making is guided, at least in part, by their morality would

doubtlessly consider the effects of their decision on others. Factual or computational factors alone cannot account for such decisions. Under such a decision-making situation, what is or could be true does not dictate what ought to be true.

The question of morality, and the individual as a moral decision-maker, is one counter balance to the rational actor view. Exactly how one defines morality and acting morally has been the source of extensive debate and research, both within the psychology discipline (Sachdeva, Iliev & Medin, 2009), and other areas, such as religion, philosophy and sociology. In fact, Monin and Merritt (2012) argue that, overall, social psychology is a study of morality and moral hypocrisy. However, within the confines of this thesis, a more specific area of morality, and its role in decision-making, must be focused on.

One such theoretical approach to morality and decision-making, is the theory of moral self-licensing and cleansing, also known as moral self-licensing. Over the following sections of this chapter, the links between morality and decision-making will be explored in greater detail, including how previous models of decision-making may be related to morality, the theory of moral licensing and cleansing, and how it explains influences on human behaviour. Further, this chapter will explore how other possible influences on decision-making, such as emotions, may influence moral theories of decision-making. The chapter will conclude with a description of the first experiment.

Early Normative Theory

EUT, developed by von Neumann and Morgenstern, was one of the earliest, widely accepted normative theories. As Plous (1993) and Moser (1990) outline, it argues for a rational agent, acting in a manner to maximize expected gains.

Mathematically, the expected utility is the sum of the possible outcomes multiplied by the probability of success. As outlined by Kahneman, Wakker and Sarin (1997) and Kahneman and Tversky (1979), each possible choice an individual may make is termed a prospect. These prospects are defined as “contracts”, which result in the outcome x_i with a probability of p_i . Assets that an individual possesses are then further taken into account; to form a final expected utility (Kahneman & Tversky, 1979).

As outlined by Plous (1993), the rational choice at the heart of EUT was made up of 5 axioms: Invariance, Dominance, Cancellation, Transitivity and Continuity. **Invariance** states that the order or manner in which alternative prospects are presented to the decision-maker will not influence their preference. **Dominance** states that if one prospect, A, is superior to another prospect, B, in one way, but equal in all others, then prospect A will be preferred by the decision-maker at all times. **Cancellation** affirms that if two prospects share any commonality, that commonality will be irrelevant to the decision. **Transitivity** declares that if A is chosen as superior to B, and B chosen as superior to C, then A will be chosen over C. Finally, **Continuity** posits that a gamble between two opposing prospects, best and worst, with satisfactory odds is preferable to a certain intermediate outcome.

Later Descriptive Models and Links to Morality: Regulatory Focus

Higgins (1997; 1998) developed Regulatory Focus (RF) as an alternative choice theory, which used a social, as opposed to cognitive, approach. On a basic level, RF distinguishes between two states of motivation: promotion and prevention focus. Whilst different, both work to approach pleasure and avoid pain (Forster, Higgins & Idson, 1998). Promotion is the attainment of growth, advancement and

accomplishment, whilst prevention is concerned with safety, responsibility and security (Crowe & Higgins, 1997). RF links gain with pleasure and loss with pain, and by doing so, Higgins (1997; 1998) argues that the presence of gain v loss leads to different decision-making tactics, all of which hold some basis in the decisions hedonic principle, as outlined by Camacho, Higgins and Luger (2003).

Logically in RF, the presence or absence of gains is the required stimulus for promotion focus while the presence or absence of loss is required for prevention focus (Renshaw, 2008). In promotion focus the absence of a gain is viewed as a non-gain, while in prevention focus the absence of a loss is viewed as a non-loss. However, a non-gain is not experienced in similar fashion to a loss, while a non-loss is not experienced as a gain, despite similar final states in both cases. Rather, gains are experienced more intensely than non-losses, and conversely, a loss is experienced more intensely than a non-gain (Idson, Liberman & Higgins, 2000). Idson et al. (2000) also demonstrated that prevention focus individuals experience criticism and negative feedback more intensely and strongly than individuals in promotion focus. Therefore, it is possible to argue that an individual's regulatory focus may affect the experience of hedonic states, despite the same final state.

RF is also one of the later descriptive models of decision-making, which most closely aligns with a view to the moral aspect of decision-making. At the core of both RF and moral judgments is a consideration or concern for the regulation of behaviour of self, and others in the case of morality. In RF, this concern for regulation may lead individuals to either a promotion focus, with a subsequent increase in risk-taking, or a prevention focus, which leads to greater risk aversion (Crowe & Higgins, 1997). Similarly, those with a strict moral code may be more prone to risk aversion compared to individuals with a more lax moral sense. Though

an individual's morality/moral code is a more personal, rather than the comparatively set parameters of promotion or prevention focus in RF, both examine the regulation of self in determining the reason for behaviour and decisions.

Furthermore, studies by Gino and Margolis (2011) extended RF into ethical behaviour research. Across four experiments, they found that promotion focus primes lead to increased unethical behaviour compared to prevention focus primes, and that how ethical standards were framed in material influenced individual ethical behaviour differently depending on RF prime. Such findings are especially relevant to this thesis given prior literature on RF tackled decision-making in a sterile vacuum, instead of concerning moral and ethical questions or behaviours.

A Question of Morality

Decision-making cannot be viewed in a vacuum free from the constraints of individual beliefs, morals and emotions. As Dunning (2007) argued, individuals often base their feelings of self-worth on a perception of their own morality. As such, decisions must be subsequently made in accordance with this morality in order to maintain an appropriate level of self-worth. To a degree, this is simply a retake on the hedonic model, where one seeks to avoid pain and gain pleasure (or low self-worth v. high self-worth in the Dunning model). Additionally, it must be acknowledged that though moral judgments are an individual process, each person applies these to others, not just themselves. Hence, self-interest cannot be the only basis for such complex, and all-encompassing aspects of individual belief and thought.

An extension of Dunning's (2007) argument may be to accept the basic premise as one of the aspects of individual belief and morality, but also

acknowledging additional factors. In his 1988 paper on moral culture within modern secular societies, and the return of the religion in politics and culture, Kavolis noted the creation of symbolic authority, which results from consideration of a social reality and the weak spots of said social reality; what it misses. Such symbolic authorities are meant to represent the “good order” of human experiences, and are intended to be universal and non-negotiable. Similarly, psychological research in a broad range of areas has highlighted moral views and obligations widely seen as non-negotiable and in essence, sacred.

Tetlock (2002) for example, proposed the social functionalist argument which views individuals’ decision-making and judgments as a form of principled theologians, seeking to protect sacred values. A further example stemming from parenting research is the moral obligation of parents to place their children’s interests, needs and requirements before their own (McCarthy, Edwards & Gillies, 2000). Therefore while Dunning (2007) described the important of self-interest, it is also important to acknowledge that some aspects of morality are often widely viewed as non-negotiable, playing an important role in the majority of individual’s moral judgments, decisions and views.

Morality is also a broad term that has come to encompass numerous facets and a large number of ideas, theories, as well as strains of study and research. Studies have sought to link morality to an individual’s political beliefs and persuasions, to broader issues of a society’s charity, crime and punishment, as well as numerous other questions. Additionally, psychologists have attempted to chart and explain developments and changes in moral thinking as we age, such as Kohlberg’s six stages of moral development (Kohlberg & Lickona, 1976). This thesis examines morality as an individual trait, and the theories and belief systems that influence it,

with an ultimate purpose of establishing a revised working definition of morality that this thesis may use.

Basis in Religion

No examination of individual morality can avoid discussing morality as a religious concept. As Preston, Ritter and Hernandez (2010) state, religion and religious thought has long been viewed as the source for human morality. One has merely to take an interest in the ongoing dispute between the current wave of more militant atheism and the religious establishment to hear the argument that, in the Western world, Judeo-Christian values constitute the foundation to our moral code. The Ten Commandments, as written in Exodus 20 (King James Version) contain what is today still one of, if not the, most widely cited moral reference points.

This thesis acknowledges that while religious belief may inform many people's personal morality codes, morality cannot be accepted as so unipolar. Nonetheless, it remains an important aspect to take into consideration.

Before further exploring aspects of morality which may impact upon this thesis, it is first important to construct at least a working model and definition of morality. While numerous authors, researchers and commentators have pointed to religion as a primary model, or at least primary foundation for morality (Stace, 1962), and others have argued for a combined secular-religious foundation (Kavolis, 1988), for the purposes of this thesis religion is at the same time too narrow and broad. Firstly, religion itself is a vast topic, covering hundreds of different faiths, and an even greater number of differing interpretations of these faiths. However, a religious-only foundation also ignores those of no faith, as well as individual who actively reject religious faith, even if using a hybridised model of symbolic authority,

such as described by Kavolis (1988). Finally, a religious only model would continue to, at least partially, ignore the social pressures which can often impact upon, as well as conflict with, personally held moralities (Monin & Miller, 2001).

Models of Morality

Eisenberg and Shell (1986) commented that morality, in terms of behavior, could be viewed as the balance between a wish to undertake good behaviour and lead to positive outcomes, but simultaneously avoid the costs often associated with good acts. Similarly Erkut, Jaquette and Staub (1981) argued that morality is often influenced by one's situation, and how that situation may influence the cost of certain moralities or moral decisions (Staub, 1978). However both arguments broadly follow a hedonic model, failing to account for values or beliefs held to a higher standard than simply seeking pleasure and avoiding pain.

As mentioned above, Tetlock (2002) proposed the social functionalist model of the principled theologian, as well as the pragmatic politician and the prudent prosecutor. Under the social functionalist principled theologian label, morality, though personal and individual, is also something immune to outside forces and influences. Indeed, it can be something seen as needing to be protected from such conflicts. While functionalist arguments and theories, which view choice and decision-making through the prism of individual's as either intuitive scientists or intuitive economists (Kelley, 1971; Edwards, 1962), where the sought outcome is either increased knowledge, understanding and leverage, or increased subjective utility and gain, respectively. However, this functionalist dichotomy fails to account for the individual who clings to morals and principles despite any and all conflict with either the intuitive scientist or intuitive economist state.

It is also important to note the difference between deontological and utilitarian principles in morality, and how this impacts upon the above working definition, and subsequent interpretation of findings. When considering moral judgments, dual-process theories highlight the deontological principle, that the morality of an action or behaviour can be judged by the behaviour or action itself, and the utilitarian principle, that the morality of an action or behaviour can be judged by the outcome it brings about (Greene, Sommerville, Nystrom, Darley & Cohen, 2001; Conway & Gawronski, 2013). This difference is vital to our understanding of morality, and this thesis' use of the term, as it divides what may be seen as a consequentialist view of the subject, the ends justify the means, from a non-consequentialist view, that the means themselves must be justifiable. While most individuals take one view more often over the other, previous research found both correlated positively with moral identity (Conway & Gawronski, 2013). Hence, this distinction should be kept in mind when interpreting this thesis' experimental results.

Taking into account the need for a working definition that accounts for such social functionalist models, for the purposes of this thesis, morality refers to an individual's strongly held beliefs regarding right and wrong. This definition must also distinguish between moral principles, judgments and beliefs, and behaviours, decision and beliefs that stem from social norms and widely accepted conventions. While it is important to acknowledge that social norms and morals do often overlap, in this thesis, morality is used in reference to personal beliefs and values, regardless of how these ally with conventions in society.

Morality v Altruism

While moral action and altruism are often taken to mean one and the same, it is important to discuss the similarities and differences between the two. While moral action may be defined as acting in line with one's own moral standards, altruism refers to selfless action, where an individual does not benefit and the motivator is purely to benefit others. This is in contrast to the long held psychological belief that all actions, even those designed to result in a benefit for another, were rooted in egoistic motivations (Batson & Shaw, 1991).

Some researchers still use the terms altruism and moral action/behavior almost interchangeably. Sachdeva et al. (2009) notably introduce their paper using the term altruism but subsequently refer to moral behavior. This disguises small differences in meaning. When discussing behavior in moral terms, though cost is at times mentioned (Eisenberg & Shell, 1986; Erkut et al., 1981), it is not inherent in the definition, merely a common element. Conversely, Robert Trivers (1971) argues for a definition of altruism relying on the notion of detriment to the individual acting in such a manner. While it is true that not all definitions of altruism require this, for example that of Auguste Comte (as cited in Batson & Shaw, 1991), the individual who coined the term, many modern definitions, which separate altruism from morality, do so.

Additionally altruism is by definition concerned with helping another; that is its ultimate goal (Batson & Shaw, 1991). However, for an individual to behave morally, no direct impact upon another individual is required. A moral act may be one purely concerned with the self. A person who spots a \$5 note on a busy city street may logically conclude that the individual who lost it is unlikely to find it, and thus picking up the note is not depriving that individual of a reasonable chance at recovering their money. However, a person's morality may still prevent them from

picking up this money. No altruistic motivation is necessarily present here, merely a moral one. As such, while altruism and moral behavior may at times mirror one another, and in fact be closely related, this does not mean they are the same thing. As this thesis is examining moral decision-making, this is important to bear in mind.

Moral Behaviour and Morals in Decision-Making

With a working definition of morality, this thesis will now address the role of morality in decision-making. Important issues to address in greater detail include motivators for moral behaviour, previous findings and theories describing alignment of actions with morals, theories regarding moral reasoning in behaviour, and the overlap and confusion of prosocial behaviour as faux morality. This section will end with an examination of the focal theory, moral self-licensing.

Motivators of Moral Behaviour

There are numerous motives for individuals to partake in a moral form of behaviour, including the implicit role of personal morality as a guiding force in one's views and decisions. In addition, under hedonic models certain moral judgments may serve to encourage behaviours that promise reward. These more straightforward motivations have been addressed and described above.

The broader role of emotions in decision-making will be addressed in greater detail later in this chapter, for now this thesis notes that emotions also play a role in motivating moral behaviour and decision-making. Sympathy and empathy have most often been cited as reasons for moral behavior. Batson (1991) argued for the primacy of both emotions as a way to understand why individual act in a moral manner. Miller and Eisenberg (1988) demonstrated that both emotions could reduce behavior

seen as morally unacceptable, such as antisocial behavior. Similarly, the moral behavior and decisions of forgiveness, letting bygones be bygones, have been consistently linked to empathy and sympathy, with both emotions having been found to increase the likelihood of such action (McCullough, Worthington & Rachal, 1997).

It is also important to highlight that theories regarding emotion as a motivator for moral behaviour at times equate prosocial and antisocial actions with moral and immoral ones respectively. Such an equation can fail to delineate between morality and accepted social norms and conventions, as discussed above. Miller and Eisenberg (1988) utilised antisocial behaviour as a form of morally unacceptable behaviour. However, there are clear differences, as well as some overlaps. While certain behaviours and actions, for example murder, may be both antisocial and immoral, others such as spitting can hardly be classified as such. This does not negate the theory or argument for emotions as primary motivators, but is merely a further example of confusion and lack of careful differentiation generally applied to morality and social norms.

Social Stigma

While researchers have argued that the emotions of sympathy and empathy encourage moral behaviour due to increasing the positive and moral outlook of an individual, others have argued that social stigmatisation has similar results, due to a will to avoid such consequences. Hence, the two may be seen as related sides of a hedonic model argument.

Recent studies have looked into the interplay between moral codes, and (overwhelmingly) negative social stigmatisation. One prominent social stigma

utilised has been the label of racist. Crocker, Major and Steele (1998) have argued that, in modern society, being labeled racist is almost akin to the threat that those stigmatised minorities have in the past experienced, and experience today. While the outward expression of racist beliefs and opinions has definitively decreased in recent times (McConahay, Hardee & Batts, 1981), debate continues as to whether the level that society holds racists opinions has also dropped. In a series of studies, Monin and Miller (2001) found that individuals were increasingly likely to demonstrate or express opinions of a prejudiced or racist nature, if recent actions or statements had shown them to be nonracist or non-prejudiced. Their experiments also made use of sexism and a number of other prejudices along with racism.

This line of argument again raises the issue of separating actual morality from social norms. While racism would clearly violate the moral codes and beliefs of some individuals, it is arguable that those willing to engage in racism, and make racist statements, due to previously establishing non-racist credentials may merely avoid racism due to it violating social norms and accepted conventions. Such individuals may also attempt to rationalise their own racist beliefs as matters of fact, not prejudice. While violation of such norms does lead to stigmatisation, this does not mean the stigmatisation has led to moral behaviour, rather it has led to behaviour in line with social convention.

Moral Cleansing Behaviour

While moral hypocrisy may describe the state of conflict between a claimed or held moral position and reasoning compared to actual actions or motives, it does not address how people seek to rectify this contradiction. One such method is moral cleansing. In their pioneering experiment utilising the electric shock of confederates,

Carlsmith and Gross (1969) observed what would come to be viewed as one of the earliest experimental examples of moral cleansing. When participants were required to administer electric shocks to a confederate, causing large amounts of perceived pain, these same participants were subsequently far more compliant to the researcher's demands and wishes than those participants who had either merely observed the electro-shock or who had administered negative verbal feedback to the confederates. As Sachdeva et al. (2009) explain, it has been reasoned that those participants who had actively engaged in the electro-shock, and thus violated their morals, needing to bolster their self-image and self-worth, caused this difference in behavior. Carlsmith and Gross (1969) argued for this reasoning, as opposed to an explanation based on restitution with the victim.

In more recent research, moral cleansing has often been demonstrated to be more extreme than the above examples. In research by Zhong and Liljenquist in 2006, participants were observed physically washing and cleansing with soaps and anti-septic after been required to duplicate an unethical story by hand. Similarly, Tetlock, Kristel, Elson, Green and Lerner (2000) set up a situation where a group of participants engaged in a discussion on the payment of poor and underclass individuals for their organs. Subsequently, these participants indicated an increased willingness to become organ donors, or undertake volunteer work. Sachdeva et al. (2009) state that such studies demonstrate individuals attempting to literally cleanse their beings in response to moral violation.

Moral Licensing and Cleansing Theory (Moral Self-Licensing)

It is apparent from the above discussion that influences upon individual behaviour, and specifically moral behaviour, often appear contradictory, or at least

fail to address one or more circumstances of decision-making. While appeals to the influence of emotions, such as empathy or sympathy, may account for differences in moral behaviour between individuals, they less readily explain differences in individual moral behaviour between similar circumstances. In similar situations, why does empathy or sympathy lead to moral behaviour on one occasion but not another? Similarly, moral behaviour to avoid stigmatisation, or bolster one's own image, the seeking of pleasure and avoidance of pain, may explain individual behaviour to seek such ends. However, such hedonic models fail to explain behaviours that risk such outcomes in order to preserve a moral view. They are unable to explain findings such as Sachdeva et al. (2009) where individuals at times behave in a manner consistent with personal morality despite its costs, and at other times readily break with this morality.

Further, what of moral hypocrisy? While traditionally moral hypocrisy has been viewed as synonymous with inconsistency, the notion of not practicing what one preaches (Naso, 2006), Monin and Merritt (2012) argued for a more discerning definition. They argued that moral hypocrisy could occur in the absence of inconsistency in cases where an individual makes a moral claim in bad faith, where the true motivation is self-serving.

Additionally, situations where moral concerns are minimized or "toned down" as they pose some form of threat. Monin and Merritt (2012) ultimately arrived at the conclusion that the true definition of moral hypocrisy must encompass the act of claiming moral reasoning or a moral position, where in fact the true motive or reason is devoid of morality. With this expanded view of moral hypocrisy, are hedonic models able to encompass and consider such implications when explaining

behaviours and decisions, or does it simply provide further limitations of such theories?

Such limitations and failures highlight the need for a theory to explain an apparent homeostatic behavioural sequence where moral behaviour, and contradictory immoral behaviours, balances out one another. The theory of moral self-licensing attempts to provide this.

Though moral self-licensing theory has a relatively limited research background in psychology (see Blanken, van de Ven & Zeelenberg, 2015; Blanken, van de Ven, Zeelenberg & Meijers, 2014), there is a significant body of experiment research in the field of consumer behaviour, and related economic areas of study (Khan & Dhar 2006; Strahilevitz & Myers, 1998). Nisan (1991) argued that individuals strive to preserve a “baseline” or morality: bad actions must be balanced with good actions (Monin & Merritt, 2012). Those who feel that they are highly moral individuals are more likely to subsequently act in an immoral manner, and those who feel in a state of little morality are more likely to subsequently act in a moral manner to restore the baseline (Sachdeva et al., 2009).

Addressing moral self-licensing in their paper on moral hypocrisy and inconsistency, Monin and Merritt (2012) argued that inconsistency may not necessarily result in moral hypocrisy if some form of balance is perceived in the positive and negative deeds: if the good and bad actions balance themselves out. They give the example of an individual undertaking a rigorous workout in the morning, while partaking in an unhealthy treat, such as chocolate cake, later in the day. While one action may be conceived as good (exercise) and the other bad (the unhealthy treat), no feeling of hypocrisy is needed as they serve to balance each

other out, even though there is clear inconsistency. They also use the analogy of a bank where one earns moral credits as well as deficit as an explanation for moral self-licensing.

