

# **SOCIAL CONTEXT MISMATCH THEORY**

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A thesis submitted to the School of Psychology, Cardiff University, in partial fulfilment of  
the requirements for the degree of DOCTOR OF PHILOSOPHY

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*This work is dedicated to souls I haven't knowingly met. I'm sorry I couldn't be there for you,  
but I promise I will keep fighting, as long as I am able.*

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## Summary

This thesis outlines the novel theoretical approach of social context mismatch theory (SCMT). SCMT outlines how changes in context can lead to mismatches between motives and their surrounding environment. For example, the basic human desire to care for others has become problematic in a modern context, where globalised identities are possible. We want to care for all the vulnerable members of society, but we are faced with numerous barriers. The conclusion of SCMT is that these mismatches provide fertile soil for hypocrisy to thrive, as people become accustomed to failing to meet their desired standards.

Having introduced the theory, three core chapters use this model to outline how broader contextual perspectives can bring different psychological concepts together in order to gain a novel perspective on well-established social psychological processes. Chapter 2 outlines how people see their values as dynamic over time and illustrates relationships between this dynamism and well-being. Chapter 3 shows how people display different forms of hypocrisy in the realm of ethical consumption and how higher thresholds for ethical behaviour can encourage greater desire to change to a more pro-social position. Chapter 4 manipulates perceptions of complexity of a little-known moral issue and shows how greater complexity can lead to less harsh moral judgements and a reduced willingness to engage with remedial action.

Finally, the thesis concludes by outlining a range of future directions that SCMT opens up, particularly for those who want to bring relatively isolated psychological ideas together. Accordingly, there is a strong focus on how a simultaneous awareness of multiple contexts can provide new perspectives on psychological processes. SCMT is a theory that is inextricably linked to working towards a more caring world and the dissertation reflects this motivation.

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## **Chapter 1: A General Introduction to Social Context Mismatch Theory**

In a recent report on childhood obesity it was stated:

Although the advent of agriculture about 14,000 years ago ensured [a] stable food supply, activities of daily living still required considerable energy expenditure until 50 years ago, when radical changes occurred in food availability and required energy expenditures. The current obesity epidemic is then likely the result of our evolutionary legacy interacting with today's technologically-advanced, consumerist society. (Han, Lawlor & Kimm, 2010, p. 1738)

This quote underlines a mismatch between the evolved tendencies of humans and their current surroundings, leading to the problematic outcome of obesity. A review in the domain of public health suggested obesity is just one of several urgent health issues, (including high blood pressure, substance misuse and unsafe sex) that can be explained via such mismatches (Curtis & Aunger, 2011). The central theme of my thesis is that such a mismatch in social contexts also contributes to a broader outcome in human behaviour, namely, hypocrisy. I term this thesis social context mismatch theory (SCMT).

The basic concept is that some social contexts have changed more rapidly than the self-concept has been able to adapt, either via evolution, cultural norms or even across an individual lifespan, and that the 21<sup>st</sup> century is a particularly important point in history to consider this issue. The consequences of these different speeds of development are mismatches between fundamental motivations and surrounding contexts. If unrecognised, these mismatches may lead to greater prevalence of hypocrisy and potential problems for the self. Such hypocrisy may then become perceptually inescapable and hence normative in and of itself, consistently reaffirming its position in the world.

The aim of my dissertation is to outline the logic of this overarching theory, summarise relevant existing evidence and present three chapters that begin to address ideas that the thesis raises. The discussion chapter will then outline the implications and future directions that SCMT invites. What is being put forward is an undeniably broad theoretical approach, which is both a potential strength (due to coverage) and a potential weakness (due to lack of specificity). It is my hope that the explanatory potential that this perspective offers can be of major utility to fields across psychology and further afield. In this regard, SCMT presents a perspective that requires evaluation in the long-term, well beyond the studies presented here. As Diamond (1997) noted in his Epilogue of the hugely popular summary of human development *Guns, Germs and Steel*, long-term analyses can bring insights that cannot be generated via short-term studies of individual societies. Whilst long-term perspectives are hence crucial, so is the need to integrate evidence from across subjects. As the then president of the American Psychological Association professed, interdisciplinary communication offers a powerful route for psychology to increase its impact in the future (Johnson, 2012). It is thus vital that theoretical perspectives are developed at broader levels of specificity, in order that frameworks are created that can adapt to more diverse sources of evidence. Later, I will describe SCMT in further depth, but first I need to outline some important premises and component parts of the theory.

### **Appreciating Context**

Context is provided by history. Hergenhahn (2008) argues that there has been a disproportionate focus on contemporary research in psychology. This is not in itself a purely modern concern. For example, Gergen (1973) suggested that social psychology is necessarily an historical inquiry, and as Boring (1950, quoted in Hergenhahn, 2008, p. 5) succinctly put “... a psychological sophistication that contains no component of historical sophistication, seems to me to be no sophistication at all”. A lack of breadth in historical appreciation can

lead to students being taught from a skewed perspective, where they struggle to appreciate the history of theoretical development and the importance of earlier research in guiding current thinking (Hergenhahn, 2008). Perhaps more importantly, focussing solely on recent research exaggerates contemporary evidence as representing psychological processes as natural, inevitable and comparatively fixed, such as the bias towards seeing humans as inexorably self-interested (Miller, 1999). By appreciating the varied social contexts people have lived in throughout history, we can counter this tendency and respect the wide range of cognitions and behaviours available to us as a species. Such diversity can in turn provide great hope in offering the potential for change, making us no longer feel quite so governed by forces beyond our control (Cushman, 1990). In more academic terms, appreciating context can also help avoid over-specialisation in psychological research (Bevan, 1991) and allow greater cohesion between theoretical spaces (Ellemers, 2013).

In this respect, it is interesting that the latter half of the 20<sup>th</sup> century saw a clear trend in carrying out cross-cultural analyses of psychological mechanisms to note potential variability across the world (Cole, 1991). However, similar strides have not been made with temporal contexts, in part because of the methodological challenges inherent in using historical data (Baumeister, 1987). I do not pretend it is simple to apply contemporary research techniques to historical populations, but I do suggest that placing extant inquiries in broader contexts will give us a greater chance of understanding the true flexibility in psychological processes. In particular, a greater appreciation of contextual influences allows a greater understanding of hypocrisy. In other words, it can help to explain why we often fail to meet our own standards.

This introduction will hence explain how SCMT offers a perspective that can help remedy some of the contextual weaknesses outlined above and offer a novel way of explaining why hypocrisy might be particularly prevalent in modern society. I will outline

why hypocrisy is an important concept for scientific inquiry, review the existing literature relating to hypocrisy and cognitive dissonance, summarise historical and contemporary evidence that shows why it is problematic to assume basic psychological concepts are fixed, and explain how a social psychological understanding of values can inform SCMT.

### Why Hypocrisy?

The first reason I chose to focus on hypocrisy is based on two philosophical premises. First, cultural and historical evidence suggests that almost all human behaviours have at some point in time and space been considered as, at the very least, morally neutral, and often morally right, by the values held as important by that society. Second, without the imposition of one person's perception of morality on another person, using the belief that the imposed belief is qualitatively superior, it is impossible to objectively define moral absolutes (right or wrong). These two premises combine, to leave hypocrisy as the only pure example of immoral possibility, as holding a moral standard and then acting discordantly can only be defined as wrong for that individual, albeit of course, to different levels of degree.

**Commented [CF1]:** Paragraph re-worded for clarification.

The first two premises map closely to the philosophical position of moral relativism (Levy, 2002), which is highly relevant to the scientist who wants to understand moral judgement, but who does not want to impose their own morality on their explorations. Current research methods in social psychology often carry an implicit bias to a morally preferred position (e.g., protecting the environment, anti-racism). In fact, such bias leads us to be concerned about the measurement error brought about via impression management (Paulhus, 1984). Tetlock (1994) argued strongly that social scientists risked fundamentally undermining trust in science by imposing their own values on their research, and that we should remember our different roles in society as academics and citizens. Additionally, Haidt and Joseph (2007) noted how moral psychology is dominated by researchers who would



place themselves on the liberal side of the (American) political spectrum. This bias, they suggest, explains why moral research has been focussed on issues of harm and fairness, rather than other moral values such as loyalty to the in-group.

The concept of hypocrisy offers a methodological avenue that can address part of this concern. If we can understand further the antecedents and contextual catalysts of hypocrisy, we can tackle real life social issues from a position of comparatively greater neutrality. The more we can do so, the more we ensure our actions will align with the positive values expressed across humanity (Schwartz, 1999). Of interest, however, this potential alignment with values is not straightforward. Initial discussions of my thesis with a range of people highlighted a common concern based around the notion that people will inevitably hold moral beliefs and values that necessarily conflict.

This potential for conflict may be solved in two ways. Firstly, the right or wrong action in a situation of moral conflict can still be isolated if one can ascertain the context of the decision being made. For example, it is acceptable for some people to follow a utilitarian approach in a classic moral dilemma where harming one person saves the lives of many others (e.g. Valdesolo & DeSteno, 2006), despite their possession of a general moral rule that it is wrong to harm others. Knowing the context of a decision, we can measure the individual's view of what is right or wrong for that situation and whether their actions differ from this standard. Secondly, it is possible that hypocrisy has become more prevalent over time, as our societal structures have become ever further interconnected (Seabright, 2010) and people have started to value acting in the interests of much broader collective identities (Meyer & Jepperson, 2000). This means that we are increasingly aware of others suffering and want to act in their interests, while nonetheless remaining limited in our ability to do so, because of external and internal (psychological) constraints. The increased tendency for hypocrisy has thus become seen as unavoidable in a complex world, hence why people see it

as inevitable that their beliefs will sometimes clash. I am not trying to suggest that such conflicts never occur, or that we can create a hypocrisy-free world. What I am suggesting is that modern contexts have exacerbated the potential for hypocrisy, that this has led to humans becoming less concerned about acting hypocritically and that these hypocritical actions have some concerning consequences.

These reasons, in combination with the evidence I will present, form only part of the rationale for focussing on hypocrisy in this thesis. The other portion of the rationale comes from the aforementioned focus on context. A key argument in this dissertation is that the potential for conflicts between values has become a particular problem in modern society. The people who raised the concerns outlined above suggested they wanted to consume ethically, but also be financially prudent; that they wanted to enjoy travelling, but not harm the global environment; that they wanted to empathise with people suffering in the developing world, but they did not want to become emotionally fatigued. Each of these examples contain conflicts that are exacerbated by contemporary social contexts and would not have been present throughout most of human history.

I thus suggest that hypocrisy is a particular problem in today's global context. Over six million children under the age of five died in 2013, most from preventable causes (World Health Organization, 2014); a third of all food produced is currently wasted, whilst 795 million people worldwide suffer from severe hunger and malnutrition (Lyons, 2015); and climate change continues to threaten people across the globe and demands urgent action that policymakers have so far failed to deliver (Bakker, 2015). Whilst these problems are evidently not easy to solve, the solutions required appear to map directly onto values that are held by the majority of societies. Few people would morally support a child dying because their family could not afford treatment, food being wasted whilst others die from a lack of nutrition, and long-term destruction of an environment in order to maintain unsustainable

consumption lifestyles in the short-term. There are consequences that humanity does not want, would not morally support and yet continue to occur every minute of every day. If people were unconcerned about these outcomes, then there would be no potential hypocrisy and the theoretical approach I am suggesting would not be tenable. In reality, hypocrisy is dangerous and prevalent, and we need to understand it further.

### **What is Hypocrisy?**

The central theme of my thesis is that contemporary contexts have exacerbated the potential for hypocrisy. However, the concept of hypocrisy has been around for a long time. Drefcinski (2003) noted that Aristotle's discussion of ethics considered whether inconsistency across actions could be considered a vice, meaning that the notion of hypocrisy goes at least as far back as 4<sup>th</sup> century BC. Additionally, there is an argument that cognitive consistency is as basic as many essential biological needs, such as hunger (Gawronski, 2012). This argument suggests that notions relevant to hypocrisy will have arisen with the earliest social systems.

Although the concept of hypocrisy is long-established, there is debate about how best to define and measure it. Psychological research on moral hypocrisy suggests the initial intentions of the act can help delineate between behaviour that is hypocritical and that which simply represents overpowered integrity (Batson & Thompson, 2001). Additionally, it appears that hypocrisy is considerably more likely to be ascribed when the words precede the deed, rather than vice-versa (Barden, Rucker & Petty, 2004). That is, people see hypocrisy more when somebody states that a standard is important and then acts in contravention to that standard, than when someone endorses a standard despite past failures to meet it.

A further distinction of note is between inter-personal and intra-personal hypocrisy. Both these types of hypocrisy have been used as dependent variables in research. For

instance, inter-personal hypocrisy can be seen when people demand more of others than they would of themselves in a particular situation, such as when people think others should donate more to charity than they themselves should donate (Polman & Ruttan, 2012). Intra-personal hypocrisy instead reflects inconsistency within the person, such as differences in what you think you should do and what you think you would actually do in situations involving potential racial prejudice (Monteith & Voils, 1998).

Hypocrisy has also been used as an independent variable. The cognitive dissonance tradition (Festinger, 1957) has used hypocrisy as a manipulation in order to facilitate attitude and behaviour change. As described later, this requires people to publically support a position and privately admit their own failings, which then leads to behaviour change (Stone & Fernandez, 2008).

Hypocrisy is necessarily a social construct, rather than a directly observable physical phenomenon. It also overlaps with the moral acceptability of changing one's mind and failing via a weakness of will (Szabados & Soifer, 1999). It is therefore useful to examine people's everyday understanding of its meaning (Alicke, Gordon & Rose, 2012; cf. Drefcinski, 2003). Alicke and colleagues (2012) presented a series of potentially hypocritical scenarios to participants and asked them whether each could be classed as hypocrisy. Their findings revealed clear differences between philosophical and lay interpretations of hypocrisy. For example, the intention to deceive is often considered a necessary condition from a philosophical standpoint, but the intention to deceive was not necessary for a sizeable proportion of the research participants to initially ascribe hypocrisy to an action. Although the intention to deceive increases lay perceptions of hypocrisy, the research outlined a number of other factors that can enhance or inhibit the likely accusation of hypocrisy, such as regularity of the offending behaviour, severity of the consequences and the level of self-deception. An additional finding was that for some people, almost any level of inconsistency can be deemed

to be hypocritical (see also Drefcinski, 2003). In line with this observation, Turner (1990) suggested that any discrepancy between belief and behaviour could be considered hypocritical. He did, however, acknowledge that this leads to a definition that is potentially problematic because of its broad nature, whilst also noting that not all hypocrisy is necessarily insincere or immoral.

This multifactorial nature of hypocrisy makes it likely, at least in lay perceptions, that hypocrisy is more of a quantitative variable. Whilst a consensus on exactly what counts as hypocrisy is thus clearly far from being reached, for the purposes of this thesis, I work with the premise that hypocrisy can be assigned in graded terms and that there are two empirically interesting types of hypocrisy: intra-personal and inter-personal. The broad nature of SCMT encourages this broad treatment of hypocrisy, as I am interested in exploring any contexts that could prove fertile for raising discrepancies between beliefs and actions. If people act more closely to their own standards, the outcomes should be positive for psychological harmony in the individual and for society more generally. That is not to say any hypocritical act inevitably carries purely negative consequences and this is a point that is revisited in the discussion. But I am suggesting that at a broader level of analysis, and in line with SCMT, the costs of hypocrisy, as I define it, are currently huge for individuals, and society as a whole.

For the purposes of this dissertation, I thus place my definition of the concept close to Turner's (1990) starting point outlined above. Hypocrisy exists when you fail to act in line with a standard that you set for yourself or a relevant other. Something we all do, every day. Being human is, after all, a necessarily imperfect and inconsistent experience.

### **Moral Hypocrisy**

The sections above outlined how the history of interest in hypocrisy goes to the beginnings of philosophical inquiry and how much variance still exists in agreed definitions

**Commented [i2]:** As we discussed, I have made some changes across these two paragraphs to try and clarify the orientation of hypocrisy within the dissertation.

of the concept. This section aims to summarise how moral hypocrisy has been viewed and studied in contemporary psychological research. Moral hypocrisy can be defined as acting in order to appear moral, rather than acting morally because it is the right thing to do (Batson, Kobrynowicz, Dinnerstein, Kampf & Wilson, 1997). Perhaps the first point worth noting is that moral hypocrisy has been found to be highly prevalent in general. In experiments where participants were given the choice of assigning themselves or others an interesting or boring task, over 70% of people chose the positive task for themselves, despite less than 10% of them supporting this position morally (Batson et al., 1997). Adding the opportunity for fairness did not help much either. Repeating the situation described above, but including a coin flip as an option for random task allocation, over 80% of participants who chose not to use the coin gave themselves the positive task and even more shockingly, over 85% of participants who did use the coin gave themselves the positive task, despite the 50% you would intuitively expect (Batson et al., 1997). Interestingly, when a mirror was placed in front of participants doing the same task, the coin flippers allocated themselves the positive task 50% of the time (Batson, Thompson, Seufferling, Whitney & Strongman, 1999). It thus appears that, in this context, moral hypocrisy is not hard to detect, although the simple addition of a mirror to encourage self-awareness can help to prevent it from arising.

Batson and Thompson (2001) warn against using this evidence to presume that moral hypocrisy is somehow rife across society. Instead they argue that initial morally benevolent intentions can be overpowered when it comes to the actual point of task assignment. This proposition is supported by research showing that 80% of people who were offered the chance of having the experimenter flip the coin for them chose this option (Batson, Tsang, & Thompson, 2000, as cited in Batson & Thompson, 2001); although people were far less likely to give up control of the coin to the experimenter if the consequences of the task were made aversive, via the potential of electric shocks (Batson & Thompson, 2001). Using a broader

conceptualisation of hypocrisy, overpowered integrity is, however, still a hypocritical position. Participants facing the potential of electric shocks stated that deliberately allocating the shocks to others was not morally right, but the majority did so anyway. This is hence likely a case where lay perceptions of the act would assign those suffering from “overpowered integrity” with some level of hypocrisy, regardless of how the distinction is drawn academically. This evidence illustrates the problem of trying to specify exactly which types of behaviour represent hypocrisy.

The paradigm of choosing between tasks that vary in pleasantness for oneself or others has been extended to the domain of inter-personal hypocrisy (Valdesolo & DeSteno, 2007). Participants judged a confederate as being less fair when the confederate self-assigned an interesting task and assigned another person a boring task, compared with participants’ judgements of themselves for doing the same thing. Additionally, this effect extended to group membership. After a minimal group manipulation, participants judged the selfish behaviour of an out-group member more harshly than participants who judged the same behaviour of an in-group member. In a similar study, cognitive load was shown to eliminate the inter-personal moral hypocrisy effect, with the authors suggesting that the additional load caused the participants to judge others more leniently, as they could not devote resources to justifying their own transgression (Valdesolo & DeSteno, 2008). These findings suggest that the context within which hypocritical judgements are made matters greatly. Our moral judgement processes can be impacted by the cognitive resources we have available or the identity of the transgressor.

Recent research into other contextual factors that can impact upon moral hypocrisy has investigated the role of emotional state (Polman & Ruttan, 2012; Tong & Yang, 2011). Indeed, it is possible to link the role of emotion to the previously described research designs of assigning positive and negative tasks. Batson and colleagues (2003) found that empathy

increased moral fairness in these situations, whereas non-affective perspective taking only increased fairness if the participant was in an initially advantageous position. Emotions thus clearly have a role to play if we are to further understand the contexts that encourage or discourage moral hypocrisy. This conclusion has more recently been extended to other types of emotion. Participants in one experiment recalled an angry, guilty, envious or emotionally neutral experience and then provided moral judgements of transgressions, imagining that they committed them or that other people committed them (Polman & Ruttan, 2012). Results showed that, compared to the neutral condition, participants in the angry condition showed greater moral hypocrisy (i.e. a larger gap between the acceptability for the self and the acceptability for others), whilst those in the guilty condition showed no moral hypocrisy, and those in the envious condition actually showed inverse hypocrisy, as they judged their own transgressions comparatively more harshly. In a similar study using positive emotions, those induced to feel pride showed similar levels of inter-personal hypocrisy to a neutral condition, but those induced to feel gratitude showed no hypocrisy (Tong & Yang, 2011). It thus appears that empathy, gratitude, guilt and envy can all reduce, or even invert, the likelihood of hypocrisy, whilst anger in particular appears to exacerbate its prevalence. The emotions that potentially reduce the prevalence of hypocrisy represent a diverse range of feelings, which further indicates the likely multifarious nature of socio-cognitive processes underlying hypocrisy.

A final key question within the literature on moral hypocrisy is why it abounds, even though people dislike hypocrisy so much that they actually take pleasure in seeing hypocrites suffer (Powell & Smith, 2013). Some scholars argue that moral actions only take place to signal to others one's virtue (Barclay & Willer, 2007); thus people will not behave morally in the absence of watching eyes. Other more optimistic arguments suggest that people are genuinely motivated by a desire for fairness and are thus willing to sacrifice their own



resources to maintain these standards (Fehr & Schmidt, 1999), but this leaves unaddressed the reason for hypocrisy. In an attempt to address this question, Lonnqvist, Irlenbusch and Walkowitz (2014) modified the task allocation paradigm described above (Batson et al., 1997, 1999, 2000) into a dictator-game situation, where participants could either assign an 80/20 or 50/50 split of money to a passive participant, thus making the fair option an equal share of resources, rather than the acceptance of a boring task. Similar to the findings described earlier, the researchers found that the most popular decision was simply to choose the selfish option (47%), whilst a significant proportion of participants (40%) chose to flip a coin as an ostensibly fair method of allocation. Remarkably, every one of the 26 participants who chose to flip the coin ended up with the 80/20 outcome. Additionally, in a further study where participants were told they would have to abide by the outcome of the coin flip, they were far less likely to use it, suggesting people were more likely to display fairness if they could cheat the consequences. These results (in combination with results relating to values that will be discussed later) led the authors to conclude that people were more motivated by appearing moral than by genuine moral concern.

In a further investigation designed to consider why moral hypocrisy thrives, a series of studies showed that participants were highly reluctant to blame or punish immoral acts of others, even when they strongly suspected the perpetrators were guilty of moral hypocrisy (Lonnqvist, Rilke & Walkowitz, 2015). Their results were described as being indicative of a general tendency to treat people as innocent until proven guilty; in other words, even relatively low levels of doubt are sufficient to deter people from blaming perpetrators for hypocrisy. This “benefit of the doubt” may make hypocrisy a useful inter-personal strategy, as the risks of being punished for hypocrisy are slim, whilst the benefits of getting away with not having to practice what you preach are potentially highly adaptive. Relating this idea back to SCMT makes it particularly concerning. As charted throughout this thesis, our social

contexts are more complex than at any other time in history; this complexity is likely to exacerbate notions of uncertainty and doubt, whilst weakening our sense of conviction in judging moral situations. It is thus possible that the 21<sup>st</sup> century contains the most fertile soil for hypocrisy to bloom in.

### **Cognitive Dissonance**

Consistent with Bevan's (1991) concern about over-specialization in psychological research, the literature on hypocrisy based on cognitive dissonance theory (CDT) overlaps very little with the previously described research on moral hypocrisy. This section will briefly summarise some of the core findings that CDT produces in relation to hypocrisy. Festinger outlined the initial theory of CDT in 1957. The basic tenets of the theory are that self-integrity is a core part of self-identity (Stone, Wiegand, Cooper & Aronson, 1997) and that discrepancies between two cognitions will threaten one's sense of self-integrity and thus create a state of arousal that is aversive (Elliot & Devine, 1994). Additionally, the simple awareness of two dissonant cognitions should be enough to elicit dissonance, even in the absence of potential aversive consequences (Harmon-Jones, 1999), though Cooper (1999) disagreed on the need for negative outcomes. Since its beginnings, the majority of CDT experiments have looked to understand the conditions under which people feel dissonant, having been made aware of inconsistency between two or more attitudes, beliefs or actions. Instead of measuring hypocrisy directly, cognitive dissonance theorists tend to induce dissonance and measure its effects on attitudes, intentions or behaviour.

Although I am using a broader definition in this thesis, the extant CDT literature defines hypocrisy as a particularly powerful induction procedure that elicits different effects from manipulations that simply raise inconsistencies and associated dissonance. In their review of the literature, Stone and Fernandez (2008) suggest that many dissonance studies

have produced attitude change (justifying discrepant actions by changing attitudes), but studies that raise dissonance via hypocrisy tend to produce behaviour change (moving action closer to the initially positive attitude). Experiments have shown changes in intentions and behaviour in the areas of energy conservation (Kantola, Syme & Campbell, 1984), condom use (Aronson, Fried & Stone, 1991; Stone, Aronson, Crain, Winslow & Fried, 1994), water conservation (Dickerson, Thibodeau, Aronson & Miller, 1992), sunscreen use (Stone & Fernandez, 2008) and road safety (Fointiat, 2004). Stone and Fernandez (2008) suggested that, for a manipulation to induce hypocrisy, the participant must publicly advocate personal support for a position and also privately admit recent failures to attain that standard. Attitude change is more difficult than behaviour change in this context. Changing the behaviour resolves the discrepancy in a relatively straightforward manner, whereas changing the attitude opens up potential new inconsistencies with other norms and public relationships.

Despite the relative simplicity of the basic theory, processes that produce cognitive dissonance are, however, likely to be multitudinous and qualitatively different in nature. For example, dissonance could relate to personal judgements of one's own actions when standards relevant to the self are salient, whereas dissonance could relate to predictions of how others will judge actions of the self when norms or shared contexts are salient (Stone, 1999). It is thus unsurprising that several moderating influences have been shown to impact dissonance production. Individual differences, such as perception of free choice (Stone & Fernandez, 2008), accessibility of recent past failures (Son Hing, Li & Zanna, 2002) and existing discrepancies between explicit and implicit attitudes (Rydell, McConnell & Mackie, 2008), can thus moderate the likelihood of eliciting dissonance. However, more importantly from the perspective of SCMT, broader social contextual factors have been implicated as fundamentally altering when, where and how dissonance will arise. These broader factors are discussed next.

### **Variance in the Self Across Context**

Later I will outline some evidence showing how notions relevant to the self have changed massively over time. For now it is worth noting that substantial differences in representations of the self exist even between modern societies, reflected in part by greater individualism in Western culture and greater interdependence in non-Western cultures (Markus & Kitayama, 1991). In fact, one of the first experiments demonstrating cognitive dissonance showed that participants would increase the difference in their attitudes towards equally attractive options (compared to a pre-choice measure) after being forced to choose between them (Brehm, 1956). This technique is known as the free-choice paradigm of CDT. The paradigm was tested in Canadian and Japanese samples, and it was found that only the Canadian sample displayed any attempts to reduce dissonance by increasing the difference in their ratings of two equally attractive music CDs after selecting one of them (Heine & Lehman, 1997). Additionally, this effect was moderated by threats to self-integrity. Participants who received positive feedback about their personality did not show dissonance in either sample, whereas those who received no feedback or negative feedback did exhibit dissonance, but only in the Canadian sample. This evidence showed that boosting the self eliminated dissonance in the Canadian sample, but boosting or threatening the self had no impact on the elicitation of dissonance in the Japanese sample. The authors thus suggest that dissonance processes differ between cultures because of fundamental differences in how the self is construed (Heine & Lehman, 1997). The Canadian sample showed dissonance because their culture treats the self as independent, whereas the Japanese sample did not show dissonance because their culture treats the self as interdependent. This explains why threatening the self had no impact on the Japanese participants, even though both samples found the threatening information equally unpleasant.

However, these results do not indicate that Japanese people do not feel or display dissonance. Another technique for eliciting dissonance is known as the induced-compliance paradigm, an effect first famously described by Festinger and Carlsmith (1959). In their original study, participants completed a boring task and were then asked by the experimenter if they would mind suggesting to the next participant (a confederate) that the task was fun. They were offered either \$1 or \$20 for participating in this deception, dependent on condition. In a control condition they were not asked to talk to the next participant and thus received no money. Later, participants were asked to rate how much they enjoyed the original boring task themselves. The results showed that those paid \$1 rated the task as more fun, compared to those who received \$20 or the control condition. The investigators explained these results by suggesting that only those who received minimal compensation for effectively misleading the next participant experienced dissonance; they could not justify the deception they had carried out for a small reward, and thus changed their own opinion of the original task in order to reduce the dissonance from saying they liked a task that they actually disliked. Research that uses this paradigm has shown similar effects in samples from the USA and Japan (Sakai, 1999), suggesting that this form of dissonance will arise in different cultures. This highlights why it is vital to understand how context and processes relating to dissonance and hypocrisy interact.

Aside from cross-cultural literature, research that integrates social identity theory (Tajfel, 1974) into CDT provides some evidence to suggest that hypocrisy can lead to a rejection of behaviour change. For example, McKimmie and colleagues (2003) found a shift towards less positive attitudes to generosity as a personal quality when participants were made to feel hypocritical and exposed to information that made the group norm appear highly generous, but only when their university identity was highly salient. Additionally, they found

the participants in this crucial condition reduced their level of identification with their in-group, compared to the other conditions.

A similar rejection can occur when the context makes the hypocrisy publically visible. Fried (1998) found that participants who were made to feel hypocritical and whose private failings were perceived as explicitly identifiable were less likely to donate time and money to a recycling program and also reported less favourable attitudes towards recycling, compared to participants who received an induced hypocrisy manipulation but whose private failings were ostensibly anonymous. Stone and Fernandez (2008) argued that the combination of hypocrisy and public accountability may lead to a sense of shame or self-blame, which actually reduces the motivation to act pro-socially, leaving a shift to a more negative attitude as the simplest path for reducing the dissonance felt. The power of social contexts to influence dissonance processes is hence worth careful acknowledgement.

These studies show that the context within which hypocrisy is induced can affect the type of dissonance reduction strategies that are employed and thus whether attitude or behaviour change occurs. Perhaps a point that these studies miss though, is the issue of how hypocrisy operates beyond the laboratory. If participants take their more negative attitudes into social contexts, will they be able to sustain them at their new less pro-social level? Or might social pressures actually still take effect and suggest that such attitudes towards recycling or generosity are not socially acceptable? If this is the case, then positive behaviour change may still be a possibility and the hypocrisy procedure could still have a prosocial effect, albeit at a later stage. Perhaps more disconcertingly, if hypocrisy itself becomes a normative behaviour, as SCMT suggests it might, then positive behaviour change will not occur, as everyone can reduce dissonance by suggesting that acting hypocritically is commonplace and thus not a serious moral concern. This meta-hypocrisy seems all the more likely in a complex society where there is plenty of room for doubt and thus a decreased

willingness to blame people for acting immorally (Lonnqvist et al., 2015). It is hence suitable to next consider how complexity, amongst other factors, has changed over time.

### **Variance of the Self Over Time**

The modern human brain came into existence 200,000 years ago and anatomically it is essentially identical to cave dwellers of 30,000 years ago (Robson, 2006). The raw material that allows our cognitions today is thus very similar to that of tens of millennia ago.

However, the range of behaviours that humans have displayed throughout history suggests that the same anatomy is capable of producing actions, motives, values and morals that we would perceive as being almost polar opposites of one another. Indeed, progress in neuroscientific research has shown that the brain, whilst modular in some regards, has notable powers of adaptability (Greenfield, 2014). Consequently, the influence of social contexts in shaping behaviour must be very powerful, given the same raw material (brain) can produce such a diversity of outcomes.

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This section thus seeks to provide evidence relating to two interactive and fundamental parts of SCMT. First, historical evidence can provide some clues that are useful in outlining the individual and social potential of humanity today. Mapping out human behaviours in their social contexts will help us to further understand the antecedents of important psychological processes and can guide contemporary literature. Second, historical evidence can also counter-balance the tendency for psychology to disproportionately focus on recent research ideas (Hergenhahn, 2008). The danger of this bias is that it presents 21<sup>st</sup> century humans as far more fixed in their human nature than is actually the case, which can in turn become a self-fulfilling prophecy (Merton, 1948). This is a danger for people in general, not just scientists. SCMT is a theoretical position wedded to positivity and optimism. Accordingly, I hope an increasing awareness of how social contexts can encourage

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hypocritical tendencies, offers us great potential for social change, in line with the values people truly want to pursue.