Sachdeva et al. (2009) followed a similar thought pattern when establishing the framework for the theory of moral self-licensing. In their experiment, participants were assigned to one of three priming conditions, where they had to write a short, self-referential story focusing on positive, negative or neutral traits in the control condition. Participants were then presented with situations or tasks involving moral questions and options. It was found that individuals, who had written stories focusing on negative traits were more likely to engage in moral behavior, make more moral decisions than those who wrote stories focusing on positive or neutral traits.

Sachdeva et al. (2009) argued that this demonstrated that individuals who affirm their moral character feel a license to act immorally, but when this moral balance is threatened, they feel the need to undertake moral acts in order to reaffirm their moral character. Notably however, as discussed in greater detail below, subsequent attempts to replicate these findings have achieved mixed results, with some studies failing to replicate the findings (Blanken et al., 2014), while others point to the need for far larger participant populations to find any significant effect (Blanken et al., 2015).

In their examination of prejudice, Monin and Miller (2001) examined expressions of prejudice in situations where participants were given the chance to affirm their non-prejudiced status. Subsequently, these participants were more likely to expressed a prejudiced attitude or agree with a prejudiced statement. This is similarly a case of moral self-licensing. Here, the difference between non-prejudiced and prejudiced attitudes represents the difference between moral credit and deficit.

This link can be drawn because for many individuals, at least partially due to now overwhelming social norms and pressures, the holding of prejudicial attitudes, and the expressions of such prejudiced feelings carries a negative and immoral connotation (Devine, 1989; Smith, 1985).

Linking the above descriptions, one possible analogy to moral self-licensing is homeostasis. In this specific case, individual homeostatic mechanisms work to maintain a level of morality, or goodness, that is most comfortable for the individual. Actions and events that cause a deviation in either direction, more or less good, are subsequently corrected with an opposite action to restore this level. This analogy is similar to theories regarding the homeostatic nature of risk-taking (Hoyes, Stanton & Taylor, 1996; Wilde, 1988; Wilde, 1982).

Work undertaken in the fields of consumer behaviour, economic decision-making, and related areas, is also vital to understanding the theory. Over a series of five experimental studies, Khan and Dhar (2006) found a consistent moral self-licensing effect, where participants were more likely to engage in an indulgent act or consumption, if they had previously undertaken a virtuous act. Further, it was also found that this effect was mitigated if participants attributed their earlier virtuous act to external motivators, rather than themselves.

Similarly, Strahilevitz and Myers (1998) undertook two lab-based studies, and one field study, examining the use of charitable contribution in promoting consumption of luxury or frivolous items, compared to the promotion of everyday necessities, such a laundry detergent. In line with the theory of moral self-licensing, charitable acts had a significant positive effect in promoting consumption of luxury items, but not for everyday necessities.

Work in the field of political correctness has also included various studies concerning moral self-licensing behaviour. Using a scenario where participants had to choose between two job candidates, one white and one African American, Merritt, Fein and Savitsky (2009, as cited in Merritt, Effron & Monin, 2010) demonstrated that participants engaged in moral behaviour when it was possible they may need to engage in moral self-licensing in the near future. Similarly, Effron, Cameron and Monin (2009) found individuals who voiced support for then-candidate Barack Obama subsequently engaged in licensing behaviour to make or support statements that may be interpreted as racist.

A key point to note is that much previous research focuses on the licensing aspect of the theory moral self-licensing theory, while taking the opposite cleansing behaviour as a given. While this is legitimate as a focus point of previous research (Khan & Dhar, 2006; Monin & Miller, 2001) and other cited above, it does leave questions unanswered regarding whether the moral cleansing aspect of the theory explains human behaviour in the same fashion.

Moral Licensing Credits v Credentials

Merritt et al. (2010) posed the important question of whether the description and demonstration of the moral self-licensing effect as included in various studies, including the Sachdeva et al. (2009) paper which has spawned numerous attempts at replication or extension, concerns a change in the behaviour being licensed, or the meaning of that behaviour? In the former, an individual knows whether subsequent behaviour is bad or wrong, by they feel licensed to undertake it. In the latter, moral self-licensing changes the very meaning of the behaviour to the individual about to engage in it.

Sachdeva et al. (2009) fit the moral credit explanation. Their self-regulation model explanation for moral self-licensing clearly views any negative behaviour as having been offset by similar moral actions. Similarly, in Nisan's (1991) explanation of moral self-licensing, that morally negative actions need to be offset by moral actions fits squarely, placing it firmly in the moral credit theoretical position. Theoretically, this closely follows the above analogy of moral self-licensing as akin to homeostasis. Nisan (1991), amongst others, also cites a bank account analogy, with good deeds and behaviours as deposits that can subsequent be spent in morally dubious behaviour.

In contrast, work broadly concerning moral self-licensing and racism, for example Effron et al. (2009) and Monin and Miller (2001), as well as from other areas of moral self-licensing study, fall into the moral credentials camp. In each case, an early moral action or behaviour, in both cases the display of non-racist behaviours, alters the individual's perception of subsequent decisions or behaviours and leads to morally illegitimate responses. Essentially, as the participants feel that since earlier decisions affirmed their non-racist or prejudiced credentials, the decision they subsequently make can't be racist or prejudiced, despite such a belief appearing to others as a fallacy.

Merritt et al. (2010) argued that both theoretical explanations have relatively equal supporting data. Additionally, they stated that instead of attempting to prove one explanation as superior, moving forward the credit v. credential difference should be viewed as different pathways through which individuals may undertake moral self-licensing. Under this proposal, this thesis falls more within the credit explanation camp, however, elements of the credential explanation are notable at times.

Some Limited Criticism, and a Justification of, Moral Self-Licensing Theory

Compared with morality, moral structures and the role morality plays more generally in individual decision-making, moral self-licensing is a relatively new theory with a short research history. While it may be studied in terms of prejudice, acting morally, altruism or even under the banner of moral hypocrisy, relatively few studies have examined moral self-licensing on its own, as the core focus. This leaves the topic open to widespread debate, as well as many questions and criticisms. Some of these more general criticisms will be addressed further in a later section, while other unanswered questions will be addressed here.

Since the publication of Sachdeva et al (2009), a number of published and unpublished studies have attempted to replicate the findings. Blanken et al. (2014), over a series of three experiments, attempted to replicate Sachdeva et al.'s (2009) results, including the use of the prime and experimental material as originally described without alteration. Across all three studies, Blanken et al. (2014) failed to replicate the original findings, with data analysis showing no support for a significant effect as explained by the moral self-licensing theory. Blanken et al. (2014) also argued their findings demonstrate the original manipulation prime as proposed by Sachdeva et al. (2009) is insufficient to induce moral licensing behaviour, and that future studies seeking to replicate or extend Sachdeva et al.'s (2009) work should use a neutral control condition, primed for neither moral credit or deficit. It is important to note, this study was published after the two experiments undertaken for this thesis were designed and carried out.

Further queries regarding the moral self-licensing theory and effects, as found by Sachdeva et al. (2009) are posed by Blanken et al.'s (2015) meta-analysis of moral self-licensing research. The meta-analysis covered 91 previous studies, with a total of 7,397 participants. The meta-analysis found a Cohen's *d* of 0.31, just greater than Cohen's (1977) interpretation of a small effect. Blanken et al. (2015) interpreted their findings as implying the need for far larger participant numbers in moral self-licensing studies than previously used if an effect was to be found, an outcome that raises questions about whether such an effect is actually present? Again, it should be noted Blanken et al. (2015) was published subsequently to the completion of the experiments used in this thesis, and just prior to submission.

Following these published criticisms, is it possible an alternative theory could address the same issues moral self-licensing seeks to? For example, could cognitive dissonance explain the very actions moral self-licensing seeks to explain? While cognitive dissonance has been examined in a large body of previous research and literature, reduction of dissonance is explained through the four established patterns: change cognition, justify through changing the conflict, changing through additional cognitions, and ignoring the dissonance. However, none of the four methods for addressing such dissonance adequately explain the consistent pattern of seemingly confliction behaviours: moral and immoral.

Another possibility is whether moral self-licensing theory could in fact be a further case of a general homeostatic theory, along the lines of the behaviours inhibitions systems and behaviours activation systems theory (BIS-BAS) (Carver & White, 1994). As demonstrated by the analogy above, there are similarities between moral self-licensing theory and a homeostatic explanation, but there are also differences. In a homeostatic theoretical explanation, if balance is thrown out, the

following action will seek to restore this balance, or appropriate level, for example level of risk (Wilde, 1988). However, previous moral self-licensing research has demonstrated that individuals will continue to move in one direction, either moral or immoral, as long as eventually the appropriate level is restored (Sachdeva et al. 2009). In moral self-licensing, there can be a delay in restoring balance.

Alternatively, Baron (2008) has argued that there is little difference between moral reasoning and other forms of decision-making. Operating on such an assumption, a sound theory for any decision-making would also be a good theory for moral reasoning. However, if we are to disregard moral reasoning, then how can decisions and behaviours that cause pain be explained? Without an important moral judgment or value to uphold, which causes decisions that violate hedonic reasoning, what is the purpose of such a decision or action? Moral self-licensing theory provides such an explanation.

In addition, a strong response to such a questions lies in the research, such as Sachdeva et al. (2009) and Monin and Miller (2001) that utilises the moral self-licensing theory to explain aspect of human behavior. In such cases, previous theories or explanations have failed to adequately address or explain the observed decision and behaviours. Furthermore, the validity of moral self-licensing as a theory is demonstrated by repeated results consistent with its explanation.

This thesis does not argue the moral self-licensing is a perfect theory to explain patterns of behaviour. Rather it suggests that it is a legitimate theory, and one that merits further research. Importantly, as discussed below, it allows for an examination of moral decision-making in combination with factors, such as human emotions.

Emotions in Decision-Making

As briefly addressed above, work by Batson (1991), Miller and Eisenberg (1998) and McCullough et al. (1997) has tied emotions not just to decision making, but as an influence on our moral outlook and motivator for decision-making in circumstances concerning moral issues and questions. As Miller and Eisenberg (1998) argued, our emotional state directly impacts and motivates various moral behaviours or decisions. However, as argued in moral self-licensing theory, such behaviours and decisions would subsequently impact individual moral self-regulation, which again would lead to potential changes in behaviour or decisions made, as well as emotional and moral self-regulated states. This potential dual effect raises the question of how emotions and emotional state interact with an individual's moral state to result in a moral licensing or cleansing outcome? However, prior to addressing this in greater depth, it is important to further explore the role of emotions in decision-making, as well as highlight specific emotions, rather than treat as a uniform group.

The somatic marker hypothesis, and supporting research, proposed a neurological mechanism in which behaviour, and specifically decision-making, could be influenced by emotions, including the lack of an emotional signal (Bechara & Damasio, 2005). Previous research has demonstrated its use, and therefore the role of emotions, in numerous forms of decision-making, including its proposed role in economic behaviour (Bechara & Damasio, 2005). The hypothesis demonstrates the importance of emotions, and for this thesis, raises the question of how emotions may interact with moral self-licensing theory.

Clearly the role of human emotions in individual decision-making, and our reaction to the outcome of such decisions, cannot be underestimated in its importance. However, it is also an area with a patchy research history, where

propositions and adages have often entered into common knowledge with little basis in rigorous research, and little empirical support. Similarly, emotions are of such variety and width, differing from individual to individual, that at times it is difficult to examine and study the role of emotions while accounting for this individual variation.

A Case for Gratitude

As stated above, for this thesis to examine a potential interaction between moral self-licensing and emotions, it must identify a singular emotion, not discuss emotions as a catchall. However, which emotion should be used in the proceeding experiments? Given the wide array of emotions that plays large roles in decision-making, depending on the context and nature of the decision, narrowing the decision down is difficult. In cases of deep interpersonal relationships, the dual emotions of love and hate, even betrayal could be argued to be key – and allow for an interesting examination of the emotional decision-making differences between the genders. Other situations would allow for a more in-depth appraisal of guilt, disgust, fear, or instead positive emotions such as joy or happiness.

Given the first experiment of this thesis will examine the possible interaction effects of the interaction between moral self-licensing and a chosen emotion, the theory of moral self-licensing may guide this choice. As discussed above, the two behavioural poles of moral self-licensing theory, licensing and cleansing behaviour, may be viewed, to a degree, as similar to anti-social and prosocial behaviour respectively. As has been well established in psychology (George, 1990), as well as research in other fields such as consumer behaviour and marketing (Kelley &

Hoffman, 1997), affect is a strong influence on both positive and negative disposition to prosocial behaviour.

Given that emotions are strong influences upon individual affect, it is plausible that certain emotions and individual emotional mood states, by influencing disposition towards or away from prosocial behaviour, would therefore also influence individual dispositions to moral licensing or cleansing behaviours. For example, if an emotion made an individual more likely to act in a prosocial manner, that individual is simultaneously more likely to engage in moral cleansing behaviour. Conversely, an emotion that leads to an individual being more averse to prosocial actions arguably increases the likelihood of moral licensing behaviour, or at least decreases the likelihood of moral cleaning behaviour. Hence, emotions may potentially influence moral self-licensing.

Bartlett and DeSteno (2006) previously argued that one emotion predisposing people to prosocial behaviour, and prosocial outcomes, is gratitude. Across a series of experiments, Bartlett and DeSteno (2006) demonstrated that inducing gratitude increased the likelihood of subsequent prosocial behaviours, even at a cost to the individual. Similarly, Grant and Gino (2010) found received expressions of gratitude motivated subsequent prosocial behaviours across a number of settings. Therefore, altering an individual's affect through inducing gratitude may plausibly influence moral licensing or cleansing outcomes.

Working within the limitations necessary to undertake moral self-licensing research, including the design of materials and hypothetical scenarios, as well as the lab setting, the ability to induce, and manipulate, the chosen emotion is perhaps the most important factor in determining if it is easy to study. As Bartlett and DeSteno

(2006) demonstrated, gratitude may be elicited through minor manipulation, without requiring an established interpersonal relationship. Such a manipulation may be undertaken with little pressure placed upon the manipulated individual, nor require the individual to be subjected to scenarios requiring a negative affect state, which is required if manipulating fear or genuine guilt. Emmons and McCullough (2003) found in addition that such manipulations could be as simple as record keeping and expressing of gratitude itself.

In contrast, other potential emotions present practical barriers to pairing with moral self-licensing studies. Fear, sadness or genuine guilt would all require the establishment of a significant negative affect state. However, this would need to be accomplished while also presenting relatively straightforward materials attempting to manipulate moral state and measure subsequent moral licensing or cleansing behaviour, within the known environment of a university psychology faculty building. Success within such constraints may require either time, or resources, such as confederates, not readily available.

Given the above, this thesis will initially focus on gratitude as the interacting emotion. However before exploring the role of gratitude in decision-making, or the manner in which gratitude may be established in a laboratory setting, a working definition of gratitude must be established.

Simmel (1996, pg. 45) previously termed gratitude the “moral memory of mankind”. In their 2001 paper, McCullough, Kilpatrick, Emmons and Larson described gratitude as a positive emotion, elicited in circumstances where another individual has either attempted to or succeeded in giving one something a value. Algoe and Haidt (2009) further argued that gratitude is the emotion responsible for

the nurturance of social relationships. Such a definition is well suited to this thesis; it is straightforward while outlining certain requirements, which may serve to differentiate gratitude from other emotions or emotional states.

Gratitude as a Guide for Action

Inherent to this definition of gratitude is the notion of reciprocity. Firstly, it relies upon at least the attempt of another individual to give something of value. It therefore follows that one will at least attempt to repay such a favour, if an opportunity presents itself. As Bartlett and DeSteno (2006) argued, gratitude may act as a significant force behind prosocial behavior, and individuals making decisions that result in prosocial outcomes.

In a 2006 study, Bartlett and DeSteno found an increase in attempts by individuals to assist another individual, even at a cost to themselves, when the other individual could be viewed as a benefactor: someone to whom they feel gratitude. In a secondary experiment reported in the same paper, it was found that this effect was robust in cases where the benefactor was a stranger. In other words, gratitude may function as an incidental emotion, requiring no prior relationship between individuals in order to influence behavior (Bartlett et al., 2006).

McCullough, Emmons and Tsang (2002) investigated differing levels of prosocial behavior in two conditions of individuals: those who often experience gratitude, and those who experience gratitude less often. Unlike the Bartlett and DeSteno (2006) studies, the work of McCullough et al. (2002) did not involve the manipulation of participants' feelings of gratitude. Nonetheless, their results indicated that individuals who reported experiencing gratitude more often also

reported engaging in prosocial behavior more often when compared to those reporting less common feelings of gratitude.

Such findings support older research into the relationship between prosocial behavior and mood. Isen and Levin (1972) and Levin and Isen (1975) found robust links between positive mood and a participants likelihood to respond to questions and requests in a prosocial manner. However, in their research such an effect was found to be limited to cases where such prosocial behavior had limited or no negative consequences for the individual. As Bartlett et al. (2006) argued this response was still limited by hedonic constraints.

A Criticism of Gratitude Behaviour Research

One major criticism of research into the effects of gratitude on decision-making and behavior is in relation to the negative implications for an individual undertaking such behavior. One example is the conflict between staying late at work to help a colleague who had previously assisted you, but therefore missing the last bus home without an alternative option. Bartlett and DeSteno (2006) and McCullough et al. (2002) have demonstrated that short term, negative implications have little impact upon prosocial behavior by individuals in high gratitude conditions. The question of long-term negative impacts has not been studied.

Short-term negative impacts on behavior may be minimised by other considerations such as repaying a debt, helping a friend or acting in gratitude to another. The same argument cannot as easily be made regarding long-term negative implications. Such long-term implications can logically be considered to be of a more serious nature, as well as have an effect on the individual beyond that, which can be expected, planned for or possibly even contemplated. As such, a strong

argument may be made that such considerations may negate gratitude's observed effect of increasing prosocial behavior.

While this criticism of current research is valid, the difficulties in undertaking such research it proposes must be acknowledged. Short term, negative consequences are easy to create in a laboratory setting, such as Bartlett and DeSteno's (2006) use of a tedious and difficult task. In contrast, long-term negative consequences are far harder, if not impossible to manufacture. Furthermore, such implications are more likely to be of a serious nature, and hence of a potential dubious ethical nature. While it may be possible to make a participant late, thereby missing an important test or exam with serious implications for their academic progress with potential long-term implications, this would not be ethical. Therefore, while this criticism is valid to a degree, a solution is hardly easy to find.

Gratitude vs Indebtedness

Research into the link between gratitude and prosocial behavior has investigated alternative explanations. Tsang (2006) found that individuals who were assigned to a gratitude condition reported and displayed greater levels of prosocial behavior. He also investigated whether previous findings were the result of self-reporting bias or the overt laboratory setting. The possibility that such results were caused by the positive mood stemming from acting in a prosocial manner was also investigated.

Rarely addressed is how to differentiate between feelings of gratitude, and those of being indebted to another individual. This thesis assumes that the feeling and emotion of gratitude is positive. This is one manner in which we may

differentiate gratitude from indebtedness. While gratitude is by definition a positive feeling, indebtedness is not. The logical emotional response to debt is negative.

In a study of university students, Nelson, Lust, Story and Ehlinger (2008) found clear links between debt, and the subsequent stress caused, and a variety of negative health impacts. While that study focused on debt in financial terms, it is not implausible to argue that emotional debt would also lead to stress and other negative outcomes.

However, a purely emotional differentiation cannot be the only way to separate gratitude from indebtedness. Rather, it may be useful to view the two emotional states as related, but not necessarily indicative of the other. If we view gratitude as the primary emotion, and indebtedness as the secondary emotion, then it is logical to argue that the individual still feels a degree of indebtedness, that they “owe” the other something. If we instead view indebtedness as the primary emotion, it is not logical to argue for feelings of gratitude. Gratitude does not follow on from indebtedness; even though indebtedness may follow from gratitude. In this sense, it is a one-way road. Gratitude may entail indebtedness, but indebtedness does not entail gratitude.

Stigma in Moral and Gratitude Scenarios

The discussion above is concerned with how individuals comprehend notions such as morality and emotions such as gratitude, as well as the role these may theoretically play in decision-making. Another angle should also be considered. In any situation, decisions can be made in violation of established factors: morality and gratitude. What happens to people when they violate moral codes, both their own or societies? Similarly, what happens when people are viewed to disregard the societal

importance placed on gratitude? The outcome of such violations, and the threat of these outcomes, may itself be a factor in the decisions made, or even used as a behavioural license itself (Moore, Stuart & Pozner, 2010; Moore, Stuart & Pozner, 2011).

It is also important to consider public consequences of moral code violations. Although violation of one's own moral code is intrinsically personal, under certain circumstances there may be public implications. These implications may depend upon the shared-value and importance of the moral code, as well as how severe the violation. In cases where individuals violate society's codes, stigma is the common outcome, and although stigma is often seen, it is only partially understood.

It is an all too common occurrence that following investigations or whistleblowers a major public company is found to have been involved in serious forms misconduct. It may have evaded taxes, misrepresented its financial position, misrepresented the safety of its products, as in the famous example of tobacco companies, or any number of other serious examples of business misconduct. In light of such information, share value and profits plunge, along with public confidence in the company (Baucus & Baucus, 1997; Akhigbe, Kudla & Madura, 2005). In some cases the drop in consumer confidence is so severe, and the results so financially harsh, that the company goes bankrupt. What these companies are experiencing is stigma.

In their 2010 paper, Moore et al. defined stigma as the result of public admissions of misconduct. However, for the purpose of this thesis, a definition based in economics is inappropriate. This thesis will use Goffman's (1963) definition of stigma as spoiled identity. Where moral violations occur, the spoilage of identity is

discreditation and distrust, as well as possible outrage, revulsion or fear. As used in this these, the caveat is that such violations must be of significant importance to warrant societal interests, and therefore result in widely accepted stigma.

As Moore et al. (2010) acknowledge, while the results of stigma can be devastating, such risks have not adversely affected the number of firms willing to engage in misconduct and therefore risk public stigma, and its pitfalls. Davidson, Worrell and Lee (1994) estimated that, in the US, more than 50% of large business firms engage in some form of ethical or moral misconduct. More than half of large firms are willing to risk stigma, but why?

Moore et al. (2010) proposed that this may be the result of many firms believing that a well established set of actions allows them to recover from any affects that stigma may have. Such actions are well known to anyone who reads the business section of the national papers: replacing a CEO or management in the wake of public misconduct. Moore et al. (2010) argued that such a change in personal is believed to demonstrate to the public that the firm has realized that its previous actions were wrong, and that it is determined to move in a different direction. However, does such an explanation hold up to statistical scrutiny, or is it merely an untested belief?

In their paper, Moore et al. (2010) answer their own question with a two-part response. While they find evidence that changes in leadership may help insulate a firm that has admitted wrongdoing but is yet to be affected or tainted by stigma, little evidence suggests that such tactics help firms that have already been tainted.

The Repeat Offender

Anybody with significant exposure to children, whether as a parent or from a professional viewpoint, such as a teacher or childcare worker, knows that for young people labeled “problem children”, certain behaviour becomes part of the expectation. Misconduct is something to be expected, and rationalised as “oh, that’s just x.”

Can we apply the same logic beyond children? Moore et al. (2010) also examined the case of business recidivists. They argued that little work has been done looking into cases where misconduct, and the resulting stigma, may be viewed as anything other than a one-off affair. Existing research largely concerns the world of organized criminal enterprise. While criminologists have widely established that a prior criminal record is one of the best predictor variables for future criminal behaviour (U.S. Department of Justice, 2000), what about businesses, or public organisations?

Moore et al. (2010) found evidence for what they term a *behavioural licensing effect of stigma*. To explain this, parallels are drawn to effects observed in previous psychological research, where it was found that elements of the mentally handicapped and disabled communities, used the stigma associated with their condition as a behaviour license; to escape those expectations other members of society are bound by (Haber, & Smith, 1971). For businesses, the initial act of misconduct, and resulting stigma, gives license to further acts of misconduct, without the fear of similar consequences. Rather, subsequent acts of misconduct instead result in reduced penalties, thereby negating the risk factors associated with stigma.

Can We Assume Similarities to Gratitude Violations?

While the above research may be understood to refer to moral violations, can we assume that similar patterns exist if the moral violation is changed to one of gratitude violation? The author of this thesis is aware of no research addressing this topic, however, certain assumptions are plausible.

As previously stated, and explored in greater detail below, we may view gratitude, and societal expectations regarding it, in a similar manner to how we view morality. Generally, it is expected that individuals will behave in a way conducive of moral expectations. Similarly, a general view is held that expects individuals to behave in line with public expectations regarding gratitude. In both cases, certain behaviours are expected, and violations are frowned on. The individual who morally transgresses may be viewed as an “unsanitary sort”, while the individual who does not respond with gratitude in the appropriate manner may be regarded as rude or unlikeable. As reactions to both violations is similar, it is not a great leap to assume that stigma may hold similar consequences for those who fail to demonstrate gratitude, and those who have a consistent behaviour pattern of such failure.

Risk-Taking in Morality and Gratitude

As reported by McCullough et al. (2001), societies at large hold both morality and gratitude in high regard. Both are seen as desirable traits to display and hold, while to display the opposite, or to be judged as lacking in one or the other is considered a negative. If we may assume that the majority of individuals wish to avoid negative judgments and impressions amongst their peers, then it follows to reason that risk-taking, in scenarios where morality, one’s moral code, or the appearance of ingratitude, is concerned is a topic worth addressing. Specifically,

could an individual's propensity to risk, or the perceived risk involved, actively moderate moral or immoral behaviour, or the display of, or lack of gratitude?

In wake of the collapse of Bernard Madoff's ponzi scheme, a fraud that robbed thousands of investors of their life savings, one major subject of reports concerned accusations of immorality. As one article stated, the Madoff fraud was not just a story of financial disaster, it was a story of the failure of morality (Quinn, 2008). In Ayal and Gino's (2011) paper "Honest Rationales for Dishonest Behaviour", the author's assert that crimes such as fraud, cheating and racketeering are some of the greatest challenges facing society at this time. However, they also hold that such crimes and behaviours represent the unethical, and immoral problems society faces. However, the authors also stated that while cases such as Madoff and Enron, or HIH Insurance to take a local example, often grab the media headlines, the rise in immoral and unethical behaviour is far more widespread (Ayal & Gino, 2011).

This raises the question: if such behaviour is on the rise, but simultaneously risks individual societal standing due to the importance placed on morality and the display of gratitude, why do so many take the risk? While there is a whole debate to be had over the supposed decline of societal morality, ethics and emotions such as gratitude, this thesis takes no part in such an argument. Rather, it is more important to address why people would take such risks.

Findings from numerous studies, such as Mazar, Amir and Ariely (2008) have demonstrated in a laboratory setting that many individuals are willing to engage in small amounts of immoral behaviour, such as cheating, if they believe the chances they will be caught are low. Ayal and Gino (2011) argued that such findings are troubling as they demonstrate the folly of "the few bad apples theory": that a few

individuals undertake most immoral behaviour. They contend that a more accurate proposal would be that immoral behaviour is the result of many apples going off just a little. Ayal and Gino (2011) provide one possible explanation for risk-taking, even where morality is concerned; the presence of other individuals who themselves are engaged in similar, immoral behaviour allows people to undertake such behaviour, while continuing to hold a view regarding the high importance of moral behaviour. However, it is important to note that the limitations of the proposition underlying this explanation. For example, Australian Federal Police statistics demonstrated that just twelve families in Canberra are responsible for a quarter of all property crime, including armed robbery, home burglary, car theft, shoplifting and vandalism (Bucci, 2011). Such figures challenge the idea of many apples going a little off.

While it is tempting to dismiss Ayal and Gino's (2011) explanation as akin to the child's cry of "but everyone else is doing it", significant research in the domain of social comparison has shown such an explanation to hold merit. Becker (1968) demonstrated that individuals observe other peoples' immoral behaviour to gauge the cost-benefit ratio of certain transgressions. Similarly, Gino and Pierce (2009) argued that individuals may judge the frequency of immoral behaviour and use such judgments to draw boundaries between what is and isn't moral and ethical.

Controlling for Social Comparison in Risk-Taking

If we therefore accept that individuals often use others' behaviour as a baseline in morality judgments, calculating the risk involved in engaging in immoral or ungrateful behaviour, and with subsequent decisions or behaviours moderated by this risk, controlling for this moderator effect is the best option.

Weber, Blais and Betz (2002) provide one option. Their *Domain-Specific Risk-Attitude Scale* measures perceptions of risk and risk-taking in individuals using five domains: financial decisions, health-safety, recreational, ethical and social decisions. Respondents are presented with a set of behaviours and asked to gauge how likely it is that they would engage in each. They are then asked to rate how great a risk they perceive each to be, and how beneficial they view each action/behaviour/decision to be. In 2006, Blais and Weber proposed an updated version of their scale, consisting of the same five domains, but with a reduced number of items. This scale was also designed to be applicable to wider age groups, given that the original scale focused heavily on issues likely to resonate with young adults. Of the domains, ethical is most relevant to moral self-licensing theory, and hence Experiment 1.

Both versions of the scale have been found to have good reliability and validity (Webber et al., 2002; Blais & Webber, 2006). Additionally, both have now become widely used scales to determine individual attitudes regarding risk-taking behaviour. As such, both scales provide a potential tool to control for attitudes regarding risk-taking in moral and gratitude scenarios that run counter to the widely researched and accepted view that society holds morality and gratitude to be extremely important.

Morality and Gratitude

Some previous research has examined links between individual morality and the emotion of gratitude. One of the key areas previously examined was whether gratitude itself may be considered an outcome of morality, and hence whether our individual moral codes and compass in turn influence how, and to what extent, we experience gratitude.

In their paper “Is Gratitude a Moral Affect” McCullough et al. (2001) proposed that gratitude may be conceptualised as an emotional moral affect: synonymous with other morality driven emotions such as guilt. McCullough et al. (2001) questioned why much recent study of emotion has tended to ignore gratitude, citing examples such as Fehre and Russell’s (1984) work concerning emotional wording. Greenberg (1980) has argued that psychology has a tendency to discount gratitude as indebtedness, and related notions, despite the differences discussed above. To counter this lack of research and discussion, McCullough et al. (2001) proposed that we should conceive gratitude similarly to how we conceive guilt. While guilt is viewed as an individual’s response to a failure to treat other individuals in line with their moral code (Baumeister, 1998), so should gratitude be the emotional response to another’s moral action towards you. Additionally, gratitude is argued to be what McCullough et al. (2001) term a “moral barometer”, an emotional that may be used to measure change in individual’s social relationships; in this case an action to benefit another.

DeSteno, Baumann, Bartlett, Williams and Dickens (2010) further this argument to view gratitude as inherently stemming from morality. In their view, previous work separately linking both morality and gratitude to prosocial behavior serves as implicit evidence that a clear relationship exists. They argued both functions have been shown to increase the rate of prosocial behavior, both self-reported and in laboratory settings. In their own study, DeSteno et al. (2010) assigned 84 participants to one of four conditions: control or gratitude, and either benefactor or stranger. Differences in prosocial behaviour were then measured between those who were manipulated into feeling gratitude and those in the control edition. Additionally, differences in prosocial behaviour as directed towards either

the preceding benefactor, or a stranger was measured. This experiment clearly supported previous findings. DeSteno and others (2010) subsequently argued that such results demonstrated a link between cooperative as opposed to selfish behaviour, and gratitude, itself stemming from a position of morality.

Further research on links between morality and gratitude has approached this question from a religious standpoint, or utilising a religious view of morality and moral codes. As McCullough et al. (2001) stated, both morality and the emotion of gratitude are highly prized and venerated in many of the world's religions, including Christianity, Judaism, Islam, Buddhism and Hinduism. McCullough et al. (2001) even quote Seneca, who damns ingratitude as a moral failure.

An Initial Proposed Criticism

Moral self-licensing is a very young theory. Papers exploring the topic specifically are small in number, and while aspects of the theory have been discussed in research for some decades, it is only in the last decade that the theory has become a topic of interest in psychology. Because of this, literature criticizing the theory and the findings of current studies is virtually non-existent.

In partial contrast, gratitude has been widely studied, with various theories refined over years of study and change. However, the theories continue to be debated, and it would not be possible to state firmly that theories regarding gratitude and its importance in society, or the consequences of disregarding its role in behaviour of decision-making, are either widely accepted or well established.

While neither theory currently encounters significant criticism in mainstream psychological research, this thesis proposes one major criticism. Research directly

addressing moral self-licensing theory, such as Sachdeva et al.'s (2009) studies, Khan and Dhar (2006), Strahilevitz and Myers (1998) or other research cited above, has addressed moral self-licensing seemingly in a theoretical vacuum. Unlike many more established theories, moral self-licensing has yet to be examined on a more multi-dimensional level – including variables and conditions that may serve to negate or mutate the effects explained by moral self-licensing. This thesis will seek to at last partially address this.

A further criticism is that, possibly due to the relative recent nature of psychological research in the field, the current literature makes little allowance for individual differences in psychological measurements. Given that work on moral self-licensing inevitably involves questions of risk-taking, and resulting hypothetical stigma resulting from participant's decisions, it would seem logical that measures of propensity for risk-taking, personal cost-benefit risk analyses and the like be included. Rather, current research has tended to assume that participants simply conform to mean scores on any such measures.

This assumption limits previous research, and a full understanding of the applicability of the theory in a number of ways. While moral self-licensing theory seeks to explain an observed pattern of behaviour, presenting it as a uniform explanation glosses over what may be important elements of its theoretical application. In turn, this limits to how accurately the theory may be used to predict behaviour, as well as explain differences and nuances observed in moral decision-making scenarios.

In addition to the lack of previous focus on the role risk-taking may have played in the observed findings, and the application of moral self-licensing theory to

explain observed behaviour, what of factors such as individual personality traits? Is it possible, or plausible, that moral self-licensing, as an explanation for decision-making, may be affected by personality? Put another way, is moral self-licensing more likely in individuals who score highly, or lowly, of certain measures on the NEO-PI-R, or MMPI? An argument may be made that, of the Big 5 personality traits, individuals with high scores on the agreeableness and conscientiousness measures are more inclined towards prosocial behaviours, and therefore more likely to engage in moral cleansing, prosocial and moral behaviours, while less likely to engage in the moral licensing, anti-social and immoral behaviours. Furthermore, what of people with score highly on measures of Machiavellianism? Arguably, they would be the opposite of those with high scores on the Big 5 agreeableness and conscientiousness measures, and instead be more inclined towards licensing behaviours. Similarly, how may impulsivity affect the application of the theory? While this thesis cannot address all these criticisms, answers to the above questions may have significant implications.

Experiment 1

Experiment 1 aimed to test for moral self-licensing, the effects of gratitude on decision-making, and joint moral self-licensing-gratitude interaction effects on decision-making in morally balanced hypothetical scenarios. Utilising a series of hypothetical scenarios, including one based on Sachdeva et al. (2009), and a gratitude task based on Bartlett and DeSteno (2006), Experiment 1 also sought to examine a possible relationship between risk-taking and moral self-licensing behaviour over a variety of situations. A non-gratitude condition was also included as a manipulation check on the gratitude prime. Experiment 1 used a moral priming tool based on one such tool utilised by Sachdeva et al. (2009). In addition, risk-

taking was controlled for by the use of the Ethical subset of the Domain-Specific Risk-Attitude scale (Weber et al., 2002).

It was hypothesised that participants would exhibit moral self-licensing behaviour along the lines of the moral prime tool: those primed into a moral deficit condition would exhibit increased cleansing, and therefore morally positive behaviour, and those in a moral credit condition would exhibit increased licensing, and therefore morally negative behaviour.

It was also hypothesised that the gratitude condition would interact with the moral prime: gratitude would inhibit and lessen licensing behaviour, and increase cleansing behaviour. Finally, this thesis hypothesised that higher scores on the Ethical subscale of the Domain-Specific Risk-Attitude scale would positively correlate with moral licensing decisions, and negatively correlate with moral cleansing decisions, while lower scores would positively correlate with moral cleansing decisions and negatively correlate with moral licensing decisions.

Experiment 1 Method

Participants

Experiment 1 had 104 participants (32 male, 72 female), whose ages ranged from 17 to 40 years, with a mean of 19.71 (SD = 3.017). Participants were Australian National University undergraduate students. Participants received either \$10, or 1-hour course credit if enrolled in first year psychology, for their participation.

Design

Experiment 1 utilised a 2 (moral credit v. moral deficit priming) x 2 (presence v. absence of gratitude) between subjects experimental design.

Materials

In Experiment 1, participants were required to undertake a questionnaire, made up of three parts.

Participants initially undertook a moral self-licensing prime, either a moral credit or moral deficit condition, using questions based upon Sachdeva et al. (2009). The questions used are presented in Table 1.

Table 1

Experiment 1 Moral Self-Licensing Priming Tool

| Prime Condition | Priming Question |
|-----------------|---|
| Moral credit | <p>Thank you for agreeing to take part in this research.</p> <p>This study aims to explore decision-making and moral choice.</p> <p>First however, please take a moment to think about how you would describe yourself if you were writing a journal, or similar personal description.</p> <p>In the space provided below please write a short (100-200 words) passage describing yourself. However, please focus on the positive traits, using only positive nouns and descriptive phrases.</p> |
| Moral deficit | <p>Thank you for agreeing to take part in this research.</p> <p>This study aims to explore decision-making and moral choice.</p> <p>First however, please take a moment to think about how you would describe yourself if you were writing a journal, or similar personal description.</p> <p>In the space provided below please write a short (100-200 words) passage describing yourself. However, please focus on the negative traits, using only negative nouns and descriptive phrases.</p> |

The second portion of the questionnaire was an unrelated distracter task, undertaken on a computer. The distracter task was a normative choice study designed by the author's supervisor. The computer was coded to malfunction and freeze randomly in 50% of cases, forming part of the gratitude prime. For the control

condition that did not include the gratitude prime, no freeze was experienced. This prime was based on the method used by Bartlett and DeSteno (2006).

Participants were then asked to complete the final part of the experiment. This section contained 3 scenarios, which presented participants with the option to act in a more or less moral manner. The first scenario was based upon that of Sachdeva et al. (2009), where participants are told they are the manager of a factory, which emits toxic chemicals. Participants were then informed that the company had agreed to filter a percentage of these emissions; however this was a costly process. Questions relating to how often the participants would apply the filter, as well as how risky they thought it would be to not filter were then asked. The subsequent two scenarios also were modelled after Sachdeva et al. (2009), however they made use of different hypothetical settings and relationships. Scenario two utilised the parent-child relationship, while scenario three used a university setting. Scenario three is presented below in Table 2.

Table 2

Example of moral choice paradigm: university setting

You are in the 3rd and final year of your Bachelors degree at ANU. While your overall grade average is good, you have been really struggling in one of your courses, and are on the borderline of either passing or failing.

If you fail this class, it will mean you are unable to graduate at the end of the year and will have to return the following year for another semester. Additionally, you will no longer be able to take up your dream job offer, as your prospective employer requires that you hold a university degree.

By luck, a close friend of yours is the Teacher's Assistant for the course you are struggling in. Knowing what is at stake for you, your friend offers you an answer guide to part of the forthcoming exam, which would enable you to pass the course and go onto graduate. However, if you were caught, you would be severely punished by the university, as would your friend, with both of you possibly being expelled from ANU.

1. In this situation, do you: A) accept your friends offer, therefore cheating on the exam and passing the course and graduating, although risk being caught. Or B) thank your friend but reject his offer, and attempt to complete the course honestly?
 2. Placed in a similar situation, which option do you think your best friend would take? Option A or B?
 3. On a scale of 1 to 10, 1 being **highly unlikely**, 5 being **neither unlikely nor likely**, and 10 being **highly likely**, what do you think is the likelihood of you being caught cheating?
 4. On a scale of 1 to 10, 1 being **not at all serious**, 5 being **neither non serious nor serious**, and 10 being **extremely serious**, how serious do you believe this act of cheating is?
-

Participants then completed the Ethical subset of Weber et al.'s (2002)

Domain-Specific Risk-Attitude scale. Previous peer-reviewed research has demonstrated the validity and consistency of this scale (Blais & Weber, 2006). The 2002 version of this scale was used as the questions are more appropriate for university-aged individuals, where as the 2006 updated scale poses questions applicable to older individuals. Hence it was felt that the 2002 version matched the expected participants' age range more closely.

Two small changes to questions in Weber et al.'s (2002) scale were made to better reflect Australian language and applicable situations. These were changing the word "term paper" to "major assignment" and changing a question about stealing cable television to one about stealing a neighbour's WiFi internet connection. A copy of Experiment 1 materials is contained in Appendix A.

Procedure

Participants were first given a small briefing about the experiment, informing them that the purpose of the experiment was to investigate possible links between decision-making and an individual's morality. Participants were also told that the individual with them running the experiment was in fact a junior "research assistant", rather than the experimenter themselves. This was done to break down lines-of-authority, and attempt to construct a confederate type situation, important for the gratitude prime. The briefing also informed participants that the research was comprised of three sections, all questionnaire style, and that since this was about their own personal judgment, participants were requested not to communicate with anyone other than the individual running the experiment. Finally, participants were reminded that they may withdraw at any time.

Participants were randomly assigned to either moral credit or moral deficit for the moral prime, with the experimenter blind to which condition each participant was in.

Participants then undertook section two, which was computer based. In 50% of cases, randomly assigned by the computer program, the computer was coded to freeze and not allow participants to continue for a period of 90 seconds. During this process the "research assistant" indicated to the participant that there had been

problems with the new software, and that they may have to return another day, starting the experiment from the beginning. The experimenter would then attempt to “fix” the computer problem through various settings to use up what remained of the 90 seconds, after which the computer would un-freeze. Participants would then continue with section two of the experiment, with gratitude to the “research assistant” for their help.