Cosmides (1989) showed the utility of integrating biological evolutionary theory with computational approaches to gain a better understanding of comparatively basic reasoning processes. More recently, evidence sourced from historical dictionary definitions, US State of the Union addresses and language usage over time, revealed clear variation in how the concept of happiness has changed over the last two centuries (Oishi, Graham, Kesebir & Galinha, 2013). Both of these research projects emphasise the importance of looking back over different periods of time, in order that we better understand the psychological processes we study today; they also underline the potential breadth of data sources available to us to achieve this goal.

To link historical perspectives as efficiently as I can to SCMT, I have chosen to focus on summarising two papers that chart the history of the self. The first is written by Baumeister (1987; see also 1986) where he outlined how self-knowledge has become more problematic as human societies have developed. The second is written by Cushman (1990) and he used a similar approach to suggest that the self has become “empty”. This focus on the self comes in part because of its central importance as a foundation for psychological theory in general (Allport, 1943). However, it also allows me to concentrate on one vital concept that has developed across human history, namely that of societal complexity. The shift towards a market economy, and the associated shift from forces of nature to market forces as the major controlling force of people, has had profound impacts upon what it means to construct the self in society (Ehrenreich & English, 1979). People are now, more than ever, reliant on other people and organisations for meeting their basic needs, and this necessarily changes notions of self and identity, particularly in cultures where individualism is highly valued. This also links neatly into the fourth chapter of my dissertation, which presents an



argument that increased perceptions of complexity can lead to a reduced willingness to utilise moral judgement processes.

Baumeister (1987) based his analysis of the development of the self over time on expert scholars' interpretations of historical and literary evidence, rather than directly accessing the evidence himself. This approach offered a greater chance for objective analyses and it also meant he had multiple sources of evidence available to derive an understanding of historical contexts where data are sparse. His central thesis is that concern about the self is a comparatively modern phenomenon when one looks back over the course of (Western) human history and he begins by noting that medieval lords and serfs did not struggle with issues of self-definition in the way we often do today. One key development relevant to SCMT was the shift from the self being conceived as a reflection of how people acted outwardly in public, to a concept that saw the self as being something unseen or hidden, which Baumeister (1987) places being around the 16<sup>th</sup> century. This shift led to an associated development in notions of sincerity, as people could now act in ways that were in conflict with their inner selves and such conflicts were potentially threatening to others. Later, towards the 19<sup>th</sup> century, the fundamental components of how the self was recognised moved away from being features assigned to the individual at birth, such as social rank and role, and towards more potentially malleable and less clearly measurable factors, particularly personality. Additionally, the growing abandonment of religion by many individuals, either completely or at least as a guiding force in daily life, led to people having ever greater need to consider how their self-knowledge played a part in setting basic moral standards to guide their lives (Baumeister, 1987).

It is relatively easy to see how these changes over time led to ever greater problems for the self. Before these developments, ideas of fulfilment were based on participating in life in a way that aligned to the basic criteria you had been given. After these developments each

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individual had to make a greater number of decisions about core life activities, such as morality, employment and relationships. In essence, the social world was fast becoming a much more complex place. Baumeister (1987) charts how societal development led to ever greater choice for people in these principal domains, thus revealing how modern ideas can be notably distant from conceptions from the past. For example he reports that passionate love was essentially a luxury for the privileged few in early medieval societies. This was based in part on pragmatic constraints for everyone else, who endured hard working lives and poor health. However, there were also cultural differences at the time, such as the prevalence of arranged marriage, which added to this less idealised notion of love.

In modern Western societies, love is often colloquially named as the most important ingredient in successful relationships, and without it such bonds are considered bound for failure. If lay and academic perceptions of relationship development relied exclusively on modern notions of how humans forge connections, we would risk creating a sense of something innate in humans that is actually very culturally responsive. This is not to dismiss the evolutionary perspectives concerning the innate processes that underlie constructs of love and pair-bonding (Fletcher, Simpson, Campbell & Overall, 2015). However, people could be pressured into feeling fundamentally inadequate if they do not attain the more contemporary and romanticised versions of concepts such as love. Furthermore, modern contexts can exacerbate the competition between home and work, causing problems for relationship development (Guest, 2002). Maintaining romantic relationships is hence a difficult task. Feeling pressured into idealised versions of love also maps onto the relatively contemporary problem of feeling pressured to be positive and happy (Oishi, Diener & Lucas, 2007). Historical evidence can help us challenge notions of fixity in human behaviour, which in turn can help people avoid feeling anxious if they cannot, or do not want to, strive for certain goals.

Baumeister (1987) described how the relationship between individual and society has also changed dramatically since medieval times. He suggests that the end of the Middle Ages saw the beginnings of social mobility, as intermarriage across classes became possible and individuals were becoming less defined by their place in the social hierarchy. These changes increased the importance of the self as a unit of interest separate to society and hence began to increase potential conflicts between the interests of individuals and wider society.

Baumeister (1987) proposed that the concept of privacy developed alongside such changes, helping to dramatically separate public and private spheres. Later, industrialisation led to increased choice in the work domain, economic interdependence led to decreased needs for self-sufficiency and the broadening role of governments offered greater support for the individual. All of these changes led to an increased role for the individualised self and therefore carried with them an associated problem of choosing which social identities to follow or aspire towards. Increasing choice also produced increasing opportunities for conflicts between major life goals and between self and society. Such conflicts encouraged people to act differently in public and private, and to differentiate between appearing to act morally and actually acting morally. Additionally, increased conflicts would be associated with increased dissonance, so people could try to evade dissonance-eliciting situations by avoiding attention to self-discrepancies.

Cushman's (1990) analysis presented several areas of corroboration with Baumeister (1987). For example, he noted how the collapse of feudalism (14<sup>th</sup> - 15<sup>th</sup> centuries) created a context which encouraged a greater sense of a bounded self, rather than simply being part of a social structure. This also shifted the locus of control for people ever further inwards, placing greater responsibility for their actions on factors relating to who they were as individuals. The 16<sup>th</sup> century saw major shifts in basic social structures, such as science challenging religion for legitimacy in understanding, and people shifting to lives dominated

by industrial and urban environments, rather than rural and agricultural settings. Cushman's (1990) approach suggested that, as these changes were developing, modern states were finding ways to control their populaces. Initially, in Victorian times, this control came through the suppression of inner desires, but the 20<sup>th</sup> century saw a shift towards control via creating and providing conditions that encouraged cycles of materialistic consumption.

Whilst Baumeister (1987) charted the rise of societal complexity and the associated problems this caused the self, Cushman (1990) presented an arguably more disconcerting evaluation through his focus on an "empty self". According to Cushman (1990) the 20<sup>th</sup> century saw several societal shifts that contributed to creating an empty self. For example, personality began to take precedence over character, hence approval from others became more important than strict moral integrity in many social situations. Furthermore, self-reliance became less valued and skills in manipulating others for personal gain became more valuable, particularly in the workplace. In essence, people were emptier because they were losing the community aspect of life. Increased individualism in general was pushing people towards continued existential crises.

Advertising was a central target for Cushman (1990) in explaining the existence and perpetuation of the empty self, as it consistently promised a solution to any broad sense of dissatisfaction through positive and idealised imagery. Economic strategy was an additional factor, as modern economies relied on manufacturing and consumption of non-essential goods and services. Additionally, Cushman (1990) suggested that the gradual shift from a savings economy to one ever more reliant on notions of debt is another driver behind the empty self. People get into a rhythm of borrowing to maintain pace with social standards and then need to pay off their debts, but there are always more and newer products to consume. Several contextual factors are thus in place today which continue to encourage people to pursue activities that at best bring temporary respite from feelings of emptiness, but at worst

consistently reproduce a society whose normative practices actually give people little chance at fulfilment and acting sustainably. The empty self that Cushman (1990) describes is therefore one that causes people's actions to be hugely discrepant from the actions they would ideally carry out.

Such discrepancies echo Baumeister's (1987) emphasis on divergence between the private and public self and are a cornerstone of SCMT. We have seen a relatively rapid and fundamental shift in the self. Medieval society operated on defined roles and fulfilment came from working within those constraints. Modern society works on freedom to choose one's roles, whilst also relying heavily on others for meeting basic needs. It is this transition which has contributed to making self-knowledge problematic. Changes over time have offered greater opportunities to pursue individual goals in hugely important parts of life. However, these opportunities have also meant greater reliance on self-knowledge, as people cannot chase their dreams if they do not know who they are. We have gone from having everything defined for us, such as our moral standards, our employment choices, our relationships and our social position, to a world where we theoretically have the freedom to choose our moral positions, our spiritual outlook, our romantic partner and our career. Making all these choices is difficult and necessarily demands compromises. It also places a heavy reliance on the self to decide what is right. It is thus unsurprising that self-knowledge has become problematic in modern times. It is disconcerting to think that the self may also have become empty. Paradoxically, a world of ever-increasing apparent choice may have led to a world of ever-decreasing control over life. This is fertile soil for hypocrisy. We theoretically have choices over what we do, yet there are also numerous powerful external forces, such as advertising (Cushman, 1990), that shape our lives. This contributes to forcing gaps between what we think we should do and what we actually end up doing. Increasing social complexity has therefore given us plenty of scope for hypocrisy.

Whilst Baumeister (1987) and Cushman (1990) provide strong arguments for why the self might be an issue of fundamental concern today and clearly indicate the need for greater contextual appreciation in psychology, they do not offer a scientific method for tackling this problem further. Cushman's (1990) conclusion is particularly pessimistic and it is interesting to consider his perspective now, 25 years later. I would speculate that, given the current issues facing psychological research and humanity more generally, it is unlikely that his view has vastly changed. One aim of SCMT is thus to provide a framework within which contemporary psychological methods can function. This can help us understand further how we can avoid some of the issues that a problematic or empty self poses today.

### **Challenging Assumptions of Self-Interest**

The previous section outlined how fundamental aspects of life such as love, work, selfhood and social role have changed dramatically in a relatively short space of time. However, as noted earlier, some perspectives tend to ignore this variance and a disproportionate focus on contemporary psychological processes can lead to some parts of human behaviour being seen as fixed, or at least impractically hard to change. One central assumption that is popular from lay viewpoints, but also academic studies across the behavioural sciences, is that of self-interest (Miller, 1999). This section aims to challenge this assumption by summarising some research that provides evidence of how people are often motivated primarily by caring for others.

Miller (1999) outlined how self-interest motives are driven by cultural factors, yet their powerful presence in the modern world is often seen as more representative of innate urges. He succinctly concludes "Homo economicus, it should not be forgotten, inhabits a social world" (Miller, 1999, p. 1059). A vital part of Miller's (1999) analysis is the normative component of self-interested behaviour. It is such norms that perpetuate the acceptability of

current actions and the inevitability of future actions, whilst lowering the perception of the potential for radical pro-social change. Fortunately, there are people who consistently act pro-socially, and even more importantly they can affect group norms in a positive direction (Weber & Murnighan, 2008).

That is not to downplay the importance of understanding pervasive human biases. For example, people often assume initially conflicting interests are directly oppositional and do not easily see solutions that benefit both parties (Bazerman, Moore & Gillespie, 1999). Such assumptions can encourage self-interested actions. If such biases have an innate basis, then the route to moderating their influence may be different than if the biases were not innate. Furthermore, people value honesty but they also accept they are not perfect, and maintaining a positive view of the self does not preclude some self-interested dishonest activity (Mazar, Amir & Ariely, 2008). Importantly from the perspective of SCMT, Mazar and colleagues (2008) suggested that such dishonesty is more likely in contexts where the parties interact indirectly rather than directly. This supports a principal hypothesis of SCMT, namely that greater complexity in social environments can encourage greater discrepancies between actions and values.

One area where self-interest is seen as particularly problematic is in shared resource dilemmas, prototypically represented by the tragedy of the commons (Hardin, 1968). In such contexts, people are assumed to be unable to sufficiently inhibit short-term self-interest in order to protect a shared resource in the long-term. However, Ostrom (2000, 2008) has shown that the effects of such dilemmas are context-dependent and that policy analysts who seek certainty often drive assumptions of self-interest, rather than more nuanced boundary conditions or moderating factors. For example, she showed in field settings that smaller groups with autonomy can coordinate their actions to make shared resource settings sustainable. Similarly, people will display concern for the interests of others in protecting

common environmental resources if they have the necessary information, a sense of relevant group identity and some trust in institutional organisations (Van Vugt, 2009). However, global issues such as climate change still present many properties reflective of a tragedy of the commons approach (Ostrom, 2009). This is why it is important to challenge the hegemony of views focussing on self-interest, as it is likely to contribute to the perceived intractability of the problem of getting individuals to act in the collective interests of the group.

The social identity approach provides a framework for understanding how motivations between the individual and the group interact (Hornsey, 2008). Reicher (2004) outlined how, despite its deep contextual roots, this approach still faced dangers of disregarding social information via reductionist scientific practices. He argued that not only does this reduce the power of many social psychological investigations, it also threatens to disproportionately represent many human actions as prevalent and inescapable. For example, devoting little attention to processes of peaceful compromise and reconciliation, and focussing heavily on examples of intergroup aggression, self-interest and prejudice, can lead to making conflict seem normal and inevitable. Interestingly, there is evidence to suggest empathy induced helping can transcend group identities and thus represent concerns beyond self-interest or in-group concerns (Batson et al., 1997). Psychological research can thus offer us reasons to be positive for a future likely to contain even more blurry boundaries of identity. Unlike Cushman (1990), Reicher (2004) offered a greater sense of hope for the future. But this hope is based on psychology stepping back and appreciating the broader contextual landscape, where individual and group processes are far from permanent. In this regard, his approach ties in closely with SCMT and the need to question the fixed nature of self-interest.



A further reason to consider attenuating the perceived inevitability of self-interest is that it actually fails to bring fulfilment. People predict an almost direct relationship between money and happiness, but the actual relationship is small at best (Aknin, Norton & Dunn, 2009). Income can contribute to self-reported well-being, but only in contexts where basic needs are not yet met (Diener & Biswas-Diener, 2002). Furthermore, wealth can actually have a negative impact on fulfilment, as it reduces the enjoyment of everyday experiences (Quoidbach, Dunn, Petrides & Mikolajczak, 2010) and leads to people consuming extremely luxurious experiences, which in turn make everyday life less enjoyable (Gilbert, 2006). Pursuing wealth at an individual level and economic growth at a national level is thus a powerful norm worth urgently questioning, in light of the environmental unsustainability of this focus (Jackson, 2009).

There are thus a number of reasons why it is important that assumptions of self-interest are challenged appropriately. Whilst it is clear that humans can act in selfish ways, it is also evident that this tendency is highly contextually dependent. What is particularly dangerous is if self-interest is seen as so innately human that it becomes socially normal to act in this way, especially in contexts where precious resources are being used inefficiently. Historical evidence and contemporary experimental methods can combine to show the antecedents of self-interest, the contexts where self-interest can be beneficial and the environments where self-interest can contribute to hypocritical action and inaction. The perspective of SCMT, outlined in detail later, aims to offer additional support towards these goals.

## **Values**

Before outlining the relationship between SCMT and the research presented in this thesis, it is important to briefly introduce the topic of human values and how it relates to

SCMT, particularly as values are measured in two of the three core chapters. Hitlin (2003) suggested that values are a useful metric for pragmatically accessing how an individual views the world, both individually and in relation to society more broadly. Values are commonly defined as trans-situational goals that guide people in life (Schwartz, 1994). Examples include honesty, power, creativity and tradition. Contemporary measures assess them by asking people to rate their importance as a guiding principle in their lives.

SCMT is a broad theoretical position, and it is thus important to consider how it could explain variance in a comparatively equally broad psychological construct. The evidence presented in the last two sections suggests that people, now more than ever, are in a state of flux regarding how best to use self-knowledge to guide basic life decisions. Rokeach (1973) suggested that values are central in people's self-concepts, making it appear likely that values reflect this instability. Chapter 2 will address this question directly and provide more detail on the theoretical foundations of values, but for now it is worth noting how values relate to hypocrisy and SCMT.

In this regard, it is useful to consider the most widely researched model of values, Schwartz's (2012) circular model. This model proposes that values can be organised in a circular structure, with values that oppose one another, such as equality and wealth, being placed on opposite sides of the circle. Individual values can be combined into two broad dimensions: self-transcendence – self-enhancement, and openness – conservation.

In a study that examined the relations between values and moral hypocrisy it was found that those who attached greater importance to conformity values were more likely to act hypocritically, whilst those who attached greater importance to pro-social (universalism) values were more likely to act with moral integrity (Lonnqvist et al., 2014). Similarly, participants with higher self-enhancement values were more likely to condone cheating

behaviour, but this effect was attenuated by exposing participants to self-transcendent value terms embedded within a speech (Pulfrey & Butera, 2013). Together, these studies suggest that values and hypocrisy are related and that pro-social values may have a protective effect against hypocrisy. Values are thus a useful tool in understanding the antecedents of differing types of moral and hypocritical behaviour.

The aforementioned evidence regarding the self over time indicates that throughout much of history people would have faced little instability in the values they construe as important, as their self-knowledge was likely to be less problematised (Baumeister, 1987). However, in a modern world of much greater societal complexity and associated issues of defining the self, it is likely that people are more fluid in which values to assign importance to and how to instantiate these values in different contexts (Maio, Hahn, Frost & Cheung, 2009). An implication of this is that values are malleable. This malleability is evident in research finding moderate stability in adulthood, but with change triggered by major life events (Bardi, Lee, Hofmann-Towfigh & Soutar, 2009). In addition, experimental tasks that challenge people to think about whether their values are consistent with how they would like to view themselves also trigger value change (Maio, Pakizeh, Cheung & Rees, 2009; Rokeach, 1973). SCMT may help to understand this value malleability further, as outlined below and in the subsequent chapters.

### **Social Context Mismatch Theory**

To conclude, this introduction describes SCMT in more detail and then indicates how it relates to the three core chapters that follow. This chapter began with a comparison between potential mismatch processes relevant to obesity and social psychology. SCMT was the bridging mechanism between these concepts. It is worth noting, however, that there are some fundamental differences between obesity and hypocrisy and their associated

antecedents. Obesity is a visible and directly measurable outcome and it is possible to relatively accurately track the diets of people and animals across history and culture (Kaplan, Hill, Lancaster & Hurtado, 2000). Hypocrisy however, is an invisible and semantically messier construct, and the contexts that SCMT proposes as contributory in its historical prevalence are harder to objectively quantify. It is thus the case that whilst the analogy to obesity is useful in explaining the structure of the theory, it needs to be used with caution.

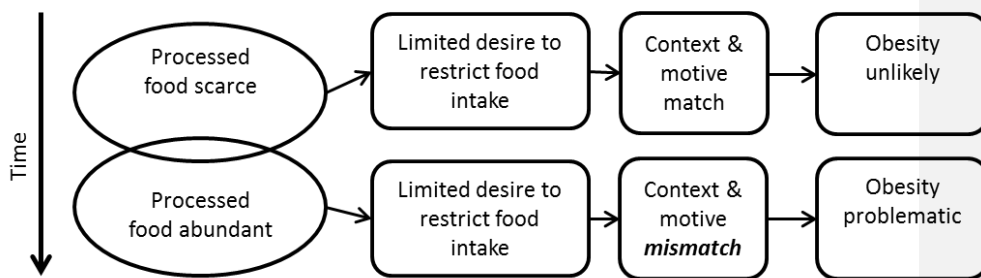


Figure 1.1: Model of SCMT to explain obesity.

As Figure 1.1 shows, SCMT can be used as a model for modern health problems, such as obesity, but its main role for this thesis is to explain why people may struggle to act in accordance with the generally benevolent values they espouse, i.e. act hypocritically. The shift between the two contexts of the model occurs over time. Crucially, the mismatch occurs because contexts change more quickly than motives. For example, social contexts can change much faster than evolution can adapt, or new technology can suddenly alter social environments whilst people take longer to become accustomed to its use. The speed and amount of contextual change can thus vary. Conceptually, a greater degree of overlap between the two contexts would be associated with smaller relevant differences and weaker

effects across the model, but for simplicity of presentation the degree of overlap is kept identical across each example.

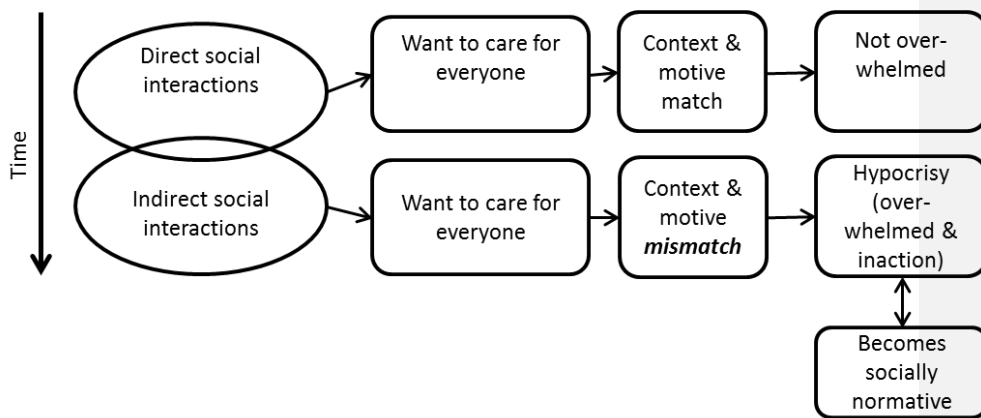


Figure 1.2: Model of SCMT to explain hypocrisy and empathy.

Figure 1.2 illustrates the model with the example of empathy. It would have been relatively straightforward to empathise with all those people we felt connected to earlier in human history, as contact was direct and interactions were between a comparatively small number of people. Today, however, people can identify with all humanity (McFarland, Webb & Brown, 2012) and we are faced with regular reminders of suffering across the globe, mediated by newspapers, television and the internet. There is thus a mismatch between contexts in terms of the desire to care for others, and the presence of a potential in-group of over seven billion people. The result is that people genuinely care about others, but are overwhelmed by the situation. This encourages inaction, which is clearly discrepant with the pro-social position that people value.

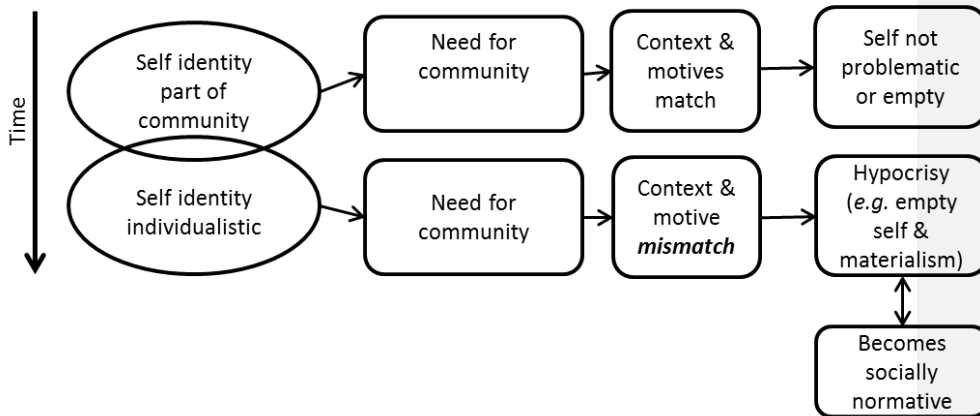


Figure 1.3: Model of SCMT to explain hypocrisy and materialism.

As displayed, the model could also extend to Cushman's (1990) explanation of the empty self (Figure 1.3). People still have a strong need for community, but social contexts have encouraged individualism and thus taken away much of the provision of community support. This leads to a mismatch in contexts and thus an empty self. In order to compensate for this emptiness people are directed towards short-term fixes, such as material goods that do not fit with important values and fail to bring fulfilment, thus representing hypocrisy.

In both the cases of empathy and the need for community, the implication is that the motives from the first context, caring for others and being part of a community, are inherently important but vulnerable to hypocrisy from the move to the second, more recent context. It is worth noting though that mismatches can also occur where the second context is less biased toward self-interest. For example, the last two decades of the 20<sup>th</sup> century saw notable rises in the importance people attached to values of tolerance in developed societies (Inglehart & Baker, 2000). However, we know from social identity theory, experimental research using the minimal group paradigm and historical evidence, that people have a longstanding tendency of using group identities in ways that favours their own groups, dehumanises other groups and

would oppose values of acceptance (Diehl, 1990). In this regard, SCMT can show how modern contexts conflict with pro-social motives from the past, as much as it can show how self-interested tendencies from the past can conflict with recently acquired pro-social motives.

An additional element of the model that is not studied directly in this dissertation is that of social norms reinforcing the legitimacy of the hypocrisy. However, earlier I outlined the potential self-fulfilling nature of assuming self-interest as an inescapable part of human nature. This evidence provides plenty of reasons as to why people might begin to reaffirm hypocrisy as socially normative, thus supporting the feedback process outlined in the model by the bi-directional arrow.

Essentially, SCMT shows that changes in social contexts can lead to gaps between what we truly value and how we act. These gaps are more likely in the 21<sup>st</sup> century, as the pace of social change in the last couple of centuries has somewhat mirrored the exponential rise in the global population. We are thus in a society set up to care a lot, but act a little. But by working together, we can turn this around.

### **Present Research**

This final section simply outlines how SCMT relates to the three core chapters that follow. SCMT has been developed throughout my studies. Accordingly, the chapters do not test the theory directly as much as they illustrate aspects of it. Nevertheless, the research within the main chapters describes ideas that are worthy of interest in their own right and can still inform future directions via SCMT. Additionally, I concur with Festinger (1987/1999), who suggested that no psychological theory is ever complete. For me, SCMT is in an embryonic stage.

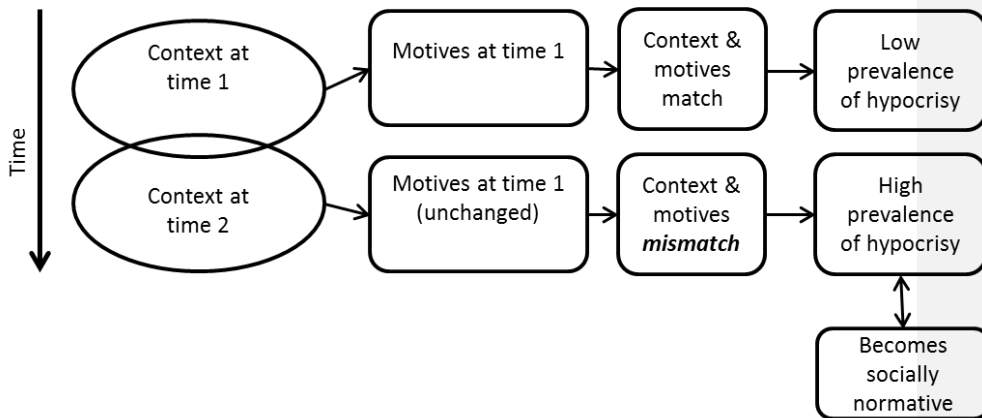


Figure 1.4: Overview of SCMT.

Figure 1.4 outlines a generalised model of SCMT. The model will be repeated at the start of each core chapter, to show how SCMT relates to the research conducted. The model shows how contexts change over time (from time 1 to time 2), yet motives often change little, or not at all, over the same period of time. It is these different paces of change that lead to matches or mismatches and their associated consequences. Whilst I focussed on time as the driver of context change, it is worth noting that other antecedents of context change would also work with this model; this issue will be revisited in the final discussion chapter.

Chapter 2 is an investigation of a novel way of measuring values, where I ask participants to indicate how they see their values over time. Historically, broad life motivations were based on following more socially defined values, whereas contemporary society makes it more important to choose one's own values (Baumeister, 1987). SCMT predicts that the social complexity in present times will lead people to perceive flexibility in their values over time, despite evidence of some stability across the lifespan (Bardi et al., 2009; cf. Gouveia, Vione, Milfont & Fischer, 2015). I therefore investigate whether people



do perceive their values as malleable, whether they see any difficulties in pursuing two competing values, and how discrepancies over time relate to well-being.

Chapter 3 is aimed more towards the end of the model. This research measures intra-personal and inter-personal hypocrisy within the context of ethical consumption. This is a context that is highly relevant for SCMT. Greater social complexity, particularly in relation to trading (Ehrenreich & English, 1979), has led to people having to consider a much broader range of values when consuming goods and services, hence the rise of “ethical purchasing” as high-volume trade in modern society. I thus test whether reminding people of how purchasing in a purely self-interested manner has harmful consequences for others, can increase the consideration of others’ plight. Essentially, this approach re-instigates the historically older foci of empathy and community in the mental representation of purchasing decisions. It then tests whether this context alteration changes intentions and reduces hypocrisy. Additionally, I test whether setting the bar high or low for pro-social behaviour works better for eliciting these changes.

Chapter 4 focuses on the role of complexity in SCMT. This chapter tests whether increased perceptions of complexity lead to a reduced willingness to assign negative moral judgements to an ethically controversial issue. This finding would support SCMT’s view that increased social complexity can encourage hypocrisy by reducing people’s confidence to make moral evaluations. Additionally, more complex contexts can dilute the impact of an individual on their social surroundings, thus making them feel less efficacious in addressing moral concerns.

The intentions underpinning this research are to help us all get closer to who we really want to be. By understanding the role of context complexity and context mismatching, it is possible to form a greater awareness of the processes underlying hypocrisy in our behaviour.

This introduction and the next three chapters combine to address this aim by illustrating portions of the SCMT framework, while attempting to integrate a wide range of psychological literature (e.g., value measurement, consumer decision making, anchoring, moral judgement, attributional processes) into its overarching perspective. The final chapter will then wrap up by summarising what has been achieved so far and indicate the future directions and implications that are raised by SCMT.

## Chapter 2: Values Over Time and Motivational Relations Between Values

### Introduction

In Gawronski's (2012) recent review of cognitive dissonance theory, he emphasised the need for cognitive consistency as a basic psychological need for individuals, mirroring that of hunger and thirst. In the general introduction I outlined how self-knowledge has become more problematic for people, particularly over the last few centuries. If this is the case, a potential context mismatch will exist between this innate need for consistency and contemporary society, where continually acting in alignment with one's values is highly challenging. Figure 5 places this idea within the SCMT model framework. An important goal for this chapter was thus to use values as a framework for understanding how people see themselves as changing over time and to see how these perceptions link to their current sense of well-being.

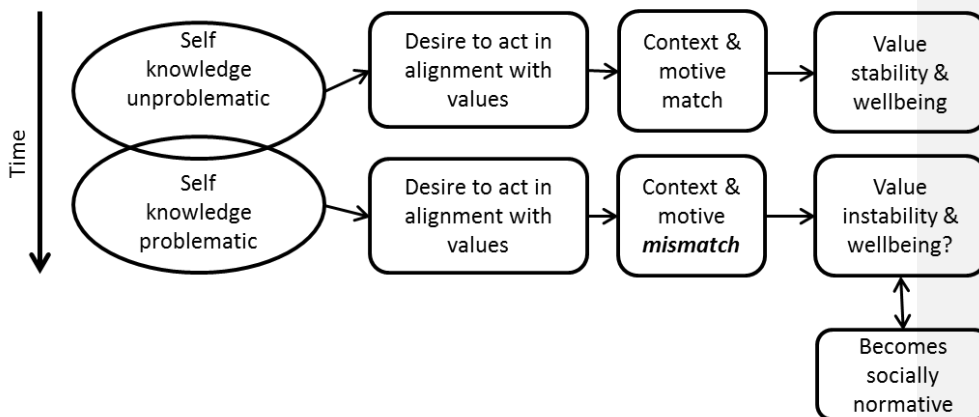


Figure 2.1: Model of SCMT to explain value instability.

Just under 30 years ago, Markus and Nurius (1986) introduced their concept of "possible selves". Their work encouraged many other researchers to consider psychological

identity from a more fluid temporal perspective than had previously been the case, whilst sociologists also bemoaned a paucity of empirical investigations into how the self-concept changes over time (Demo, 1992). There has since followed a diverse range of work that has tested the direction and range of temporal variability in psychological constructs, covering areas such as personality (Biesanz, West & Kwok, 2003), well-being (Ryff, 1991) and affect (Wilson & Gilbert, 2003). However, equivalent research into the *perception* of value change across the lifespan has been somewhat lacking. This chapter aims to begin addressing this gap.