Finally, participants were presented with a booklet containing the three moral choice scenarios, as well as the Ethical subset of the Domain-Specific Risk-Attitude scale. Following this, participants were asked whether they were willing to undertake a further, time-consuming experiment. This acted as a test for gratitude, though no experiment was undertaken if the participant responded affirmatively.

Upon completion of the experiment, participants were given a debriefing document, explaining to them the manipulations used in the experiment, as well as the aims and hypotheses of the research.

Experiment 1 Results

Data Screening and Cleaning

Data screening and cleaning, as well as subsequent analysis was performed using IBM SPSS Statistics 20 for Mac. Dependent variables were assessed for measures of skew and kurtosis. Data from the first scenario indicated slight negative skew and significant positive kurtosis. Data from the second scenario revealed significant positive skew, while the third scenario data revealed significant negative skew. Both transformation and recoding of data were inappropriate due to the form

of responses. Box-plots revealed no significant univariate outliers, whilst Mahalanobis distance evaluation showed no multivariate outliers.

Missing values analysis was carried out, revealing a number of missing values. One participant had failed to complete the majority of the experiment and was excluded. Missing values analysis revealed other missing values were spread randomly throughout the data, and accounted for less than 2% of responses. The “exclude cases pair wise option” was therefore selected for subsequent SPSS analysis. Missing values analysis also revealed two cases of missing data in responses to the Ethical subset Domain-Specific Risk-Attitude scale (Weber et al., 2002). In both cases mean substitution was used, to produce risk-taking ratings. Risk-taking ratings were also subsequently recoded for future analysis, with ratings below the mean recoded to 0, and those above the mean to 1.

Initial Descriptive Analysis and Confidence Intervals

Primary descriptive statistics revealed mixed results. Mean filtering in Scenario 1 was higher in the moral credit condition than the moral deficit condition. Additionally, mean filtering was higher in the gratitude prime condition than without the gratitude prime. This is shown in Table 3. Further primary descriptive statistics indicated no interaction effect between the moral and gratitude primes.

Table 3

Participant Mean Filtering Levels for Experiment 1, Scenario 1

| Filter Dependent Variable | | |
|----------------------------|------------------------------|-------------------------------|
| | Moral Credit Prime Condition | Moral Deficit Prime Condition |
| Participant | 54.86 | 51.44 |
| Hypothetical Other Manager | 50.68 | 48.56 |
| | Gratitude Prime Condition | No Gratitude Prime Condition |
| Participant | 54.49 | 52.36 |
| Hypothetical Other Manager | 53.33 | 46.30 |

The effect of both the moral self-licensing and gratitude primes was examined in Scenarios 2 and 3 using paired difference confidence intervals. In Scenario 2, lying to one's parents, a 95% CI [-0.38, -0.14] was found under the moral prime, with a 95% CI [-0.38, -0.12] for the presence or absence of gratitude prime, both indicating a negative correlation between the primes and lying. In Scenario 3, cheating on an exam, a 95% CI [0.19, 0.43] was found for the moral prime, and a 95% CI [0.21, 0.45] for presence v. absence of gratitude prime, indicating a positive correlation between the primes and cheating. It should be noted however, that in both Scenarios, initial data was heavily skewed.

The effect of personal risk-taking was also examined for Scenarios 2 and 3. In Scenario 2, a 95% CI [-0.44, -0.19] was found for above v. below mean of risk-taking, indicating a negative correlation between risk-taking and lying, and a 95% CI [0.14, 0.38] for Scenario 3, indicating a positive correlation between risk-taking and cheating.

Repeated Measures

Data was subsequently analysed using repeated measures ANOVA to test significance of moral and gratitude prime conditions. The 2x3 repeated measures ANOVA was set up with factor1 = which response (i.e. questions 1 and 2) and factor2 = the prime (moral, gratitude, combined). As with all repeated measures ANOVAs, the two factors represent the related groups of data. In this case, factor1 is the group of responses to the various questions, while factor2 is the primes group. Such analysis was repeated for Scenarios 1, 2 and 3.

ANOVA analysis revealed no significant results. The between-subjects effects Test for Scenario 1 showed $F(1,98) = 0.98$, $p = 0.33$ for the moral prime, and $F(1,98) = 3.07$, $p = 0.083$ for the gratitude prime, with $F(1,98) = 0.43$, $p = 0.51$ for both primes combined. In Scenario 2, the moral prime had an effect of $F(1,97) = 0.24$, $p = 0.62$, with a gratitude prime effect of $F(1,97) = 0.28$, $p = 0.60$, and the same result for the combined effect of both primes. In Scenario 3, the moral prime had an effect of $F(1,100) = 0$, $p = 0.99$, gratitude prime an effect of $F(1,100) = 0.02$, $p = 0.89$ and both primes $F(1,100) = 1.18$, $p = 0.28$.

Repeated measures ANOVAs were also used to test for significance of risk-taking. The 2x3 repeated measures was set up with factor1 as above and factor2 = risk. The ANOVA revealed a significant effect for risk-taking in Scenario 2, $F(1,99) = 5.78$, $p = 0.018$. In Scenarios 1 and 3, the p values were 0.27 and 0.395 respectively.

Bayesian Analysis

Given the lack of significant results, Bayes factor analyses, and required Paired Samples T-Tests, were undertaken. While standard statistical analysis only allows for the rejection of the null hypothesis, it cannot actually confirm the null. Given the number of insignificant results and failure to find significant effects, analysis to confirm the null would allow for further understanding and interpretation of the results. Bayes factor analysis would allow for confirmation of the null. This analysis was based on the Bayesian theories discussed in Rouder, Morey, Speckman and Province (2012) and Rouder, Speckman, Sun, Morye and Iverson (2009). Bayesian analysis was undertaken using the University of Missouri's online Bayesian T-Test tool.

Tests for Scenario 1 showed $t(101) = 1.90$, $p = 0.06$. The resulting Bayes factors were a JZS Bayes Factor of 2.22, a Unit-Information Bayes Factor of 1.74 and a BIC Odds Bayes Factor of 1.70. For Scenario 2, results of $t(100) = 1.92$, $p = 0.06$, with a JZS Bayes Factor of 2.14, a Unit-Information Bayes Factor of 1.67 and a BIC Odds Bayes Factor of 1.63. For Scenario 3, results of $t(103) = 2.59$, $p = 0.01$, with a JZS Bayes Factor of 0.51, a Unit-Information Bayes Factor of 0.40 and a BIC Odds Bayes Factor of 0.38.

Bayes factor results for Scenarios 1 and 2 did not allow for the confirmation of the null hypothesis and are classed as barely worth mentioning (Jeffreys, 1961). Results for Scenario 3 indicate support for the null hypothesis.

Experiment 1 Discussion

The results of Experiment 1 failed to support the hypotheses that moral deficit priming will lead to increased pro-social behaviour, and that moral credit priming will lead to increases in immoral behaviour. Under three separate scenarios requiring

individuals to choose actions that would benefit either themselves or others (the community at large), no significant effects were found.

These findings contradict Sachdeva et al. (2009) who found perceived threats to moral identity lead to increased attempts to regain self-worth, while affirmation of moral identity provides a license to act immorally. The results also conflict with Effron et al.'s (2009) findings of endorsement of (then) Senator Obama and subsequent pro-White biased expressions, and Monin and Miller's (2001) findings regarding establishment of non-prejudicial credentials and subsequent politically incorrect statements. Further, this lack of moral self-licensing effect differs from Khan and Dhar's (2006) work on moral self-licensing in choices of luxury and utilitarian consumption.

Similarly this thesis's results are inconsistent with Bartlett and DeSteno (2006) who found that gratitude increased efforts to undertake either pro-social behaviour, or actions that the participant was aware were beneficial to others. In addition, the findings contradict the theoretical work of Simmel (1996), and the view of gratitude as a decision-making emotion. This experiment also did not find a statistically significant combined effect or interaction between the two primes. Previous published studies had not examined such interaction, and hence no comparison is possible.

Limited support was found for the effect of risk-taking measures as a predictor of behaviour or future decisions. Results from Scenario 2 indicate a significant effect for risk-taking measures, though this result was not repeated across Scenarios 1 or 3.

Finally, comparing the decisions made by participants as themselves, or as a hypothetical other, no significant difference was found between results. Indeed, Bayesian analysis indicates that in Scenario 3, the result support the null hypothesis.

Failure of Priming?

The failure to replicate, or at least produce results somewhat in line with previous research requires consideration of the design and methodology of Experiment 1. One possibility is that the primes for moral self-licensing and gratitude were either insufficient or flawed.

Moral Self-Licensing Prime

Experiment 1 used a moral self-licensing prime based on Sachdeva et al. (2009), itself a modification of one shown to affect moral identity by Reed, Aquino and Levy (2007) in cases of brand identity and goodwill. However, in Reed et al.'s (2007) prime, participants were presented with specific, hypothetical circumstances of moral behaviour intended to affect their moral state. Similarly, Sachdeva et al. (2009) required participants to initially read a list of words that were positive, negative or neutral, and consider the meaning of each word. Participants were then required to write a short story about themselves including all the words on the list.

In contrast, the prime used in Experiment 1 merely required the story element of Sachdeva et al. (2009), and neither the initial list of words for later use, nor the specific hypothetical example of Reed et al. (2007). It is possible that by allowing participants the freedom to produce their own story, with neither the specifics of a pre-created hypothetical, nor the enforced language and length of the list and short story option, the prime used in Experiment 1 failed to correctly affect the moral self

view of participants. However, this cannot be confirmed however to the absence of a manipulation check, such as a neutral condition.

A further possible explanation is that, by not utilising a list of specific traits, such as Sachdeva et al. (2009), the prime used in Experiment 1 was open to the inclusion of amoral positive and negative characteristics. While the use of traits such as physically attractive, artistic, athletic etc., fits within the broad scope of positive and negative traits, they do not have a specific moral implication. The use of such traits by participants would allow them to complete the prime tool, but not actually be morally primed as intended. As with the above explanation however, the lack of manipulation check means this explanation cannot be confirmed.

Gratitude Prime

Similarly to the moral prime, it is possible that modification also reduced the effectiveness of the gratitude prime used in Experiment 1. The original prime used by Bartlett and DeSteno (2006) utilised female confederates who were blind to the hypotheses of the study. Additionally, their prime included tasks with joint scores to ensure legitimacy of subsequent gratitude priming behaviour between the participant and the confederate. Such a process, while long, allowed gratitude and emotional development between the participant and confederate over a period of time. While Experiment 1 used a gratitude manipulation tasks very similar to Bartlett and DeSteno (2006), it did not use actual confederates or the prior tasks, which provided a level of legitimacy to subsequent emotional interaction. Such simplifications were required given gratitude was not the only focus of Experiment 1, and recreating the original prime would have adversely impacted the test for moral self-licensing. However it is also possible that removing the prior tasks, which provided emotional

legitimacy, meant participants viewed this manipulation as an isolated experiment, without the development towards gratitude and desire to help.

It is also important to consider the deception alternative used in place of confederates in Experiment 1. For Bartlett and DeSteno (2006), the female confederates had the dual advantages of being unable to accidentally give away the true purpose of the study, and having no power imbalance in the confederate-participant relationship. This lack of power imbalance was not replicated in Experiment 1 using the deception mechanism.

While participants may view a research assistant, the deception used, as less an authority than an experimenter, in this case presented as a Professor in the Psychology Department, they still hold higher authority than the participant. As demonstrated by research examining student-tutor relationships in higher education (Spencer-Oatey, 1997) and the nursing field (Stephenson, 1984), students see authority in student teachers such as tutors and research assistants. As such, rather than removing the authority imbalance, which was the aim of the deception, it merely supplemented one authority imbalance with another.

Lack of Moral Self-Licensing – Gratitude Interaction

While it would be easy to explain away the failure to demonstrate any interaction between the moral and gratitude primes as a product of the failures of both primes, this may be too simple. It should be considered whether an interaction between the two primes is possible under any circumstances, including a mirror image of previous research into each individual element?

Does moral self-licensing overwhelm other considerations, such as gratitude, when making decisions? In circumstances of moral violation, the general outcome is stigma and negative image (Moore et al., 2010; Baucus & Baucus, 1997; Davidson, Worrell & Lee, 1994). Towards stigmatised individuals, behavioural changes by others are overwhelmingly negative and expected (Akhigbe et al., 2005). Similarly, those who fail to show gratitude and act accordingly are labeled with a similar type of stigma. However the ramifications and social implications of these stigmas differ substantially. To act in defiance of gratitude displays poor manners and judgment, to act in defiance of morality displays darker tendencies. If we assume that stigma from a moral failure is greater than from a violation of gratitude, it is arguable consideration of the implications of moral failure stigma override other considerations, such as gratitude failure stigma. Following such reasoning, gratitude is not an adequate foil to moral self-licensing as originally hypothesised.

However research into political convictions and responses raises questions about this line of argument. In research on the moral and emotional bases for public policy preferences, Skitka and Wisneski (2011) found that positive and negative emotions partially mediated the effects of prior policy convictions and resulting behavioural tendencies. Their findings indicated that emotions would mediate commitment to activism or similar pursuits of political policy activity. Therefore though a combined effect of morality and emotional state on behaviour is questionable, emotions act to moderate and arbitrate outcomes. It should be noted however, that gratitude made up just one of the emotions analysed in Skitka and Wisneski's (2011), where emotions were categorized as positive or negative, and no emotion was analysed individually. Furthermore, there is a difference between moral convictions and moral self-licensing. Moral convictions are long associated with

certain emotional states, for example anger (Mullen & Skitka, 2006), as well as motivators for behaviour (Morgan & Skitka, 2012), where as moral self-licensing seeks to explain behaviours associated with maintaining a form of internal moral balance. Hence, while emotions may be able to sway moral conviction based behaviour, it does not necessarily follow that the same is true of emotions and moral self-licensing.

Given the relatively small body of previous research and experiments exploring moral self-licensing from a psychological perspective, let alone potential interaction with emotions, Experiment 1 broke new ground. However it did so in a simplified form subsequently reflected at least partially in the results obtained.

Flaws in Situation Designs

Scenario 1

Scenario 1 in Experiment 1 was borrowed almost directly from Sachdeva et al. (2009), with few changes. However, while the results of Scenario 1 failed to find a significant moral self-licensing effect, Sachdeva et al. (2009) found statistically significant effects for both the moral credit and deficit conditions. Given that changes were made in the priming task, but not the wording of the scenario, one conclusion is that the moral self-licensing priming tool used in this experiment was insufficient.

However, another interpretation of the findings is that moral self-licensing theory as an explanation and predictor of behaviour is less pervasive than claimed by Sachdeva et al. (2009). Scenario 1 utilised a hypothetical situation foreign to the participant population, and not readily relatable to everyday decisions or

circumstances participants would usually face. Whether this difference to experienced circumstances represents a barrier to moral self-licensing, and hence provides scope to how the theory may be applied, should be further considered. Though issues with the prime must be considered, it should not be at the expense of alternative explanations. Further data is required to explore this possibility.

Scenario 2

Scenario 2's situation of lying to one's parents was age-appropriate given the demographic composition of the participant population. However, it is arguable the scenario was flawed in presenting two alternatives with unequal gains and losses. Lying has been established as a common, everyday existence. In a 1996 study of various population samples, including college students, DePaulo, Kashy, Kirkendol, Wyer and Epstein found participants averaged between 1 and 2 lies a day, depending on age and community. They also found that while interactions involving lying were experienced as less pleasant and more negative, they were not regarded as serious. Further the threat of being caught lying had little effect of plans to cease lying.

Significant volumes of research also indicate young adults have a willingness, if not propensity, to lie to their parents. In a study of 229 high school students and 261 American college students, Jensen, Arnett, Feldman and Cauffman (2004) found that for young adults, lying to parents may constitute an expression of the right to autonomy. Although high school students, broadly classed as adolescents, were more accepting of lying, and lied to authority figures including their parents more frequently, college students still lied to their parents on a range of topics, while less accepting of lying overall.

The results of Scenario 2 may provide further scope to the applicability of moral self-licensing theory in explaining decisions and behaviour. In circumstances similar to Scenario 2, where alternative decisions have unequal consequences, moral self-licensing is unlikely to predict behaviour. As discussed below, the results of Scenario 3 provide further evidence of this.

Scenario 3

In contrast to Scenario 2, where the lack of balance in the alternatives options was towards the less moral decision, Scenario 3 presented the opposite. An overwhelming number of participants in Scenario 3 chose not to cheat, under risk of discovery and expulsion.

Various studies have identified different levels of cheating in higher education (Burns, Davis & Hoshino, 1998; Davis & Ludvigson, 1995; Stern & Havlicek, 1980). However all have found that cheating is a not insubstantial problem. Indeed it is relatively common, including across cultural settings (Burns et al., 1998). Although various mechanisms have been proposed to prevent cheating, the threat of expulsion has been established as perhaps the most efficient.

In a study of Japanese and South African high school and university students, expulsion from school was identified as the threat most likely to discourage cheating (Burns et al., 1998). This finding was consistent across respondents who did not cheat, who only cheated once or twice, and those who reported consistently cheating. While the value of self-reporting by regular cheaters is questionable, given most higher education academic institutions commonly expel students caught cheating, responses from occasional and non-cheaters indicates the severity of the perceived outcome.

Similarly, a study by Hall and Kuh (1998) examining attitudes towards cheating amongst students, academic staff and university administrators found expulsion was seen by all groups as a major deterrent to cheating. Students also indicated they would be unlikely to take action against cheating peers given the risk of severe punishments such as expulsion. This attitude only changed when one student's cheating was seen as having a negative effect upon an individual's own academic performance.

Therefore, the results of Scenario 3 may be interpreted as providing additional evidence that theoretically, moral self-licensing may not offer an explanation of behaviour where decisions concern two unbalanced alternatives. Though the results of Scenarios 2 and 3 are by no means definitive, nor is this explanation the only possibility (see above discussion of issues with the design of the prime tool), it presents questions regarding the application, and interpretation, of moral self-licensing theory.

Absence of Risk as a Factor

Measures of risk-taking as a predicting factor were only found to be statistically significant in Scenario 2, with risk failing to reach significance in Scenarios 1 or 3. This is notable given the issue of unbalanced alternative decisions in Scenario 2 discussed above. However, that explanation does not account for the analysis of risk.

One possible explanation is that despite the ease with which young adults lie to their parents, Scenario 2 provided a semblance of balance between risk and rewards. In Scenario 3, it is clear that the risk posed was too great, and overly discouraged one behavioural option. In Scenario 1, it could be argued that risk was in fact not a

pertinent factor as there were equal risks to any course of action. Scenario 1 clearly established that whatever response was given, it was a tradeoff: either profit could be increased while decreasing the chance of promotion, or pollution could be decreased. Contrastingly in Scenario 2, though the risk of the lie being discovered is low, it still exists without overwhelming, or being overwhelmed by the alternative.

A second potential interpretation of the results is that there was insufficient differentiation between participants' risk scores. The degree, to which participant risk scores grouped around the midpoint of the scale, rather than more evenly spread from one end to the other, indicated a participant pool with similar risk-taking and interpretation. Potentially, this similarity resulted in too little statistical difference between risk-scores to measure for an effect. Though an effect of risk in was found to be statistically significant in scenario 2, the lack of significance in scenarios 1 and 3 may be interpreted as indicating any effect was too small to be found with smaller participant pools and limited variation in risk scores. Further study and analysis is required to determine what role, if any, risk may play in moral self-licensing or gratitude decisions.

“Safe” and Whole Number Anchoring

One final feature of the results from Experiment 1 that should be addressed was the inclination of some participants to anchor to 60 per cent as their filtering level in Scenario 1. Given 60 per cent was the filtering percentage provided as an example to participants as that previously agreed to, this is one potential explanation for its prevalence. Furthermore, many participants appeared to treat the response scale as one with multiples of 10 as set value points, rather than any value between 0 and 100.

Although the topic of “safe” number anchoring has garnered very little discussion in psychological literature, numerous tactics have been developed to accommodate it. One common approach is to recode data to account for the practice, although this was not appropriate or necessary for the results of Experiment 1.

However, another explanation is worth considering. As is common practice within social psychological research, Scenario 1 of Experiment 1 required participants to express their decision and view as a single figure. By anchoring to whole and safe numbers, it may be an indication that participants did not have a definitive answer and would have preferred the option of responding with a set range of values i.e. 50-70. Without this option participants split the difference, with individual differences in opinion grouped together under “safe” mean answers.

While anchoring to 60 may have been the result of it being presented in the scenario, alternative reasons for anchoring to whole numbers are important. If a portion of the anchoring represents an attempt to “split the difference”, and a wish to give answers as a data range rather than single figure, this could have major implications for interpretation of results. Unfortunately, there is insufficient data to explore this further in Experiment 1.

Experiment 2 Introduction

The failure to replicate previous findings and produce statistically significant results in Experiment 1 was the result of multiple factors, both methodological and theoretical. Both sets of factors provide substantial direction for Experiment 2.

Revision of Scenarios

All scenarios used in Experiment 1 may be criticised on a number of points. It is important to address these in designing appropriate scenarios and questions for Experiment 2.

Plant Manager Scenario

Despite the theoretical considerations discussed above, which require further data, replication of Sachdeva et al.'s (2009) environmental management scenario still represents a reliable, established test of moral self-licensing. However, participant responses in this scenario in Experiment 1 displayed significant safe number anchoring, specifically to the provided filtering level examples. Though similar wording and provision of example percentages was used in previous studies, such as Sachdeva et al. (2009), and Khan & Dhar (2006), the issue cannot be ignored for Experiment 2.

One alternative approach is to provide a contrast between human and financial cost. Such a description might read, " P per cent of emissions unfiltered equals B number of members of the community suffering side effects." Further, " x per cent of filtered emissions will cost y per cent of profits, though x per cent of unfiltered emission will result z per cent of profits due to community sentiment and criticism." Although such an equation does not completely mitigate the possibility of participants anchoring to the provided numbers, it removes the obvious option, as provided in Experiment 1.

The wording in Experiment 1 also presented an example filtering level slightly above half the time, which, whether an individual was primed to moral credit or deficit, potentially provided an attractive point to anchor. In contrast, the use of an equation such as the above would require participants to anchor to a very low level

of filtering (i.e. $P = 10$ per cent), which is not a theoretically viable option across both moral prime conditions.

Further Environmental Scenarios

A potential criticism of Experiment 1 was the lack of focus between scenarios. Given Sachdeva et al.'s (2009) scenario focuses on environmental v. monetary decision-making, developing scenarios with some degree of consistency in focus, for example the environment, may provide a better test of moral self-licensing.

Three possibilities are questions of personal costs to address climate change, recycled water and acceptance of nuclear power. All issues have featured in Australia's recent environmental and political discourse, and have engendered public discussion regarding the correct environmental direction for the country to pursue. The implementation of the carbon pricing mechanism by then-Prime Minister Gillard proved controversial, with polling demonstrating drastic divisions in public favourability (Tingle & Priest, 2012). Similarly a 2006 referendum in Toowoomba, North Queensland resulted in a 62 per cent vote against the use of recycled water (The Chronicle, 2011), while the West Australian public largely supported a trial of similar measures (Trenwith, 2012). Finally, nuclear power is a constant issue in Australian environmental politics, with differing levels of support across polls (McNair Gallup Poll, 2007; The Sydney Morning Herald, 2009).

Interpersonal Relationships

However, it is important this thesis considers moral self-licensing in types of scenarios not previously explored. One area of direction is interpersonal

relationships, and building on the results from Scenarios 2 and 3 from Experiment 1, the experience of emotions such as guilt and resentment in relationship decisions.

Moll, de Oliveira-Souza and Eslinger (2003) have theorised a link between the experience of brain-behaviour interaction and our moral reasoning. Further, using fMRI studies Moll, de Oliveira-Souza, Garrido, Bramati, Caparelli-Daquer, Paiva, Zahn and Grafman (2007) illustrated distinct patterns of brain activation when comparing “prosocial”, “empathic”, and “other-critical” emotional questions. Borg, Hynes, Van Horn, Grafton and Sinnott-Armstrong (2006) also found similar brain activity when comparing various “moral” and “nonmoral” scenarios with fMRI.

Moll et al. (2003) also proposed a further link between moral reasoning and common human experiences, including religion and interpersonal relationships. They argued this stemmed from the link between experience of brain-behaviour interaction and moral reasoning. This link has been described as a neural basis for humans’ unique moral cognition (Moll, Zahn, de Oliveira-Souza, Krueger & Grafman, 2005). During interpersonal relationships, it is common to experience a range of emotions that previous fMRI studies have linked to differing brain activity. Guilt, resentment, love and happiness are examples (Moll et al., 2007; Borg, Hynes, Van Horn, Grafton & Sinnott-Armstrong, 2006). As Prinz (2006) summarises, moral judgments may be viewed as emotional in nature. Hence, a manipulation of such emotions may alter subsequent moral judgment. Similarly, manipulation of moral condition may result in different emotions experienced in interpersonal relationships.

Moral Self-Licensing: Single Focus

Interpreting the results of Experiment 1, the limitations of examining moral self-licensing and gratitude in the same experiment were considered. Specifically,

whether adequate experimental materials and method, without the benefit of a true confederate or other additional resources as previously utilised by Bartlett and DeSteno (2006), could be designed to correctly prime for both moral self-licensing and gratitude. The results of Experiment 1 clearly demonstrated the limitations of utilising deceit and a faux-confederate, and it is probable that similar limitations and failures would be repeated should a revised prime still utilising such conditions be repeated. Therefore, given this thesis' primary focus is on the emerging theory of moral self-licensing, not gratitude, it is more appropriate to examine this singularly, and exclude gratitude from Experiment 2.

However, in order to continue to explore moral self-licensing in different directions, a decision-feedback tool utilising various sources of feedback may be included. This would provide data on both original decisions, as well as how such feedback interacts with, and potentially affects, subsequent moral self-licensing primed decisions. Using Sachdeva et al.'s (2009) production plant environmental management scenario, this may be achieved by splitting the scenario into two phases. Initially participants indicate their preferred level of filtering. They subsequently complete the moral prime and are provided with a form of feedback, specifically criticism. Following this criticism, participants are asked whether they wish to reconsider their previous responses. For this experiment, the criticism feedback would come from either the hypothetical company the participant works for, or the surrounding community.

This method draws on Khan and Dhar's (2006) research into consumer choice as well as Strahilevitz and Myers' (1998) analysis of the interaction between charitable donations and subsequent consumption. In their work, Strahilevitz and Myers (1998) demonstrated that promised charitable acts, specifically donations,

promoted subsequent consumption of luxury items and goods, though the same effect was not found in the consumption of everyday items, those potentially viewed as necessities.

In this proposed criticism feedback method, a participant's reaction to community criticism is akin to the altruistic response of Khan and Dhar (2006) and the promised charitable acts donations of Strahilevitz and Myers (1998). Conversely, the reaction to company criticism and the pursuit of profits is likely akin to the hedonistic reaction of Khan and Dhar (2006). This two-phase design also has the added benefit of providing a within subject test of the moral prime tool.

It should be acknowledged that the use of the two-phase design might provide participants the opportunity to undertake an alternative form of safe number anchoring: their reconsidered answers anchored to their initial responses pre-prime and criticism. This could potentially confound the effect of the utilised primes. However, such safe number anchoring would not be problematic for the purposes of Experiment 2 as it would provide further evidence concerning conditions that may limit the applicability of moral self-licensing theory as an explanation for behaviour.

Whether community criticism could really be expected to elicit an altruistic response should also be considered. Arguably, the theoretically increased filtering due to such criticism may not reach the level of luxury consumption demonstrated in Strahilevitz and Myers (1998). Instead participants may interpret it as akin to daily necessities. However, Khan and Dhar's (2006) research demonstrated the importance of the extent of giving in subsequent altruistic acts and charitable behaviour. Used as a guide, as long as the criticism from either source is perceived to be strong enough

by the participant (extent of the giving in Khan and Dhar (2006)), it can be expected to elicit the theorised response.

Revision of the Priming Tool

It is clearly important to revise the moral self-licensing prime used in Experiment 1. A failure of the moral prime in Experiment 1 was that it was overly vague, and did not specify a definitive negative of positive moral act and/or use of descriptors. While the prime of Reed et al. (2007) or Sachdeva et al. (2009) may be appropriated, it is worth considering a further modified version, as this potentially provides increased scope to consider the conditions required for moral self-licensing.

One option is to ask participants to consider a specific, recent good or bad deed they have performed and how this affected others. Participants would then write a short piece detailing this deed, the effects it had on others, and how the participant feels about this now. The design addresses the over-simplification of the prime in Experiment 1, while also providing a greater focus on the positive and negative moral conditions.

Measure of Risk

Presenting an appropriate picture of propensity for risk-taking is important. Weber et al.'s (2002) Domain-Specific Risk-Attitude Scale provided an age-appropriate measure for participants who were university students. However this is inappropriate for a participant pool with greater variation in age. An alternative is to utilise Blais and Weber's (2006) revised Domain-Specific Risk-Taking Scale. The revised scale adopts questions applicable across a wider age range. Additionally, it reduces the overall number of items from 40 to 30.

Experiment 2

Experiment 2 aimed to test for moral self-licensing, the effects of criticism feedback, and joint moral self-licensing-criticism effects. Further, Experiment 2 explored moral self-licensing theory in interpersonal relationship situations. Experiment 2 also aimed to examine the relationship between risk-taking and moral self-licensing behaviour. Changes and alterations to materials and method were made to reflect deficiencies and considerations following Experiment 1.

Experiment 2 utilised a similar design to Experiment 1, with a number of important alterations. A scenario based on Sachdeva et al. (2009), and included in Experiment 1, was once again used, however it was altered to include pre and post moral prime questions, as well as the above discussed criticism feedback. The moral prime was also revised, as discussed above. A variety of other scenarios that focus on environmental issues, a continuation of one theme of the Sachdeva et al. (2009) scenario, were also included. Finally, an interpersonal relationship themed scenario was used. Risk-taking was controlled for through the use of Blais and Weber's (2006) revised Domain-Specific Risk-Taking Scale.

This thesis hypothesised that participants under the moral credit condition would exhibit greater morally negative behaviour while those in the moral deficit condition would exhibit greater morally positive behaviour. It was also hypothesised that the criticism conditions would interact with the moral self-licensing conditions: company criticism would increase morally ambiguous or immoral behaviour while community criticism would increase morally positive behaviour. Furthermore, it was hypothesised that participants in the moral deficit condition may display more prosocial interpersonal relationship behaviour, and vice versa.

The relationship between risk-taking and moral self-licensing was also examined. Higher risk-taking scores were predicted to be related to increased moral licensing behaviour.

Experiment 2 Method

Participants

Experiment 2 had 115 participants (48 males, 67 females), with an age range of 18 to 59, and a mean of 23.45 (SD = 6.14). Participants included both undergraduate students, and members of the wider public. Australian National University students enrolled in first year psychology were eligible for 1-hour course credit.

Design

Experiment 2 utilised a 2 (moral credit v. moral deficit prime) x 2 (company criticism v. community criticism) x 2 (original negotiation v. renegotiation) experimental design.

Materials

Participants in Experiment 2 undertook a questionnaire made up of 3 question sections.

Participants were initially presented with a refined version of the manufacturing plant manager hypothesis used in Experiment 1, itself based upon the work of Sachdeva et al. (2009). In this version of the hypothetical, participants were informed that for every 10% of unfiltered release, 1000 people in the community would suffer side effects. Participants were also informed that every 10% of filtration would cost the company 3% in profits, however, every 10% not filtered would result

in a 2% loss of profits due to negative publicity. Participants were also offered a \$250 salary increase for every 1% of filtration prevented.

Participants were questioned on how much they would agree to filter, how much they believed a manager at a rival company would agree to filter, and how much they believed another manager at the same company would agree to filter. The use of both another manager at the same company and a manager at a rival company was an attempt to control for a potential the Wilder or Bradley Effect in participants responses given the socially unacceptable nature for certain decision options (Hopkins, 2009; Stout & Kline, 2008).

Participants were subsequently primed using a tool based on Sachdeva et al. (2009), similar to that used in Experiment 1. However, in this instance the prime questioned a specific good or bad deed rather than general positive or negative personality traits.

Participants were then informed that their previous decision had come under criticism from either the company or community. In light of the criticism, participants were asked whether they would seek to re-negotiate their position, and were then re-presented with the previous questions. Participants were also questioned whether they believed another manager at their company and a manager at a rival company would seek to renegotiate their position and if so, to what level.

In the second set of questions, participants were presented with three hypothetical scenarios concerning various environmental and community issues: those of a carbon price, recycled water and nuclear power. The carbon price hypothetical is presented as an example in Table 4.

Table 4

Example of moral choice paradigm: carbon price

The Australian Federal Government has recently announced the details of its Carbon Pricing scheme, in order to reduce Australia's carbon emissions. Under this plan consumers will not be taxed, instead 500 of Australia largest polluting companies will pay for their emissions.

However, **suppose hypothetically** that the carbon tax was to also be imposed upon individuals.

1. Using a range of 1-10% of your personal, pre-tax income, please indicate how much you would be willing to pay to do your part under such a hypothetical tax. Please note this amount would be in addition to standard income tax.
2. Do you believe that there has been human induced climate change? Y/N
3. Do you believe that action needs to be taken in order to either counter, or mitigate climate change? Y/N

The final hypothetical scenario was a situation involving their current romantic partner and a choice between a once in a lifetime opportunity to meet a childhood hero or undertake a trip their partner had been planning for some time. Questions enquired as to feelings of resentment and guilt related to the alternative choices.

Finally, participants were asked a series of demographic questions, as well as Blais and Weber's (2006) revised Domain-Specific Risk-Taking Scale. The updated 2006 scale was used in Experiment 2 given wider demographic applicability. A complete copy of the Experiment 2 materials is attached as Appendix B.

Procedure

Experiment 2 was presented using the Qualtrics online survey tool, enabling participants to access the study from a venue of their choice. Consent was first obtained, following which a brief passage of text explained the basic purpose of the study. Participants then made their way through the questions strands. Both the moral prime, and the company v. community criticism variable were randomly assigned by the Qualtrics software, which was programmed to randomly assign using a 1:1 overall ratio.

Following completion of the study, participants were provided with a debriefing document explaining the aims and hypotheses of the research, as well as experimenter and ethics office contact information.

Experiment 2 Results

Data Screening and Cleaning

Data screening and cleaning, as well as subsequent analysis was performed using IBM SPSS Statistics 20 for Mac. Dependent variables were assessed for measures of skew and kurtosis. Data from the first scenario, before and after priming, indicated slight positive to slight negative skew, and slight positive to moderately negative kurtosis. Similar results for found for the following 4 scenarios, with slight negative to positive skew, and slight negative to positive kurtosis. Both transformation and recoding of data proved inappropriate. Box-plots revealed no significant univariate outliers were found, whilst Mahalanobis distance evaluation showed no multivariate outliers.

Two participants had failed to complete the majority of the experiment, and were excluded from subsequent analysis, while a further 3 were excluded for failure

to complete the moral prime. Missing values analysis revealed other missing values were spread randomly throughout the data, and accounted for less than 2% of responses. The “exclude cases pairwise option” was therefore selected for subsequent SPSS analysis. Missing values analysis also revealed a number of missing values in Blais and Weber’s (2006) Domain-Specific Risk-Taking Scale, including 8 participants who failed to complete the scale. For the other participants with missing values, the missing data accounted for less than 2% on the total scale items. Descriptive statistical analysis both including and excluding each participant revealed similar means and standard deviations. Cases were therefore included, with mean substitution used for missing values.

Initial Descriptive Analysis

Primary descriptive statistics examination revealed mixed results. Mean filtering levels were found to be lower in the moral credit prime condition compared to the moral deficit prime condition across the *yourefilter*, *rivalrefilter* and *otherrefilter* questions. Similarly, mean filtering was lower across the same questions in the company criticism condition compared to the community criticism condition. Across all four conditions, *rivalrefilter* demonstrated the lowest filtering level.

Means were also inspected for evidence of a possible interaction between the moral self-licensing and criticism primes. As can be seen in Table 5, difference in mean filtering between the moral credit and deficit primes, across the three questions, was most marked in the community criticism condition. In contrast, in the company criticism conditions, means were more similar across the two moral prime conditions.

Table 5

Difference in Mean Filtering Percentage for Refilter Questions in Moral Self-Licensing Prime by Criticism Prime Interaction

| Filter Dependent Variable | Prime Condition | Mean (SD) | Mean (SD) | Overall Mean |
|---------------------------------|------------------------|----------------------|------------------------|--------------|
| | | Company Criticism | Community Criticism | |
| yourefilter | Moral Credit Prime | 50.40 (28.26) | 43.00 (23.62) | 48.38 |
| | Moral Deficit Prime | 46.00 (28.22) | 57.76 (26.22) | 54.98 |
| | Overall Mean | 49.32 | 53.88 | |
| | | Company Criticism | Community Criticism | |
| rivalrefilter | Moral Credit Prime | 39.95 (24.02) | 29.33 (17.15) | 37.05 |
| | Moral Deficit Prime | 42.62 (24.47) | 50.24 (23.01) | 48.41 |
| | Overall Mean | 40.60 | 44.64 | |
| | | Company Criticism | Community Criticism | |
| otherrefilter | Moral Credit Prime | 46.03 (26.35) | 32.33 (17.31) | 42.29 |
| | Moral Deficit Prime | 42.54 (23.75) | 51.12 (24.71) | 49.09 |
| | Overall Mean | 45.17 | 46.18 | |

Line graphs were subsequently used to further examine the interaction pattern across the three refiltering questions. As can be clearly seen in Figures 1, 2 and 3, differences between filtering percentages in the moral credit and deficit prime conditions are only apparent in the community criticism condition. In the company

criticism condition, this difference is smaller, with the moral prime condition effect smaller.



Figure 1. Difference in yourefilter mean filtering percentage between moral credit and deficit prime conditions, and company and community criticism conditions.



Figure 2. Different in rivalrefilter mean filtering percentage between moral credit and deficit prime conditions, and company and community criticism conditions.

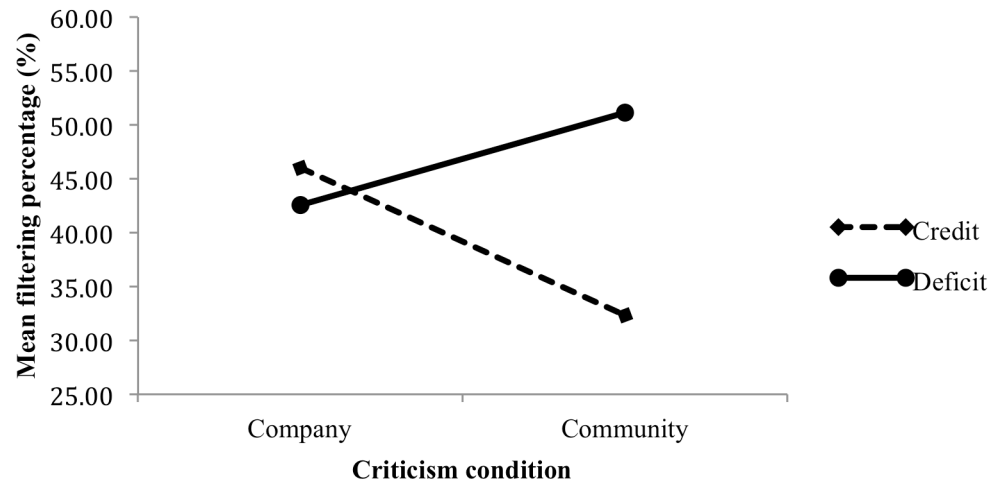


Figure 3. Difference in otherrefilter mean filtering percentage between moral credit and deficit prime conditions, and company and community criticism conditions.

Descriptive statistics were also used to examine the frequency of renegotiation in Scenario 1. As Table 6 shows, participants in the moral credit condition had a higher frequency of renegotiation across all refilter questions compared to participants in the moral deficit condition. Similar statistics also revealed participants in the company criticism condition had a higher frequency of renegotiating across all refilter questions compared to the community criticism condition, as shown in Table 7.

Table 6

Difference in Renegotiation Frequency (as percentage) for Refilter Questions in Moral Self-Licensing Prime Conditions

| Filter Dependent Variable | Renegotiate | Not-renegotiate |
|-------------------------------|-------------|-----------------|
| Moral Credit Prime Condition | | |
| yourefilter | 63.63 | 36.37 |
| rivalrefilter | 58.18 | 41.81 |
| otherrefilter | 69.09 | 30.91 |
| Moral Deficit Prime Condition | | |
| yourefilter | 58.18 | 41.81 |
| rivalrefilter | 47.27 | 52.73 |
| otherrefilter | 58.18 | 41.81 |

Table 7

Difference in Renegotiation Frequency (as percentage) for Refilter Questions in Criticism Condition

| Filter Dependent Variable | Renegotiate | Not-renegotiate |
|---------------------------|-------------|-----------------|
| Company Criticism | | |
| yourefilter | 66.04 | 33.96 |
| rivalrefilter | 56.60 | 43.40 |
| otherrefilter | 67.92 | 32.08 |
| Community Criticism | | |
| yourefilter | 56.14 | 43.86 |
| rivalrefilter | 49.12 | 50.88 |
| otherrefilter | 59.65 | 40.35 |

Means were also inspected for data from the climate change, recycled water, nuclear energy and relationship scenarios. In the climate change scenario there was

little difference in the percentage of tax participants were willing to pay to combat climate change between the moral credit and deficit prime conditions, illustrated in Table 8. Participants overwhelmingly believed in climate change and government action to address it, with too little difference to analyse the effect of the prime.