I begin by considering the literature on values and their potential structure, then move on to look at evidence examining how people perceive aspects of themselves as stable or dynamic over time, before also summarising some research on well-being and its association with values. These three broad areas of research are then pooled together to provide the context for the three studies that follow. I wanted to test how people see their values as changing over time, whether they perceive potential tensions in these changes and how such trajectories might relate to present feelings of well-being.

### **Values and Value Structures**

Hitlin and Elder (2007) suggest that the notion of the self is a necessarily temporal experience, yet social psychologists (and to some extent sociologists) have neglected to routinely use temporal contexts to explain the role of the self and agency in behaviour. This may be in part because the concept of the self is so complex. Multiple aspects of the self are presented in psychological theories such as self-discrepancy theory (Higgins, 1987), and the links between self-identities and social groups also offer a further range of options for understanding the self via social identity theory (Brown, 2000). Hence there are already enough degrees of complexity in simply analysing the self at one time point. Hitlin (2003),

however, suggests that values can be a coherent construct for bringing these multiple versions of the self and their associated relevant contexts together. He notes that established values at an individual level, such as benevolence, clearly relate to possible group identities such as volunteering. Furthermore, he suggests that values contain both emotional and cognitive components. This makes values an important metric for capturing the comparatively broad sense of what identity means for an individual, particularly over multiple time points.

Given the significance of values to the self-concept, it is important to consider notions of stability, progress over time and conflicting motivations in values. Schwartz (1994) defines values as trans-situational goals that guide people in life. But this leaves open the question as to whether people really see values as goals to achieve, or perhaps standards to maintain. If it is the former, then values should be aspirational and thus potentially change over time. If it is the latter, then values may be set at a constant level, which people do not wish to alter. Previous research has tended to rely on the premise that values are essentially stable but can vary to some degree over time (Bardi et al., 2009; Rudnev, 2014). However, no research has considered whether people themselves see their values as stable over time.

These perceptions of value change are relevant to people's perceptions of their general personal development over time, which is brought into focus in the next section. Important consequences emanate from how people construct their identity from past to present to future. These perceived trajectories often differ substantially from actual temporal change, but they remain relevant to many psychological mechanisms.

Before examining values in the context of general identity progress, it is worth looking at how values are structured, as this will provide the context for understanding how people perceive different values as changing over time. The dominant model of values in social psychology over the past two decades was presented in full by Schwartz (1992). His

model states that values form a continuum, which takes the approximate shape of a circle. In this circular structure, competing motivations appear opposite one another and complementary motivations appear close together. It is this model I use in my research (see Figure 2.2). The precise number, definition and structure of each value in the model has varied from its initial foundation (Schwartz & Bilsky, 1987) to more recent revisions (Schwartz et al., 2012). However, the broader dimensions of self-transcendence and self-enhancement, and openness and conservation, have remained essentially constant, and it is these dimensions I focus on. The validity of the structure is reflected by evidence of tensions across the circle, for example people who attach more importance to self-transcendence values also attach less importance to self-enhancement values (Schwartz & Sagiv, 1995).

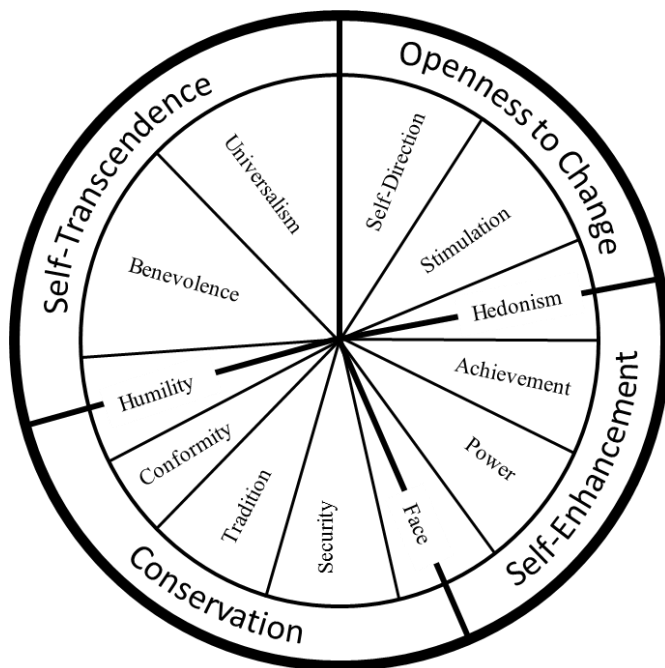


Figure 2.2: Circular model of values, adapted from Schwartz et al. (2012).

The model has been successful in part because the values it assesses help to predict a variety of attitudes and behaviour. For example, those who were higher in openness values and lower in conservation values were more ready to embrace out-group contact (Sagiv & Schwartz, 1995). In addition, values are useful predictors of future concerns (Schwartz, Sagiv & Boehnke, 2000) and hence have clear relevance to people's cognitions relating to time.

However, the most important evidence supporting the model directly examines its assumptions about the circular pattern of motivational relations between values. The structure has a wealth of evidence supporting it across a range of samples and contexts (Bardi & Schwartz, 2003; Fischer & Schwartz, 2011; Pakizeh, Gebauer & Maio, 2007; Schwartz & Boehnke, 2004). Also, priming research has shown that if people raise one value, they tend to also lower an opposing value, whilst leaving orthogonal values unchanged (Maio, Pakizeh et al., 2009). Similarly and perhaps most pertinent to my research, where values have been shown to change over time, the value structure has been maintained (Bardi et al., 2009). This evidence thus suggests that a circular structure is consistent across a range of situations and remains valid even when people change the importance they attach to different values. A fundamental question for my research was thus whether people perceive this apparent circular structure when they consider their own values over time.

### **Stability and Change Over Time**

Cross-sectional research has shown that values change across the lifespan, with age correlating positively with conservation values and negatively with openness values (Caprara, Caprara & Steca, 2003; Robinson, 2013). Additionally, in a longitudinal study, it was found that students shifted away from extrinsic values over their college career (Sheldon, 2005). So although values are a relatively stable construct (Bardi et al., 2009), it appears that gradual change over the longer-term is likely.

An important part of understanding the relationship between identity and time is to understand how the perception of temporal distance matters in terms of attitudes and behaviour. Overall concern for the future can be separated into two factors of immediate and future interests, and individuals who placed greater emphasis on considering future consequences were more likely to exercise and eat healthily (Joireman, Shaffer, Balliet & Strathman, 2012). Similarly, comparisons between past and potential selves formed independent factors in relation to predicting future task performance (Elliot, Murayama, Kobeisy & Lichtenfeld, 2014). It also appears that self-evaluations differ when the future is projected as close or distant (Wilson, Buehler, Lawford, Schmidt & Yong, 2012; Heller, Stephan, Kifer & Sedikides, 2011), though interestingly there is some disagreement in this evidence as to whether the manipulation improves or worsens the self-appraisals. One line of evidence suggested greater positivity towards close future selves compared to distant future selves (Wilson et al., 2012), whilst the other suggested greater positivity towards self-concepts placed in the distant future, compared to the near future (Heller et al., 2011). Such conflicts reveal a need to understand further how temporal perspectives can affect how we view ourselves over time.

Construal level theory (CLT) has attracted a lot of interest over the last decade and is another useful theoretical perspective for thinking about self-changes over time (Trope & Liberman, 2010). A central tenet of the theory is that psychological distance is related to the present self and that further perceived temporal distance relates to the level of abstraction of the relevant construal (Trope & Liberman, 2003; Ledgerwood, Trope & Chaiken, 2010). CLT is relevant to values insofar as it proposes that current values are a useful predictor of distant behaviour, as they are an abstract concept, lacking in concrete situational demands (Eyal, Sagristano, Trope, Liberman & Chaiken, 2009). Interestingly, in their research, the greatest congruence between values and intentions actually occurred in a control condition, when



neither abstract nor concrete construal framing was used (Eyal et al., 2009). This reflects the potential importance of not always constraining how people personally construct their mental representations of psychological measures. However, CLT has not yet considered mapping the trajectory of perceived value change onto current or future intentions. Values in the past and future might offer an even greater level of abstraction, whilst the component of relative progress over time adds an additional element of interest. Overall, it is clear that subjective temporal distance impacts upon psychological processes that are relevant to the progress of the self.

There are, however, competing motivations that are likely to be at work when it comes to change over time. Kivetz and Tyler (2007) suggested that people feel motivated to present a stable view of their true self, but noted how the multifaceted nature of self-representations offers many pathways to consensus and conflict. Interestingly, their research suggests that a tension exists between pragmatism and idealism and that distal priming (thinking about choosing a university course next year) compared to a proximal equivalent (choosing a course that starts in a few days), led to a greater focus on value-relevant features rather than instrumental benefits. This research indicates the potential for understanding further how temporal perspectives can affect the perception of tension in opposing motivations.

There are also individual differences in how people focus on different aspects of time in their lives (Zimbardo & Boyd, 1999) and there is evidence to suggest that this focus can interact with how people actually progress over time to produce a range of outcomes. For example, those who tended to focus more on the future were found to perform stronger academically, though this was only the case for those already low in perceived self-control (Barber, Munz, Bagsby & Grawtich, 2009). It seems that perceptions of self-identity and temporal perspective regularly interrelate (Rappaport, Enrich & Wilson, 1985) and it is thus

vital to further our comprehension of how people perceive their core identity characteristics as dynamic or stable over time.

There might also be broad lifespan trajectories that are relevant across these interacting changes. People sometimes appear willing to denigrate conceptions of their past selves in order to boost their perception of their current self, yet their projections of themselves into the future are almost exclusively positive (Ross & Newby-Clark, 1998; Ross & Wilson, 2003). However, Ryff (1991) noted that older people do not always carry this general optimism for the future. In her research she asked young, middle-aged and elderly participants to assess their previous, current and potential wellbeing. In contrast to the studies I describe in this chapter, she did not explicitly ask participants to draw trajectories over time, but instead asked them for their ideal assessment, followed by their present, past and then future assessments. This method is thus notably indirect and asks participants to make their assessments out of chronological order. She found that younger and middle aged participants did predict improvements over time, but the elderly predicted less variability over time and also a general decline in the future. In a similarly designed study, but focussing on personality, Fleeson and Heckhausen (1997) suggested that perceived personality changes over time are not generally in one direction and relate more specifically to situational differences, for example being curious when first leaving home, or seeking security when raising a family. Being optimistic for the future is arguably a human trait (Peterson, 2000) and one that people ironically may be overly optimistic about in terms of its utility (Tenney, Logg & Moore, 2015), but the question remains whether such a general motivation will translate into predicted progress for the self, via positive change in values.

Alongside perceptual processes, we could ask whether people's predicted progress is accurate. Are people actually good at predicting change over time? Work on affective forecasting (Wilson & Gilbert, 2003; 2005) shows that people can predict the type of emotion

they will feel in response to a future event, but they are often relatively poor at predicting the intensity and duration of that emotion. In terms of self-evaluation, the improvements over time people perceive are frequently illusory (Ross & Wilson, 2003) and open to manipulation (Wilson et al., 2012). However, as I have already outlined, different stages of life do seem to offer realistic constraints on the self-concept (Ryff, 1991; Fleeson & Heckhausen, 1997). Whilst my research will not directly address changes across the lifespan, an interesting research question here remains as to whether the predicted trajectories of value change found map onto the apparent changes detailed at the start of this section (Caprara et al., 2003; Robinson, 2013), e.g. will people predict becoming more conservative? However, perhaps something more important than actual accuracy, is how perceived value change and well-being interact.

### **Values and Well-being**

Assessing the well-being of an individual is seen as a difficult challenge, fraught with issues of definition, subjectivity and reliability; indeed, some academics have suggested avoiding even trying to measure the concept (Barcaccia et al., 2013). Yet for most, the positive potential in doing so outweighs the negative. Also, there are identifiable links between well-being measures and everyday behaviour (Kunzmann, Stange & Jordan, 2005), suggesting that the measurement of well-being, whilst clearly complicated, is a valid aim.

Nevertheless, psychological well-being is a multi-faceted construct. Research has identified three key components: life satisfaction, affective well-being, and psychological flourishing (Diener et al., 2010). Life satisfaction can be measured using the Satisfaction with Life Scale (SWLS), which taps into cognitive judgements of well-being (Diener, Emmons, Larsen & Griffin, 1985). Affective well-being can be measured using the Scale of Positive and Negative Experience (SPANE), which identifies the current strength of emotional states

(Diener et al., 2010). Psychological flourishing can be measured with the Flourishing Scale (FS), which captures the extent to which people feel they are functioning well in important areas of human life (Diener et al., 2010). All three components are considered in the present examination of values and well-being.

Given the aforementioned evidence placing values close to the heart of self-identity, it is plausible that there is a strong connection between values and well-being. Indeed, some researchers consider personal values to be relevant to every aspect of well-being, because values necessarily interact with the subjective experiences that contribute to each individual's happiness (Felce & Perry, 1995). Essentially, what brings joy to each person is different and these differences can be captured in part by knowing their values and their social context.

Some research has assessed the direct relationship between values and well-being. Sagiv and Schwartz (2000) found people who were higher in affective well-being attached more importance to openness values and self-enhancement values, whilst those who were lower in affective well-being attached more importance to conservation values. No consistent correlations were found with cognitive well-being, measured via life satisfaction. In general, the size of the relationships were small ( $r < .25$ ), as found in similar studies (Oishi, Diener, Suh & Lucas, 1999). This line of research also suggests that values work as a moderating influence on well-being, with the effects of success in different domains interacting with the individual's personal value orientations. For example, students who strongly valued achievement values reported greater well-being when they experienced success in terms of academic performance, whilst students who strongly valued hedonistic values were happier on days they had gone to a party.

Self-determination theory (SDT), conversely, suggests that extrinsic motivations are negatively related to well-being and that personal values do not necessarily moderate this

effect (Ryan & Deci, 2000). Additionally, acting with predominantly extrinsic motives can decrease the sense of autonomy in others and thus the well-being of groups, as well as individuals (Kasser, 2011). However, contextual effects relevant to the relationship between values and well-being remain a source of debate. For example, Sagiv and Schwartz (2000) found that students' course of study can relate to their own value orientation, and this in turn can moderate the relationships between value importance and well-being. Specifically, business students with higher levels of self-enhancement values reported greater well-being, whilst psychology students with higher levels of self-transcendence values reported greater well-being. Kasser and Ahuvia (2002), however, found no evidence of moderation effects in their analysis of business students in Singapore: they found only that higher self-enhancement values predicted a lower sense of well-being.

In Maio's (in press) recent summary of the link between values and fulfilment, he also noted the need to consider the contextual situation of the individual. For example, placing greater emphasis on benevolence values when you are raising a family in an affluent setting is likely to lead to greater well-being, via increased motives to connect with others; whereas trying to survive in a context of relative poverty requires a need to focus on more self-enhancing values in order to achieve greater well-being, as this will aid with striving for meeting basic needs. In sum, to understand the link between values and well-being, it is clearly important to know the value orientations of the individual, relevant details of the social context, and to consider different components of well-being.

Some research suggests there can be both significant direct links and moderating effects of values in this domain (Burr, Santo & Pushkar, 2011). Whilst discussions of exactly how values and well-being interrelate are undoubtedly important, my main concern at this stage was simply to assess how the novel methodology of measuring values over time might directly relate to different components of well-being. Discrepancies in value importance over

time could indicate a frustration at failing to meet an ideal standard, or aspiration for a higher level of attainment. It was thus not possible to provide clear directional hypotheses. However, it was broadly expected that both positive and negative relationships between discrepancies of different value types and well-being measures would occur.

### **Present Research**

The sections above present a brief introduction to three topics of study and their interconnections. The aim of the research here was to begin to integrate the personally central notion of values with our understanding of perceptions of change over time and then to consider how this integration relates to an important psychological construct, well-being. The majority of research in psychology that does consider change over time tends to either focus on a contrast between the past and the present, or the present and the future. Nonetheless it is important to consider the psychological potential for measuring how people feel their current life compares to past and future time points concurrently, because current perceptions and decision-making are likely to involve a mix of previous memories and future forecasts. The perception of one's overall journey matters.

In order to assess how value importance varied over time, it was important to consider how to frame the question for participants. Earlier I outlined how construal level framing of any type led to reduced congruence between values and intentions, compared to no constraining framework (Eyal et al., 2009), potentially because the additional contextual demands reduced the abstract nature of the task. Unlike many procedures that force the participants to consider a particular point in the past or the future (e.g. Ryff, 1991; Wilson & Ross, 2001), I hence chose to avoid specifying exact time-points, as such constraints were likely to cause participants to focus on the situational pressures of that specific time, rather than allowing them to respond at the abstract level that values ideally tap into. This was a

particular issue for students, for whom the recent past was likely to be hugely different in crucial contextual factors (e.g. living away from home).

I had three main questions to address in this research. The first was to test whether people see their values as relatively stable over time, or predict some level of dynamism. The second was to test whether theoretical models of values that presuppose opposition between values were supported by people's own forecasted progress. The third was to see if perceived value change over time related to current perceptions of well-being. These aims were pursued in three studies. Study 1 was exploratory: extant research offers conflicting evidence relevant to each of these questions, hence no specific directional hypotheses were put forward. Based on the findings of Study 1, I formed additional research questions for Study 2, which examined whether the trajectories for each set of values and apparent lack of opposition over time could be replicated, as well as testing how thinking about values over time might be demonstrably different to a single time-point measure. Study 3 also aimed to replicate the patterns of the first two studies and then considered how discrepancies between time points for different values would relate to well-being.

### **Study 1**

If people do see their values as changing over time, it is important to understand how they conceptualise such variance. I started to examine this issue with a simple study that aimed to ascertain three points of interest. First, whether people show any changes in their values between past, present and future; second, whether people see opposition in the pursuit of these values in a manner consistent with Schwartz's (1992) model of values; third, whether these temporal trajectories would be affected by a subtle priming procedure. Whilst primes have been successfully used to alter social behaviour in a range of psychological systems (Bargh, 2006), they do not always have an effect, as factors such as strong availability of the self-concept can limit their impact (Smeesters, Yzerbyt, Corneille & Warlop, 2009). Whilst

there is little evidence that a basic prime should impact value importance *per se*, I was interested as to whether increasing the accessibility of particular values might alter people's perceptions of past and future importance, particularly in contrast to the current time point.

## **Method**

### **Participants**

Participants were 124 undergraduate students at Cardiff University (117 women, 7 men) who took part for course credit. They were between 18 and 28 years of age ( $M = 21$ ). All participants completed the study in the laboratory.

### **Design**

A between-participants design was used. There were three independent variables: value dimension (self-transcendence – self-enhancement or openness – conservation), prime type (self-transcendence or self-enhancement), and order of values (self-transcendence, self-enhancement, openness or conservation first). Participants were randomly assigned to one of the eight possible conditions. The dependent measure was the adapted SVS that assessed the importance attached to values over time. The Preference for Consistency (PFC) scale (Cialdini, Trost & Newsom, 1995) was a potential moderator.

### **Procedure**

Participants were sat in individual laboratories. They first completed the scrambled sentences task, during which they were also asked to note down which of the words they found most interesting (in order to increase attention to the semantics of the stimuli presented). After completing this task, they moved to completing the values measure they had



been assigned. Finally, they completed the PFC scale<sup>1</sup>. Afterwards they were probed for suspicion, debriefed, and thanked for their time.

## **Materials**

A scrambled sentences task (Costin, 1969; see Appendix A) was used for the priming procedure. Five words were presented on a computer in a nonsensical order and participants had to rearrange the words to make a logical four word sentence (e.g. “having James cat control enjoyed”, becomes, “James enjoyed having control”). In total, 30 sentences were presented, of which 20 contained a relevant priming word (e.g. powerful, wealth, tolerant, honest) and 10 of which contained no priming word (as filler).

An adapted version of the Schwartz (1992) Value Survey (SVS) was used to measure how participants saw their values as changing over time (see Appendix B for the layout used). By placing the time points side by side and in chronological order, the task thus encouraged participants to effectively draw a trajectory over time for each value. Participants either received 10 values representing the self-transcendence (helpfulness, responsibility, forgiveness, equality, honesty) and self-enhancement (power, wealth, success, ambition, influence) dimension, or they received 10 values representing the openness (creativity, adventure, curiosity, an exciting life, a varied life) and conservation (politeness, moderate tendency, respect for tradition, obedience, devotion) dimension. For each value, participants were asked to rate the importance of each value as a guiding principle in their life in the past, present, and future. Answers were provided on a scale from -1 (*opposed to my values*) to 7 (*of supreme importance*). The measure was administered using pen and paper.

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<sup>1</sup> Analyses for Study 1 and Study 2 revealed the PFC had no significant effects, it is thus mentioned here for procedural completeness, but is not discussed in the results sections.

To provide value scores for each motivational domain, the five values in each domain at each time point (past, present and future) were summed. Cronbach's  $\alpha$  for self-transcendence values varied from .69 to .77, for self-enhancement values varied from .62 to .71, for openness values varied from .51 to .61, and for conservation values varied from .56 to .59. Although some of these reliability indicators were lower than the arguably arbitrary acceptable thresholds often cited in psychological research (Lance, Butts & Michels, 2006), they are certainly comparable with other research using shortened versions of the SVS (e.g. Lindeman & Verkasalo, 2005). The obtained reliability indicators were thus considered acceptable, given the breadth of value type that each score necessarily encompasses (Sortheix & Lonnqvist, 2014), the introductory nature of the research, the long-established validity of the measure and the potential effects of asking participants to consider a temporal contrast of values (Study 2).

In addition the 18-item Preference for Consistency (PFC) scale (Cialdini et al., 1995) was administered (see Appendix C). Example items include "I prefer to be around people whose reactions I can anticipate" and the reverse-worded "It doesn't bother me much if my actions are inconsistent". Answers were provided on a scale from 1 (*strongly disagree*) to 9 (*strongly agree*). The items form a single factor. Cronbach's  $\alpha$  for the PFC scale was .88. The measure was also administered using pen and paper.

## **Results and Discussion**

In Study 1, the choice was made to measure only opposing values for two main reasons. First, this was the first time values had been measured across temporal contexts in this fashion and it was therefore important to keep the process as simple as possible; otherwise, there was a risk participants would get fatigued with a potentially difficult and comparatively abstract task. Second, to reduce the risk of diluting the impact of an already

very sensitive priming procedure, the temporal values measure needed to be concise. One consequence of this however, meant that the values could not be centred around each participant's mean value rating, which Schwartz (2009) recommends to control for differential use of the scale. The following analyses thus focus on the raw data.

A repeated-measures analysis of variance (ANOVA) was conducted for each set of values. Figure 2.3 presents the overall pattern of data for each set of values. The within-participants contrasts for self-transcendence values showed a very strong linear trend,  $F(1, 61) = 112.02, p < .001, \text{partial } \eta^2 = .65$ , and a weaker, but significant quadratic trend,  $F(1, 61) = 8.99, p < .01, \text{partial } \eta^2 = .13$ , such that the values were rated as increasing in importance over time, but to a lesser extent between present and future. The within-participants contrasts for self-enhancement values also showed a very strong linear trend,  $F(1, 61) = 159.50, p < .001, \text{partial } \eta^2 = .72$ , but no significant quadratic trend,  $F < 1, p = .79, \text{partial } \eta^2 = .001$ ; thus, these values were rated as increasing in importance over time. The within-participants contrasts for openness values showed a strong linear trend,  $F(1, 60) = 22.32, p < .001, \text{partial } \eta^2 = .27$ , and no significant quadratic trend,  $F(1, 60) = 2.18, p = .15, \text{partial } \eta^2 = .03$ ; thus, these values were rated as increasing in importance over time. The within-participants contrasts for conservation values showed no significant linear trend,  $F < 1, p = .60$ , and a significant but relatively weak quadratic trend,  $F(1, 60) = 4.70, p = .03, \text{partial } \eta^2 = .07$ , such that the values were rated as increasing in importance over time, but only between present and future.

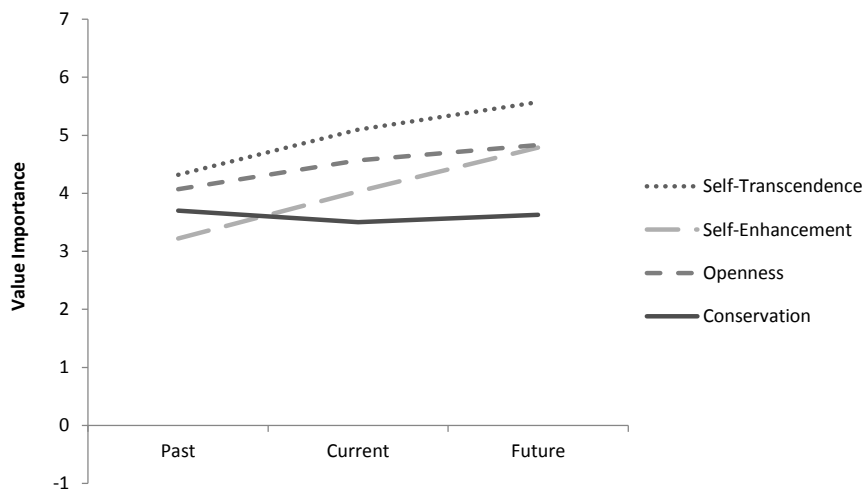


Figure 2.3: Raw data for Study 1 showing perceived changes in value importance over time.

These results clearly indicate that participants indicated a perceived shift over time in the importance they attribute to a range of values. There was a reliable tendency for most values to be seen as increasing in importance over time, with conservation values being the exception. These data provide a clear answer to the first point of interest: all but conservation values are seen as growing in personal importance over time.

Furthermore, the results indicate that individuals perceive no between-value oppositions in change over time. For instance, participants reported that both self-transcendence and self-enhancement values increase in importance to them over time. These two value types normally change in opposite directions: as either value type grows in importance, the other decreases in importance (Bardi et al., 2009; Maio, Pakizeh, et al., 2009). However, the participants believed they could pursue both sets of values concurrently. It is worth noting that this does not simply reflect a process of general value inflation over time, because the conservation values did not show the same trend. These data thus provide

intriguing evidence for the second point of interest: participants did not intuitively see the concurrent pursuit of potentially conflicting values as being problematic.

The third point of interest was whether these found trajectories could be altered by a priming procedure. Accordingly, mixed design ANOVAs were run on each set of values, with the values at each time point entered as a repeated-measures factor (past, present, future) and prime (self-transcendence or self-enhancement) and order (self-transcendence or self-enhancement values presented first) entered as between-participants factors. No significant main effects or interactions were found on any set of values (all  $F$ s < 3.77, all  $p$ s > .08). No support was thus provided for the impact of priming or order effects on the pattern of value changes reported above.

### **Summary**

The results of Study 1 indicate that participants saw their values as dynamic over time. Strong upward linear trends for self-transcendence, self-enhancement and openness values were obtained. Of interest, these upward changes did not reflect the motivational conflicts described in Schwartz's (1992) model of values, in either the self-transcendence and self-enhancement dimension or the openness and conservation dimension. Furthermore, this pattern was uninfluenced by a procedure priming either self-transcendence or self-enhancement values. The null effect of priming is not interpretable by itself (see Cesario, 2014), but it suggests that the perceptions of value change over time may be robust even when different values are salient.

### **Study 2**

The findings from Study 1 provided an interesting first glimpse of how people might perceive their values over time; however, they also raised a number of additional research

questions that required attention before strong inferences could be made about the patterns of data produced. Study 2 thus sought to address a number of issues. Firstly, it investigated whether the patterns of Study 1 could be replicated and the sensitivity of the values measure to the testing context and modality. Accordingly, in this study, participants completed the study in a group setting and using a computer, rather than pen and paper.

Secondly, it was important to gather values data that could be centred around each participant's mean value ratings, as Schwartz (2009) recommends for most analyses. This would allow the data to be mean-centred at each time point; e.g. to obtain the centred score for self-transcendence values in the past, the mean past score for each of the five self-transcendence values would be calculated and then subtracted by the overall mean score participants scored for all twenty values in the past time context. This mean-centring would allow for greater control over scale usage and provide the opportunity to analyse patterns of centred data, alongside the raw data. This would also allow more robust testing of the circular structure of values in individual's perceptions of them over time.

Thirdly, it was important to see how making the temporal contrast affects values compared to a control condition. This was a novel values measure and it was thus important to test how completing it compared to a well-established equivalent standard. Given the results from Study 1, it was plausible to suggest that participants might suppress their current values in order to leave room for future progression. Alternatively, they may enhance their current rating compared to the past, similar to the tendency to be critical of past selves (Ross & Wilson, 2003).

Finally, if effects were replicated it would be important to note whether changes occurred for value instantiations as well as value importance, as such changes can be independent (Maio, Hahn, et al., 2009). People can maintain the same level of importance for

a particular value, but different contexts can change the way that value is seen as relevant to a particular action. For example, those primed with a typical example of egalitarianism (gender) then produced attitudes and behaviour more in alignment with the value of equality than those primed with an atypical example (right or left handedness), despite there being no change in the importance attached to equality as a value (Maio, Hahn, et al., 2009). Assessing values over time arguably requires greater thought about each value than a standard measure. It was thus possible that this process would lead to greater perceived applicability of self-transcendent values in various situations, given that they are often rated as more important than self-enhancement values (Bardi et al., 2009). To test this proposal, I created a range of behaviours that were likely to be relevant to students in the future and that could vary across a dimension of concern for the self (self-enhancement) and concern for others (self-transcendence).

## **Method**

### **Participants**

Participants were 92 undergraduate students at Cardiff University (85 women, 7 men) who took part for course credit. They were between 18 and 26 years of age ( $M = 19$ ). All participants completed the study in the laboratory in small group sessions.

### **Design**

A between-participants design was used. Participants were allocated to one of two conditions: the temporal contrast SVS group (past, present and future) or the control SVS group (current only). The PFC scale (Cialdini et al., 1995) was again used as a potential moderator.

## **Procedure**

Participants completed the study in group sessions in a computer laboratory. They first completed the values measure they had been randomly assigned. Next, they completed the items relating to value instantiations and they then completed the PFC scale. Finally, dependent on condition, they were asked to note the ages they were thinking about when considering the past and future contexts for the temporal contrast SVS and whether they imagined being employed, parenting, and in a relationship in the future context. Afterwards they were probed for suspicion, debriefed, and thanked for their time.

## **Materials**

The materials used mirrored those from Study 1, with three main differences. Firstly, the SVS and PFC scales were completed on the computer, rather than using pen and paper. Secondly, the SVS scale contained 20 items representing both dimensions of the scale (self-transcendence – self enhancement, and openness – conservation), rather than just one of the dimensions. Finally, as indicated in the design, there were two versions of the SVS for this study. Participants either completed the standard SVS, which asked only for their current rating of each value, or they completed the temporal contrast SVS, which asked for their rating of each value in the past, present, and future.

As in Study 1, it was necessary to combine the five value scores representing the opposing sides of each dimension at each time point. Reliability estimates at each time point ranged as follows: Cronbach's  $\alpha$  for self-transcendence values varied from .66 to .78, for self-enhancement values varied from .51 to .78, for openness values varied from .74 to .81, and for conservation values varied from .62 to .72. There were very little differences in reliability for the temporal contrast SVS and the standard SVS. These indicators thus reflected similar levels of internal consistency as in Study 1.



In addition, to test for any effects of the temporal contrast on the instantiation of values, 10 items (Appendix D) were included providing scenarios that reflected germane behaviours for a student sample (e.g. deciding which career to pursue; voting in a student election). These items asked participants to think about each scenario and consider how their decision would be driven by personal interest vs. the needs of others. These items were thus designed to address the self-transcendence – self-enhancement dimension of values. Answers were provided on a scale from 1 (*entirely driven by personal interests*) to 9 (*entirely driven by the needs of others*).

This measure of value instantiations was also used in the research on ethical consumption (Chapter 3). The items were thus selected with certain themes in mind, such as purchasing habits. In order to test whether these themes were reflected in the structure of the overall measure, a factor analysis was conducted using the data from both research streams (Study 2 in this chapter and Study 2 in Chapter 3). The data were combined in order to achieve an adequate sample size for this type of analysis (see MacCullum, Widaman, Zhang & Hong, 1999). A principal axis factor analysis was conducted on the 10 items with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin (KMO) measure suggested the sample size was acceptable for the analysis, KMO = .64. All KMO values for individual items were above the satisfactory limit of .5 (Field, 2013). Three factors had eigenvalues greater than 1 and in total explained 38.75% of the variance, whilst the scree plot showed the point of inflexion as occurring at the third factor (Field, 2013), hence three factors were retained. The items that clustered on the first factor represented actions that were generally less individualistic in nature (voting in a student election, voting in a general election, donating money to charity, signing a petition and helping organise a party for a friend). The items that clustered on the second factor represented purchasing habits (buying clothes, a car and food). The items that clustered on the third factor represented personal work choices (selecting a

career and choosing a course at university). These factors are hence used in both this chapter and Chapter 3.

### Results and Discussion

The first goal was to test whether the data from Study 1 could be replicated. Figure 2.4 presents the overall pattern of data for each set of values, excluding the control SVS group. Initial visual inspection suggested a similar pattern of results as obtained in Study 1, including the relative importance between values, as well as over time. A repeated-measures analysis of variance (ANOVA) was thus run for each set of values, to identify the significance and strength of these data. The within-participants contrasts for self-transcendence values showed a very strong linear trend,  $F(1, 45) = 60.72, p < .001, \text{partial } \eta^2 = .57$ , and a slightly weaker quadratic trend,  $F(1, 45) = 22.08, p < .001, \text{partial } \eta^2 = .33$ . The within-participants contrasts for self-enhancement values also showed a very strong linear trend,  $F(1, 45) = 77.64, p < .001, \text{partial } \eta^2 = .63$ , and a much weaker, but significant, quadratic trend,  $F(1, 45) = 4.44, p = .04, \text{partial } \eta^2 = .09$ . The within-participants contrasts for openness values showed a strong linear trend,  $F(1, 45) = 27.40, p < .001, \text{partial } \eta^2 = .38$ , and a strong quadratic trend,  $F(1, 45) = 17.91, p < .001, \text{partial } \eta^2 = .29$ . The within-participants contrasts for conservation values showed no significant linear trend,  $F < 1, p = .89, \text{partial } \eta^2 < .01$ , and a significant but relatively weak quadratic trend,  $F(1, 45) = 4.94, p = .03, \text{partial } \eta^2 = .10$ .

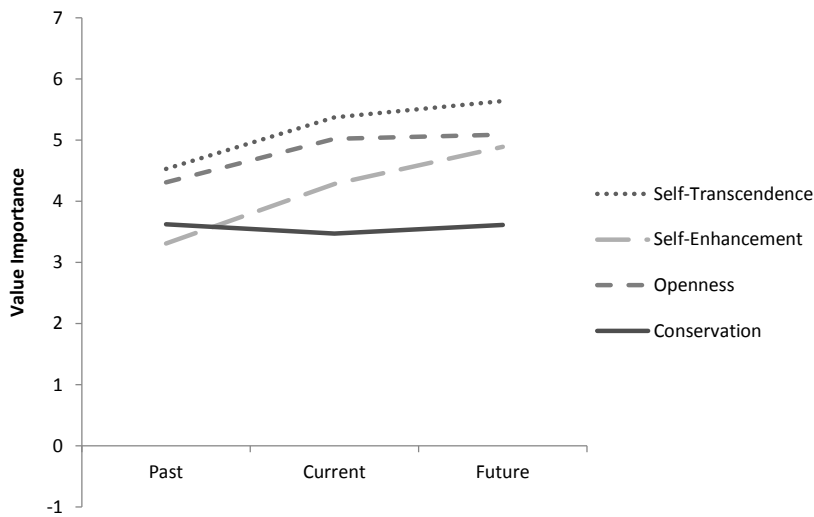


Figure 2.4: Raw data for Study 2 showing perceived changes in value importance over time.

Replicating the patterns from Study 1, the strongest effects over time were linear for self-transcendence, self-enhancement and openness values. It is worth noting however, that the data here showed stronger quadratic trends than were found in Study 1, reflected by the larger effect sizes for each set of values. This issue will be revisited in the discussion of Study 3. Also replicating Study 1, only a weak quadratic trend was detected for conservation values. Overall, the effects over time replicated and extended Study 1.

The second goal of the study was to use mean-centred values scores. This process controls for individual differences in scale usage (Schwartz, 2009), and here it also enabled the analysis to look at how value importance changed over time in relative, rather than in absolute terms.

A repeated-measures analysis of variance (ANOVA) was run using the mean-centred data for each set of values. The within-participants contrasts for self-transcendence values

showed a significant linear trend,  $F(1, 45) = 4.85, p = .03, \text{partial } \eta^2 = .10$ , and a significant quadratic trend,  $F(1, 45) = 6.19, p = .02, \text{partial } \eta^2 = .12$ . The within-participants contrasts for self-enhancement values showed a very strong linear trend,  $F(1, 45) = 24.81, p < .001, \text{partial } \eta^2 = .36$ , and no significant quadratic trend,  $F < 1, p = .74, \text{partial } \eta^2 < .01$ . The within-participants contrasts for openness values showed no linear trend,  $F < 1, p = .52, \text{partial } \eta^2 = .01$  and a significant quadratic trend,  $F(1, 45) = 5.92, p = .02, \text{partial } \eta^2 = .12$ . The within-participants contrasts for conservation values showed a very strong linear trend,  $F(1, 45) = 84.29, p < .001, \text{partial } \eta^2 = .65$ , and a strong quadratic trend,  $F(1, 45) = 27.81, p < .001, \text{partial } \eta^2 = .38$ . Figure 2.5 presents the pattern of data for each set of values, excluding the control SVS group.

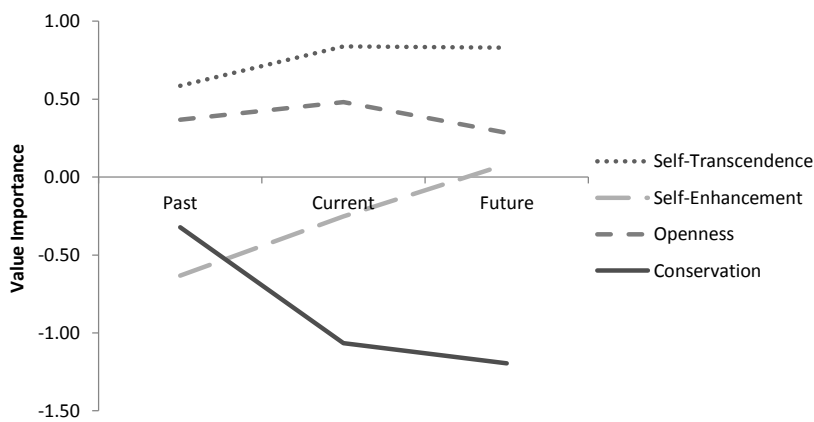


Figure 2.5: Mean-centred data for Study 2 showing perceived changes in value importance over time.

These results provide an interesting contrast to the raw data. By controlling for scale usage, the strongest effects are an upward trend for self-enhancement values and a downward

trend for conservation values. This pattern of data is particularly interesting given the wealth of evidence for the circular structure of the values contained within the SVS. The raw data from Study 1 and Study 2 suggest that participants did not consciously see the oppositional nature of each set of values. The mean-centred data in Study 2 also suggest that such opposition is not present, even though centring focuses on relative changes in value importance. This consistent result suggests that perceptions of value change over time do not reveal the same motivational relations between values as have been found when examining actual value changes over time (Bardi et al., 2009).

The third goal of this study was to see if completion of the temporal contrast SVS yielded ratings of values in the present that differed from ratings in the standard SVS measure without the past and future contrast. This was a novel comparison and I had no specific *a priori* predictions about potential differences, particularly given the potential bi-directional pressures outlined earlier.

As Table 2.1 illustrates, the participants completing the temporal contrast SVS did differ from their control group counterparts. For each set of values, participants in the temporal contrast group tended to raise the importance of the values in the present, compared to the control group. This trend was reliable, however, only for openness values, with a marginal difference for conservation values. It would thus appear that thinking about values over time acts as a general enhancer of value importance in the current context, particularly for openness values. This finding fits with evidence that a future focus can shift attention towards the importance of values (Kivetz & Tyler, 2007).

Table 2.1

*Comparing raw data from the temporal contrast SVS to the standard SVS*

	Temporal Contrast	Standard	<i>t</i>	<i>Cohen's d</i>
	<i>M (SE)</i>	<i>M (SE)</i>		
Self-transcendence	5.37 (0.14)	5.24 (0.13)	-0.70	-.15
Self-enhancement	4.28 (0.14)	4.18 (0.10)	-0.60	-.13
Openness	5.02 (0.17)	4.03 (0.17)	-4.10**	-.86
Conservation	3.47 (0.17)	3.04 (0.16)	-1.87†	-.39
All Values	4.54 (0.11)	4.12 (0.09)	-2.88**	-.61

Note: †*p* < .10; \**p* < .05, \*\**p* < .01. Higher means represent greater importance.

It was then necessary to check whether these differences from the control condition also arose in the mean-centred value scores. Table 2.2 shows that the centred data revealed different trends from the raw value scores. Participants who considered their values over time significantly increased the importance they attached to openness values, similar to the raw data. However, as the centred data are necessarily relative in nature, opposing effects are needed to balance any such change. Here, the opposing effects are reflected in relative decreased importance in self-transcendence and self-enhancement values. Again, these data do not offer support for participants reporting potential conflict across the value dimensions. In comparison to the control group, participants who thought about the temporal trajectory of their values clearly increased the importance they attached to openness values in the current context, but this was not accompanied by a decrease in the importance they attached to conservation values.

Commented [CF6]: Changed is to are.

Table 2.2

Comparing mean-centred data from the temporal contrast SVS to the standard SVS

	Temporal Contrast	Standard	<i>t</i>	Cohen's <i>d</i>
	<i>M</i> ( <i>SE</i> )	<i>M</i> ( <i>SE</i> )		
Self-transcendence	0.84 (0.08)	1.12 (0.10)	2.15*	.45
Self-enhancement	-0.25 (0.10)	0.05 (0.09)	2.25*	.47
Openness	0.48 (0.12)	-0.09 (0.14)	-3.10**	-.65
Conservation	-1.07 (0.12)	-1.08 (0.11)	-0.11	-.02

Note: †*p* < .10; \**p* < .05, \*\**p* < .01. Higher means represent greater importance.

The final goal of this study was to see if the different versions of the SVS produced any consequential effects on value instantiation. T-tests were run on the three factors identified earlier (other-focussed actions, purchasing habits and personal work choices). Those in the temporal contrast condition perceived purchasing decisions from a more selfless perspective ( $M = 2.28$ ,  $SE = 0.12$ ) than those who completed the standard measure ( $M = 1.91$ ,  $SE = 0.10$ ), mean difference =  $-0.37$ ,  $[-0.68, -0.06]$ ,  $t(90) = -2.37$ ,  $p = .02$ ,  $d = -0.50$ . The other two factors did not differ between conditions (both  $t_s < .02$ ,  $p_s > .98$ ). Whilst this result is interesting in showing a potential increased focus on the accessibility and applicability of self-transcendent values, further work is needed to outline exactly how an assessment of values over time might help with this process. Additionally, the ten scenarios were aimed at the self-transcendence and self-enhancement dimension, rather than the openness and conservation dimension of values; given the results earlier indicated the strongest effects of making a temporal contrast on value importance occurred in the domain of openness values, it would be worth using instantiation items that tapped into openness and conservation values to check for any potential effects of instantiation in this dimension. Nevertheless, it is

interesting to note the effect of taking a temporal contrast on the value instantiation of purchasing behaviour.

### **Summary**

Study 2 replicated the initial patterns found in Study 1. The temporal contrast SVS produced similar results in both individual sessions with pen and paper (Study 1) and in group sessions with a computer (Study 2). The mean-centred data indicated that participants projected a rise in self-enhancement values and a fall in conservation values over time. Neither the raw data nor the centred data provided evidence that the participants saw traditionally opposing values as being in competition. Finally, the completion of the temporal contrast SVS enhanced the importance of all values in the current context, but openness values were particularly strongly affected.

### **Study 3**

The first two studies provided consistent evidence that people see the majority of their values increasing in importance over time, without indication of the usual tension that opposing sets of values should bring. Study 3 had two specific aims to extend these findings. The first was to attempt to replicate the pattern of centred data found in Study 2 in a larger sample. The second aim was to look at how the temporal changes reported by the participants might be associated with well-being. As indicated in the introduction, previous research has revealed interesting associations between values and well-being. However, this research has not looked at the extent to which people's sense of progression in values over time relates to well-being. An interesting issue was whether the upward trends exhibited for most values are detrimental to well-being and whether discrepancies over time are adaptive for some values but not for others.



## Method

### Participants

Participants were 198 first-year undergraduate students at Cardiff University (175 women, 23 men) who took part in a pre-test research session during their induction week. They were between 17 and 50 years of age ( $M = 19$ ). All participants completed both parts of the study in large group sessions.

### Design

A simple correlational design was used. All the participants completed both the temporal contrast SVS and each of the three measures of well-being.

### Procedure

Participants completed the study in large group sessions in a computer laboratory. The research was presented as two separate studies within a large testing session, wherein participants completed a diverse range of psychological measures for a number of researchers in the School of Psychology, in addition to the measures used in my research. Accordingly, participants were free to complete the measures in any order they preferred. Upon completion of the session, participants were debriefed and thanked for their time.

### Materials

The same temporal contrast SVS was used as in Study 2. Three scales were used to measure well-being, all of which were presented on computer. The first measure was the Satisfaction with Life Scale (SWLS; see Appendix E), which taps into cognitive judgements of well-being (Diener et al., 1985). Example items included "In most ways, my life is close to ideal" and "So far, I have gotten the important things I want in life". The response scale varied from 1 (*strongly disagree*) to 7 (*strongly agree*) and the five items formed a single

reliable factor ( $\alpha = .88$ ). The second measure was the Scale of Positive and Negative Experience (SPANE; see Appendix F), which identifies current emotional well-being (Diener et al., 2010). Example items for positive emotions included “happy”, “joyful” and “good” and example items for negative emotions included “sad”, “angry” and “bad”. Participants were asked to think about how much they had experienced each feeling over the last four weeks. The response scale varied from 1 (*very rarely or never*) to 5 (*very often or always*). The positive emotions ( $\alpha = .88$ ) and negative emotions ( $\alpha = .84$ ) formed reliable factors, as did the combination of both scales ( $\alpha = .87$ ). The third measure was the Flourishing Scale (FS; see Appendix G), which captures the extent to which people feel they are functioning well in important areas of human life (Diener et al., 2010). Example items included “I lead a purposeful and meaningful life” and “I am competent and capable in the activities that are important to me”. The response scale varied from 1 (*strongly disagree*) to 7 (*strongly agree*) and the five items formed a single reliable factor ( $\alpha = .86$ ).

### **Results and Discussion**

Firstly, it was important to test whether the raw value scores replicated the effects from the first two studies. A repeated-measures analysis of variance (ANOVA) was run for each set of values, to identify the significance and strength of these data. The within-participants contrasts for self-transcendence values showed a very strong linear trend,  $F(1, 197) = 202.30, p < .001, \text{partial } \eta^2 = .51$ , and a weaker quadratic trend,  $F(1, 197) = 49.32, p < .001, \text{partial } \eta^2 = .20$ . The within-participants contrasts for self-enhancement values also showed a very strong linear trend,  $F(1, 197) = 265.41, p < .001, \text{partial } \eta^2 = .57$ , and a much weaker, but significant, quadratic trend,  $F(1, 197) = 9.63, p < .01, \text{partial } \eta^2 = .05$ . The within-participants contrasts for openness values showed a strong linear trend,  $F(1, 197) = 104.61, p < .001, \text{partial } \eta^2 = .35$ , and a slightly weaker quadratic trend,  $F(1, 197) = 43.12, p$

<.001, *partial*  $\eta^2 = .18$ . The within-participants contrasts for conservation values showed a marginally significant linear trend,  $F(1, 197) = 3.47, p = .06, \text{partial } \eta^2 = .02$ , and no significant quadratic trend,  $F < 1, p = .86, \text{partial } \eta^2 < .01$ . Figure 2.6 presents the overall pattern of data for each set of values.

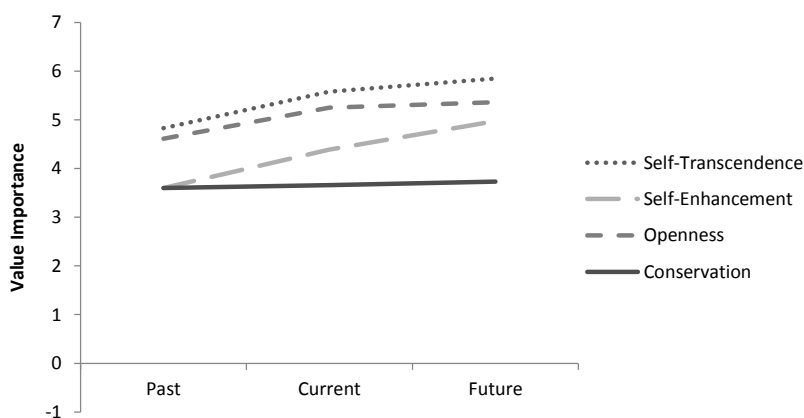


Figure 2.6: Raw data for Study 3 showing perceived changes in value importance over time.

This pattern of raw data maps onto the previous results well. In all three studies, there have been strong linear effects for self-transcendence, self-enhancement and openness values, but not for conservation values. Notable quadratic trends have also emerged for each value set, though it is worth noting that where a linear effect exists the associated effect size is always more robust (i.e., a lower  $p$ -value and a larger effect size). The significant quadratic trends reflect a flattening of the curve, most noticeably for self-transcendence and openness values. This may reflect a ceiling effect, as these values consistently represent the two highest ranked sets of values. It may also be that young adult participants see their current selves as closer to their future selves than their past selves in terms of value development. This possibility should be considered in light of the evidence from Study 2 that participants inflate

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their values to some degree when they make a temporal contrast, in particular when they consider their openness values. This issue will be discussed further in the general discussion.

Having found consistency in the raw value scores across studies, it was important to see if the pattern of centred data from Study 2 was also replicated. A repeated-measures analysis of variance (ANOVA) was run for each set of values. The within-participants contrasts for self-transcendence values showed a significant linear trend,  $F(1, 197) = 13.17, p < .001, \text{partial } \eta^2 = .06$ , and a significant quadratic trend,  $F(1, 197) = 9.70, p < .01, \text{partial } \eta^2 = .05$ . The within-participants contrasts for self-enhancement values showed a strong linear trend,  $F(1, 197) = 79.00, p < .001, \text{partial } \eta^2 = .29$ , and no significant quadratic trend,  $F < 1, p = .50, \text{partial } \eta^2 < .01$ . The within-participants contrasts for openness values showed no linear trend,  $F < 1, p = .25, \text{partial } \eta^2 = .01$  and a significant quadratic trend,  $F(1, 197) = 10.67, p < .01, \text{partial } \eta^2 = .05$ . The within-participants contrasts for conservation values showed a very strong linear trend,  $F(1, 197) = 156.74, p < .001, \text{partial } \eta^2 = .44$ , and a significant quadratic trend,  $F(1, 197) = 37.20, p < .001, \text{partial } \eta^2 = .16$ . Study 3 thus produced data trends that were very closely matched to Study 2. Figure 2.7 presents the overall pattern of data for each set of values.

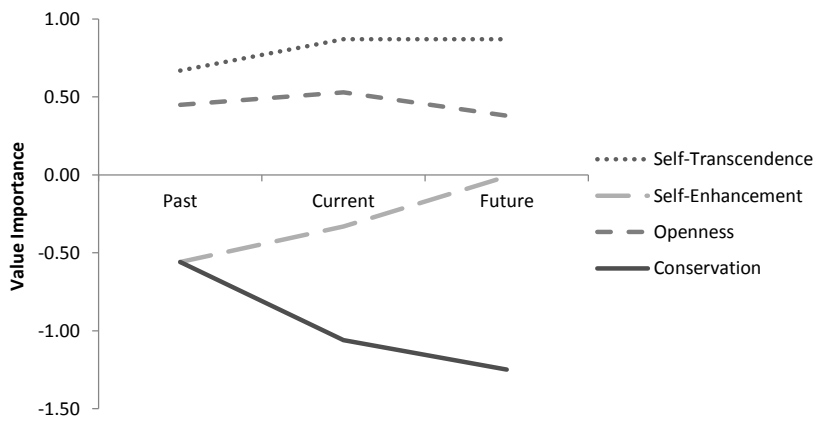


Figure 2.7: Mean-centred data for Study 3 showing perceived changes in value importance over time.

Having ascertained the reliability of the data patterns, the second aim was to look at the relationship between these patterns and well-being. This was tested in two main ways. First, the correlations between each value set at each time point and the measures of well-being were assessed. Second, the discrepancies over time and their correlation with well-being were evaluated. The following tables display six measures relating to well-being. The SWLS and FS are calculated as in Diener et al. (2010). The SPANE measures are also calculated as in Diener et al. (2010), hence the two subcomponents of positive and negative emotions are presented separately to show the strength of the effect on each factor. To calculate the SPANE overall score, the negative items are reverse coded. The final measure presented is a Well-being Index which is a standardised composite of the SWLS, SPANE and FS ( $\alpha = .84$ ).

Table 2.3

*Correlations between raw values data and well-being*

	SWLS	SPANE Positive	SPANE Negative	SPANE Overall	FS	Well- being Index
Self-Transcendence Past	0.15*	0.15*	-0.04	0.10	0.14	0.15*
Self-Transcendence Current	0.23**	0.27**	-0.18*	0.26**	0.28**	0.29**
Self-Transcendence Future	0.21**	0.29**	-0.16*	0.25**	0.24**	0.27**
Self-Enhancement Past	0.00	-0.04	0.13*	-0.11	0.12	0.01
Self-Enhancement Current	-0.07	-0.06	0.19**	-0.15*	0.09	-0.05
Self-Enhancement Future	-0.01	0.02	0.12	-0.07	0.11	0.01
Openness Past	-0.01	0.11	-0.04	0.09	0.14*	0.08
Openness Current	0.00	0.22**	-0.05	0.15*	0.23**	0.15*
Openness Future	0.00	0.15*	-0.06	0.11	0.20**	0.12
Conservation Past	0.12	-0.02	0.10	-0.07	0.04	0.03
Conservation Current	0.15*	0.08	-0.01	0.05	0.10	0.11
Conservation Future	0.14	0.09	0.01	0.04	0.09	0.10

Note: \* $p < .05$ , \*\* $p < .01$

Table 2.3 represents the correlations between each set of values at each time point and the well-being measures. For self-transcendence values, there was a consistent association between higher value importance and higher well-being on the SWLS, SPANE and FS, with the values being most strongly linked to the current and future time points. This finding suggests those who report trending toward higher self-transcendence values also report higher well-being across a diverse range of cognitive, emotional and flourishing components. For

self-enhancement values, the association with well-being is less clear, though the opposite direction of effects does appear for SPANE Negative, indicating that those reporting higher importance for these values also report a more negatively emotional state. For openness values, no association appears present for SWLS. However, for SPANE Positive and FS there are consistent positive relationships. This indicates those who attached more importance to openness values also reported greater emotional well-being and flourishing. For conservation values, there were some positive correlations with SWLS. There were no clear associations between conservation values and emotional well-being and flourishing.

Table 2.4

*Correlations between centred values data and well-being*

	SWLS	SPANE Positive	SPANE Negative	SPANE Overall	FS	Well- being Index
Self-Transcendence Past	0.11	0.14*	-0.11	0.14*	0.03	0.11
Self-Transcendence Current	0.17*	0.17*	-0.21**	0.23**	0.11	0.20**
Self-Transcendence Future	0.12	0.16*	-0.17*	0.19**	0.06	0.14*
Self-Enhancement Past	-0.07	-0.12	0.13	-0.14*	0.03	-0.07
Self-Enhancement Current	-0.18**	-0.22**	0.24**	-0.27**	-0.10	-0.21**
Self-Enhancement Future	-0.12	-0.13	0.16*	-0.18*	-0.05	-0.13
Openness Past	-0.09	0.08	-0.11	0.11	0.04	0.02
Openness Current	-0.10	0.10	-0.06	0.10	0.06	0.02
Openness Future	-0.11	0.02	-0.06	0.04	0.05	-0.01
Conservation Past	0.07	-0.09	0.07	-0.09	-0.10	-0.05
Conservation Current	0.11	-0.03	0.00	-0.01	-0.05	0.02
Conservation Future	0.10	-0.01	0.02	-0.02	-0.04	0.02

Note: \* $p < .05$ , \*\* $p < .01$ 

Table 2.4 displays the associations between relative, mean-centred value importance scores and well-being. The pattern of results for self-transcendence values was somewhat similar to the raw values in that there were consistently positive correlations between value importance and SWLS and SPANE, although the association between self-transcendence values and FS was lower and non-significant. For self-enhancement values, there were consistent negative correlations between value importance and well-being, particularly in the



current time context, but, as with all the centred value scores, the association with FS was weaker and not significant. For openness and conservation values, there were no significant correlations with well-being.

The raw and centred data thus provide an interesting first look at how a temporal contrast SVS compares with a range of well-being measures. In both the raw and centred data, there was consistent evidence to suggest that those who attached more importance to self-transcendence values reported greater well-being, whereas those who attached more importance to self-enhancement values reported lower well-being. In Sagiv and Schwartz's (2000) investigation of relations between value priorities and well-being, they reported associations between a range of values and emotional, but not cognitive, well-being. Their analysis focused on the ten more specific value motivations that underlie the four broader value sets being assessed in these studies, so direct comparisons are awkward. However, their sample did not show any associations between self-transcendence values and well-being, nor with a cognitive well-being measure. Instead, they found those who were higher in self-direction, stimulation and achievement values reported greater affective well-being, whilst those who were lower in security, tradition and conformity values reported lower affective well-being.

The pattern of results in Study 3 suggest the findings are thus more in line with Kasser and Ryan's (2001) analysis of intrinsic and extrinsic goals and their association with well-being. They found that intrinsic aspirations, which broadly fit with self-transcendence values, were positively associated with well-being, whilst extrinsic aspirations, which broadly fit with self-enhancement values, were negatively associated with well-being. Maio's (in press) review of the relationship between values and well-being outlined how the literature supports the existence of both a direct link and a moderating influence. There is evidence for a direct link between certain values and well-being and the link appears strongest for values which

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encourage positive relationships with others (Maio, in press). However, there is also evidence to show individual differences in value importance are important too. For some individuals, the higher their well-being, the more they report acting in alignment with the values that matter most to them.

The debate on how values and well-being interrelate will continue, but a separate issue is whether perceived changes in values over time also predict well-being. Table 2.5 shows the associations between raw value scores and well-being. The changes from past to current contexts and current to future contexts have been analysed separately.

Table 2.5

*Correlations between raw value discrepancies over time and well-being*

	SWLS	SPANE Positive	SPANE Negative	SPANE Overall	FS	Well- being Index
Self-Transcendence C-P	0.04	0.07	-0.14	0.13	0.10	0.10
Self-Enhancement C-P	-0.07	-0.01	0.01	-0.01	-0.08	-0.06
Openness C-P	0.02	0.08	0.00	0.04	0.05	0.04
Conservation C-P	0.05	0.14*	-0.15*	0.17*	0.09	0.12
Self-Transcendence F-C	-0.12	-0.07	0.12	-0.12	-0.20**	-0.17*
Self-Enhancement F-C	0.11	0.15*	-0.14	0.17*	0.03	0.11
Openness F-C	-0.01	-0.13	-0.01	-0.06	-0.06	-0.05
Conservation F-C	-0.03	0.04	0.05	-0.01	-0.04	-0.03

Note: \* $p < .05$ , \*\* $p < .01$

C-P = Difference between current and past value rating

F-C = Difference between future and current value rating

Looking at the change from past to current, the only significant effects were with conservation values, where participants reporting a greater difference in value importance also reported greater emotional well-being. Looking at the change from current to future, there is an interesting turnaround when compared to the earlier correlations in Tables 2.3 and 2.4. Those who predicted attaching greater importance to self-transcendence values in the future generally reported a lower sense of well-being, particularly with FS. Whilst those who predicted attaching greater importance to self-enhancement values in the future generally reported a greater sense of well-being, particularly with SPANE. Working from correlational data, it is impossible to infer the exact process of this relationship. It is certainly plausible to suggest that those who report greater levels of well-being at the moment, may be able to do so because they are already living close to their ideal position on self-transcendence values, hence why a larger difference correlates with less happiness, as they already feel able to consistently act with the concerns of others in mind. However, this logic works less well with self-enhancement values, as it is more difficult to intuitively see how people who are happier now would also be aspiring to attach greater importance to such values, which are more relevant to meeting personal needs via concern for the self. Further research is thus necessary, to understand the relationship between perceptions of value importance in the future and well-being.

Table 2.6

*Correlations between centred value discrepancies over time and well-being*

	SWLS	SPANE Positive	SPANE Negative	SPANE Overall	FS	Well- being Index
Self-Transcendence C-P	0.04	0.01	-0.10	0.07	0.09	0.08
Self-Enhancement C-P	-0.09	-0.08	0.09	-0.10	-0.13	-0.13
Openness C-P	0.02	0.01	0.08	-0.05	0.01	-0.01
Conservation C-P	0.06	0.09	-0.10	0.11	0.07	0.09
Self-Transcendence F-C	-0.14	-0.07	0.15*	-0.13	-0.14	-0.16*
Self-Enhancement F-C	0.13	0.18**	-0.16*	0.20**	0.10	0.17*
Openness F-C	-0.01	-0.16*	0.00	-0.08	-0.02	-0.04
Conservation F-C	-0.03	0.04	0.07	-0.02	0.03	-0.01

Note: \* $p < .05$ , \*\* $p < .01$

C-P = Difference between current and past value rating

F-C = Difference between future and current value rating

The centred value scores, detailed in Table 2.6, revealed no significant associations between current-past discrepancies and well-being. However, the future-current discrepancies reflected a similar pattern to the raw value scores. Participants who predicted attaching greater relative importance to self-transcendence values in the future also reported lower well-being, whilst those who predicted attaching greater relative importance to self-enhancement values, reported a greater sense of well-being. Whilst the comparative contribution of each well-being measure varies between the raw and centred data, the

direction of each effect consistently offers a similar perspective. The raw and centred scores both suggest that participants who saw themselves as attaching more importance to self-transcendence values in the future were concurrently reporting a lower sense of well-being. The reverse pattern arose for self-enhancement values.

### **Summary**

The results from Study 3 replicated the patterns obtained in the first two studies. These patterns continue to show that people see no opposition in the pursuit of values that have been consistently shown to serve opposing motives. The links between value importance and well-being also revealed two associations of interest. Firstly, consistent with some past research on intrinsic motivation (Ryan & Deci, 2000), participants who currently attach more importance to self-transcendence values and less importance to self-enhancement values, report a greater sense of well-being across a range of measures. Secondly, participants who predict attaching greater importance to self-transcendence values and less importance to self-enhancement values in the future, report lower well-being. This is a finding that warrants reference to the literature on affective forecasting (Wilson & Gilbert, 2003; 2005), which suggests that people are often poor at predicting how they may feel in response to future events. People could also be poor at predicting the type of values that will make them happy. The correlational nature of this result does of course prevent firm conclusions from being drawn in this regard. These correlations may reflect how happier people feel freer to act in alignment with their self-transcendent values. Nevertheless, the data raise some fascinating questions for future research.