Table 8

Difference in Mean Additional Tax Paid (in percentage) to Address Climate Change in Moral Self-Licensing Prime Conditions

| Prime Condition | Mean | Standard Deviation |
|-----------------|------|--------------------|
| Moral Credit | 2.46 | 2.05 |
| Moral Deficit | 2.48 | 2.29 |

Table 9

Difference in Mean Acceptance of Recycled Water and Nuclear Energy in Moral Self-Licensing Prime Conditions

| Prime Condition | Mean | Standard Deviation |
|-----------------|---------------------------|--------------------|
| | Acceptance Recycled Water | |
| Moral Credit | 4.92 | 1.34 |
| Moral Deficit | 4.66 | 1.85 |
| | Acceptance Nuclear Energy | |
| Moral Credit | 3.48 | 1.69 |
| Moral Deficit | 3.40 | 1.78 |

Note. Results indicate mean of participant's answers given utilising seven point Likert scale where 1 = extremely unwilling, 4 = neutral, 7 = extremely willing.

Both the recycled water and nuclear energy scenarios generated similar descriptive statistics to the climate change scenario. In both, there was little difference in mean acceptance of either recycled water or nuclear energy between prime conditions. This is shown in Table 9.

In the relationship scenario, there was some difference between the moral credit and deficit primed participants in mean guilt felt if they pursued their activity (meet childhood hero) as opposed to their partner's activity (took a trip), but little difference in mean resentment where they undertook their partner's activity rather than their own. These results are shown in Table 10. Regardless of moral prime, participants indicated both communications and compromise were very important to a successful relationship.

Table 10

Difference in Mean Guilt and Resentfulness in Moral Self-Licensing Prime Conditions

| Prime Condition | Mean | Standard Deviation |
|-----------------|---------------|--------------------|
| | Guilt | |
| Moral Credit | 2.98 | 1.70 |
| Moral Deficit | 3.24 | 1.79 |
| | Resentfulness | |
| Moral Credit | 3.71 | 1.88 |
| Moral Deficit | 3.82 | 1.55 |

Note. Results indicate mean of participant's answers given utilising seven point Likert scale where 1 = extremely guilty/resentful, 4 = neutral, 7 = extremely non-guilty/non-resentful.

Univariate and Repeated Measures

Data was subsequently analysed using repeated measures ANOVA to test significance of moral self-licensing prime and criticism prime conditions. The 3x2 repeated measures ANOVA was set up with factor1 = which filter (i.e. you, rival, other) and factor2 = the prime (i.e. pre and post prime). Both the moral and criticism primes were included as between-subjects variables.

ANOVA analysis revealed mixed results. The interaction effect of the moral prime and factor2 reached significant, with $F(1,105) = 6.14$, $p = 0.015$. However, the interaction effect of the criticism prime and factor2 failed to reach significance, $F(1,105) = 0.29$, $p = 0.589$, as did the interaction between the moral prime, criticism prime and factor2, $F(1,105) = 0.78$, $p = 0.379$. Analysis of within-subjects effect of risk taking failed to reach significance.

ANOVA results also indicated a number of interaction effects had borderline p-values, only slightly above the accepted cut-off for significance. The interaction effect between factor1 and factor2 was $F(2,104) = 2.71$, $p = 0.071$, while the 3-way interaction between factor1, factor2 and the criticism prime was $F(2,104) = 3.07$, $p = 0.051$. This 3-way interaction effect is especially close to significance, important to note given the limited sample size.

Repeated measures ANOVA results also revealed that the effect of the interaction between the moral self-licensing and criticism primes reached significance when tested for between-subjects effects. In this case, $F(1,105) = 4.11$, $p = 0.045$. Neither the moral nor criticism primes recorded significant main effects.

Simple Effects Analysis

Simple effects analysis was performed to further explore the significant within-subjects interaction effect of the moral prime and factor2, and the between-subjects effect of the interaction between the moral and criticism primes. The simple effects analysis was performed using ANOVA and splitting the data set.

Splitting the data file by moral self-licensing prime condition (i.e. separate moral deficit and moral credit data sets) revealed mixed results. While the interaction

effect of factor2 and the moral self-licensing prime was significant in the moral deficit condition, $F(1,52) = 8.65$, $p = 0.005$, it was not significant in the moral credit condition, $F(1,53) = 0.52$, $p = 0.473$.

Simple effects analysis of the between-subjects interaction effect of the moral and criticism primes revealed mixed results. The data set was split by criticism condition, and in line with the pattern demonstrated in Figures 1, 2 and 3, the interaction effect between the moral prime and the community criticism condition was significant, $F(1,54) = 6.72$, $p = 0.012$. However, no significant effect was found between the moral prime and the company criticism condition, $F(1,51) = 0.18$, $p = 0.673$.

Similar analysis was also performed with the data file split by moral self-licensing prime condition. Both the interaction between moral deficit prime and criticism, and moral credit prime and criticism failed to reach significance.

Experiment 2 Discussion

The results of Experiment 2 provided mixed support for the experimental hypotheses. Firstly, a significant effect of the moral prime on participant behavior was found: those primed using a moral credit tool would display increased immoral behaviour as opposed to those primed using a moral deficit tool. In scenarios akin to those utilised by Sachdeva et al. (2009), the moral prime was found to affect the level of filtering undertaken by participants. While analysis found an overall effect, simple effects analysis indicated mixed support. The moral deficit prime significantly affected the behaviour and choices of participants, however the moral credit prime failed to reach significance, although it did show the predicted mean difference. Therefore, results from Experiment 2 partially conflict with previously

discussed studies by Sachdeva et al. (2009), Effron et al., (2009) and Monin and Miller (2001).

Similarly mixed support was found for the hypothesised interaction between the moral and criticism primes: that company criticism would elicit further morally ambiguous or immoral behaviour, and community criticism would increase morally positive behaviour. While initial analysis revealed a statistically significant interaction effect between the moral and criticism primes, further simple effects analysis revealed mixed results. Splitting the data set by the criticism condition, a significant difference was found between the moral primes in the community criticism condition, but no significant difference was found between the moral primes in the company criticism condition.

This result partially conflicts with Khan and Dhar's (2006) work on consumer choice activation and subsequent self-attributions in the consumption of luxury or hedonistic goods, as well as Strahilevitz and Myers' (1998) findings regarding charitable activity and consumption of luxury against necessary items. However, as previously forecast, these findings may be explained by an alternative theoretical application of previous studies, as well as issues surrounding sample size and statistical power, which are discussed in greater detail below.

No support was found for the hypothesised effect that the moral prime would lead to increased morally positive or negative behaviour, depending on prime condition, in the various environmental scenarios, nor the interpersonal relationship based scenario. This does not conflict with Moll et al.'s (2003) proposed moral reasoning and human experiences link, but may assist in further exploring the proposal, as discussed below.

Finally, no support was found for increased moral licensing behaviour due to risk-taking propensity. It should be noted that, similarly to Experiment 1, there was a limited variance in participants' Blais and Weber (2006) risk-taking scores, which provided only limited scope for statistical analysis of possible effects of risk-taking propensity on behaviour.

Comparison of Effect Sizes

Given mixed support for the hypotheses, and differing effect sizes found in Experiment 2, it is worth comparing the effect sizes to previous research on moral self-licensing. Such comparison will highlight findings in this Experiment 2 that sharply contrast with previous results, as well as areas of similar data and effect sizes.

Experiment 3 in Sachdeva et al.'s (2009) paper provided the nearest "like-for-like" comparison with the manufacturing plant manager scenario from Experiment 2. Sachdeva et al. (2009) found significant effects in both the moral credit and deficit conditions. Asking participants what percentage they would filter pollution, with a hypothetical agreed rate of 60%, they found a mean of 73% for moral deficit participants, and 55.6% for moral credit participants, while results of what percentage another manager would filter did not reach significance. In contrast, Experiment 2 of this thesis found a filtering mean of 48.38% in the moral credit condition, and 54.98 in the moral deficit condition.

However a better comparison is of effect sizes using R^2 . To determine R^2 values, reported f-statistic scores were converted using the tool produced by Smithson (2000). In their moral credit condition, Sachdeva et al. (2009) reported $F(2,43) = 3.59$, $R^2 = 0.14$, compared to $F(1,53) = 0.522$, $R^2 = 0.01$ in Experiment 2 of

this thesis, which failed to reach significance. While Sachdeva et al. (2009) did not report the relevant F-statistic for their moral deficit condition, if a similar result to that obtained in the moral credit condition is assumed, this can be compared to the moral deficit results obtained in Experiment 2, $F(1,52) = 8.646$, $R^2 = 0.14$. Hence, in the moral credit condition, Sachdeva et al. (2009) found a larger effect size, though the effect size of moral deficit in Experiment 2 is similar to the reported moral credit effect size in Sachdeva et al. (2009).

A further comparison, though not “like-for-like”, is with Experiment 2 from Monin and Miller’s (2001) paper exploring moral self-licensing in the expression of prejudice. In their experiment, the only condition was moral credit, with no equivalent to the moral deficit condition used in this thesis. Monin and Miller (2001) found $F(1,124) = 6.3$, $R^2 = 0.048$ when measuring the effect size of the moral licensing behaviour in expression of prejudice. This is larger than the effect size of moral deficit in Experiment 2. Though obviously the two experiments examined moral self-licensing under different circumstances and using substantially different methods, comparison of the results provides further notable contrast with this thesis’ findings, which failed to reach significance in the moral credit condition.

Though other comparisons with previous studies are possible, the above reflected both the most similar experiments, in the case of Sachdeva et al. (2009), as well as a further example where experimental design allowed for such a comparison. Though further comparisons are possible, the above provides the necessary snapshot.

A(nother) Question of Moral Self-licensing Priming

While more effective than that used in Experiment 1, the mixed results of Experiment 2 raised further questions regarding the revised moral self-licensing

priming tool. These questions are also raised by the contrast demonstrated above between effect sizes from Experiment 2, and previous studies such as Sachdeva et al. (2009). Given the refinements made to the moral prime tool between Experiments 1 and 2, and the subsequent difference in results, a number of facets of the moral self-licensing prime, and the theory behind its operation bear further consideration.

Deficit v Credit

A major query regards the failure of the moral credit prime effect to reach significance, compared to the significant effect of the moral deficit prime. While the Repeated Measures ANOVA indicated a significant overall effect for the moral self-licensing prime in Scenario 1, simple effects analysis demonstrated significance only in the moral deficit condition. Why the difference? Both primes were worded almost identically, only differing in defining the past deed i.e. good v. bad etc.

One possibility lies in participants' interpretation of the primes, and the nature of the deed they were being asked to recall. In the moral deficit condition, participants had to recall and describe a selfish act or bad deed, while those in moral credit had to recall and describe an unselfish act or good deed. Though there was significant variation in the deeds and acts described by participants, including in how "everyday" compared to "out of the ordinary" they were, self-described unselfish acts or good deeds tended to be actions many people undertake on a regular basis. These were acts most be people would do with little thought, and in many cases form part of social convention for good behaviour.

In contrast, self-described selfish acts or bad deeds tended to be more negative. Even where they could be thought of as common mistakes, the negative characteristics of the acts or deeds stood out, compared to the commonality of the

positive or unselfish equivalents. In their choice of examples in the prime, participants tended towards interpreting the recall of past negative actions as more serious and with greater implications at the time, compared to the recall of prior good deeds or undertakings.

Therefore the mixed results may stem from a different interpretation of the primes, and subsequent importance placed by the participants on the events or deeds recalled. While those in the moral deficit prime appeared to describe more important and less common/everyday events, perhaps event acts or deeds which illicit memories laced with shame, moral deficit prime participants utilised more benign positive deeds. The difference in importance attached by participants to the different acts and deeds was subsequently responsible for the difference in importance placed upon the prime itself. Where the deed was considered more serious, as was more likely the case for moral deficit prime participants in Experiment 2, the prime was more likely to have the intended effect, with a significant effect on choices/behaviour. Where it was considered less serious or more everyday, which was more common with moral credit condition responses, the prime did not have the intended effect.

It is also possible that reduced statistical power, brought about by splitting the data set to allow for simple effects analysis, played some role in the failure to reach significance. However this explanation is flawed. Tests for the effect of the moral deficit prime also utilised the same reduced statistical power, and it reached significance. Hence, while it may have played a role in failure to find a significant effect in the moral credit condition, it does not account for the difference between conditions.

Assigning Characteristics

The lack of significant effects in the moral credit condition, compared to the moral deficit condition, highlighted a key feature of individuals' assignment of positive and negative characteristics to themselves and others. Sachdeva et al. (2009) found individuals have a tendency to assign positive traits, characteristics and descriptors to themselves, while assigning negative traits, characteristic and descriptors to others. This tendency is partially controlled by the moral prime itself. However it may be hypothesised that by forcing participants to use negative descriptors, and discuss negative traits or acts about themselves, as opposed to others, the impact of the prime was increased: that the everyday assignment of positive traits to oneself decreases the actual impact of such an attribution compared to the contrasting negative traits and descriptors.

Prime v Manufacturing Plant Manager Scenario

Another factor to consider regarding the lack of significant effects in the moral credit condition was the clarity of the relationship between the prime condition, credit or deficit, and the scenario action. In the manufacturing plant scenario, which action is morally positive and which morally negative, filtering against profit, may be interpreted in different ways. As results from Experiment 2, as well as Sachdeva et al.'s (2009) previous work, confirmed, increased filtering and hence decreased health risks in the hypothetical community is clearly seen as the morally positive response. However the alternate course of action, not filtering and increasing profits, is arguably not as clearly defined in a moral sense. Specifically, not increasing the filtering level is a failure to take action. It is not an action, but instead a lack of

action. While moral self-licensing theory proposed a behavioural link between a subconscious moral state and our actions, is the effect as strong for non-action?

Prime Effect and Accessibility of Scenario

Given the differences discussed above between the effect sizes found by Sachdeva et al. (2009) and the results of Experiment 2 it is worth considering what effect, if any, the accessibility of the hypothetical scenario had on the effectiveness of the prime? Given the consistent findings from previous studies on moral self-licensing which, bar Sachdeva et al. (2009), utilises common financial scenarios (Effron et al., 2009; Strahilevitz & Myers, 1998; Monin & Miller, 2001), it is arguable the accessibility of the scenario is important in testing and measuring for a prime effect. In short, moral self-licensing theory is most apparent, and readily tested/manipulated, in scenarios similar to real-life circumstances, where participant's memories of such circumstances and prior actions are readily accessible.

While examining moral self-licensing under economic circumstances, specifically consumer choice, Khan and Dhar (2006) make the point that such economic decisions are real choices, and individuals may access previous decisions they have made in order to influence subsequent behaviour. The financial aspect of the decisions is merely an easily utilised, accessible tool. Similarly, in refining their experimental method and tools to examine moral self-licensing in consumption and charitable giving, Strahilevitz and Myers (1998) specifically referenced the importance of “real-world context” (pg. 441). Providing real-world/life context, and easily accessible scenarios, allowed participants to make realistic decisions and follow their actual behavioural patterns. Conversely, purely hypothetical scenarios with little basis or similarity to a participant's previous experiences only allows for

purely hypothetical decisions, which may bear little resemblance to decisions made in real-life.

Turning specifically to Scenario 1 in Experiment 2, the accessibility of the scenario to residents of Canberra, and students from the Australian National University, who largely made up the participant pool, should be considered. This is in contrast to students at Northwestern University in Illinois, the participants in Sachdeva et al.'s (2009) study. One theory is that there was a difference in accessibility of the scenario between the two groups. Manufacturing, and manufacturing plants, have long formed an integral part of the community identity of the American rust belt, including Illinois, and remain important despite the decades long decline in traditional manufacturing in these areas. As Dobbie (2008) argues, these traditional, working class notions of employment and labour, in this case manufacturing, continue to form integral parts of individual and community identity in many areas of the United States, including Illinois. Indeed, manufacturing in a community's conscious extends beyond the working class. In contrast, manufacturing does not form a similar part of the identity of Canberra. It should be noted however that such a difference is merely theoretical and cannot be tested with data available to the author.

Criticism, its Source and Effect

The statistically significant effect found for the criticism condition, and its effect on moral licensing and cleansing, supported this thesis' hypotheses. However the source of the criticism played a clear role in the strength of the effect. Criticism from the community had a significant effect on a participant's subsequent moral licensing or cleansing, however criticism stemming from the company did not.

Hence the experimental hypotheses found mixed support. This raised the question of why the difference between sources of criticism? Notably both criticisms were presented in the same fashion, with similar wordings, and were randomly assigned to participants to ensure similar participants numbers in the 4 possible combinations of moral prime and criticism conditions.

One theoretical explanation lies in the substance and content of the alternative criticisms, and how participants interpreted the importance of this. In Experiment 2, community sourced criticism addressed serious health related side effects in the local community, stemming from the action of the manufacturing plant the participants worked for. In contrast company criticism discussed profits for the company. Participants possibly interpreted and placed different values on the content of the two criticisms, health and money, which subsequently affected their decision-making.

Support for this explanation can be drawn from prior work by Strahilevitz and Myers (1998) and Khan and Dhar (2006). As previously discussed Strahilevitz and Myers' (1998) work illustrated that charitable acts, equivalent to the altruism v. hedonism of Khan and Dhar (2006), had no significant effect on the consumption of everyday necessities, only luxury commodities. Necessary items were viewed as too important to individuals, which negated any effect on consumption post charity. Extended to the different effect of company and community criticism, as discussed in the introduction to Experiment 2, the implicit hypothesis of this explanation is that the profit motive of company criticism implies hedonism and luxury consumption. In contrast the community criticism envisages increased filtering in an altruistic and necessary act for the benefit of the community at large.

Participants judged health as a necessity, in comparison to company profit, leading to the statistically significant effect of the community criticism conditions. It is important to note however that this argument inverts the cause-effect direction as established by previous research. While their findings addressed attempts to manipulate consumptions of necessities and luxuries, this reasoning places the necessities at what is causing the manipulation.

However a number of questions stem from this theory. While health and wellbeing are obviously important at an individual level, profit has a similar importance for corporations. But participants clearly treated the two as different. This implies that the participants did not see the two criticisms as equal though different concerns, leaving aside the community v corporation dynamic, but instead placed different values on the criticisms. Another potential contributing factor was that participants ignored the experimental materials, which outlined the importance of the profits. Unfortunately Experiment 2 did not gather relevant views regarding human and corporate necessities, or other opinions that may have provided insight into the results.

An alternative explanation for the different criticism results is that the experimental materials actually provided too little difference between the two alternatives. While the company criticism condition directly addressed company profits, the community criticism condition also included threats to profits, given the already established decrease in business due to decreases in filtering. Although the use of threats to profits as a consequence of health impacts was important given it provided a measurable and quantifiable threat to the company, in contrast to health effects which are harder to quantify, it is also possible that it served to balance, or negate, the threat of profits in the company criticism. Essentially, participants in the

company criticism condition were confronted with a hypothetical scenario where reacting to the criticism would still impact profits. In contrast, participants in the community criticism condition did not have this conflict, rather only addressing health concerns.

A final consideration is whether such a criticism feedback tool requires an additional response stage in the scenario? If we assume that community v company criticism is representative of altruism v hedonism, then the charitable consumption results of Strahilevitz and Myers (1998) indicated an initial altruistic action would be followed by an increased hedonistic choice. In the manufacturing plant scenario, while community criticism may result in an initial increase in filtering, a further response stage would be required to test for the expected subsequent reverse, the equivalent of the luxury consumption following charitable giving/action seen in Strahilevitz and Myers (1998). Obviously, this argument relies upon a number of assumptions, and should such assumptions be proved incorrect the point is moot.

Further Absence of Risk

The Blais and Weber (2006) measures of risk-taking were not found to be statistically significant predictors of moral self-licensing behaviour, contrary to the hypotheses of Experiment 2. Notably, the range and variability amongst the participant population's risk scores was limited. The vast majority of participant's risk scores, both in risk-taking and risk perception, were close to an average rating.

This second failure to find statistically significant effects for risk raised the question of its relevance to moral self-licensing theory. As argued earlier in this thesis, given individuals often seek to avoid negative judgments and impressions amongst peers, theoretically an individual's propensity for risk-taking may moderate

decision-making in situations where moral alternatives have the potential to lead to such judgments or impressions. However, despite changes to the risk-taking measure and experiment design following Experiment 1, Experiment 2 again failed to identify risk. Is risk therefore not theoretically relevant to discussions of moral self-licensing? While there is insufficient evidence from this thesis alone to draw such a conclusion, the relevance of risk to the scenarios of Experiment 2 is clearer.

While the theoretical justification for risk as a moderator lay with public perception and judgment, many of the scenarios presented to test for moral licensing and cleansing behaviour were more private than public. Except for the plant manager scenario, Experiment 2's scenarios were more private decisions, free from necessarily exposing oneself to negative judgments from peers, and therefore arguably free from the role of risk. However, such an explanation does not account for the failure for risk to moderate the plant manager scenario.