### **General Discussion**

The three studies in this chapter provided consistent evidence that people forecast values changing over time. At the same time, however, people's forecasts do not express

oppositional forces across time in either the self-transcendence and self-enhancement dimension or the openness and conservation dimension of values. These findings occurred both when I examined raw ratings of each type of value and value ratings that were centred around each participant's mean value rating. Moreover, in both cases, the upward linear trends across time did not arise for conservation values, and the centred value ratings even showed decreases over time for conservation values. Even when I isolated directly opposing values (Study 1), participants still did not perceive the potential opposition over time. Together, this evidence indicates that a temporal perspective on values offers a very different outlook from existing perspectives for understanding how people use values in conjunction with their self-identity over the lifespan.

Of importance, it was not the case that asking about values from a temporal perspective merely invoked a need for progress, almost regardless of its content, thus removing the potential for oppositional forces. Conservation values, despite maintaining their positive rating of importance, did not produce similar patterns of upward trajectory as the other values did. Furthermore, the centred data are necessarily relative, and these also failed to provide evidence of tensions between values. Additionally, it is worth noting that values are only very weakly correlated with social desirability (Schwartz, Verkasalo, Antonovsky & Sagiv, 1997), so participants were unlikely to have been affected by any concerns of self-presentation.

Instead, the findings are broadly consistent with evidence indicating that people's mental representations of changes over time have different antecedents than actual changes over time. In general, it is not unusual to find that people have comparatively low insight into their own abilities (Zell & Krizan, 2014) or are relatively poor at assessing their likely emotional response to a future event (Wilson & Gilbert, 2003). This difference is evident in both people's representations of past events and future events. In research examining

recollection of past events it appears people tend to evaluate the same event more favourably if they perceive it as close, rather than distant, to the current time point (Ross & Wilson, 2003). In research on predictions of future events, research on affective forecasting has found people underestimate how other things happening at the same time will have an impact on their experience of such events (Wilson & Gilbert, 2005). A common factor in both sets of evidence is that people base their recollections or predictions on their own theories regarding factors that influence them. Construal level theory (Ledgerwood et al., 2010; Trope & Liberman, 2003, 2010) indicates that these predictions will become increasingly focused on abstract, emotional constructs as the mental simulations become more distant in time (i.e., past or future). In the present context, people's simulations do not subsume the motivational conflicts between values that are encompassed in the circular structure of values (Schwartz, 1992). Instead, people predict a general rise in values serving self-transcendence, openness, and self-enhancement motives, with no or (perhaps) less change in conservation values. Because conservation values are lower in importance than the other value types, these findings could be summarised as indicating that people see all but their least important values as rising in importance to them over time. In other words, people tend to think they can increasingly aspire to the values that matter for them, without any trade-offs between them.

The next important question to address is the extent to which the reported value trajectories are accurate. Without tracking values longitudinally across the lifespan it is impossible to be sure about the accuracy of these value trajectories. However, there are some clues from the introduction to suggest that the participants' simulations do not mirror real-life patterns. Firstly, the evidence that suggested conservation values increase over the lifespan (Caprara et al., 2003) and openness values decrease with aging (Robinson, 2013). Although these studies rely on cross-sectional analyses and are thus potentially confounded with their associated cohorts (Bardi & Goodwin, 2011), this evidence suggests that the participants here

will not follow the change in values over time that they report. In line with the previous question of why value tensions do not arise, it will be interesting to research further as to why perceived value trajectories appear unlikely to be followed.

Conversely, it should be noted, there was one area where extant evidence of actual value change and the data in my studies did converge. Sheldon (2005) found that university students attached more importance to “healthy” (intrinsic) positive values when they reached graduation, compared to the start of their degree. Relating this finding to the data I collected is not straightforward, as my participants were projecting much further into the future than the end of their university degree. But it is interesting to note that participants did predict an increased shift towards self-transcendent values in the future.

However, given participants did not report feeling tensions between values that we know exist in other contexts and that they probably do not follow most of the trajectories of values that they set themselves, it is important to consider how these perceptual inaccuracies map onto other psychological constructs, which was my third main aim. Study 3 offered the first glimpse of such a relationship by comparing the values participants reported with a range of well-being measures. Initial analysis showed participants who reported higher self-transcendence values across the time points also reported higher levels of well-being, with the current time context unsurprisingly reflecting the strongest effects. The reverse pattern was found for self-enhancement values. These findings fit well with a range of existing research that has looked at links between values and well-being and found those who place greater importance on self-transcending values also declaring greater cognitive and emotional well-being (Burr, et al., 2011; Deci & Ryan, 1995; Kasser & Ahuvia, 2002).

But importantly, a novel finding was that the discrepancies between time points also related to well-being. A greater distance between current and future value importance had a



negative relationship with well-being for self-transcendence values and the reverse pattern was again found for self-enhancement values. These data provide the first evidence that perception of a discrepancy in value importance over time and current well-being interrelate. Future research ideas, presented later, attempt to provide some pathways to understanding this issue further.

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### Limitations

There are two key related limitations to the research presented which need to be acknowledged. Firstly, the samples are relatively homogeneous. They consist of undergraduate students studying one course (Psychology), dominated by young adults at one university (Cardiff). Given that Sagiv and Schwartz (2000) found important differences across courses in value priorities in their work relating to well-being, it is important that future research considers broader student samples.

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The second limitation relates to the reality constraints that potentially arise disproportionately in certain samples. Participants' ratings of identity relevant measures can be particularly different in old age (Ryff, 1991; Ryff & Heinicke, 1983). Furthermore, some of the values, such as wealth, power and obedience may have been lower in value importance in the past, simply because children do not have as much opportunity to realise those values in their lives. Accordingly, changes in value importance in some values could be somewhat confounded with more situational demands. However, any such constraints are likely to be small in impact compared to the value patterns reported here. Additionally, initial analysis of the participants aged between 21 and 50 in my research suggested no clear differences in value trajectories (compared to those under 21). This mirrors Ryff's (1991) comparison between young and middle-aged adults, where both groups report steady upward trajectories over time for well-being. Nevertheless, a range of more heterogeneous samples would

alleviate any concern that the driving force behind the patterns reported here is due primarily to situational factors, rather than psychological mechanisms. The value trajectories reported here thus need to be tested across the lifespan, before the findings can be generalised more widely.

### **Future Research Ideas**

Notwithstanding its limitations, this research opens up a number of avenues for future research. As implied in the introduction, interest in measuring psychological variables over time is not new, and past research thus provides a range of additional factors and mechanisms that could be incorporated into research evaluating values over time. For instance, people can show dispositional variation in their tendency to focus on different temporal parts of their lives (Barber et al., 2009) and it would thus be worth seeing if such tendencies moderate my findings by using a standardised measure of time perspective (Zimbardo & Boyd, 1999). For example, those who tend to focus more on the future might report smaller discrepancies between current and future value importance.

Similarly, the perceived distance between the current self and other time points matters in self-projection (Wilson et al., 2012). Future studies could thus constrain time points (e.g., Ryff 1991; Cozzolino, Sheldon, Schachtman & Meyers, 2009) to ensure control of lifespan periods. For example, people could be asked to think about specific ages in their past and future to maintain consistency across participants, which might be particularly important for samples with a greater heterogeneity of ages. There is, however, some benefit to allowing participants to set their own conceptions of past, present and future, as it keeps the task at an abstract level and away from situational demands that more specific constraints might encourage. It could indeed be fruitful to analyse why participants choose to vary their

choices in where they locate the past, present and future, when it comes to values, and control for the chosen time period in other analyses.

Ross and Wilson (2003) note that it is not simply the passage of time that matters when it comes to perceiving the relevance of a past or future self or event. Research into perceived lifespan change in values and personality suggests past-current discrepancies tend to be larger than current-future discrepancies (Quoidbach, Gilbert & Wilson, 2013). Some of the quadratic trends reported above also suggest that transitions from the past to the current and from the current to the future are not always equal. Given suggestions that past and potential goals are separable constructs (Elliot et al., 2014), this distinction merits further consideration. However, it should be noted that the stronger effect sizes consistently found in the linear contrasts above, suggest that participants generally saw smooth progress across the three time points.

Aside from the ways in which the temporal manipulation can be altered, it would be worthwhile to investigate how a temporal values measure works in different contexts. Countrywide levels of development have been shown to moderate the relationship between values and well-being (Sortheix & Lonnqvist, 2014), so it is possible that data patterns in other cultures would look quite different, though value priorities are generally stable across most countries (Fischer & Schwartz, 2011). A prediction of SCMT is that greater development may lead to reduced perceptions of values as stable and this could be tested to some extent cross-culturally.

The role of values as either a cause or moderator of affective and cognitive well-being is another area that demands attention. My initial analyses point in some new interesting directions. Firstly, the previously obtained null relationship between values and cognitive aspects of well-being (Sagiv & Schwartz, 2000; Oishi et al., 1999) is challenged by my

results. In support of the existing literature, affective measures did reveal the strongest effects, but some specific temporal contrasts showed significant relationships with the SWLS and FS scales. The task of considering values across different temporal contexts could help predict different components of well-being in future research.

Secondly, future analyses could study the moderation hypothesis further, particularly in regard to differences between the past, present and future. We need to understand further whether certain values tend to directly relate to well-being, or whether it is adherence to the specific values each person considers important that works as the best predictor. It would hence be interesting to see if temporal discrepancies in values are only relevant to well-being for those who place greater importance on such values. As suggested, my initial interest was to assess the possibility of a direct link, but future work would benefit from assessing this issue further. Additionally, some research has indicated that links between values and well-being can be mostly explained via personality traits (Haslam, Whelan & Bastian, 2009). Individual differences in personality are thus worth integrating into analyses of values over time and their associations with well-being.

Finally, another theoretical area of interest could be assessing the role of projected values in relation to psychologically distant behaviours, such as those tested with construal level theory (CLT; Trope & Liberman, 2010). It may be that the perceived gradient of progress is a particularly important predictor of future intentions (Liberman & Dar, 2009; Webb, Chang & Benn, 2013), something that a measure taken at only one time point, as is the norm with CLT, cannot easily capture. What people strive to achieve in the future and their associated forecasted happiness could thus be further informed by using a temporal measure of values that contains enough time points to detect gradients of change. This raises an additional point in terms of measuring values over time too. To some extent the change between current and future value importance could be seen as a prediction or as an aspiration.

The wording of my research encouraged participants to think about how important each value will be in the future. However, it is worth considering how alternative framing of temporal contrasts might differ in construal level, amongst other variables.

All these suggestions are deliberately diverse and reflect the broad range of avenues that looking at values over time opens up. These issues are important in a practical sense because many studies have shown that temporal perspective can be manipulated for potential positive impact. Creativity, self-control and life-satisfaction have all been shown to increase as a result of taking a more abstract, distant perspective (Burgoon, Henderson & Markman, 2013). Similarly, various methods of focussing on the future, including mortality salience, have increased long-term thinking (Liu & Aaker, 2007), academic achievement (Barber et al., 2009), idealism (Kivetz & Tyler, 2007), pro-environmental engagement (Pahl & Bauer, 2013) and self-transcendence values (Joireman & Duell, 2005), whilst also protecting against negative affective responses (Namkoong & Henderson, 2014). It is thus worth considering how our values, which form such a central component of our self-identity, might affect judgement and behaviour if combined with a mechanism that temporarily focuses people on values' abstract nature by encouraging people to consider their values over time. In fact, this speculation is interesting in light of Study 2's finding that simply completing the temporal contrast version of the SVS increased the importance attached to openness values compared to the control group. This increase in the perceived importance of openness values may be yet another consequence of a future focus on values (or at least a past-to-present-to-future focus), with potential ramifications for personal strivings and social behaviour.

### **Values Over Time and SCMT**

Whilst it is noted that experiencing and pursuing happiness is not a universal ideal for every context (Gruber, Mauss & Tamir, 2011), understanding how current perceptions of

well-being interrelate with perceptions of the self over time remains a vital aim. Earlier in this chapter, and in the general introduction, I outlined how contemporary society may well encourage instability in value importance. It is hence crucial to understand the ramifications of having greater flexibility in matters of self-knowledge, of which values are a central part. This initial research provides two main findings in this regard. First, values are seen as changing over time. Second, perceived value discrepancies appear to have both costs and benefits when it comes to present feelings of well-being. In this regard, our increased willingness to see values as malleable might be a double-edged sword; one that gives us greater room to change who we are over time, yet one that also makes defining the self decidedly more problematic (Baumeister, 1987).

## **Conclusion**

The three studies reported here provide consistent and replicable evidence that people see values as changing over time. With the exception of conservation values, people generally believe that they are increasing the importance of their values over time. This pattern is interesting in part because people's visions of change do not reflect the tensions across value dimensions that have been consistently found with standard measures, and because these trajectories do not fit with extant evidence of lifespan developments in value change. The trajectories are also important because they reveal interesting associations with well-being. Participants appear to show greater well-being when anticipating more attachment to self-enhancement values in the future, despite being currently happier when prioritising self-transcendence values. In this sense, participants' views raise a number of questions about their awareness of how their values will change over time and how this change may relate to their own well-being. With further development and research, the method of asking participants to consider their values in the past, now and in the future may allow people to use their values more powerfully and in a more fulfilling manner.

## Chapter 3: Setting the Bar High in Ethical Consumption

### Introduction

In the general introduction, I outlined a series of societal changes that have directly impacted upon how people and things interact, with a particular focus on the increased levels of complexity in contemporary society (Baumeister, 1987; Cushman, 1990; Ehrenreich & English, 1979). Living in a post-industrialised and post-globalised social context can present difficulties with regards to consuming in alignment with pro-social values. Inherently, consumers are likely to be reluctant to consume products if the consequences of the production process conflict with their moral beliefs. However, whereas historical social contexts would have allowed individuals to have a greater sense of understanding of how the products they consumed were manufactured, modern marketplaces are replete with products with highly intricate production chains. Accordingly, modern consumers are accustomed to feeling uninformed of how such chains work and to feeling powerless as a consumer to make a difference (Chatzidakis, Hibbert & Smith, 2007). This context mismatch is analysed further in this chapter and represented by the model below (Figure 3.1).

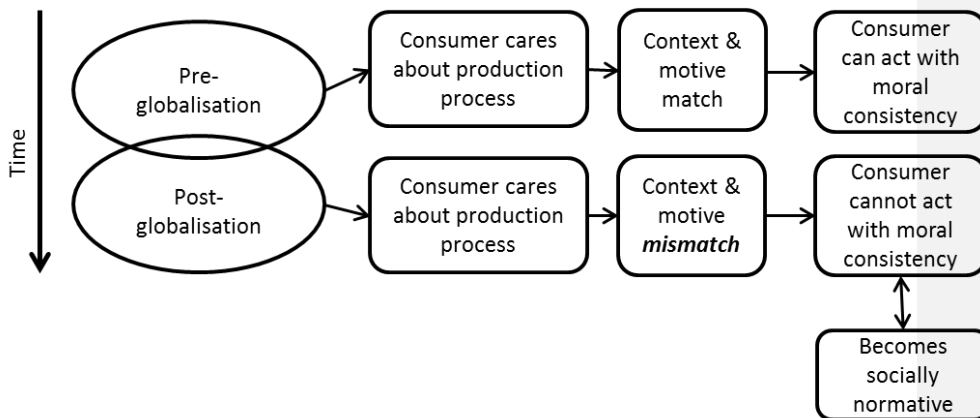


Figure 3.1: Model of SCMT to explain the difficulty of consuming ethically.

In his analysis of the history of global consumerism, the historian Peter Stearns' (2006, p. 159) final conclusion stated: "Managing consumerism is a challenge, for it is easy to be managed by it. But consumerism is a human construction, despite all the complex factors behind it. It should serve human ends". A contemporary concern however, is that consumerism is not serving such ends. A diverse range of global figures, including the Pope (Weisenthal, 2013) and the US President (Roberts, 2015) have recently raised concerns that world markets are contributing to ever growing inequality, both within and between nations, and that this inequality is costing lives. Of course, inequality is often portrayed as a political and economic issue and the relative costs and benefits are regularly debated (Pieterse, 2002). Notwithstanding the broad political and economic context, however, there are issues for consumerism today in terms of sustainability (Jackson, 2009), consumer well-being (Bauer, Wilkie, Kim & Bodenhausen, 2012), and producer exploitation (Billig, 1999). Indeed, an increasing awareness of the link between global warming and consumerism (Newholm & Shaw, 2007) makes this topic one that demands urgent attention. The growing urgency of such issues is reflected in the increasing modern tendency to attach a moral aspect to consumer decisions that until very recently did not carry such a dimension (Chatzidakis, 2015).

This moral aspect is often reflected in attempts at ethical consumption. These attempts subsume a diverse range of behaviours. Research has indicated a willingness to receive lower returns on investments (up to \$5000 over 15 years) if they avoid unethical funds (Lotz & Fix, 2014), to pay a 10% premium for fair-trade coffee (De Pelsmacker, Driesen & Rayp, 2005) and a 5 % premium for eco-labelled apples (Loureiro, McCluskey & Mittelhammer, 2002). To be clear, the willingness to pay more for a product of equal quality but greater ethical standards does not appear to be a mere minority pursuit. For example, a majority of US participants were willing to pay an extra \$5 on a \$20 dollar sweater and an extra \$1 per pound



of coffee, if the products were ethically produced (Hertel, Scruggs & Heidkamp, 2009). Similarly, an analysis of older UK consumers suggested people were willing to pay more for ethical products, as long as the quality of the product is maintained (Carrigan, Szmigin & Wright, 2004). So whilst ethical consumption can only be part of the solution to global inequality and environmental sustainability, it is also a behaviour that is relevant to people across the world and can act as a daily reminder of the need to consider morality in our habits. It is also increasingly popular. Indeed, ethical spending, personal boycotts, and ethical investment have all seen rapid growth in the UK over the last two decades (Webb, Long, Harrison & Kenyon, 2014).

The interaction between cultural contexts and products leads to a range of attempts at ethical consumption that carry differing tensions between morality and consumerism. For example, ethical food consumption can promote conflicts of power, where consumers feel tension between acting as an empowered consumer (e.g. buying Fairtrade coffee) and also being unable to make a significant difference (“drop in the ocean” effect, see Cohen, 2000). Alternatively, conflicts of interest can arise, as consumers feel tension between considering purchases that meet their hedonistic demands (e.g. flying on holiday) whilst simultaneously conflicting with their concern for the environment (Pecoraro & Uusitalo, 2014). Different situations are likely to evoke different ethical concerns for people.

Additionally, different relations can exist between consumption and individual identity across contexts, as evidenced by shifts in attitudes towards materialism since the 18<sup>th</sup> century (Hilton, 2004). For instance, a modern form of ethical consumption is actually consuming *less* (Shaw & Newholm, 2002). However, it is unlikely that there is a great degree of overlap in the specific motives behind choosing an ethical variant of a product that was going to be purchased anyway, compared to adopting a lifestyle of increasingly simplified or reduced consumption. A key role for social psychological research is thus to evaluate

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concurrently the particular type of materialism, the underlying motives and the socio-historical context.

This chapter has two overarching goals. The first is to summarise extant evidence about why people choose to consume ethically. Examinations of the drivers behind ethical consumer behaviour have been relatively sparse in sociology (Adams & Raisborough, 2008). A similar argument can be extended for social psychology, whilst business ethics, economics and marketing instead contribute the most direct research. It is important to start filling this gap from a psychological perspective. The second goal is thus to report three studies that investigate how asking people to do a little, or a lot, changes how they perceive their own and others' moral responsibilities when it comes to consumer decisions.

### **Facilitators and Barriers in Ethical Consumption**

The motivations underlying ethical consumption are undoubtedly numerous, multi-levelled and even conflicting. Indeed, it has been argued that ethical consumers sometimes reaffirm the legitimacy of materialism and can accidentally, or deliberately, maintain social and financial hierarchies, by displaying an individual ability to spend resources on more ethical alternatives (Pecoraro & Uusitalo, 2014). Whilst materialism and hierarchies may well be reaffirmed or reinforced by attempts at ethical consumption, the benevolent intentions underlying ethical purchases still merit consideration. Oh and Yoon (2014) find a correlation between altruistic concern for others and ethical consumption attitudes and intentions, supporting previous research suggesting a link between pro-social values and ethical consumption (Doran, 2009; Thøgersen, 2011). Indeed, Thøgersen (2011) suggests any apparently selfish reasons given for green consumerism may in fact reflect a post-hoc rationalisation of an inherently unselfish act. It thus seems plausible to suggest that the balance of motives underlying ethical consumption tends towards the compassionate.

Clues about the factors that facilitate ethical consumption come in part from research that finds various demographic factors correlate with ethical purchases, including level of education, income, and female gender (Starr, 2009). Similarly, higher fair-trade premiums were supported by younger, female, politically liberal, and highly educated individuals (Taylor & Boasson, 2014). However, counter to this evidence, a lack of consensus in the role of demographic indicators has been observed by some researchers (Bray, Johns & Kilburn, 2011). Doran (2009) argues demographics do not directly predict fair-trade consumption, instead suggesting that value orientation is more important. She found those who attached more importance to self-transcendence values, particularly universalism values, reported more fair-trade purchasing, whilst those who were higher in self-enhancement values reported less fair-trade purchasing. At a broader level, the perception of social norms can also encourage shifts towards ethical consumption. For instance, individuals living in an area where ethical consumption was generally high were found to be more likely to shop ethically themselves (Starr, 2009).

Whilst marketing research has identified target demographics that might be more sympathetic to ethical purchases, there is still a need to understand why people's willingness to consider ethical factors does not always translate into action. There is evidence of discrepancies between how much consumers purportedly care about ethical standards and how much they actually consume ethically (Bray et al., 2011). Much of the research on ethical consumption has looked at the purported sizeable gap between concern for ethical standards and actual action. The focus has therefore been on the barriers to ethical consumption (e.g. Bray et al., 2011), rather than the factors that enable it.

Sometimes this gap is framed as showing people simply failing to act in alignment with their reported concerns, but another potential framing could reflect people's worries with participating in ethical markets, rather than a lack of genuine intention to pay more for

ethical products. Established barriers to ethical consumption include a perceived lack of positive consequences of ethical choices (e.g. the extra money fails to reach the producer), the potential negative identity of ethical consumers (e.g. being seen as part of a group that imply others are acting unethically), and the thresholds for behaviour change being too difficult (e.g. needing to spend time learning how ethical products work) (Johnstone & Tan, 2014). Uncertainty has also been identified as a broad term ethical consumers use to cover concerns of market complexity, competing motives and ambiguous credibility, all of which reduce the likelihood of positive engagement (Hassan, Shaw, Shiu, Walsh & Parry, 2013).

Attempts to understand decision making in ethical consumption have often used the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1985) as models. These models indicate that behavioural intentions are predicted by attitudes, subjective norms and (in the theory of planned behaviour) perceived behavioural control. Intentions and perceived behavioural control can then directly predict action. Attitudes account for how much people feel positive towards an object. Subjective norms account for how much people think others around them would expect them to act in a certain manner. Perceived behavioural control indicates the extent to which people feel they can successfully perform an action. Whilst these models have been useful in providing a framework for predicting ethical decision-making, it is possible they conflate the ethical and non-ethical factors involved (Bray et al., 2011). Furthermore, self-identity and past behaviour (Sparks & Shepherd, 1992), universalism and self-direction values (Yamoah, Duffy, Petrovici & Fearne, 2014), and ethical obligation (Shaw, Shiu & Clarke, 2000) have also been found to be useful additional predictors when intentions to consume ethically are examined. The findings presented so far begin to illustrate the complex range of cognitive mechanisms involved in making ethical choices.

Aside from cognitive processes, emotion and anticipated emotion are also important determinants of ethical consumption. Guilt and pride can increase perceived efficacy in ethical consumption, which in turn affects purchase intentions (Antonetti & Maklan, 2014). Similarly, anticipated guilt, produced via increased salience of the consequences of unethical behaviour, results in increased ethical intentions towards a shop-worker (Steenhaut & Van Kenhove, 2006). Guilt-reducing processes such as self-affirmation have also been shown to increase preference for luxury items above utilitarian items (Khan & Dhar, 2006). Furthermore, feelings of power have been identified as producing unethical behaviour (Dubois, Rucker & Galinsky, 2015). It is hence clear that emotional and cognitive influences both play a key role in ethical decision-making.

Fundamentally then, the less somebody cares about ethical issues and sees potential problems as beyond their sphere of influence, the less they will intend to and actually consume ethically. At the same time, however, there is a gap between concern and action. In the aforementioned research, attitudes were only moderate predictors of intention in most cases (e.g. Shaw et al., 2000). It is thus vital to better comprehend which barriers prevent people from participating in ethical consumption, particularly when they feel this is something they should be doing.

### **Cost and Anchoring**

One potential key barrier to ethical consumption is cost. Price is often indicated as the primary concern in choosing an ethical alternative (Bray et al., 2011). A key question to address therefore is how much ethical products can demand as a premium, above perceptions of the standard price. It is clear that people often come across trade-offs between cost and ethical standards (Carrigan & de Pelsmacker, 2009), but it is not yet clear how they use available information to make their judgements.

There are plenty of examples showing that we do not simply use numbers proportionately to make ethical judgements. For example, when people were asked how much money they thought should be spent on saving waterfowl from environmental hazards, they gave the same amount for 2,000, 20,000 and 200,000 birds (Desvousges et al., 1993). In everyday life it is not unusual to be presented with precise thresholds about how much an ethical option costs (e.g. carbon offsetting a journey) or indirect information that requires some further elaboration (e.g. comparing standard and ethical brands of tea). People then use this information to make decisions about whether or not to consume ethically. A central goal of this research was to begin testing how different cost thresholds might influence perceptions of what people think they should do in ethical consumption contexts.

Tversky and Kahneman's (1974) classic paper on the use of heuristics and biases describes how judgements can be influenced by anchors. For example, participants were asked to estimate how many African countries were in the United Nations and were also asked whether the number was higher or lower than a low anchor (10) or a high anchor (60); those who received the low anchor estimated the answer to be 25 and those who received the high anchor estimated the answer as 45. The participants had thus used the initial anchor to guide their personal judgement. Tversky and Kahneman (1974) outlined several other examples of how the anchoring process can take effect, including when the participant uses their own anchor as an initial baseline. Anchoring effects can also have serious consequences in the real world and effects have been found for perceived suitability of personal-injury rewards (Marti & Wissler, 2000), expert judgements regarding appropriate criminal sentencing (Englich, Mussweiler & Strack, 2006) and a range of forecasted behaviour (Critchler & Gilovich, 2008) and actual behaviour (Cheek, Coe-Odess & Schwartz, 2015).

Arbitrary anchors have also been shown to affect judgements of everyday items' cost (Ariely, Loewenstein & Prelec, 2003; Simonsen & Drolet, 2004) and marketing techniques

can use higher anchors to increase the quantity of purchases in a supermarket (Wansink, Kent & Hoch, 2000). Experts are also susceptible to anchoring effects, as car dealers reported anchor-directed (low vs. high) estimates for the value of a used-car, although these effects could be attenuated by encouraging the dealers to generate reasons why the initial anchor might be inappropriate (Mussweiler, Strack & Pfeiffer, 2000). Together this evidence shows the role of anchoring effects in a range of judgement and purchasing contexts.

However, in their review of the anchoring effect, Furnham and Boo (2011) called for more academic research into how the process works in ecologically valid purchasing contexts. There is no research that directly tests the role of anchoring mechanisms in ethical purchasing decisions. Furthermore, a consensus is yet to be reached in terms of how anchors are processed and hence effective (Wegener, Petty, Blankenship & Detweiler-Bedell, 2010). Attitudinal research suggests a distinction between thoughtful and non-thoughtful processing, with different pathways for each (Blankenship, Wegener, Petty, Detweiler-Bedell & Macy, 2008), whilst some judgement and decision researchers suggest that the distinction between thoughtful and non-thoughtful processing is unnecessary (Frederick, Kahneman & Mochon, 2010).

Researchers also differ in their predictions for the effects of extreme anchors. On the one hand, extreme anchors have been found to be less influential than moderate anchors for affecting judgements, suggesting a potential rebound effect (Wegener, Petty, Detweiler-Bedell & Jarvis, 2001). On the other hand, there is evidence that extreme anchors will result in judgements being placed at the boundary of plausibility for each estimate (Mussweiler & Strack, 1999; Mussweiler & Strack, 2001a), thus proving as influential as the highest, most plausible, equivalent anchor.

There are further boundary conditions and moderators that can influence the anchoring heuristic. Knowledge of the context can reduce uncertainty and thus the power of the anchor (Mussweiler & Strack, 2000), whilst semantic similarity will influence the extent to which anchors can have spill-over effects (Mussweiler & Strack, 2001b). For example, an anchor for the height of the Brandenburg Gate did not influence judgements of its width (Strack & Mussweiler, 1997).

Despite the robustness of the anchoring effect (Furnham & Boo, 2011) it is thus clear that further research is necessary to understand how it works in various consumption situations, particularly those with an ethical component. A key question for researchers interested in the relationship between anchoring and ethical decision-making, is whether asking people to do a little more, or a lot more, can promote or inhibit changes in attitudes, intentions and behaviour. If people are told they need to raise their game a little bit, they might be motivated to act because they only need to shift their current position a comparatively small amount; however, faced with such information, they might also simply assimilate the higher threshold into their perception of current behaviour and thus see no need to change. Additionally, if people are told they need to raise their game a lot, they might be motivated to act because they see how far away they are from a desired moral standard; however, similar to some of the evidence on rebound effects (Wegener et al., 2001), a demand that seems hugely distant from current behaviour might be demotivating, as it is seen as unattainable.

### **Consumption and Hypocrisy**

As outlined earlier, ethical consumption is an activity that can elicit many types of tension (Pecoraro & Uusitalo, 2014). One such potential conflict is that of moral concern and self-interest. Such conflicts are often framed in terms of what we “should” do versus what we



“want” to do (Milkman, Rogers & Bazerman, 2008). Accordingly, it is a context that can motivate people to reflect on the potential for hypocrisy.

The general introduction described in detail how defining the boundaries of hypocrisy can prove tricky (Szabados & Soifer, 1999). What some would describe as hypocrisy, others might describe as good intentions being overpowered by situational constraints (Batson & Thompson, 2001). However, similar to Polman and Ruttan (2012), I conceptualise it in two simple ways for this chapter. The first is intra-personal hypocrisy, where there is a discrepancy between what somebody thinks they should do and what they would or actually do. The second type of hypocrisy, inter-personal hypocrisy, arises when individuals demand more of others than they do of themselves.

To measure intra-personal hypocrisy, I utilised Monteith and Voils’ (1998) methodology of contrasting ought behaviour with predicted behaviour in a given situation. In their research they asked people to complete two separate questionnaires; the first evaluated how they think they *should* feel when judging and interacting with Black people, the second evaluated how they think they *would* feel in these situations. However, I asked for “actual” rather than “would” responses. Monteith and Voils’ (1998) work focussed more on hypothetical situations, whereas I was investigating identifiable behaviours that individuals would have likely carried out before, so I could more closely measure their actual behaviour. I also deliberately contrasted the actual and should items side by side in order to measure the perceived level of intra-personal hypocrisy, whereas Monteith and Voils (1998) tried to avoid such matching. This variation simply represents different research aims.

To measure inter-personal hypocrisy I designed the studies to assess both what people think *they* should and actually do, as well as assessing what they think *people generally* should and actually do. Research utilising a comparable design in the realm of ethical

consumption showed that people were less condemning of questionable labour standards when considering a holiday for themselves, compared to when considering the same holiday for their friends (Paharia, Vohs & Deshpande, 2013). The authors suggest such discrepancies arose because of motivated reasoning processes, which were then reduced via cognitive load. Importantly from a design perspective, the evaluations were made separately, with participants either responding to items in the context of their own holiday, or to items in the context of their friends' holiday. I initially follow a similar between-participants approach, but have to switch to a within-participants design for the final two studies.

The three studies that follow thus had two methods of assessing ethical consumption hypocrisy. Differences between what you think you should do and what you actually do (or what people generally should do and actually do) provided perceptions of intra-personal hypocrisy. These should-actual differences could then be contrasted between the self and people generally to test for inter-personal hypocrisy. That is, if the differences are comparably smaller for the self, this represents demanding more of others than one does of oneself.

### **Present Research**

I have outlined the increasing relevance of ethical consumption in a global marketplace, the factors that encourage or impede such action and how anchoring can impact relevant judgement processes. The aim of the present research was to bring these issues together, in an attempt to start understanding how setting the bar comparatively low or high changes people's perceptions of how they (and/or others) should act in ethical consumption situations. This helps to meet a number of researchers' calls for a greater quantitative methodological input into research into ethical consumption (e.g. Carrington, Neville & Whitwell 2014; Oh & Yoon, 2014; Papaioikonomou, Valverde & Ryan, 2012).

I thus sought to begin addressing a number of gaps in the literature. Aside from Paharia and colleagues' (2013) work, there is an absence of research that addresses hypocritical attitudes in ethical consumption. Secondly, I know of no work that directly connects anchoring effects to hypocrisy, either inter-personal or intra-personal. Accordingly, I initiated a project that connects the paradigms of anchoring and hypocrisy within the context of ethical consumption. Given the exploratory nature of the research, I also included broader measures of values and identification with humanity as secondary variables of interest, in order to test for a range of impacts of the manipulation.

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Study 1 took the form of a 2 (ethical information video: information video / no video control) x 2 (intra-personal hypocrisy target: self / people generally) between-participants design. The results of Study 1 were then used to set suitable price anchors for the following studies. Owing to pragmatic constraints, both Studies 2 and 3 collapsed the intra-personal hypocrisy target factor into a repeated-measures variable, so participants responded with their personal should-actual contrasts and then with their perceptions for people generally. Study 2 hence had three conditions (no video control / moderate anchor video / high anchor video) and Study 3 had four conditions (no video control / moderate anchor video / high anchor video / extra-high anchor video).

### **Study 1**

In line with the main areas of interest outlined in the introduction, there are four associated hypotheses for Study 1. Firstly, it is predicted that watching the video that makes ethical issues salient will lead to participants suggesting they themselves and people generally should pay more for their clothes, compared to those who do not see the video.

Second, and consistent with the first effect, it is predicted that the video manipulation will lead to harsher moral judgements of cheap purchasing. Making the ethical concerns

involved in the production process salient should lead to more questioning of the morality of cheap purchasing, though any changes would of course depend on how the purchase is judged by the control groups initially.

Thirdly, similar to the findings of Paharia et al. (2013), it is predicted that an interpersonal hypocrisy effect will appear, with participants demanding greater change from others than from themselves. Seeing the video should thus elicit a greater discrepancy in the condition that focuses on how people generally should act, compared to how they themselves should act.

The general introduction and Chapter 2 have explained in detail how Schwartz's (1992) circular model of values works. The need to balance getting good value for oneself, alongside considering the effects of the production process on others, is one that maps onto the self-transcendence and self-enhancement dimension of the model. It is possible that the video manipulation will increase the salience of being concerned with the welfare of others. Accordingly, the fourth hypothesis is that participants who see the video will attach greater importance to self-transcendence values and attach less importance to self-enhancement values.

A final area of interest relates to measures applicable to humanity in general, which as mentioned previously, were taken as dependent variables of secondary interest. Luke and Maio (2009) found that priming images of people threatening super-ordinate values led to lower ratings of humanity esteem. It was thus possible that seeing a video that displays images and text relevant to child labour will have similar effects here and also potentially carry over to identification. However, it is also plausible to suggest that being reminded of one's role in a global marketplace could decrease the perceived distance between consumer and producer, leading to more positive attitudes and stronger identification with humanity.

Accordingly the Humanity Esteem Scale (Luke & Maio, 2009) and Identification With All Humanity Scale (IWAH) (McFarland et al., 2012) were measured, but no directional predictions were made.

## **Method**

### **Participants**

Participants were 83 first-year students at Cardiff University (76 women, 9 men) who took part for course credit. They were between 18 and 26 years of age ( $M = 18$ ). All the participants completed the experiment in individual sessions on a computer in a laboratory at the university. No participants were excluded from the analyses.

### **Design and Procedure**

A between-participants design was used. There were two independent variables: ethical information video (information video or no video control) and intra-personal hypocrisy target (self or people generally). Participants were randomly assigned to one of the four possible conditions. The dependent variables were the consumption hypocrisy items, the moral judgement task, the Schwartz Values Survey (SVS), the IWAH and the Humanity Esteem Scale.

Participants were initially asked for their sex, age and how much they spend on clothes in an average month. Next, participants either saw a video that made the ethical consequences of cheap clothing salient, or in the control condition they simply proceeded to the dependent measures. These measures assessed people's consumption hypocrisy, their moral judgement of cheap purchasing and the additional scales outlined in the materials

section. Finally, a couple of items asked for an estimation of their financial security<sup>2</sup> and a view of how much a typical student tends to spend on a pair of jeans. After completing the study, the participants were probed for suspicion, debriefed and thanked for their time.

### **Ethical Information Video**

Participants in the ethical information video conditions saw a two-minute presentation of text and images specifically prepared for these studies (Foad, 2013a). The aim of the video was to raise awareness of the potential ethical issues that accompany the production of clothes. The video presented text that asked the person watching to consider where clothes are bought and where they are made. These textual prompts were interspersed with relevant images (e.g. a shopping centre and a factory). The person watching was then informed that prices in the UK are often very low and that the Environmental Justice Foundation<sup>3</sup> suggests there are some serious negative consequences of such low prices. Textual prompts then asked the person watching to consider how much we actually pay for our clothes and how much we should pay. The video was designed to make the issue salient and engaging for the participant, without eliciting a strong affective response (e.g. images used showed no workers in distress). Discussions with participants in the debriefing sessions suggested this aim had been achieved, though a small number of participants did report low levels of negative affect in the form of guilt or sadness.

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<sup>2</sup> Financial security was not found to moderate the effects reported and is thus not included in the analyses.

<sup>3</sup> The Environmental Justice Foundation is a real organisation that campaigns against child labour.

## Dependent Measures

*Ethical consumption hypocrisy.* Participants responded to items asking how much they (or people generally) should and actually spend in pounds on an average pair of jeans. To compute a hypocrisy score, actual ratings were subtracted from should ratings. A positive value thus indicates that participants felt they should spend more on an item and conversely a negative value indicates they felt they should spend less than they actually do. Most analyses focused on these should-actual contrasts because the contrast was made directly by the participants, and I was explicitly interested in the perception of the gap between should and actual behaviour. Future analyses can, however, look at how the movement of the two original values change.

Those participants responding about their own perceptions (rather than people generally) were asked to briefly describe the last time they made such a purchase; this allowed the identification of any participants who were atypical (e.g. bought jeans from a charity shop). The process was repeated for an average t-shirt, an average box of tea and monthly charity donations. Participants were free to leave items blank if they did not purchase any particular item or did not want to respond for any reason.

*Moral judgement.* Participants read a vignette describing a student who purchased a pair of jeans at full price (i.e. not on sale) for £8.50. Participants rated the moral acceptability of this purchase on a scale from 1 (*morally wrong*) through 6 (*morally neutral*) to 11 (*morally right*).

*Values.* Participants also completed a 20-item version of the Schwartz (1992) value survey (as used and described in Chapter 2). The SVS contained five items for each of the four higher order domains (self-transcendence, self-enhancement, openness and

conservation); these subscales showed adequate to good reliability ( $.67 < \alpha < .83$ ). Each set of values was mean-centred to control for scale usage, as recommended by Schwartz (2009).

*Humanity measures.* Participants completed the Identification With All Humanity Scale (IWAH) (McFarland et al., 2012; see Appendix H) and the Humanity Esteem Scale (Luke & Maio, 2009; see Appendix I). The IWAH contains nine items, each of which was asked at the level of community, country and world; these three different levels each showed good reliability ( $.83 < \alpha < .86$ ). Example items include “How close do you feel to each of the following groups?” and “How much would you say you have in common with the following groups?”. The response scale varies in wording depending on the question, but each item is rated from 1 to 5, with a higher score indicating a stronger level of identification. The Humanity Esteem Scale contains eleven items, five of which are reverse scored; this scale showed good reliability ( $\alpha = .71$ ). Example items include “I feel that human beings have a number of very good qualities” and “Human beings are able to prosper as well as any other species in the universe”. Answers were provided on a scale from -3 (*strongly disagree*) to 3 (*strongly agree*). A higher score on the scale reflected a more positive attitude towards humanity in general.

### **Estimate of Average Spend on Jeans**

A final question was included to ascertain a perception of the current level of spending of students on a pair of jeans. The item asked “Finally, could you please indicate how much you think the average student spends on a pair of jeans (in £)?”. This value is used in the later studies as a baseline for manipulating a range of thresholds. However, it was also worthwhile to check whether the manipulation had any effect on this perceived cost.



## **Ethical Issues**

As mentioned above, despite efforts to raise the relevant issue in as neutral a manner as possible, the video did cause some mild discomfort for a small number of participants in the laboratory. However, no participant reported serious concern and the apparent response could be equated to seeing a contextually similar article in a standard news report. Contact details were provided for the experimenter and the supervisor in case of any further concern, but no participants made further contact<sup>4</sup>.

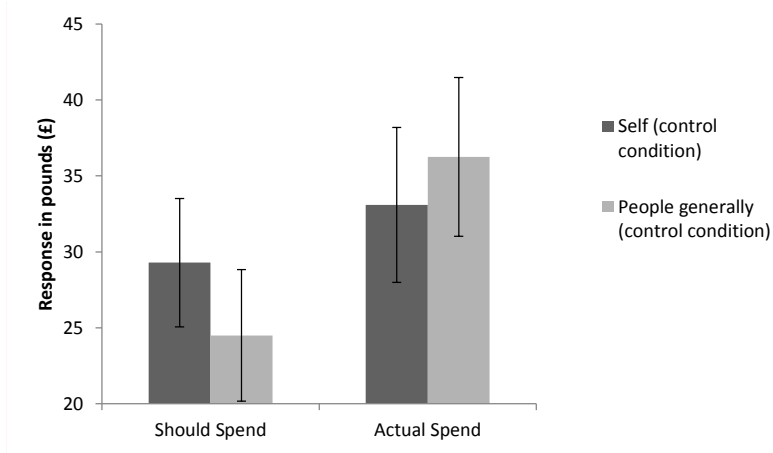
## **Results and Discussion**

### **Hypocrisy in the Control Conditions**

Before analysing the effects of the ethical information video, it was important to note whether hypocrisy was present in the control conditions alone. Accordingly, a mixed design analysis of variance (ANOVA) was run, with hypocrisy target (self or people generally) as the between-participants variable and should and actual spends as the repeated measures variable. This analysis revealed no main effect of hypocrisy target,  $F(1, 39) < 1, p = .70$ ,  $partial \eta^2 < .01$ , but a significant main effect of should vs. actual spends,  $F(1, 39) = 18.70, p < .001, partial \eta^2 = .32$ . This main effect was qualified by a significant interaction effect,  $F(1, 39) = 4.87, p = .03, partial \eta^2 = .11$ .

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<sup>4</sup> Similarly, no participants reported further concern after the debriefing process for Study 2 (in the laboratory) or Study 3 (online).



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*Figure 3.2: Reported should and actual spends for jeans in the two control conditions (Study 1); error bars show 95% confidence intervals*

As the pattern of data in Figure 3.2 indicates, participants in the control (no video) conditions tended to have a default position of needing to spend less on jeans. In fact, only 2 of the 41 participants in these conditions stated they should be spending more than they actually do on jeans and t-shirts. The vast majority of participants in this experiment had a default setting that they (and people generally) needed to be more frugal, rather than spend more. The pattern also revealed inter-personal hypocrisy. That is, participants thought people generally should spend less and actually spend more, when compared to participants who were asked about their own should-actual contrast. Thus, the gap between what the participants thought they should and actually do, is smaller than the gap between what the participants thought people generally should and actually do.

## Purchasing Beliefs

I conducted a 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) between-participants ANOVA on hypocrisy scores for each consumer item separately.

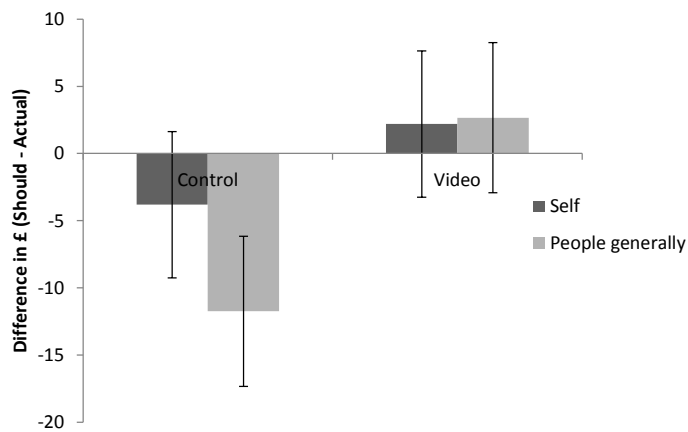


Figure 3.3: Should-actual contrasts for jeans (Study 1); error bars show 95% confidence intervals

In the analysis of hypocrisy scores for purchasing jeans, the 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) between-participants ANOVA indicated that there was a significant main effect of the video,  $F(1, 79) = 13.74$ ,  $p < .001$ ,  $partial \eta^2 = .15$ . As shown in Figure 3.3, participants who saw the video shifted from the default position of frugality and now suggested they should spend more than they actually do on jeans. The main effect of hypocrisy target was non-significant,  $F(1, 79) = 1.84$ ,  $p = .18$ ,  $partial \eta^2 = .02$ . The interaction effect was also non-significant,  $F(1, 79) = 2.34$ ,  $p = .13$ ,  $partial \eta^2 = .03$ . Thus, the video increased how much participants thought they and people in general should spend.

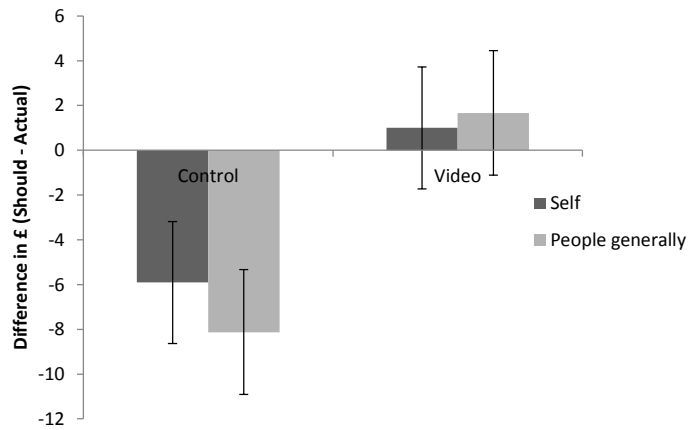


Figure 3.4: Should-actual contrasts for t-shirts (Study 1); error bars show 95% confidence intervals

In the analysis of hypocrisy scores for purchases of t-shirts, there was a significant main effect of the video,  $F(1, 79) = 36.73, p < .001, \text{partial } \eta^2 = .32$ . As shown in Figure 3.4, participants who saw the video shifted from the default position of frugality and now suggested they should spend more than they actually do on t-shirts. The main effect of hypocrisy target was non-significant,  $F(1, 79) < 1, p = .57, \text{partial } \eta^2 < .01$ . The interaction effect was also non-significant,  $F(1, 79) = 1.10, p = .30, \text{partial } \eta^2 = .01$ . These findings mirror the results relating to jeans purchasing, which is unsurprising given the video content was relevant to clothing in general.

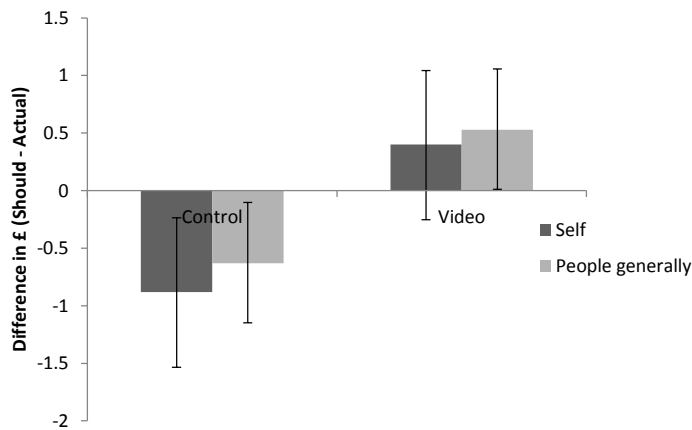


Figure 3.5: Should-actual contrasts for tea (Study 1); error bars show 95% confidence intervals

In the analysis of hypocrisy scores for purchases of tea, there was a significant main effect of the video,  $F(1, 68) = 25.91, p < .001, \text{partial } \eta^2 = .22$ . Figure 3.5 shows that participants who saw the video shifted from the default position of frugality and now suggested they should spend more than they actually do on tea. The main effect of hypocrisy target was non-significant,  $F(1, 68) < 1, p = .50, \text{partial } \eta^2 = .01$ . The interaction effect was also non-significant,  $F(1, 68) < 1, p = .81, \text{partial } \eta^2 < .01$ . This analysis shows that the manipulation was successful in creating spill-over effects to other products, in this case, tea.

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To summarise the findings for the three products above, it is clear that the video had a strong effect on the should-actual contrasts reported by the participants. The video caused participants to shift away from the default of frugality and towards a contrast that reflected a need to spend more on each item. The effect seemed to hold both when participants were asked about their own purchasing habits and about what people generally should and actually do.

### Beliefs about Charitable Donation

Unlike the default position for consumer items (frugality), the reverse position was adopted for donating to charity. Perhaps unsurprisingly, 95% of participants in the control conditions suggested they should donate more to charity on a monthly basis. I conducted a 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) between-participants ANOVA on hypocrisy scores for beliefs about charitable donation.

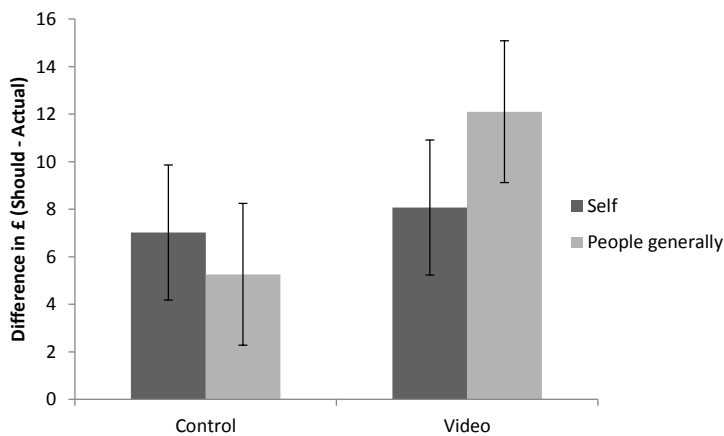


Figure 3.6: Should-actual contrasts for monthly charity donations (Study 1); error bars show 95% confidence intervals

As reflected by Figure 3.6, there was a significant main effect of the video,  $F(1, 77) = 7.35, p < .01, \text{partial } \eta^2 = .09$ . Participants who saw the video suggested the gap between how much they, or people generally, should and actually donate to charity was larger compared to those who did not see the video. The main effect of hypocrisy target was non-significant,  $F(1, 77) < 1, p = .44, \text{partial } \eta^2 = .01$ . The interaction effect however, was significant,  $F(1, 77) = 3.96, p = .05, \text{partial } \eta^2 = .05$ . Simple effects analyses revealed that the effect of the video was significant for those asked about what people generally should and actually donate to

charity,  $F(1, 77) = 10.65$ ,  $p < .01$ , Cohen's  $d = .87$ , whereas it was non-significant for those asked about their own charity donations,  $F(1, 77) < 1$ ,  $p = .61$ , Cohen's  $d = .22$ . These results suggest a new way of looking at inter-personal hypocrisy, where the manipulation has a limited effect if the participants are asked how it changes their own ought levels of behaviour, but a stronger effect if the participants are asked about how it should change people's behaviour in general.

### **Moral Judgement**

It is worth restating the difference between the cells at this point, because the difference between “self” and “people generally” is less intuitive for the remaining analyses. Those in the “self” conditions were asked questions about what they themselves should and actually do in terms of buying jeans, t-shirts and tea, as well as donating to charity. Those in the “people generally” conditions were asked the same questions but from the perspective of what people generally should and actually do. This manipulation preceded the moral judgements and other dependent measures to follow, but was not directly bound up in the measures, as it was for the purchasing and donation judgements. As I outline later in the summary section, there are potentially different levels of threat to self-integrity when faced with answering questions about one's own moral behaviour compared to what people generally do. This experience may have elicited a mindset that is relevant to the subsequent measures and is therefore included as a factor in these analyses.

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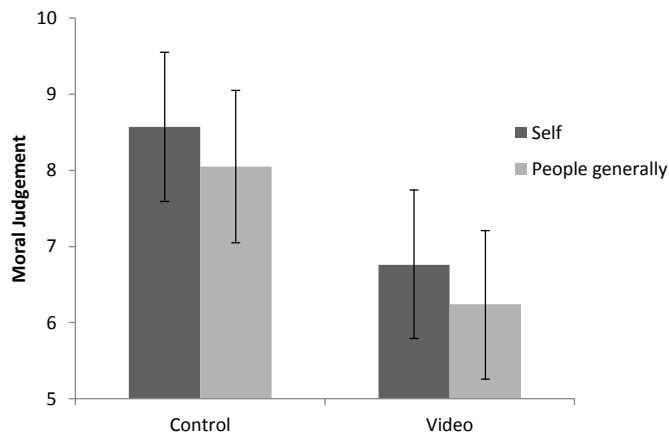


Figure 3.7: Moral judgement of cheap clothing purchase (Study 1); error bars show 95% confidence intervals

The 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) between-participants ANOVA on participants' judgements of the morality of a student who paid £8.50 for a pair of jeans revealed a significant main effect of the video,  $F(1, 79) = 13.44, p < .001, partial \eta^2 = .15$ . As shown in Figure 3.7, participants who saw the video were less likely to support the purchasing of cheap jeans from a moral perspective. The main effect of hypocrisy target was non-significant,  $F(1, 79) = 1.12, p = .29, partial \eta^2 = .01$ . The interaction effect was also non-significant,  $F(1, 79) < 1, p = 1, partial \eta^2 < .01$ . Thus, the video making the ethical concerns of cheap clothing salient led to an increased moral concern about a cheap purchase. It should be noted however, that each cell remains above the midpoint of the scale (*morally neutral* = 6). So whilst the manipulation led to a different evaluation of the moral question posed, it did not push those who saw the video to universally condemn the behaviour as morally wrong, but perhaps less morally acceptable.



## Values

In the analysis of values, the ANOVA design used for the other measures was expanded to include a within-subjects factor for the self-transcendence and self-enhancement values as the repeated measures. This 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) x 2 (value type: self-transcendence vs. self-enhancement) ANOVA revealed no main effect of the video,  $F(1, 79) = 1.30, p = .26, \text{partial } \eta^2 = .02$ , nor a main effect of hypocrisy target,  $F(1, 79) < 1, p = .93, \text{partial } \eta^2 < .01$ . The interaction effect was also not significant,  $F(1, 79) = 1.65, p = .20, \text{partial } \eta^2 = .02$ . The ethical information video thus did not have an impact upon value importance.

## Identification with Community, Country, and All Humanity (IWAH)

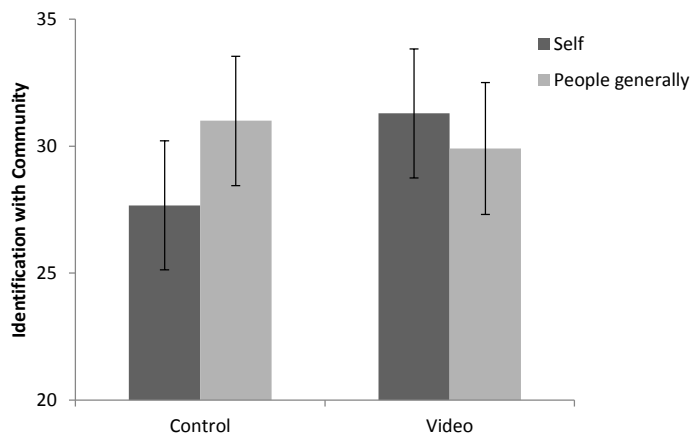


Figure 3.8: Identification with Community; error bars show 95% confidence intervals

A 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) between-participants ANOVA on the identification with community level of the IWAH measure revealed no main effect of the video,  $F(1, 79) < 1, p = .33, \text{partial } \eta^2 = .01$ , nor was there a main effect of the hypocrisy target,  $F(1, 79) < 1, p = .45, \text{partial } \eta^2 = .01$ .

There was, however, a marginally significant interaction effect,  $F(1, 79) = 3.37, p = .07$ ,  $partial \eta^2 = .04$ . Given that this study was the first in this new series of experiments, it was important to avoid prematurely dismissing an important result with an overreliance on a stringent Type 1 error rate. I therefore conducted simple effects analyses to probe this interaction (see Figure 3.8). Results indicated that the effect of the video was not significant for those asked about people generally,  $F(1, 79) < 1, p = .55$ , Cohen's  $d = -.19$ . However, it was significant for those asked about their own purchasing habits,  $F(1, 79) = 4.02, p = .05$ , Cohen's  $d = .61$ . Thus, those who saw the video and were asked questions about their own should-actual contrasts, identified more with their community, compared to those who did not see the video.

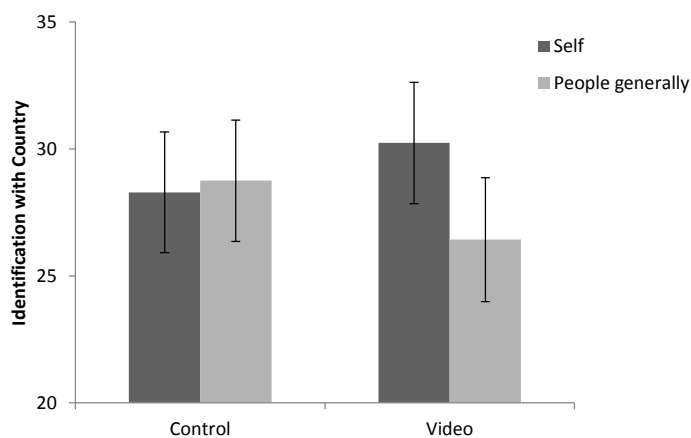


Figure 3.9: Identification with Country; error bars show 95% confidence intervals

As shown in Figure 3.9, the analysis of identification with one's own country again revealed no main effect of the video,  $F(1, 79) < 1, p = .88$ ,  $partial \eta^2 < .01$ , nor hypocrisy target,  $F(1, 79) = 1.93, p = .17$ ,  $partial \eta^2 = .02$ . There was, however, another marginally significant interaction effect,  $F(1, 79) = 3.15, p = .08$ ,  $partial \eta^2 = .04$ . Simple effects analyses did not identify a significant effect of the video for those asked about people

generally,  $F(1, 79) = 1.84, p = .18$ , Cohen's  $d = -.45$ , nor for those asked about their own purchasing habits,  $F(1, 79) = 1.33, p = .25$ , Cohen's  $d = .33$ . The pattern of data does, however, trend in the same directions as the measures for community and humanity.

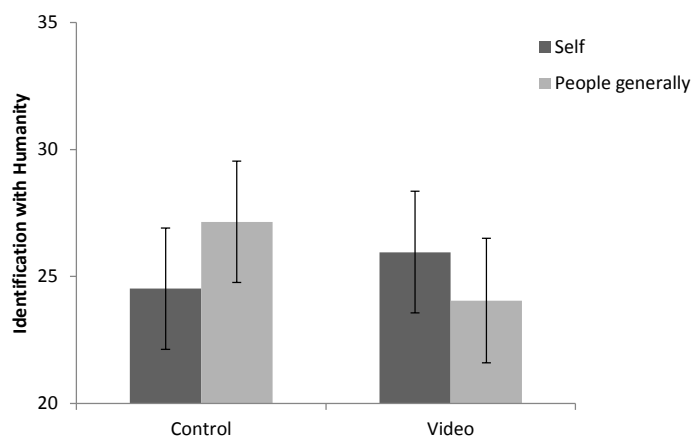


Figure 3.10: Identification with Humanity; error bars show 95% confidence intervals

As depicted in Figure 3.10, the analysis for identification with humanity again revealed no main effect of the video,  $F(1, 79) < 1, p = .49, partial \eta^2 = .01$ , nor hypocrisy target,  $F(1, 79) < 1, p = .77, partial \eta^2 < .01$ . There was however, another marginally significant interaction effect,  $F(1, 79) = 3.51, p = .07, partial \eta^2 = .04$ . Simple effects analyses suggested a marginally significant effect of the video for those asked about people generally,  $F(1, 79) = 3.25, p = .08$ , Cohen's  $d = -.59$ , but no effect for those asked about their own purchasing habits,  $F(1, 79) < 1, p = .40$ , Cohen's  $d = .25$ . In other words, those who saw the video and were asked questions about what people generally should and actually do, appeared to identify somewhat less with humanity, compared to those who did not see the video. This pattern is similar to the data for community and country, but in this instance it is the “people generally” condition that appears to be the stronger influence underlying the interaction.

There are two further things worth mentioning in this subsection. Firstly there is a steady progression of less identification as the level moves from local to global levels, as expected in a student sample (McFarland et al., 2012). Secondly, those in the “people generally” conditions appear to have been negatively affected by the ethical information; i.e. watching the video led to less identification with humanity. However, those in the “self” conditions have shown the reverse effect. In the introduction I outlined why effects in either direction were plausible. It is possible that the interaction reflects this plausibility, which will be discussed further later.

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### Humanity Esteem

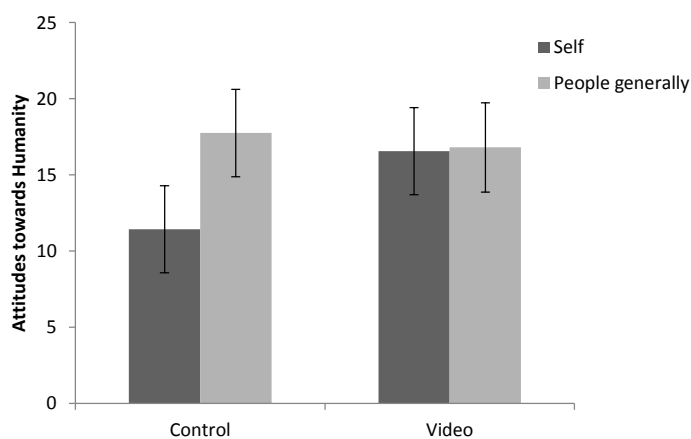


Figure 3.11: Humanity Esteem; error bars show 95% confidence intervals

A 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) between-participants ANOVA on humanity esteem revealed no main effect of the video,  $F(1, 79) = 2.12, p = .15, \text{partial } \eta^2 = .03$ . However, there was a main effect of the hypocrisy target,  $F(1, 79) = 5.16, p < .05, \text{partial } \eta^2 = .06$ . As shown in Figure 3.11, those who were asked questions about themselves reported a less positive attitude towards

humanity than those who were asked questions about people generally. This main effect was qualified by a significant interaction,  $F(1, 79) = 4.43, p = .04, \text{partial } \eta^2 = .05$ . Simple effects analyses showed a non-significant effect of the video for those asked about people generally,  $F(1, 79) < 1, p = .65, \text{Cohen's } d = -.14$ , but a significant effect for those asked about their own purchasing habits,  $F(1, 79) = 6.42, p = .01, \text{Cohen's } d = .82$ . So those who saw the video and were asked questions about what they themselves should and actually do, exhibited increased positivity towards humanity, unlike those who were asked questions about how people generally act. This result is consistent with the results on the IWAH measure, suggesting that the ethical information video, despite its potentially negative tone, has had a positive impact on the participants who were asked items relevant to themselves, but not for those who were asked questions about people generally.