A further consideration regarding the lack of statistically significant effect is whether the low variability of participant risk-taking scores attenuated any possible relationship or effect with moral licensing or cleansing? Except for 6 participants, all had a mean risk-taking score in the 3s or 4s, on a scale ranging from 1 to 7. Hence the vast majority of participants had an average or moderate risk-taking score according to Blais and Weber (2006), with insufficient scores indicating either low or high risk-taking to undertake meaningful analysis. In line with the hypothesis, it is therefore possible that such a relationship or effect is present but insufficient data is available to identify and analyse it.

The lack of effects of the Blais and Weber (2006) risk perception score must also be addressed. While participants' risk-perception scores had slightly greater

variation than risk-taking scores, it was again limited, with only 21 participants risk-perception means above or below the 3s or 4s on the 1 to 7 scale. There was also a statistically significant negative correlation between individual's risk perception scores and their risk-taking scores ($r = -0.491$, $n = 102$, $p < 0.05$). While the correlation is as expected, the lack of variation is the primary issue, and accounted for the lack of statistically significant effect with either risk score.

As with Experiment 1, it should also be considered that across a number of the examined scenarios, all participants displayed little difference in their choices irrespective of risk-taking scores, moral prime or any other variable. This is most apparent in the childhood hero – interpersonal relationship scenario, where participants uniformly indicated a strong belief in the importance of communication and compromise to relationships. Similar uniformity was found regarding belief in climate change, and to a lesser extent willingness to drink recycled water. Where such beliefs are held irrespective of risk-taking or perception scores, it negates the potential to test for the effect of risk.

Finally, it is important to address the variation in risk-taking and risk perception due to gender. As has been well established across multiple studies (see Byrnes, Miller and Schafer, 1999), males have a greater propensity for risk-taking than females. In Experiment 2, the participant population was approximately 58 per cent female, with risk-taking scores indicating almost uniform moderate risk-taking. However effects analysis controlling for gender revealed no statistically significant difference between male and female participants.

Hence the type of risk, and its implications, should be considered. Byrnes et al. (1999) outlined that the type of risk is a factor in the extent of gender difference.

Using their criteria the scenarios in Experiment 2 largely fall within the choice dilemma category, which was argued to lead to less gender-based risk differences than others. Given these findings and theoretical consideration, whether risk as a moderating variable should be included in future moral self-licensing study remains questionable.

A Word on Scenario Considerations and Limitations

Despite the previously discussed implications of the results of Experiment 1, as well as previous research findings, the data and findings from Experiment 2 raised certain limitations in the design of the scenarios utilised.

Morality and Issue Concern

Substantial volumes of previous research highlighted the role morality played increasing attachment and engagement with issues, including the importance attached to certain causes. Across multiple fields and facets, from political, religious, social and others, a moral connection or concern has been found to be an important element in guiding an individual's involvement (Stern, 2000; Bratt, 1999; Stern, Dietz, Abel, Guagnano, and Kalof, 1999; and Cable, Walsh, and Warland, 1988). This role of morality is not confined to what may be termed activism, which implies a level of commitment and devotion of time and resources, but also more generally in those issues people devote at least some resources to. Sachdeva et al. (2009) further suggested that moral self-licensing might allow people to more easily detach or "disengage" (pg. 527) from these issues. Though Sachdeva et al. (2009) do not specifically state as such, it may be assumed that individual's undertaking moral cleansing would in turn become more engaged or attached to such issues.

This has specific implications for the manufacturing plant manager scenario, as well as the environmental scenarios (discussed further below). Using community health side effects, and the cost of preventative filtering, as the balance between profits and costs, as well as the implicit environmental aspects of the pollution and filtering, the manufacturing plant scenarios fits neatly into two common areas of political concern, and activism in more committed cases. Though this experiment did not yield relevant data to test for a possible interaction between the effect of the moral prime and the potential role played by morality in commitment to a cause, it is important to note for further consideration and control.

No Moral Effect for the Environment

The failure to find any effect of the moral self-licensing prime on decisions in the various environmental scenarios seemingly contradicted the role of morals and moral concern in commitment to issues and causes, as discussed by Sachdeva et al. (2009), Stern et al. (1999), and Cable et al. (1988). As environmentalism and the environment is an area of major concern, especially amongst younger people who make up the majority of this experiment's participants, it was expected that the manipulation of an individual's moral state would have a significant effect on their responses to questions on such a hot button set of issues. However there are a number of theoretical explanations for this lack of effect.

One potential reason for the failure to find an effect is that, though environmentalism and environmental issues are hot button and politically charged topics (Maher and Franklin, 2012; Essential Report, 2013), the specific scenarios utilised did not engage successfully with the participants. Specifically participants were unable to fully identify with the scenario as it was presented to them, and were

unable to place themselves in the hypothetical role as required. For example, in the questions regarding climate change and action to address it, the largely student based participant population would have a more difficult time identifying with the issue of income tax increases to fund action, given students, especially those in first year studies at the Australian National University, have substantially less exposure to the issue of income tax, and arguably feel the effect or increases less than the broader working public.

Similarly in the case of both nuclear power and recycled water, though both issues have at times been hotly debated in Australia, they have largely been issues for areas other than Canberra and the Australian Capital Territory. It is therefore arguable that participants were unable to place themselves fully into the required hypothetical situation, and make decisions with which they could meaningfully identify. If this occurred, then the decisions made would not be expected to display the same effects of the moral prime as hypothesised.

Another issue to consider is the convergence of views amongst the participants on the issues raised by the various environmental questions and scenarios. For example, in the climate change scenario, control questions regarding belief in climate change and need to take action were included. While opinion polling has at times found just over half the Australian population, and slightly more under 35s and university education, believe in climate change (Essential Research 2014), only 6 participants in Experiment 2 indicated they did not believe in climate change, with 94.5% indicating they believed, and 90.9% supporting action to address it.

Such overwhelming belief in climate change and support for action amongst the participant group possibly mitigated the effects of the moral prime. Amongst a

group already predicated to take action, it could be argued that the moral deficit prime was unlikely to push to even greater action, at least to a degree that would be statistically significant with the included participant sample. Similarly, those primed with the moral credit tool were being manipulated to act against their beliefs. Hence it may be theorised that belief in climate change either negated the effect of the prime, or at least acted as a confounding factor, such that any effect of the prime was not significant.

However, this leaves open the possibility that with an increased participant pool, and hence increased statistical power, an effect may be found. Further, due to the overwhelming uniformity of responses to the two control questions, it was not possible to undertake meaningful analysis with the controls in place. This theoretical explanation has interesting parallels to the discussion below regarding moral licensing and cleansing in interpersonal scenarios.

Limitations of Childhood Hero and other Interpersonal Quandaries

The lack of a significant effect of the moral self-licensing prime in the childhood hero interpersonal scenario raises a number of questions. These concern both the scenario itself, and Moll et al.'s (2003) proposed link between moral reasoning, itself stemming from brain-behaviour interaction and human experiences such as interpersonal relationships.

The first consideration regarding the scenario is the use of meeting a childhood hero or taking a trip with your loved one as the two available choices. Does a childhood hero actually carry any significance in later life, even hypothetically, when compared to the wishes of a loved one and the daily requirements of maintaining a successful and happy relationship? As LaBarge (2005) notes, though childhood

heroes, and heroism itself, are difficult to detach from concepts of morality, the very heroes children chose for themselves ensure they become decreasingly important in later life. Instead of significant figures such as Martin Luther King Jr. or Abraham Lincoln, American children and teenagers turn to either fictional or disposable heroes; celebrities, rap stars and other icons who hold little value as they grow up and enter adulthood. Though LaBarge (2005) draws on American experiences, this can likely be assumed in Australia. Additionally, as Elsley (2009) demonstrated in research utilising depictions in children's literature, though young people are active co-constructors of childhood, they understand it to be a "state of being", a phase.

In contrast, loving interpersonal relationships are well-established necessities of adulthood. Maslow, in his famous 1943 paper *A Theory of Human Motivation* outlined his hierarchy of needs, which placed "[t]he love needs" (pg. 380) as the third most important requirements for people, after physiological requirements such as food and water, and safety needs such as housing and employment. Hence, the presented hypothetical choice between childhood hero and time away with your loved one cannot be considered an evenly weighted question. Further evidence supporting this conclusion is found in participant responses to the included scenario control questions. When asked to indicate how important they felt compromise and communication were to relationships, all participants indicated between somewhat important and extremely important. Given other results, this may be interpreted as an indication of the importance placed on relationships.

Moll et al.'s (2003) proposed link between moral reasoning and human experiences, in this case interpersonal, also bears further discussion. As indicated earlier, these results do not conflict with this proposed link. Rather than manipulating emotions, the theorised partial basis of moral judgments (Prinz, 2006), Experiment 2

attempted to manipulate moral condition and test for a subsequent effect on emotion and emotional judgments, specifically guilt and resentment. The lack of significant effect, a failure to identify any effect upon emotion by manipulated moral condition and judgment, is noteworthy.

Though suggesting, based upon these results, that moral condition cannot alter emotion or emotional judgments would border on the absurd, it does again highlight the difficulties of hypothetical interpersonal relationship scenarios. Such scenarios, whether real-life or hypothetical, have numerous confounding variables that are difficult to control for. However, while the proposed link of Moll et al.'s (2003) is an interesting theoretical area, it is not the primary focus of this thesis.

Finally, the more central consideration of whether the childhood hero scenario, as designed and worded, even measured for moral self-licensing should be acknowledged. While theoretical arguments, such as those above, can be made that moral self-licensing may impact interpersonal decisions, the design of the hypothetical in Scenario 2 actually implied that a moral prime might somehow change individual interpretation of emotions in interpersonal scenarios. This is not a clear-cut measure for moral licensing and cleansing behaviour as the other scenarios. As discussed further below, while moral self-licensing theory in interpersonal decisions remains an interesting area for further study, this design flaw should be noted.

Overall Discussion

Across two experiments, this thesis found mixed support for the effects of a moral self-licensing prime upon individual participants' subsequent decision-making. Experiment 1 failed to find any effect for the moral prime. Experiment 2

demonstrated a significant effect of the prime upon individuals' choices in certain circumstances. This thesis partly supports the general contention of Sachdeva et al. (2009) that such priming leads to a feeling of either moral entitlement or moral degradation, and therefore enables subsequent choices and decisions to behave in a less moral (immoral) or more moral (moral cleansing) fashion.

However, the results across multiple studies raised a number of questions. These concerned the applicability of the theory across circumstances and scenarios, the mixed findings when moral licensing and cleansing prime results were analysed separately, and regarding the consistency of individual moral identity.

Unlike previous research, such as Sachdeva et al. (2009), Effron et al., (2009), Monin and Miller (2001), Khan and Dhar (2006) and Strahilevitz and Myers (1998), but somewhat in line with Hayley and Zinkiewicz (2013), this thesis examined moral behaviour across a range of both financial/economic and non-economic scenarios. In Experiment 1, an interaction between moral priming and gratitude was also tested, while Experiment 2 examined an interaction between moral state and the source of criticism of participant's initial decisions. Though surprisingly no significant interaction was found between the moral prime and gratitude manipulation methods, a statistically significant interaction effect between the moral prime and the criticism manipulation methods was found in Experiment 2. Further simple effects analysis revealed that, though there was a significant interaction effect between the moral prime and the community criticism condition, no significant effect was found for the moral prime in the company criticism condition. Across both experiments, an interaction between risk-taking and moral prime was examined, but no statistically significant effect was found.

Both Experiments 1 and 2 sought to partially replicate an earlier hypothetical scenario used by Sachdeva et al. (2009), utilising a manufacturing plant manager scenario. However, a number of markedly different results emerged in these replications. A major discrepancy between the original experiments and the replication performed here was the lack of consistent results comparing moral licensing behaviour primes (moral credit), and moral cleansing behaviour primes (moral deficit). While previous research has found similar effects for both moral states, and the relevant primes to affect such a moral state, Experiment 2 identified a strong effect in the moral deficit condition, though still smaller than that found in Sachdeva et al. (2009), with significant moral cleansing behaviour, but no significant effect in the moral credit condition.

With the data available from both experiments, there is no immediately apparent reason for this discrepancy, both in terms of consistency in intra-experiment results, and between previous studies and these. It may be that certain specific or special conditions are required for moral licensing and cleansing behaviour to occur, such as regarding the situation or circumstance faced and how it may relate to the individual. Alternatively, the required mindset and sub-conscious decision-making process of the individual may be more complex and less easily predicted than previously thought. These possibilities, amongst others aimed at determining the cause of such discrepancies, are discussed below as directions for future research.

Future Research Directions

One direction that should be explored further is the tendency of participants completing the moral prime task to describe common, even everyday, good deeds in the moral credit condition, but less common and comparatively more explicitly

negative actions in the moral deficit condition. Further research utilising redesigned priming tasks should ensure equality between the self-descriptions in the two moral prime conditions.

However, this thesis acknowledges that controlling for such differences in self-descriptions is difficult, given the need to avoid over prescribing to participants what to write in the priming task, which could reduce its effectiveness. One option may be to ask participants to describe a recent, everyday good or negative deed or undertaking, which the participant undertakes regularly. Alternatively the prime could specify the opposite, and instruct participants to describe an out of the ordinary, unusual good or negative deed that they had recently undertaken.

Future work could also examine what differences in effect may result from decisions resulting in an action v a lack of action, as highlighted earlier in this thesis. As previously found by Gilovich and Medvec (1995) in their research examining patterns in the experience of regret, though actions, which they labeled errors of commission, resulted in greater regret in the short term, inaction, which they labeled errors of omission, resulted in significantly greater regret over the long term. A similar different over longer periods was found by Rajagopal, Raju and Unnava (2002), though their results demonstrated no difference in the short term. Further, Gilovich, Medvec and Kahneman (1998) found that different emotional responses were evoked by action against inaction.

In this thesis, across both experiments, moral cleansing behaviour in the manufacturing plan scenario constitutes an action: actively increasing filtering. Conversely the moral licensing behaviour of not increasing filtering levels is instead an inaction or lack of action. Further research could construct similar scenarios, but

altered so that both moral licensing and cleansing behaviour required actions, as well as scenarios where both moral licensing and cleansing behaviours required a lack of action. Both options would provide additional data regarding the difference in approach to action against inaction, and how this may effect individual perceptions of their choices in moral situations.

In earlier discussion of the findings of Experiments 1 and 2, as well as comparisons between those of this thesis and previous research by Sachdeva et al. (2009), it was hypothesised that one confounding factor may have been the familiarity, or accessibility of the hypothetical scenario to participants. In cases where the hypothesised scenario was unfamiliar, or inaccessible, to one group of participants in contrast to another, this may influence their consideration of the decision, and confound the expected effect of the moral prime manipulation. This provides a rich area for future research, utilising scenarios of similar design and characteristics, though differing in accessibility and relation to everyday experiences. Such research should be carried out using participant pools of consistent characteristics, such as nationality, background, education etc. Conversely, the effect of accessibility could be examined through the use to two or more separate participant pools, with scenarios specifically designed to relate to the everyday experiences of one participant pool, but not the other.

A related area for further study is limiting the accessibility of a scenario through the use of the hypothetical other. Though this thesis found a statistically significant effect of moral priming when participants were questioned over their own hypothetical actions and decisions, results were more mixed regarding the actions of hypothetical others. Whether such findings are the result of a form of the Wilder or Bradley Effect, where an individual indicates they will take a certain action because

it is viewed as the more acceptable course of action, but in reality intend to undertake a different, less socially acceptable action (Hopkins, 2009; Stout & Kline, 2008) may be explored in future research.

Originating in political science, the use of a hypothetical other was designed to elicit an individual's true response rather than the perceived more acceptable or correct one, and therefore circumvent the Wilder Effect. It has also been used to avoid self-enhancement or social desirability in responses by asking individuals about the actions of a close friend against an average person. In such cases, the close friend response is taken as the individual's view of someone like themselves. Applied to moral licensing and cleansing theory, the hypothetical other could allow for further exploration of any interaction between social desirability, self-enhancement, or even the preferred course of action, against that at least partially dictated by the moral prime. Such further exploration would also allow for an increased understanding of the applicability of this theory across differing circumstances.

This thesis also raised a number of questions regarding the applicability of moral licensing and cleansing theory beyond economic decision-making scenarios. Further research should be undertaken to test what effects moral priming has in scenarios unrelated to economic decisions. Similarly, where previous research has used charity and the consumption of luxury items as the two contrasting moral behaviours (cleansing v. licensing), and Experiments 1 and 2 in this thesis had a similar distinction in the plant manager scenario (profits v. community health), future work could examine the effects of moral priming in scenarios where the distinction between decisions is less clear.

For example, how would participants in the two moral prime conditions react when faced with two negative or positive courses of actions, where one perhaps represents the lesser of two evils? Would individuals primed using the moral deficit prime, and expected to undertake moral cleansing behaviour, choose the lesser of two evils to a significant extent, and would the reverse be illustrated for moral credit condition primed individuals? Such future research would be of a similar vein to the proposed study of possible differences between actions and inactions; both would further draw out moral self-licensing theory and its applicability in situations without sharp moral contrasts between various courses of action.

In Experiment 2, this thesis attempted to examine the effects of moral priming in an interpersonal scenario, distinct from the economic scenarios widely utilised. However this thesis found no significant effect for this scenario, centered on conflicting commitments between the participant and a loved one, with no increase in moral cleansing or moral licensing behaviour due to the prime. However, this remains an area for future study. Considerations for any such research should include whether the moral licensing and cleansing theory can be applied in circumstances of emotive decision-making, or whether it is limited to scenarios where any decisions are mostly rational, such as financial and consumption related ones?

Further exploration of moral licensing and cleansing in interpersonal situations may also explore the proposed link between brain-behaviour interaction and our moral reasoning (Moll et al., 2003). Such research could also examine the subsequent link between our moral reasoning and common human experiences, including relationships, and the various additional factors that complicate isolating and manipulating the moral licensing or cleansing effect.

Interpersonal relationships inevitably carry what can be described as baggage, in layman's terms, which itself may be hypothesised to play a large role in decision-making and behaviour. One direction for future research may be to explore moral self-licensing, and how moral priming can influence decision-making in newer, less established relationships against long-term relationships. Research could also examine the difference in moral self-licensing behaviour in situations regarding a romantic partner against other interpersonal relationships such as family or close friends. In both cases it would also be advisable to include a detailed questionnaire designed to provide the requisite data to control for various confounding factors – the baggage previously referred to. This research would provide valuable insight into how moral self-licensing may explain behaviour in more complex, common scenarios and how various other factors may, in some cases, play a more important part in decisions reached.

Perhaps the largest contrast between the results of this thesis, and those of previous studies, and indeed between this thesis and the theory of moral licensing and cleansing, is in the consistency of moral identity. As outlined by Hayley and Zinkiewicz (2013), the very act of moral cleansing is an attempt to protect a threatened moral identity. Yet across multiple scenarios, participants acted erratically, seemingly conforming to a moral identity in one scenario, and willfully discarding it in the next. This was despite the use of moral primes intended to uniformly manipulate each participant's moral identity.

One methodological avenue to address this would be to include tests or questionnaires to ascertain the participant's salient moral identity at key points throughout the experiment. Though this would not immediately identify the reason for this inconsistency, it would provide greater data and evidence pinpointing when

the moral identity changes, and hence allow for an identification of possible causes. It would also allow future research to not be concerned with potential abrupt inconsistencies, which impacts the main focus and theoretical hypotheses. Additionally, using such a method would potentially provide greater insight into the strength of various moral primes, and how long they may affect an individual's moral identity. Such findings would add substantially to our understanding of the theory of moral self-licensing, and how it may or may not explain various behaviours, decisions, and patterns in actions.

Concluding Remarks

Though the results discussed in this thesis did not fully support the claim that moral licensing and cleansing are “pervasive and everyday phenomena” Sachdeva et al. (2009, pg. 527), they demonstrated that under certain conditions moral licensing and cleansing theory can explain certain individual behaviours and decision. The theory also presents a plausible guide to individuals' often contrasting behaviour across various circumstances. While history is replete with illustrations of both moral licensing and moral cleansing behaviour, it has often been ignored. Similarly, while religion is replete with examples of moral cleansing, it seemingly ignores licensing behaviour (this is perhaps an outcome of the redemptive message of many religions). Both the experiments carried out in this thesis, and the previous research discussed, go some way to applying psychological understanding to what is essentially an ancient proposition.

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Appendix A

Initial Briefing (Provided Verbally)

Thank you for your participation today. My name is David Reeves and I am the Research Assistant to Professor Michael Smithson, whose study you are taking part in today. This experiment seeks to explore links between individual morality and decision-making across a number of hypothetical scenarios.

The experiment comprises of three sections, with two completed on paper and one of the computer. Individual instructions for each section are provided, but if you have any questions please do not hesitate to ask.

Also, you are free to withdraw from this research at any time, either during or after.

Decision Making and Moral Choice (Moral Self-Licensing Prime)

Thank you for agreeing to take part in this research.