### Estimate of Average Spend on Jeans

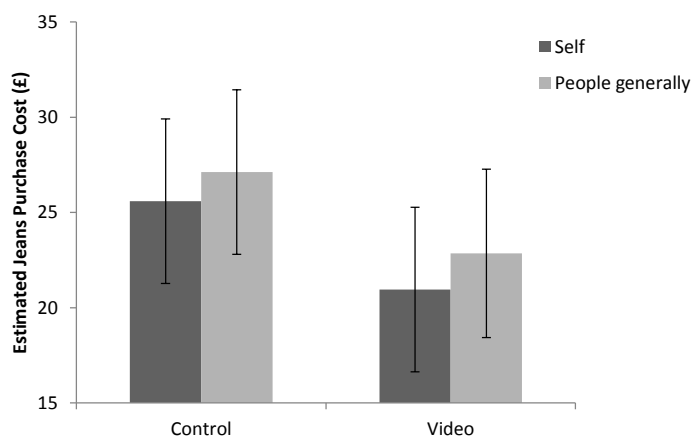


Figure 3.12: Estimated student spend on jeans (Study 1); error bars show 95% confidence intervals

A 2 (ethical information video: video / control) X 2 (hypocrisy target: self / people generally) between-participants ANOVA on the average student spending on jeans revealed a significant main effect of the video,  $F(1, 79) = 4.16, p < .05, \text{partial } \eta^2 = .05$ . As shown in Figure 3.12, participants who saw the video estimated a lower average spend on jeans, compared to those who did not see the video. There was no main effect of the hypocrisy target,  $F(1, 79) < 1, p = .43, \text{partial } \eta^2 = .01$ , nor was there a significant interaction,  $F(1, 79) < 1, p = .93, \text{partial } \eta^2 < .01$ . Participants perceived the average jeans price paid by a student to be approximately £24, which I used in the next study for setting appropriate thresholds.

### Study 1 Summary

The aim of this study was to establish some baseline responses for each condition and to check the initial effectiveness of the manipulation. The analysis of responses in the control condition revealed a clear default position in participants' understanding of their consumption and charity donations. There was a consistent desire to be more frugal on products from jeans and tea. During debriefing, some participants suggested the frugality was driven by a feeling that one should give in less to tempting, hedonistic urges to consume. This type of response fits with research that finds associations between feelings of guilt and consumption (Dahl, Honea & Manchanda, 2003). Guilt may also be relevant to the second default position in the control condition: the tendency to feel one should give more to charity.

The frugality belief was significantly influenced by the ethical information video. The data provide clear evidence that making the social justice issues of manufacturing cheap clothing salient, led to a significant shift in how participants believed they should spend, relative to how much they actually spend. After viewing the video, participants thought they should spend more than they actually do. The video focused on clothes but this effect spilt over into an unrelated product (tea). Furthermore, the manipulation caused participants to

give less positive moral judgements towards the purchasing of cheap jeans. These judgements were less positive in that the means for the video conditions hovered around the midpoint of the scale. This suggests participants were not simply responding in a socially desirable manner by condemning the behaviour, but instead recognising the potential tension between individual frugality and ethical choices. This finding is noteworthy because the vignette suggested that the jeans were purchased at full price (i.e. not on sale), so participants were presumably aware that this was not an opportunity to meet the demands of both frugality and avoiding the ethical costs of cheaply produced goods.

In addition, the results revealed evidence of inter-personal hypocrisy. This effect first appeared in the control conditions, where people generally were seen to have a larger should-actual gap compared to the participants' view of their own should-actual contrast, in the context of purchasing jeans. Interestingly, the effect of inter-personal hypocrisy appeared again when it came to charity donations. In this context, the video had no significant effect on increasing how much participants felt they should donate to charity, yet the video did increase how much participants felt people generally should donate to charity. This type of interaction hints at a new way of measuring hypocrisy in relation to potential interventions, where participants suggest that a manipulation should change others' behaviour but not their own. Combined, these findings reveal a difference in expectations for self vs. people generally and this relates neatly back to Paharia et al.'s (2013) research into sweatshop labour, as in separate evaluations participants here suggested different standards for themselves compared to others.

Unexpectedly, the video did not shift the importance that participants attached to self-transcendence and self-enhancement values, although there was a nonsignificant trend in the predicted direction (i.e., with more importance to self-transcendence values and less to self-

enhancement values). It may be the case that greater power is needed to detect such an effect. Similar to the reasons outlined in Chapter 2, an alternative explanation is that the apparent changes in should-actual contrasts may be driven by the instantiation of these values, rather than via a shift in associated importance (Maio, Hahn, et al., 2009). Study 2 thus includes measures of value instantiations to test whether this mechanism is more suitable for understanding the effects of the manipulation.

Finally, identification with, and attitudes towards, humanity were marginally lower when the participants saw the ethical information video and were asked questions about what people generally should do. However, a series of significant or marginally significant interaction effects suggested the converse effect for participants who were asked questions about their own behaviour. After viewing the video and then considering their own behaviour, it would appear the video allowed participants to identify more strongly with humanity and have more positive attitudes towards humanity. I had no specific directional hypotheses for how the manipulation might affect the humanity measures and these results suggest the ethical information can have oppositional effects.

One possible explanation for these interactions is that those in the “control & self” condition simply had their own inability to resist temptation in terms of spending and giving to charity made salient, which led them to decrease their attitudes towards, and identification with, humanity. In contrast, those in the “video & self” condition were given a logical outlet for their should-actual discrepancy, as the video made ethical consumption a complex issue that is relevant to society in general. The comparative lower positive relations towards humanity in the “control & self” condition hence represent a personally relevant dissonant experience; whilst the “video & self” condition could evoke a similar process to dissonance misattribution (Fried & Aronson, 1995). Those asked about what people generally should do



did not receive a threat to self-identity. If anything, for these participants, seeing the ethical information video simply reminded them of the problems that face humanity, hence why it had an opposite effect compared to those in the “self” conditions. Overall, the apparent interaction between the target of the original items and the manipulation is one that is worth pursuing further, although it is not the focus of this research.

An additional result of note is that participants who saw the video estimated the current spend by students on jeans as lower than those who did not. Although this did not relate to any specific hypothesis, it is evidence that any manipulation of the contrast between should and actual behaviour can affect both sides of the equation. This is one of the reasons why caution should be applied if focus is ever to be placed only upon changes in what participants think they should do, as a measure of changing intention or moral judgement. Manipulations can affect the perception of current actual personal behaviour, as well as wider social norms.

## **Study 2**

Having identified various baseline levels of intra-personal and inter-personal hypocrisy, as well as assessing their susceptibility to manipulation via making ethical issues salient, the next planned step was to introduce different thresholds into the design. As outlined earlier in the chapter, research on anchoring and thresholds suggests people respond differently depending on the context of the situation and the extremity of the anchor. My basic aim was to set a price anchor for ethical consumption just above, or considerably above, current price estimates. In this way, I could test whether, in the realm of ethical consumption, moderate or higher price thresholds were more effective in increasing intentions to spend more ethically.

Using the data from Study 1, I thus set the moderate threshold as £31 for a pair of jeans, as this was a reasonable increase on the perceived normal price found in Study 1 (£24). The high threshold was set as approximately double the moderate threshold (£61), as this was considered to be a realistic scenario but a large deviation from current norms. Previous anchoring research has found random two digit numbers led participants to value the same product by a factor of two to three times higher (Ariely et al., 2003; Simonsen & Drolet, 2004), so the thresholds I used fall comfortably within these ranges. In line with these studies, it is plausible to suggest that the high threshold will be more effective than the moderate threshold at changing perceptions of what is an acceptable price to pay for a product. The key difference for my research is that the anchor is not presented as random or arbitrary. Instead, the value provided directly addresses how much one should spend on jeans.

The addition of the anchoring manipulation meant participant numbers became more problematic, as a greater number of cells were required. Pragmatic constraints prevented the recruitment of enough participants to run a full between-participants 3 (ethical information video: no video control / moderate threshold / high threshold) x 2 (hypocrisy target: self / people generally) design. The consumption items relating to self and people generally were thus now presented to every participant. Priority was given to items representing the self, so the should-actual contrasts assessing what participants thought they should do always preceded the should-actual contrasts assessing what participants thought people generally should do.

My hypotheses for Study 2 are thus as follows. Firstly, I expect a replication of default frugality and the inversion of this position by raising ethical issues in the video. Secondly, I expect a high threshold to elicit more intra-personal ethical consumption hypocrisy, compared to the moderate threshold. Thirdly, I expect the previously found inter-

personal hypocrisy effects to disappear. The hypocrisy target contrasts are now within-participants and people do not tend to like appearing hypocritical if they feel their judgements are being observed (Lonnqvist et al., 2014). Additionally, impression management processes that exist both generally and in the laboratory (Tedeschi, 1981) would likely attenuate the previously found effects of demanding more from others than one does of oneself, given the contrasts were to be made consecutively by each participant.

Fourthly, I expect both versions of the video to encourage more concern regarding the moral judgement tasks, as both thresholds (£31 and £61) are set considerably above the price stated in the vignette (£8.50). Intuitively, the high anchor might be expected to elicit greater moral concern at cheap purchasing. However, it could equally make the threshold for ethical behaviour appear so far away that a student could not be expected to make such a purchase, making them less morally responsible for buying cheap items. Accordingly, there is no reason to think either threshold will be comparatively more powerful in this domain. Instead, it is likely that the ethical information in the video will simply make cheap purchasing less acceptable in general.

In line with earlier discussions, value instantiation items were also added, to assess whether the manipulation had an impact on values through instantiation rather than personal importance. Accordingly, given the results of Study 1, the fifth hypothesis predicted that the videos would not affect value importance, but would elicit greater self-transcendent value instantiations, particularly those relating to purchasing decisions, given the context of the study.

Finally, I did not predict any effects would arise on the scales that measure identification with humanity and humanity esteem. The findings from Study 1 suggest an interactive effect between responding to a particular hypocrisy target and the manipulation,

but by making the hypocrisy target a within-participants variable, any such effects cannot arise in this design.

## Method

### Participants

Participants were 90 undergraduate students at Cardiff University (76 women, 14 men) who took part for course credit. They were between 18 and 22 years of age ( $M = 19$ ). As before, all the participants completed the experiment in one sitting at a computer in a laboratory at the university. Three participants were excluded from the analyses, as they reported recent purchases from charity shops. These participants hence did not naturally construct the standard tension between personal costs and ethical costs, as required for these research questions.

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### Design

A mixed-participants design was used. The between-participants independent variable had three levels: ethical information video (no video control / moderate threshold video / high threshold video). The within-participants independent variable was hypocrisy target (self / people generally). Participants were randomly assigned to one of the three conditions. As mentioned earlier, my primary interest was the effect of different thresholds on self-relevant behaviour so I prioritised this self-relevant behaviour by always presenting it before the items about people in general. The dependent variables were the consumption hypocrisy items, the moral judgement tasks, the SVS, the IWAH and the Humanity Esteem Scale.

## **Procedure**

Participants received the same initial demographic and anchor items as in Study 1 and then saw the moderate threshold video, the high threshold video or no video. Next they completed the should-actual contrasts for each item regarding their own behaviour and the moral judgement tasks. Finally, they completed the should-actual contrasts for people generally, the SVS, the value instantiation measures, the IWAH, the Humanity Esteem Scale and the same two final items from Study 1, assessing personal financial security<sup>5</sup> and their perception of an average jeans purchase. Having completed the study, the participants were probed for suspicion, debriefed and thanked for their time.

## **Experimental Manipulation**

Participants in the relevant video conditions saw the same two-minute video as presented in Study 1, with two additional slides. These slides contained the price threshold information. Participants in the moderate threshold condition saw information purporting to be from a non-governmental organisation that had calculated £31 as the minimum price jeans could be ethically produced (Foad, 2013b). Participants in the high threshold condition saw the same slides, but the threshold was set as £61 (Foad, 2013c). Participants in the control condition again simply proceeded to the dependent measures.

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<sup>5</sup> As with Study 1, analyses revealed financial security did not moderate the effects found and is thus not reported hereon in.

## **Dependent Measures**

The items to assess ethical consumption hypocrisy were the same as in Study 1. However, as noted in the design section, this time participants responded to the items for themselves *and* people generally.

To assess moral judgement, the same vignette from Study 1 was used. In addition, a similar vignette describing a student who purchased a box of tea for £0.27, was presented. This allowed testing of whether the spill-over effects found for the should-actual contrasts in Study 1 extended to moral judgement. Answers for both vignettes were provided on a scale from 1 (*morally wrong*) through 6 (*morally neutral*) to 11 (*morally right*).

Participants again completed a 20-item version of the Schwartz (1992) value survey (SVS). To assess potential changes in value instantiations, the same items described in Chapter 1 were employed (Appendix D). The IWAH (McFarland et al., 2012) and the Humanity Esteem Scale (Luke & Maio, 2009) were again measured. The SVS subscales for each set of values again showed adequate to good reliability ( $.69 < \alpha < .87$ ). Each level of the IWAH exhibited good reliability ( $.83 < \alpha < .87$ ), as did the Humanity Esteem Scale ( $\alpha = .75$ ).

## **Results and Discussion**

### **Hypocrisy in the Control Conditions**

As before, it was important to test whether hypocrisy was present in the control conditions alone. In line with the first and third hypotheses outlined above, I expected to find intra-personal hypocrisy represented by default frugality; however, the collapsing of the self and people generally factor into a within-participants variable meant I did not expect inter-personal hypocrisy to appear. Accordingly, a two-way repeated measures ANOVA was run,

with hypocrisy target (self or people generally) and should and actual spends on the primary item of interest (jeans) as the repeated measures variables. This analysis revealed the predicted main effect of frugality, represented by lower values for should than actual spends,  $F(1, 27) = 10.33, p < .01, \text{partial } \eta^2 = .28$ . This main effect was somewhat qualified by a marginally significant interaction effect,  $F(1, 27) = 4.87, p = .09, \text{partial } \eta^2 = .10$ .

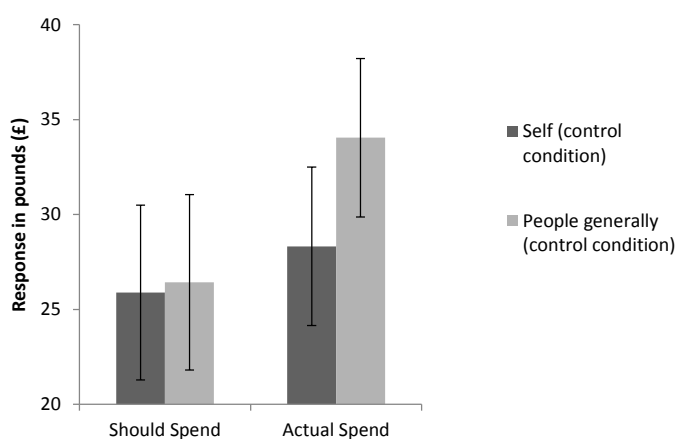


Figure 3.13: Reported should and actual spends for jeans in the two control conditions (Study 2); error bars show 95% confidence intervals

As the pattern of data in Figure 3.13 indicates, participants in the no video control conditions tended to present default frugality for buying jeans, replicating the findings from Study 1 and supporting the first hypothesis. The pattern also revealed marginal support for inter-personal hypocrisy. Similar to Study 1, the marginal interaction effect reflects that participants appeared to demand greater should-actual differences from people generally than from themselves. The third hypothesis suggested inter-personal hypocrisy effects should not be present, as impression management processes (Tedeschi, 1981) took effect. However, the data provide some evidence that despite switching to making the judgements for the self and

people generally a within-participants variable, people were still somewhat willing to demand more from others than they do of themselves.

### Purchasing Beliefs

I conducted a 3 (ethical information video: no video control / moderate threshold video / high threshold video) X 2 (hypocrisy target: self / people generally) mixed design ANOVA on hypocrisy scores for each consumer item separately. As a reminder, the moderate threshold video stated £31 was the minimum amount needed for jeans to be produced ethically, whilst the high threshold stated £61 as the minimum necessary spend.

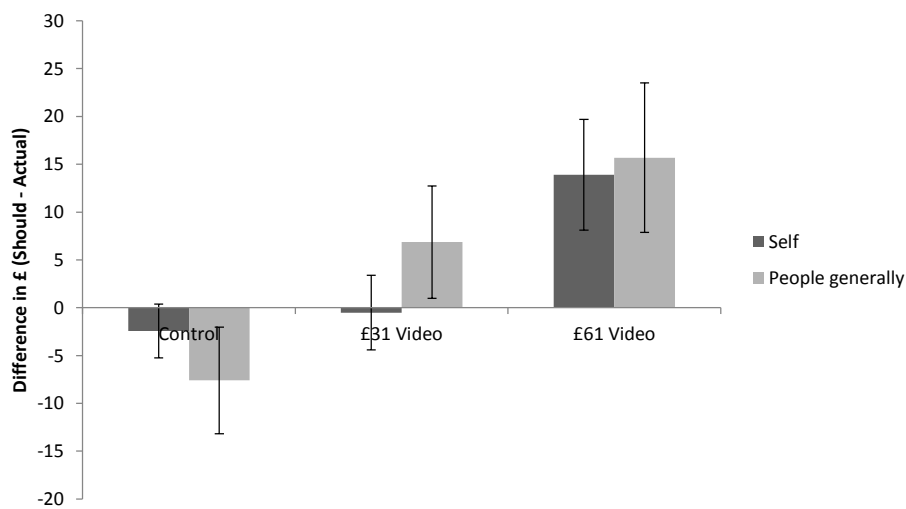


Figure 3.14: Should-actual contrasts for jeans (Study 2); error bars show 95% confidence intervals

For jeans, the analysis revealed a main effect of the ethical information video,  $F(2, 82) = 19.32, p < .001, \text{partial } \eta^2 = .32$ , but this main effect was qualified by a significant



interaction between video condition and hypocrisy target,  $F(2, 82) = 3.78, p = .03, \text{partial } \eta^2 = .08$ . This suggests that participants in each condition provided different responses for people generally than they did for themselves. To understand this interaction further, separate one way ANOVAs were run for both levels of hypocrisy target. For the self, there was a main effect of condition,  $F(2, 82) = 17.67, p < .001, \text{partial } \eta^2 = .30$ . Post-hoc analyses (controlling for multiple comparisons using Bonferroni) support the confidence intervals displayed in Figure 3.14, as the high threshold group significantly differed from both the moderate threshold group ( $p < .001$ ) and the control group ( $p < .001$ ), whilst the moderate threshold group did not differ from the control group ( $p = 1$ )<sup>6</sup>. For people generally there was also a main effect of condition,  $F(2, 82) = 12.77, p < .001, \text{partial } \eta^2 = .24$ . Post-hoc analyses again support the confidence intervals displayed in Figure 3.14, as the control group significantly differed from both the moderate threshold group ( $p < .01$ ) and the high threshold group ( $p < .001$ ), whilst the moderate threshold group did not differ from the high threshold group ( $p = .15$ ).

In summary, these data suggest the high threshold video has mimicked the effect of the video in Study 1, whilst the moderate threshold video has had a smaller effect. This evidence thus supports the second hypothesis, which predicted that the high threshold would elicit more ethical consumption hypocrisy than the moderate threshold. However, the different effects of the thresholds are moderated by the hypocrisy target. It appears the moderate threshold is sufficient to shift beliefs compared to the control group for what people generally should and actually do, yet a high threshold is required to shift what people think they themselves should and actually do. In essence, this reflects a willingness of the participants to make different demands of people generally; that is, the moderate threshold video does not change the perception of personal gaps in should-actual behaviour, but it does

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<sup>6</sup> The quoted  $p$ -values reflect Bonferroni's adjustment and are thus capped at 1.

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change the perception of how people generally should act. Essentially, this reflects an interpersonal hypocrisy effect, despite the within-participants nature of the design, which contradicts the third hypothesis. It is very interesting to see participants openly able to demand more of others than of themselves.

Although the videos presented the same information as in Study 1, the addition of thresholds made the should-actual contrasts specifically relevant to jeans, rather than clothing in general. The next item, t-shirts, was thus now less contextually overlapping.

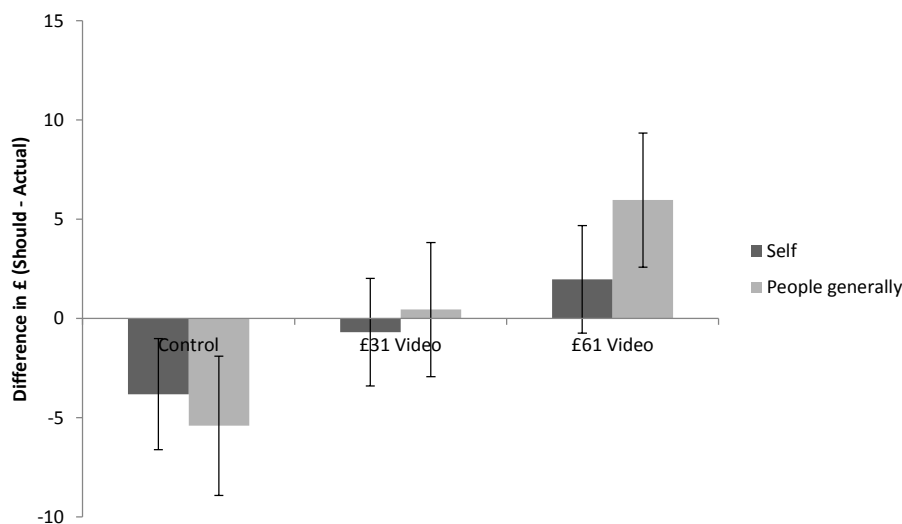


Figure 3.15: Should-actual contrasts for t-shirts (Study 2); error bars show 95% confidence intervals

Nonetheless, a mixed ANOVA revealed a main effect of the ethical information video,  $F(2, 82) = 10.13, p < .001, \text{partial } \eta^2 = .20$  and a marginally significant interaction between video condition and hypocrisy target,  $F(2, 82) = 3.05, p = .05, \text{partial } \eta^2 = .07$ . Separate one way ANOVAs were again run for both levels of hypocrisy target. For the self,

there was a main effect of condition,  $F(2, 82) = 4.36, p = .02, \text{partial } \eta^2 = .10$ . Post-hoc analyses reflect the confidence intervals displayed in Figure 3.15, as the high threshold group significantly differs from the control group ( $p = .01$ ), but does not differ from the moderate threshold group ( $p = .51$ ). The moderate threshold group also does not differ from the control group ( $p = .34$ ). For people generally there was also a main effect of condition,  $F(2, 82) = 10.79, p < .001, \text{partial } \eta^2 = .21$ . Post-hoc analyses showed the control group marginally significantly differed from the moderate threshold group ( $p = .06$ ) and differed further from the high threshold group ( $p < .001$ ), whilst the moderate threshold group marginally differed from the high threshold group ( $p = .07$ ). These results reproduce the findings relating to jeans: the moderate threshold attenuated the effect of the video, but more so for contrasts relating to the self.

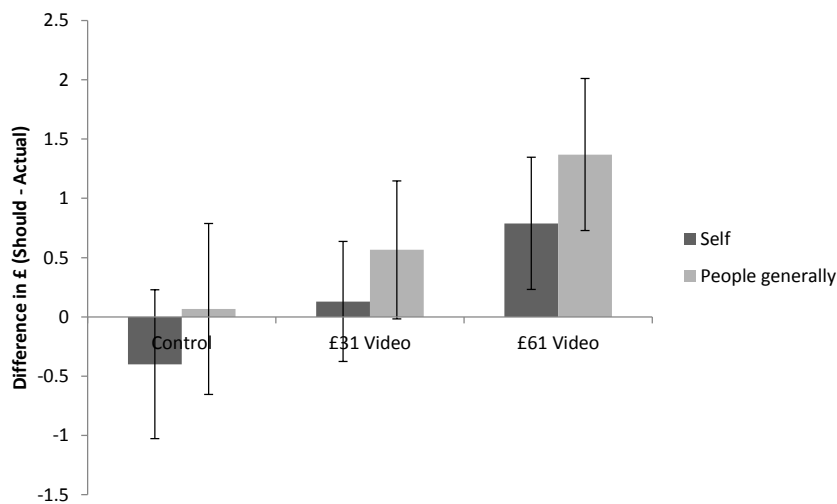


Figure 3.16: Should-actual contrasts for tea (Study 2); error bars show 95% confidence intervals

For tea, a mixed ANOVA revealed a main effect of the ethical information video,  $F(2, 54) = 5.75, p < .01, \text{partial } \eta^2 = .18$ , but no significant interaction between video condition and hypocrisy target,  $F(2, 54) < 1, p = .95, \text{partial } \eta^2 < .01$  (see Figure 3.16). The main effect of the video suggests the videos still had a spill-over effect outside of their specific context. The lack of interaction here seems driven in part by the lack of a frugality default in the control group for people generally. This is the only instance in my research where participants in the control group suggested people should spend *more* than they actually do. Interestingly, this shows the importance of using a control group as a comparison for each product, as some items may be more likely to provoke automatic motivations, such as frugality or ethics, than others.

### Beliefs about Charitable Donation

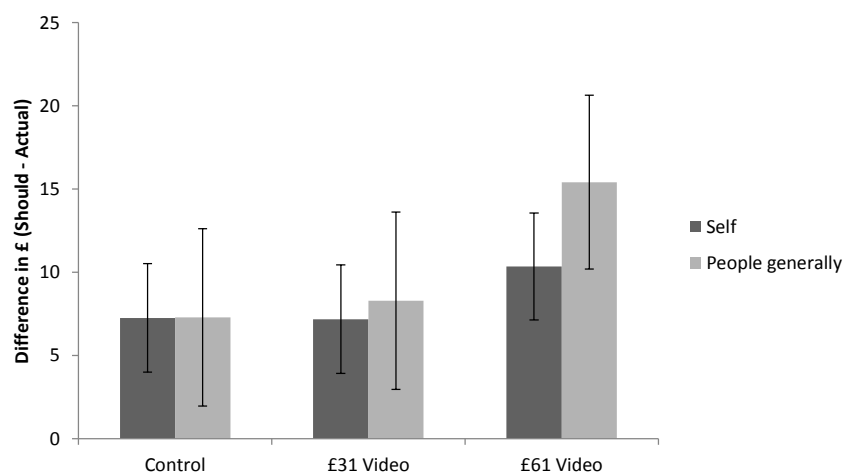


Figure 3.17: Should-actual contrasts for charity (Study 2); error bars show 95% confidence intervals

No significant interactions or main effects were found for charity (all  $p$ s > .12). The data do however, trend similarly to the effects found in Study 1, as the high threshold video produces the greatest contrast between should and actual beliefs, particularly for people generally (see Figure 3.17).

### **Moral Judgement**

A one way ANOVA revealed a main effect of video condition on the moral judgement of buying cheap jeans,  $F(2, 84) = 8.98$ ,  $p < .001$ ,  $partial \eta^2 < .18$ . Further analysis<sup>7</sup> revealed participants thought the act was significantly more morally wrong after seeing the moderate threshold video ( $M = 5.73$ ; 95% CI [4.96, 6.51]) and the high threshold video ( $M = 5.93$ ; [5.15, 6.71]), compared to the control group ( $M = 7.89$ ; [7.09, 8.69]). Similar results were found for the cheap tea purchase,  $F(2, 83) = 7.64$   $p < .01$ ,  $partial \eta^2 < .16$ . Participants again thought the act was significantly more morally wrong after seeing the moderate threshold video ( $M = 6.03$ ; [5.17, 6.89]) and the high threshold video ( $M = 5.79$ ; [4.89, 6.68]), compared to the control group ( $M = 8.04$ ; [7.14, 8.93]).

The spill-over effects found previously for ethical consumption hypocrisy can thus be extended to moral judgement. These results support the fourth hypothesis and replicate the findings of Study 1, in that making salient the ethical considerations of consumption elicits lower positivity in moral judgements of cheap purchasing. As predicted, whilst the moderate and high thresholds produce different effects for judgements of how much people should and actually spend, they do not produce different effects for related moral judgements.

These results suggest that judging the morality of an action of another person fits closely with the perceptions of what people generally should and actually do, rather than

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<sup>7</sup> Post-hoc analyses used the Bonferroni method to adjust for multiple comparisons and all significant results are reported at the .05 level of significance.

what the self should and actually does. That is, the moderate and high thresholds were both sufficient to change purchasing beliefs for people generally, whereas for purchasing beliefs about the self, only the high threshold had a consistent effect. For moral judgements, both thresholds had a similar effect on the perceived acceptability of cheap purchasing of jeans and tea. This also fits with previous evidence showing that moral judgements of others can activate different moral mechanisms compared to assessing self-oriented standards (Barkan, Ayal, Gino & Ariely, 2013).

### Values

A 3 (ethical information video: no video control / moderate threshold video / high threshold video) X 2 (values: self-transcendence / self-enhancement) mixed design ANOVA was run on the self-transcendence and self-enhancement values dimension. As with Study 1, values were again mean-centred.

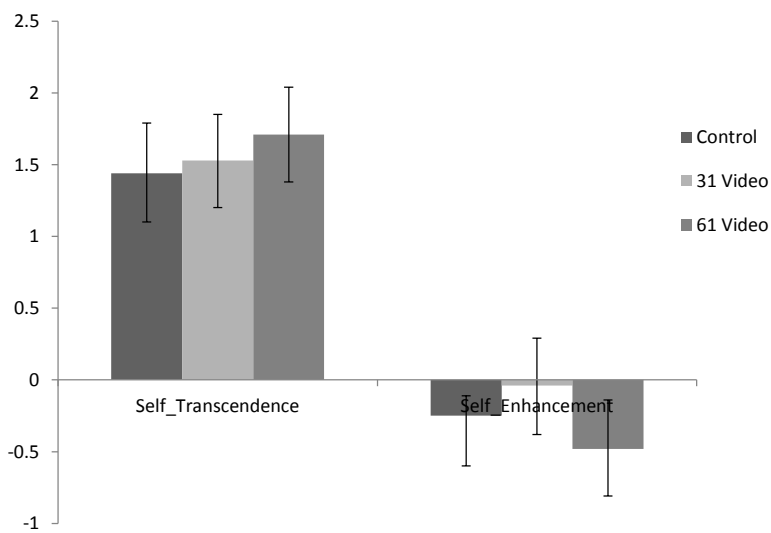


Figure 3.18: Self-transcendence and self-enhancement values (Study 2); error bars show 95% confidence intervals

There was no significant interaction between values and video condition,  $F(2, 84) = 1.20, p = .31, \text{partial } \eta^2 = .03$  (see Figure 3.18). Similar to Study 1, the data did, however, trend in the same direction, as those who saw the high threshold video attached the greatest importance to self-transcendence values and the least importance to self-enhancement values.

### **Value Instantiations**

After the apparent lack of impact of the video on value importance in this study and in Study 1, I decided to test whether the videos may instead affect how the values were being instantiated. As with Chapter 2, the ten instantiation examples were reduced to three factors: purchasing, personal development and other self-transcendent actions<sup>8</sup>. A one way ANOVA revealed a significant main effect of video condition on the value instantiation of purchasing,  $F(2, 84) = 3.10, p = .05, \text{partial } \eta^2 = .07$ . Post-hoc analyses revealed that participants thought significantly more about others when perceiving making purchasing decisions having seen the high threshold video ( $M = 3.05; [2.65, 3.45]$ ), compared to the moderate threshold video ( $M = 2.36; [1.96, 2.75]$ ). There were no significant differences compared to the control group ( $M = 2.58; [2.18, 2.99]$ ). This suggests the moderate threshold was not sufficient to change value instantiations from the control group, as participants only thought their purchasing decisions should take others' interests into account more having seen the high threshold video. No effects of condition were found on the personal work choices factor,  $F(2, 84) < 1, p = .73, \text{partial } \eta^2 = .01$ , nor on the other-focussed actions factor,  $F(2, 84) < 1, p = .53, \text{partial } \eta^2 = .02$ . The specific context of making ethical consumption salient may explain why these value instantiations shifted, whilst the other factors did not. However, it may also be that these instantiations are generally more malleable, given it was this factor that also

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<sup>8</sup>See Chapter 2 for a description of the three factor structure.

increased after the temporal contrast values measure in Chapter 2. There was hence some tentative support for the fifth hypothesis.

### **IWAH and Humanity Esteem**

As predicted, no effects of video condition were found on the IWAH and humanity esteem measures (all  $F$ s < 1.05, all  $p$ s > .35). In Study 1 I outlined how any ethical information video that contains threats to super-ordinate values could lower humanity identification or esteem. However, the video also offers a solution to the problem presented and as such may well rebalance any such effects. More importantly, the interaction effects from Study 1 suggest a potentially complex relationship between the target of the moral judgements (being questioned about the self or people generally) and the presentation of ethical information. Putting the judgements for the self and people generally as a within-participants variable removed the possibility of replicating the effects from Study 1. Future research could directly test whether information relevant to the issues of globalised production processes does indeed reduce positive attachment to constructs of humanity.