This study aims to explore decision-making and moral choice.

First however, please take moment to think about how you would describe yourself if you were writing a journal, or similar personal description.

In the space provided below, please write a short (100-200 words) passage describing yourself. However, please focus on your **positive traits**, using only **positive nouns** and **descriptive phrases**.

Or

Thank you for agreeing to take part in this research.

This study aims to explore decision-making and moral choice.

First however, please take moment to think about how you would describe yourself if you were writing a journal, or similar personal description.

In the space provided below, please write a short (100-200 words) passage describing yourself. However, please focus on your **negative traits**, using only **negative nouns** and **descriptive phrases**.

Task 2

Please do not open this booklet until you have read the following instructions.

In the following section, you will be asked to read through a hypothetical scenario, imagining you were the individual involved. You will then be asked a series of question concerning the passage, and what choices you would make in such a circumstance.

There are **no right or wrong answers**. I am genuinely interested in your views on these scenarios; it is impossible to give the wrong answer. As such, please answer truthfully, and ensure the answer you give is truly your own opinion, and not that of a friend, or another individual.

Following these scenarios and questions, you will then be asked to complete a Risk-Attitude Scale and answer a number of control and demographic questions.

Thank you for your participation in this research.

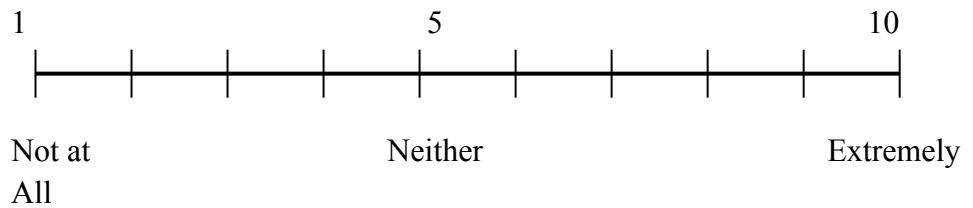
You may now open this booklet and continue with the study

Scenario 1

You are the manager of one large manufacturing plant, located in the outer suburbs of a major Australian city. This plant is a series of plants, each operated by the same company, but each having an individual manager such as yourself. As manager of the plant, you are held responsible for maximising the plants profits, while at the same time maintaining a good reputation for the plant amongst the community.

Due to the manufacturing process, your plant, like operated by this company, emits toxic, carcinogenic chemicals into the atmosphere. As a result of recent lobbying and pressure from environmental groups, the company has agreed to a plan whereby

4. Using the scale below, please indicate how **serious** do you believe this act of cheating is?



Scale of Risk-Attitude

For each of the following statements, please indicate the likelihood of you engaging in each activity. The scale is presented below.

| | 1 | 2 | 3 | 4 | 5 |
|---|-----------------------|---|-------------|---|---------------------|
| | Extremely Unlikely | | Not Sure | | Extremely Likely |
| 1. Buying an illegal drug for your own use. | 1 | 2 | 3 | 4 | 5 |
| 2. Cheating a fair amount on your income tax. | 1 | 2 | 3 | 4 | 5 |
| 3. Cheating on an exam. | 1 | 2 | 3 | 4 | 5 |
| 4. Driving home after you had 3 drinks in the last 2 hours. | 1 | 2 | 3 | 4 | 5 |
| 5. Forging somebody's signature. | 1 | 2 | 3 | 4 | 5 |
| 6. Illegally copying a piece of software. | 1 | 2 | 3 | 4 | 5 |
| 7. Plagiarising a major assignment. | 1 | 2 | 3 | 4 | 5 |
| 8. Shoplifting a small item (i.e. a lipstick or a pen). | 1 | 2 | 3 | 4 | 5 |
| 9. Stealing your neighbour's WiFi internet connection. | 1 | 2 | 3 | 4 | 5 |
| 10. Using office supplies for your personal business. | 1 | 2 | 3 | 4 | 5 |

For each of the following statements, please indicate the risk level you perceive from engaging in each activity. The scale is presented below.

| | 1 | 2 | 3 | 4 | 5 |
|--|---------------------|---|---------------------|---|--------------------|
| | Not At All Risky | | Moderately Risky | | Extremely Risky |
| 1. Buying an illegal drug for your own use. | 1 | 2 | 3 | 4 | 5 |
| 2. Cheating a fair amount on your income tax. | 1 | 2 | 3 | 4 | 5 |
| 3. Cheating on an exam. | 1 | 2 | 3 | 4 | 5 |
| 4. Driving home after you had 3 drinks in the last 2 hours. | 1 | 2 | 3 | 4 | 5 |
| 5. Forging somebody's signature. | 1 | 2 | 3 | 4 | 5 |
| 6. Illegally copying a piece of software. | 1 | 2 | 3 | 4 | 5 |
| 7. Plagiarising a major assignment. | 1 | 2 | 3 | 4 | 5 |
| 8. Shoplifting a small item (i.e. a lipstick or a pen). | 1 | 2 | 3 | 4 | 5 |
| 9. Stealing your neighbour's WiFi internet connection. | 1 | 2 | 3 | 4 | 5 |
| 10. Using office supplies for your personal business. | 1 | 2 | 3 | 4 | 5 |

Finally, for each of the following statements, please indicate the benefit you perceive as resulting from engaging in each activity. The scale is presented below.

| | 1 | 2 | 3 | 4 | 5 |
|--|----------------------|---|---------------------|---|------------------|
| | No Benefit At All | | Moderate Benefit | | Great Benefit |
| 1. Buying an illegal drug for your own use. | 1 | 2 | 3 | 4 | 5 |
| 2. Cheating a fair amount on your income tax. | 1 | 2 | 3 | 4 | 5 |
| 3. Cheating on an exam. | 1 | 2 | 3 | 4 | 5 |
| 4. Driving home after you had 3 drinks in the last 2 hours. | 1 | 2 | 3 | 4 | 5 |
| 5. Forging somebody's signature. | 1 | 2 | 3 | 4 | 5 |
| 6. Illegally copying a piece of software. | 1 | 2 | 3 | 4 | 5 |
| 7. Plagiarising a major assignment. | 1 | 2 | 3 | 4 | 5 |
| 8. Shoplifting a small item (i.e. a lipstick or a pen). | 1 | 2 | 3 | 4 | 5 |
| 9. Stealing your neighbour's WiFi internet connection. | 1 | 2 | 3 | 4 | 5 |
| 10. Using office supplies for your personal business. | 1 | 2 | 3 | 4 | 5 |

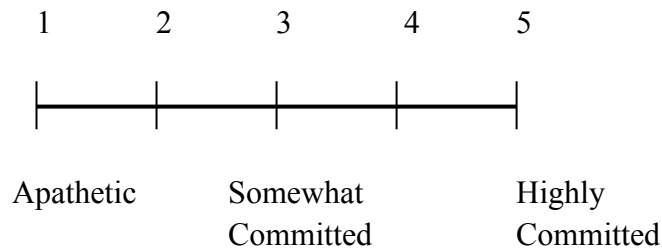
Demographic Questions

Age: _____

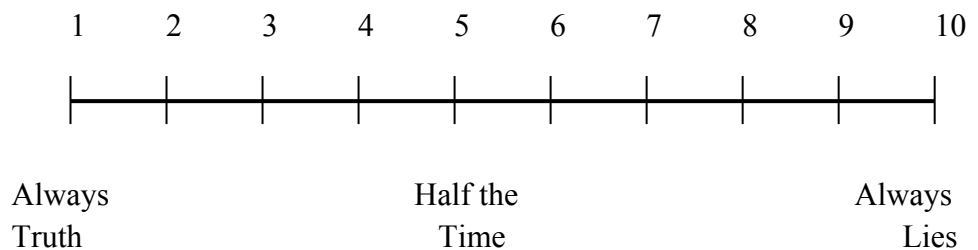
Gender: M F

Occupation: _____

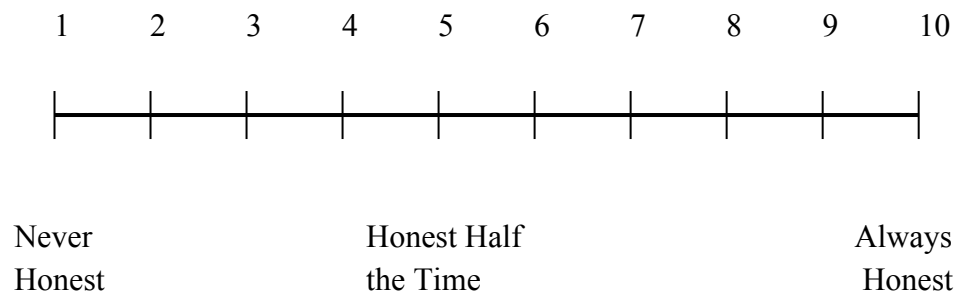
- Using the scale below, please indicate to what extent you consider yourself an environmentalist.



- On a scale of 1 to 10, 1 being **always tells the truth**, 5 being **tell the truth half the time**, and 10 being **always lies**, rate how often you believe you tell the truth.



- Using the above scale, please indicate using a numerical value, how often you believe a friend, similar to you, tells the truth.
- Are you religious? Please tick. Yes No
- Do you generally support a specific political party? Please tick. Yes No
- On a scale of 1 to 10, 1 being **never academically honest**, 5 being **academically honest half the time**, and 10 being **always academically honest**, rate how academically honest you see yourself as.



- Using the above scale, please indicate using a numerical value, how academically honest a friend, similar to you, is.

Thank you for you participation in this research.

Information Sheet

Thankyou for your participation in this research. Your contribution is highly valued.

This study aimed to examine the relationship existing between emotions, morality and the occurrence of temporal discounting. Specifically, what effects gratitude has upon the delay of gratification behaviour, as well as how this effect may be mediated or impacted upon by an individuals "moral licensing."

The term moral licensing refers the taking of decisions/making of actions that are immoral by in individual who believes they are highly moral. It has been theorised that if an individual believes themselves to be greatly moral, have an over abundance of 'moral credit,' then he is she is moral likely to allow themselves to act in an immoral manner. Conversely, an individual who believes they have a deficit of 'moral credit' is more likely to act in highly moral way, to make decisions he or she sees as moral, in order to restore their moral standing.

To explore and examine these relationships, a slight deception was required. Firstly, the individual who conducted this experiment was in fact the researcher himself, not an individual employed to simply guide participants, as claimed.

Secondly, two conditions existed during Part 2 of the study, performed on a computer. In one condition, the computer appeared to freeze and the investigator appeared to 'fix' the problem, with the aim of gaining the participants gratitude. This computer problem was planned as was the investigators actions, in order to maximise the chance of gratitude, and test whether the presence of gratitude would impact a participant's likelihood of agreeing to perform a final task, unrelated to the main study.

We do not foresee any psychological risks from participation in this research, as procedures and questions are based upon those used in previous research.

All data collected in this experiment will remain confidential as far as the law allows. Your responses are also anonymous. This data will be used in both a student Masters of Philosophy (Psychology) study, and research by both Professor Smithson and Associate Professor Platow, and may be published in academic journals, or presented at conferences. However, such reporting would be of data trends, and individual responses will not be identifiable from such reporting.

Participation in this study is voluntary, and you are free to withdraw at any time, without penalty. Any payment or course credit you receive will not for forfeited.

If you have any further questions, please feel free to contact David Reeves on u4314694@anu.edu.au, or Professor Michael Smithson or Dr. Michael Platow at the ANU School of Psychology on 02 6125 2795.

If you hold concerns about how this study was conducted, please contact:

Secretary (Human Ethics Officer)

Human Research Ethics Committee
Research Office
The Australian National University
ACT 0200
Phone: 02 6125 3427
Email: Human.Ethics.Officer@anu.edu.au

If you would like to learn about the outcomes of this study, please feel free to contact me at u4314694@anu.edu.au and I will be happy to provide you with the results of this research.

Appendix B

Moral Self-Licensing

Informed Consent

This form is to illustrate that you, the participant, give permission for any data and/or answers you provide during this testing, to be used in the experimenters Masters of Philosophy (Psychology) study.

All data collected herein is for the use of the afore mentioned Masters Study, and will only be viewed by the experimenters, and any contracted research assistants.

Your responses are anonymous and collected data is treated confidentially as far as the law allows. No individual responses will be presented in the thesis or any published work.

Participation in this study is voluntary, and you may withdraw from this study at any time while answering the questionnaire.

Furthermore, you have a right to view any results obtained. Details on obtaining a copy of said results is provided on your feedback sheet, which you will be provided with at the end of your participation in this study.

Scenario 1

You have recently been promoted into a managerial position within a major Australian manufacturing firm. Your company owns and operates a number of manufacturing plants throughout Australia, mostly located in the outer-industrial areas of major cities.

Your position within management has a dual focus on business, and community engagement.

In line with this focus, you have recently taken the lead in negotiations with a number of community advocacy groups, as well as nationwide environmental groups relating to chemicals released by your company's plants.

During the manufacturing of certain goods, a number of harmful chemicals are released into both the atmosphere and soil. These chemicals are known to have a number of health-related side effects, with research indicating that for every 10% of unfiltered release, 1000 people in the local community will suffer headaches,

breathing problems and other effects. As such, both environmental and community groups have begun lobbying and negotiations with you, in the hope of securing a deal to restrict the release of such chemicals by filtering them for an agreed-upon percentage of the time taken by the manufacturing process.

The filtering process incurs costs. The company accountants have calculated that filtering for 10% of the manufacturing process time, the cost equates to 3% of your company's profits. However, the accountants also have calculated that every 10% of time not filtered could cost 2% of profits in lost revenue due to negative public perception. Because of this, your manager has offered you a \$250 salary increase for every 1% of profit loss that you prevent.

Questions:

1. In the negotiations, taking into account both cost and public image, what percentage of time for filtering would you aim at getting agreement on? Please use the slider below to indicate your response.
2. Taking account of both cost and public image, what percentage of time for filtering would you expect a **manager at a rival company** aim at getting agreement on? Please use the slider below to indicate your response.
3. In the negotiations, taking into account both cost and public image, what percentage of time would you expect **another manager at your company** aim at getting agreement on? Please use the slider below to indicate your response.

Moral Prime

Please take a minute to think about a recent occasion where you have performed an unselfish act or a good deed. This occasion should have been purely to the benefit of someone else.

In the space below, please write a couple of paragraphs describing this act/deed, and its effects.

Or

Please take a minute to think about a recent occasion where you have been selfish or performed a bad deed. This occasion should have had a harmful effect on another person or benefited you at their expense.

In the space below, please write a couple of paragraphs describing this act/deed, and its effects.

Gratitude Prime

It has now been a year since the filtering process you negotiated and agreed to has been in place.

During this time, the agreement you negotiated has come under strong criticism from within the company due to the percentage of profits lost in filtering costs.

Or

During this time, the agreement you negotiated has come under strong criticism from the community due to a perceived failure to adequately protect them from the harmful chemical releases, and the side effects of this.

Scenario 1 Again

Because of this, after one year, the original parties have once again come together to negotiate any changes to the original agreement.

You are once again the individual placed in charge of the negotiations.

1. In this second set of meetings, would you seek to renegotiate the agreement on filtering percentage?
2. If yes to the above question, what percentage of filter time would you seek to reach agreement at? Please give you answer on a scale of 0-100%.
3. In this second set of meetings, would you expect a **manager at a rival company** to seek to renegotiate the agreement on filtering percentage?
4. If yes to the above question, what percentage of filter time would you expect a **manager at a rival company** seek to reach agreement at? Please give you answer on a scale of 0-100%.
5. In this second set of meetings, would you expect **another manager at your company** to seek to renegotiate the agreement on filtering percentage?
6. If yes to the above question, what percentage of filter time would you expect **another manager at your company** seek to reach agreement at? Please give you answer on a scale of 0-100%.

Scenario 2

The Australian Federal Government has recently announced the details of its Carbon Pricing scheme, in order to reduce Australia's carbon emissions. Under this plan

consumers will not be taxed, instead 500 of Australia largest polluting companies will pay for their emissions.

However, **suppose hypothetically** that the carbon tax was to also be imposed upon individuals.

1. Using a range of 1-10% of your personal, pre-tax income, please indicate how much you would be willing to pay to do your part under such a hypothetical tax. Please note this amount would be in addition to standard income tax.
2. Do you believe that there has been human induced climate change? Y/N
3. Do you believe that action needs to be taken in order to either counter, or mitigate climate change? Y/N

Scenario 3

The availability of water has become a major concern for Australian governments due to the effects of recent droughts, combined with an ever-growing population. Because of this, a number of options to increase water supplies have been discussed.

Due to favourable size and geography, the ACT Government has decided to undertake a pilot study into using recycled water as part of the mains water supply. The suburbs to undertake this trial include the inner-north and ANU.

1. Using the scale below, indicate your willingness to drink recycled water as part of the trial.

7 point Likert scale 1 = extremely unwilling, 4 = neutral, 7 = extremely willing

Scenario 4

Australia's population is currently growing at a rapid rate. Some predictions indicate that it will exceed 40 million in a few decades.

One of the major issues such population growth raises, is continuing to provide affordable base-load power. This is further complicated by environmental concerns, with coal-fired power stations being amongst the highest emitting sources of power.

One possible option is nuclear power. Unlike coal it is a clean source of energy, yet is also a proven technology, capable of providing base-load power.

These positives however must be weighed against the inherent dangers in nuclear

power, illustrated by such disasters as Chernobyl and the recent Fukushima partial meltdown.

Imagine that the ACT had been chosen as a trial ground for nuclear power in Australia, and as such there was to be built a base-load capable nuclear plant in the outer regions of Canberra.

1. Using the scale below, please indicate your willingness to accept nuclear power in the ACT as a clean energy source, despite its dangers.

7 point Likert scale 1 = extremely unwilling, 4 = neutral, 7 = extremely willing

Scenario 5

Please take a minute to consider you're your current boyfriend/husband or girlfriend/wife. If you are single, please consider your closest, dearest friend.

You are confronted with a situation where you have the opportunity to meet a major childhood hero. This would be a once in a lifetime chance for you.

However, this meeting clashes with a trip your partner has been planning for both of you for many months. Due to work commitments, this would be your last chance for a weekend away together for at least the next year.

1. Using the scale below, indicate how resentful you would be if you went on the trip.

7 point Likert scale 1 = extremely resentful, 4 = neutral, 7 = extremely non-resentful

2. Using the scale below, indicate how guilty you would feel if skipped the trip, and instead took the chance to meet your childhood hero.

7 point Likert scale 1 = extremely guilty, 4 = neutral, 7 = extremely non-guilty

3. Using the scale below, indicate how important you believe communication is to a successful relationship.

7 point Likert scale 1 = extremely unimportant, 4 = neutral, 7 = extremely important

4. Using the scale below, indicate how important you believe compromise is to a successful relationship

7 point Likert scale 1 = extremely unimportant, 4 = neutral, 7 = extremely important

Demographic Questions

Age: _____

Are you female? Y/N

Occupation: _____

Are you typically a supporter of one specific political party? Y/N

If answered yes to above, please indicate which party.

Information Sheet

Thankyou for your participation in this research. Your contribution is highly valued.

This study aimed to examine the relationship between decision-making, and various circumstantial moralities. Specifically, this study sought to further explore the link between theoretical moral licensing, and decision-making.

The term moral self-licensing refers the taking of decisions/making of actions that are immoral by in individual who believes they are highly moral. It has been theorised that if an individual believes themselves to be greatly moral, have an over abundance of ‘moral credit,’ then he is she is moral likely to allow themselves to act in an immoral manner. Conversely, an individual who believes they have a deficit of ‘moral credit’ is more likely to act in highly moral way, to make decisions he or she sees as moral, in order to restore their moral standing.

In two sections of this study, you will have been assigned to one of two conditions. In one section, you may have been asked to recall either a good, or a bad deed, while following this some participants are told they have come under company criticism, while others are instructed they have come under community criticism. These options create a 2x2 design for this study, and hence allow for moral licensing to be manipulated.

We do not foresee any psychological risks from participation in this research, as procedures and questions are based upon those used in previous research.

All data collected in this experiment will remain confidential as far as the law allows. Your responses are also anonymous. This data will be used in a student Master of Philosophy (Psychology) study and may be published in academic journals, or

presented at conferences. However, such reporting would be of data trends, and individual responses will not be identifiable from such reporting.

Participation in this study is voluntary, and you are free to withdraw at any time, without penalty. Any course credit you receive will not be forfeited.

If you have any further questions, please feel free to contact David Reeves on u4314694@anu.edu.au, or Professor Michael Smithson on michael.smithson@anu.edu.au

If you hold concerns about how this study was conducted, please contact:

Secretary (Human Ethics Officer)
Human Research Ethics Committee
Research Office
Lower Ground Floor
Chancellery 10B
East Road
Australian National University
Acton ACT 0200
Phone: 02 6125 4807
Email: Human.Ethics.Officer@anu.edu.au

If you would like to learn about the outcomes of this study, please feel free to contact me at u4314694@anu.edu.au and I will be happy to provide you with the results of this research.