### **Estimate of Average Jeans Spend**

As with Study 1, the final item asked participants to estimate the price students would normally pay for an average pair of jeans. A one way ANOVA revealed a marginally significant main effect of video condition on this estimate,  $F(2, 84) = 2.73, p = .07, partial \eta^2 = .06$ . Post-hoc analyses revealed participants thought students spent significantly less having seen the moderate threshold video ( $M = 21.13; [17.77, 24.50]$ ), compared to the control group ( $M = 26.54; [23.06, 30.02]$ ). The difference between the moderate threshold and the high threshold video ( $M = 25.28; [21.86, 28.70]$ ) was marginal. This somewhat replicates the effect in Study 1, where the video suppressed estimated spending on jeans.



## Study 2 Summary

Two main findings arose from the results described above. Firstly, the basic effects found in Study 1 were replicated. The default position was again one of frugality, and the ethical information video again tended to invert this position to one of ethical concern. Secondly, the moderate and high thresholds were shown to moderate this inversion. The high threshold was effective in changing should-actual perceptions for each consumer item. The moderate threshold also changed these perceptions, but only when participants were asked about people generally (and only for jeans and t-shirts). This represents an interesting type of inter-personal hypocrisy which has been willingly self-reported in a within-participants design. Essentially, participants have indicated that being aware of ethical issues changes their views of what people generally should do, but not necessarily what they themselves do. Interestingly, this is not a simple effect of feeling that others are in a stronger financial position to act ethically, as a general glance at the actual and should group means shows there are no consistent differences across hypocrisy target. That is, participants do not think people generally actually do, or should, spend more than them. Furthermore, perceptions of financial security did not moderate any of the effects reported. These results support the first three hypotheses.

The findings also supported the final two hypotheses. For moral judgement, both versions of the video encouraged participants to consider cheap purchasing as less morally acceptable. Value importance was again unaffected by the manipulation; however, there was some evidence to suggest that the manipulation affected value instantiations, as purchasing decisions carried a greater element of concern for others after participants saw the high threshold video. Overall, the data across both studies show consistent patterns.

One other point to note was that the trend in the charity donation data was similar, but nonsignificant, as participants slightly increased the should-actual gap for giving, again more so for people generally. The lack of significant inter-personal hypocrisy in beliefs regarding charitable donations might be a result of such effects being susceptible to impression management, which were thus particularly affected by moving the hypocrisy target to a within-participants variable.

Finally, and perhaps most importantly, the novel introduction of a manipulation of thresholds was informative. In this study, the higher threshold had a greater impact compared to the moderate threshold. This is interesting in light of past evidence about assimilation and contrasts of target judgements to primes or anchors in spending contexts (Ariely et al., 2003; Furnham & Boo, 2011; Simonsen & Drolet, 2004). As outlined in the introduction, it was conceivable that the judgements would more easily move toward the moderate threshold than the higher threshold, because the extreme nature of the higher threshold might be rejected as being unachievable. Through dissonance related processes, people might therefore have rejected the premise that paying more is morally desirable. Instead, it turned out the higher threshold was more persuasive. This effect may have occurred because the threshold was *not* out of reach for participants, allowing it simply to motivate more change instead of rejecting the possibility of change.

### Study 3

In light of the above findings, I wanted to carry out two additional tests to further test the robustness of the effects being found. Firstly, I wanted to extend the research to a more generalizable population than a wholly student sample, as students have their own particular lifestyle and financial concerns. Accordingly, this study uses a general US (American) sample. Secondly, I wanted to test an extra-high threshold, to see if the type of effects found

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with extreme thresholds in other contexts (Mussweiler & Strack, 2001) also produced potential ceiling or rebound effects here.

Because it is important to keep online data collection as brief as possible (Goodman, Cryder & Cheema, 2013) only the items relating to consumption, charity and moral judgement were used. The measures concerning value importance, value instantiations, identification with humanity and humanity esteem were thus excluded.

In line with the previous two studies and the goals for this study, I have four main hypotheses. Firstly, the findings of default frugality and an inversion of this position via the ethical information video will be replicated. Secondly, higher thresholds should elicit a willingness to pay higher prices for goods, though it is likely that the extra-high threshold will not produce equivalently stronger effects as it reaches the boundary of plausibility (Mussweiler & Strack, 1999). The third hypothesis is a reversal of the equivalent hypothesis from Study 2, as the evidence described above suggested participants were sometimes willing to report inter-personal hypocrisy, even when the hypocrisy target (self / people generally) was a within-participants variable. Accordingly, I now expect participants to show a willingness to demand more from people generally than they do themselves. Fourthly, the moral judgement of cheap purchases will be seen as less acceptable, regardless of the threshold presented.

## **Method**

### **Participants**

Participants were 183 people recruited using Mechanical Turk and all were based in the US (79 women, 102 men, 2 preferred not to say). They were between 18 and 72 years of

age ( $M = 34$ ). Each participant was paid \$0.75. Incomplete entries were automatically rejected by the survey software.

We used exclusion criteria to eliminate participants who may have completed the survey multiple times or were not paying sufficient attention to the study, as is the norm in online data collection (Aust, Diedenhofen, Ullrich, & Musch, 2012). Seven participants (4%) used the same IP address, 13 (7%) failed a simple video knowledge check, 6 (3%) failed a basic knowledge check and 18 (10%) provided rare answers that suggested a lack of attention (e.g., I should give less to charity than I actually do). In total, 38 participants were excluded, and because some ( $n = 6$ ) failed on more than one of these basic checks, this left a final sample for analysis of 145. The low failure rate for each check indicates the comparatively liberal nature of these criteria.

### **Experimental Manipulation**

Participants in the relevant video conditions saw the same two minute videos as presented in Study 2, again with minor adjustments to reflect the US setting. Participants in the moderate threshold condition saw the threshold for the ethical production of jeans as \$44 (Foad, 2013d), participants in the high threshold condition saw the threshold as \$88 (Foad, 2013e) and participants in the extra-high threshold saw the threshold as \$133 (Foad, 2013f). This extra-high threshold appeared effective as a very high, but perhaps not entirely implausible anchor, as a couple of participants in this condition questioned the credibility of this price when giving feedback. Participants in the control condition again simply proceeded to the dependent measures.

### **Design**

A mixed participants design was used. The between-participants independent variable now had four levels: ethical information video (no video control / moderate threshold / high threshold / extra-high threshold). Participants were randomly assigned to one of the four conditions. The within-participants dependent variable was again hypocrisy target (self / people generally). As with Study 2, I prioritised the hypocrisy target of the self by ordering these items first. The dependent variables were the consumption hypocrisy items and the moral judgement tasks.

### **Procedure**

Participants received the same initial demographic and anchor items as before and then saw the relevant video or no video. If they saw a video (i.e., all participants in the experimental conditions), a simple knowledge check asked them to select the threshold they had seen from a list of options. Next, they completed the should-actual contrasts for each item regarding their own behaviour and the moral judgement tasks. Finally, they completed the should-actual contrasts for people generally, items assessing personal financial security,<sup>9</sup> and their perception of an average jeans purchase. For participants in the video conditions, as part of the knowledge check, an additional question asked them to select the type of music they heard during the video. Having completed the study, the participants were debriefed via an information page and thanked for their time. Contact details of the researcher and supervisor were also provided, but no participants made further contact.

### **Dependent Measures**

The items to assess consumption hypocrisy were the same as in the previous studies except for changes made to reflect the US culture. For example, pounds were switched for

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<sup>9</sup> As with Study 2, analyses revealed financial security did not moderate the effects found and is thus not discussed further.

dollars and tea was switched for coffee. Similar changes were made to the vignettes for moral judgement, and the cost in each scenario was increased to approximately match the currency rate of pounds to dollars.

## Results and Discussion

### Hypocrisy in the Control Conditions

As before, it was important to test whether hypocrisy was present in the control conditions alone. Accordingly, a two-way repeated measures ANOVA was run, with hypocrisy target (self or people generally) and should and actual spends on jeans as the repeated measures variables. This analysis revealed the predicted main effect of frugality, represented by lower values for should than actual spends,  $F(1, 40) = 49.41, p < .001, \text{partial } \eta^2 = .55$ . This main effect was qualified by a significant interaction effect,  $F(1, 40) = 7.61, p = .01, \text{partial } \eta^2 = .16$ .

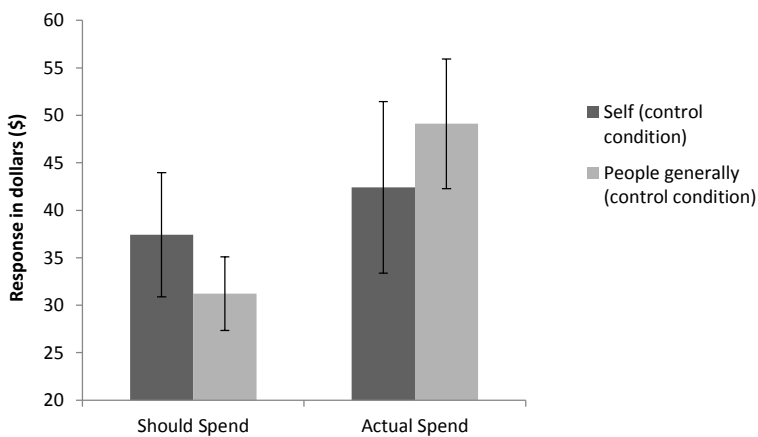


Figure 3.19: Reported should and actual spends for jeans in the two control conditions (Study 3); error bars show 95% confidence intervals

These results support the first and third hypotheses. The findings of the previous two studies relating to default frugality were replicated, as participants again suggested they (and people generally) should spend less than they actually do on jeans (see Figure 3.19). Furthermore, the interaction effect also supports the findings of the previous two studies, as it would appear participants were willing to demand more frugality from people generally than they were willing to demand from themselves. In general, before considering the ethical manipulation, it would appear people are willing to act hypocritically, both in a between-participants and a within-participants design.

### **Purchasing Beliefs**

I conducted a 4 (ethical information video: no video control / moderate threshold video / high threshold video / extra-high threshold video ) X 2 (hypocrisy target: self / people generally) mixed design ANOVA on hypocrisy scores for each consumer item separately. As with Study 2, one way ANOVAs were then run on each level of the hypocrisy target if a significant interaction was found. As a reminder, the moderate threshold video stated \$44 was the minimum amount needed for jeans to be produced ethically, the high threshold stated \$88 as the minimum necessary spend and the extra-high threshold stated \$133 as the minimum necessary spend.

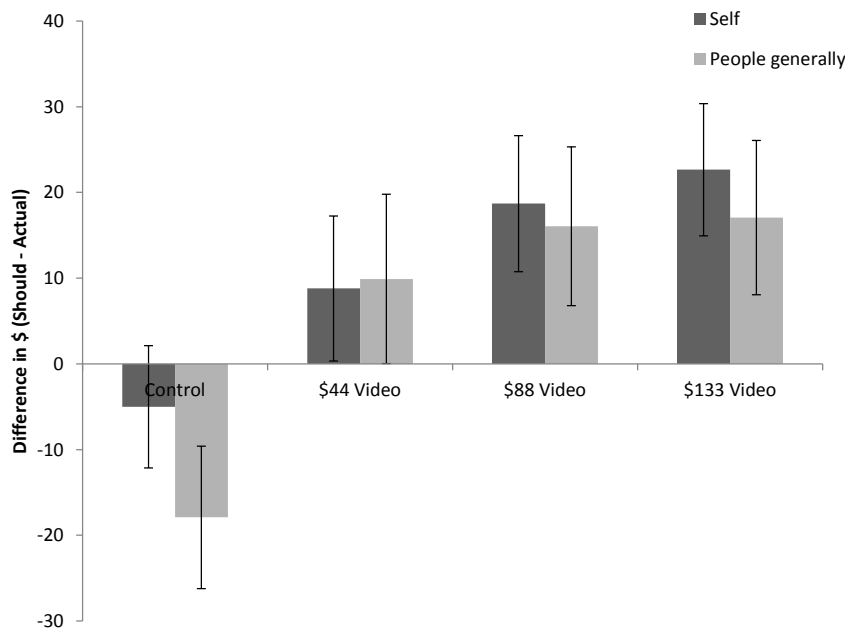


Figure 3.20: Should-actual contrasts for jeans (Study 3); error bars show 95% confidence intervals

For jeans, the mixed ANOVA revealed a main effect of the ethical information video,  $F(3, 134) = 15.96, p < .001, \text{partial } \eta^2 = .26$  and a main effect of the hypocrisy target,  $F(1, 134) = 6.11, p = .02, \text{partial } \eta^2 = .04$ . These effects were somewhat qualified by a marginally significant interaction between video condition and hypocrisy target,  $F(3, 134) = 2.26, p = .09, \text{partial } \eta^2 = .05$ . As before, to understand this interaction further, separate analyses were run for both levels of hypocrisy target. For the self, there was a main effect of condition,  $F(3, 134) = 10.84, p < .001, \text{partial } \eta^2 = .20$ . Post-hoc analyses (controlling for multiple comparisons using Bonferroni) support the confidence intervals displayed in Figure 3.20, as the control group marginally significantly differed from the moderate threshold condition ( $p = .09$ ), but differed further from the high threshold ( $p < .001$ ) and the extra-high threshold ( $p$



< .001). For people generally, there was also a main effect of condition,  $F(3, 134) = 14.44$ ,  $p < .001$ , *partial*  $\eta^2 = .24$ . Post-hoc analyses again support the confidence intervals displayed in Figure 24, as the control group significantly differed from every video condition (all  $ps < .001$ ), whilst none of the video conditions differed from one another (all  $ps = 1$ ).

These results replicate the findings from Study 2 and lend support to the first two hypotheses. Default frugality was reported in the control group and this position was inverted by the video conditions. This inversion appears somewhat stronger when people generally are the hypocrisy target, as the moderate threshold has a notably greater effect compared to how it affects the self. However, it is worth mentioning that the group means suggest this effect is driven particularly by the initially stronger demand for frugality in the control group. This stronger demand for frugality, and the marginal interaction, together provides evidence that participants again demanded more of people generally than they did themselves, despite having already acknowledged their own should-actual discrepancies. There also appears to be a levelling off when comparing the high and extra-high thresholds, suggesting a potential ceiling effect.

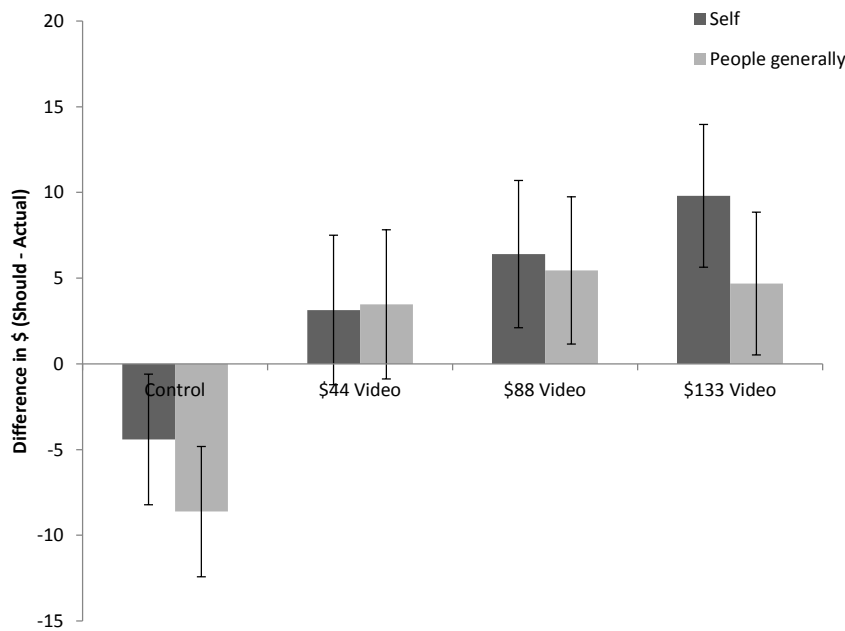


Figure 3.21: Should-actual contrasts for t-shirts (Study 3); error bars show 95% confidence intervals

For t-shirts, the mixed ANOVA revealed a main effect of the ethical information video,  $F(3, 138) = 12.30, p < .001, \text{partial } \eta^2 = .21$  and a main effect of the hypocrisy target,  $F(1, 134) = 6.88, p = .01, \text{partial } \eta^2 = .05$  (see Figure 3.21). However, there was no significant interaction between video condition and hypocrisy target,  $F(3, 138) = 1.83, p = .15, \text{partial } \eta^2 = .04$ . Pairwise comparisons revealed the control group significantly differed from each video condition (all  $ps < .01$ ), but there were no differences between the video conditions (all  $ps > .90$ ). This suggests the information in the video has inverted the initial frugality default, but the different thresholds have not had an impact upon participants' perception of should-actual contrasts for either the self or people generally.

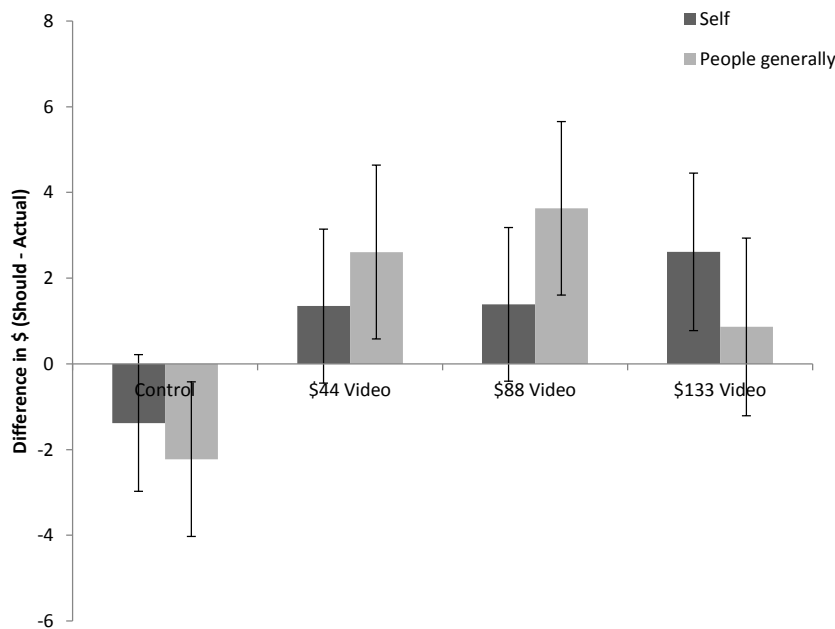


Figure 3.22: Should-actual contrasts for coffee (Study 3); error bars show 95% confidence intervals

For coffee, the mixed ANOVA revealed a main effect of the ethical information video,  $F(3, 93) = 6.25, p = .001, \text{partial } \eta^2 = .17$  but no main effect of the hypocrisy target,  $F(1, 93) < 1, p = .61, \text{partial } \eta^2 < .01$ . The main effect of video condition was qualified by a significant interaction between video condition and hypocrisy target,  $F(3, 93) = 4.26, p < .01, \text{partial } \eta^2 = .12$ . Separate one way ANOVAs were again run for both levels of hypocrisy target. For the self, there was a main effect of condition,  $F(3, 93) = 4.00, p = .01, \text{partial } \eta^2 = .11$ . Post-hoc analyses support the confidence intervals displayed in Figure 3.22, as the control group differed from the extra-high threshold ( $p < .01$ ) but not from the other video conditions (both  $ps > .15$ ). For people generally there was also a main effect of condition,  $F(3, 93) = 7.24, p < .001, \text{partial } \eta^2 = .19$ . Post-hoc analyses again support the confidence

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intervals displayed in Figure 3.22, as the control group significantly differed from the moderate threshold ( $p < .01$ ) and the high threshold ( $p < .001$ ), but not the extra-high threshold ( $p = .17$ ), whilst none of the video conditions differed from one another (all  $ps = .37$ ).

These results again suggest that the videos differ in their impact upon what people think they themselves should do compared to what people generally should do. For purchasing coffee, the extra-high threshold was required to significantly shift should-actual perceptions for the self. However, for people generally, the moderate and high thresholds were effective. Interestingly, the extra-high threshold did not work for people generally. This supports the notion of a potential rebound effect being present in this context.

### Beliefs about Charity Donation

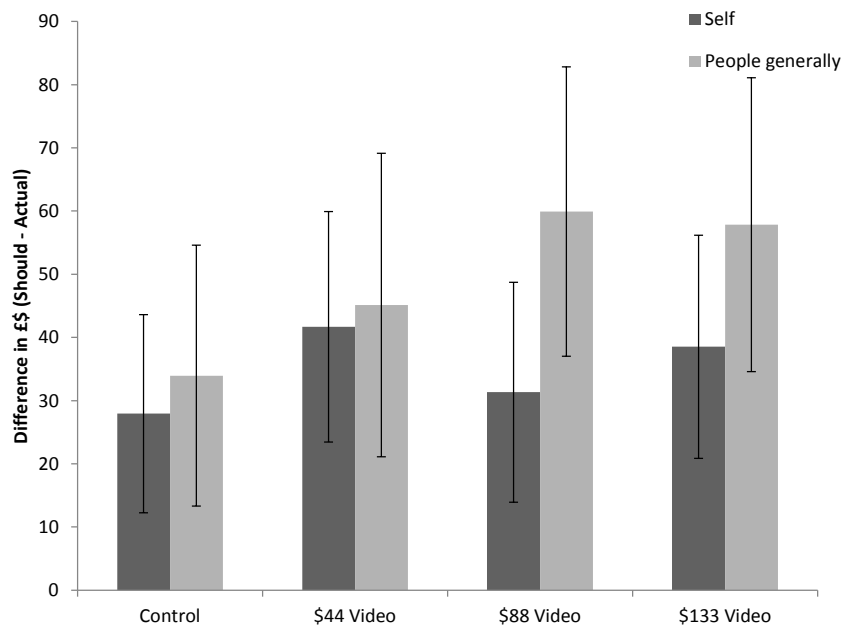


Figure 3.23: Should-actual contrasts for charity (Study 3); error bars show 95% confidence intervals

No significant interactions or main effects were found for charity (all  $ps > .15$ ). As with Study 2, the means suggest that the video may have had some impact for people generally, but if so, the effects are not strong enough to be detected here (see Figure 3.23).

### Moral Judgement

A one way ANOVA revealed a main effect of video condition on the moral judgement of buying cheap jeans,  $F(3, 141) = 9.51, p < .001, \text{partial } \eta^2 = .17$ . Further

analysis revealed participants thought the act was significantly less morally acceptable after seeing the moderate threshold video ( $M = 5.69$ ; 95% CI [4.87, 6.50]), the high threshold video ( $M = 6.65$ ; [5.86, 7.44]) and the extra-high threshold ( $M = 6.54$ ; [5.78, 7.30]), compared to the control group ( $M = 8.45$ ; [7.74, 9.16]). Similar results were found for the cheap tea purchase,  $F(3, 141) = 6.47$ ,  $p < .001$ ,  $partial \eta^2 = .12$ . Participants again thought the act was significantly more morally questionable after seeing the moderate threshold video ( $M = 5.81$ ; [4.99, 6.64]), the high threshold video ( $M = 6.68$ ; [5.87, 7.48]) and the extra-high threshold ( $M = 6.68$ ; [5.91, 7.45]), compared to the control group ( $M = 8.17$ ; [7.44, 8.89]). Similar to the previous two studies, the control group participants rated the behaviour as morally acceptable, whilst those who saw any of the ethical information videos moved close to the midpoint (*neutral*) of the scale.

These data directly support the fourth hypothesis. Interestingly, as with Study 2, the moderate threshold carried the strongest impact. In contrast to shifting perceptions of should-actual behaviour, it is possible that lower-moderate thresholds make the possibility of acting ethically more attainable and thus the action of acting in an ethically questionable manner as more wrong. Nonetheless, the present data offer only partial support for this speculation; this issue is hence an interesting avenue for future consideration.

### **Estimate of Average Jeans Spend**

A one way ANOVA revealed no effect of video condition on the estimated purchase price of an average pair of jeans,  $F(3, 141) < 1$ ,  $p = .63$ ,  $partial \eta^2 = .01$ . Unlike the previous studies, there was no indication that the manipulation had changed the perceived average spending on jeans.

### **Study 3 Summary**

The results supported the four hypotheses. Default frugality was again the norm and once more inverted by making ethical issues of production salient. The effect of thresholds suggests that this inversion required a lower threshold to be effective for changing participants' perceptions of what people generally should do, compared to changing what they should do themselves, although the pattern for coffee was notably different from the other findings in this and the previous two studies. Furthermore, within each purchasing decision, the control groups also demanded greater frugality from people generally than they did themselves. These effects suggest consistent findings of inter-personal hypocrisy, including when the items are part of a within-participants design. A ceiling effect of ethical demands seems present, given the high and extra-high thresholds almost always carried the same effect. However, evidence for a rebound effect is limited, as the extra-high threshold did not significantly differ from the high threshold in any of the analyses. Cheap purchasing was seen as more acceptable in the control group compared to each of the video conditions.

### **General Discussion**

Across three studies, I have demonstrated several reliable effects that represent an interesting first foray into the relationship between anchoring, hypocrisy and ethical consumption. An initially surprising finding that consistently prevailed was the default frugality shown by participants in each control group. This default position was reliably inverted by videos that made ethical issues salient. However, there were two particularly important moderating influences. Firstly, effects of frugality and ethical concern were stronger for people generally than for the self. Secondly, the inversion towards ethical concern was stronger when a higher anchor was used. Additionally, the anchors did not moderate the harsher moral judgements provided by participants who saw any of the videos.

These findings were produced in a student sample (Studies 1 & 2) and then replicated in a community sample (Study 3). Discoveries of secondary interest included the shift to more self-transcendent value instantiations (Study 2) and the interaction between hypocrisy target and video manipulation on identification with, and attitudes towards, humanity (Study 1).

This research thus offers a number of novel findings. Firstly, people have a default position of frugality if asked to contrast ought and actual behaviour in consumption. With hindsight, it is plausible to suggest that these participants saw the should-actual contrasts as a test of hedonistic urges, fitting with research linking guilt and consumption (Dahl et al., 2003). However, there was no *a priori* reason to think the majority of participants would frame the should-actual contrast in this way. This default position neatly represents one side of the tension that people often feel when it comes to ethical consumption: the need to minimise spending (Bray et al., 2011).

The frugality position also showed both forms of hypocrisy at play. Firstly the unexpected should-actual gap represented an initial acceptance of intra-personal hypocrisy. Secondly, the suggestion that the gap is bigger for people generally, compared to the self, revealed inter-personal hypocrisy. Before even considering the ethical component of consumption, or anchoring, it is therefore clear that hypocrisy is prevalent in consumption attitudes. Also of interest, a positive attitude to frugality could prove effective in promoting pro-environmental behaviour (Fujii, 2006), so this concept alone is worthy of further attention.

The videos that made ethical issues of cheap clothing salient consistently inverted this position. After viewing these videos, participants tended to indicate that they should spend more on consumer items. The effects spilled over from clothing to tea and coffee, but to a much lesser extent to charity donations (only Study 1). This suggests a boundary condition of



the manipulation, reflected by the decrease in semantic similarity (Mussweiler & Strack, 2001b) between the video information and the topic of charitable donations. Although poverty and social justice themes were present, the video was more about considering the ethics of consumption, rather than about directly helping others. Intra-personal hypocrisy in the video conditions usually represented a desire to devote more resources to avoid unethical production processes, rather than a desire to be frugal. Inter-personal hypocrisy was also present, as the effects throughout the studies were stronger for “people generally”, even when the items were collapsed into a repeated measures design (Studies 2 & 3). Put simply, the participants’ response to the ethical information was to adjust their own actions, but demand even greater change from others.

With regard to the anchoring effects, a higher plausible anchor was more effective than a moderate anchor and these effects spread from jeans to tea and coffee. In Study 3, the extra-high anchor appeared to mainly mimic the effects of the high anchor, thus suggesting participants were adjusting in a way that moved them to the boundary of plausibility (e.g., Mussweiler & Strack, 1999). Wegener and colleagues (2010) might predict that the extra-high anchor would be less effective than the high or moderate anchors, consistent with their argument that extreme anchors will, upon elaboration, be seen as less persuasive than more moderate equivalents. The lack of an effect suggests instead that very high thresholds in ethical consumption are as likely to work as more plausible alternatives, notwithstanding some limitations discussed below.

Inter-personal hypocrisy was also related to anchoring, as lower anchors were more effective for people generally, compared to the self. For instance, in both Studies 2 and 3, participants exposed to the ethical information and a moderate anchor did not differ from the control group in how much they thought they themselves should and actually spend on jeans, yet they did differ from the control group in how they thought people generally should and

actually act. It took a higher anchor to shift perceptions of what was required for the self. This provides the first evidence to illustrate an interaction between anchoring effects and hypocrisy.

The moral judgement vignettes showed one consistent effect. Those in the control conditions saw cheap purchasing as morally right, whereas those who saw any of the videos estimated cheap purchasing as roughly morally neutral. The size of the price anchors therefore did not influence the moral judgement of others. This finding could suggest the anchoring only affected the judgements that were matched in terms of metric compared to a moral judgement scale. That is, the anchors affected judgements of the pounds or dollars that participants would spend but not of the moral acceptability of another person's behaviour. This result could also signify that only a low threshold for ethical purchases is sufficient to elicit moral concerns about purchase behaviour. At the same time, however, the general lack of moral condemnation suggests that participants were aware of the tensions people face between consuming ethically and acting in a financially prudent manner.

To summarise, it is clear that the tension between needs to be frugal and needs to act morally can be accessed via intra-personal hypocrisy measures. Furthermore, people demonstrate inter-personal hypocrisy both as a default position and as a position after social justice issues are made salient, even in a within-participants design.

### **Limitations**

This set of novel studies ambitiously addressed a range of interrelated mechanisms, which inevitably means a number of limitations need to be considered alongside the initial findings. However, such caveats also open up many further questions of interest.

The first limitation to consider is the suitability of comparing the control and video conditions for the purchasing beliefs. Although participants were answering the same questions, the manipulation could encourage them to approach the items from qualitatively different perspectives. For example, those in the control groups appeared to see the should-actual contrast as representative of frugality. Those who saw any of the ethical information videos were instead likely to see the should-actual contrast as representative of an ethical issue. It is thus important to consider whether it is appropriate to make the comparisons between the groups. An alternative is to compare the video condition to a zero baseline, instead of the control groups. By this I mean compare the effects of the manipulation to a should-actual contrast of zero, rather than using the should-actual contrast reported by the participants in the control groups. However, a zero baseline represents an artificial starting point for each variable which does not represent people's actual psychological position. Furthermore, such a baseline measure cannot allow the initial differences between self and people generally to be accounted for.

There are a number of further reasons to support the chosen method of analyses reported in my research. Firstly, some participants in the control conditions did appear to initially frame the contrast as one of ethical concern, as they suggested they should spend more than they actually do, even in the absence of any ethical information being made salient. Similarly, many participants did not shift to a position that they should spend more having seen the ethical information. So whilst the group means represent the overall patterns, they do not represent uniformity in direction of response. Essentially, default frugality and an inversion to ethical concerns are not represented across every condition and item, so any such reframing effects are far from universal. Secondly, as reflected by the moral judgement tasks, even in the ethical information video conditions participants still recognised competing

demands of frugality and morality. In combination with the reasons given in earlier discussion sections it thus seems valid to contrast the video conditions to the control groups.

A second concern is the lack of an arbitrary anchor, as is the norm in a standard anchoring study. That is, previous anchoring research often describes the anchor as random and/or irrelevant to the judgement being made, so it is theoretically illogical for the participants to use it. However, the fundamental interest of this research was to see how people respond when *challenged* to do a little or a lot in a pro-social context. It was thus not theoretically useful to present the anchor as random or arbitrary. However, this means that effects relating to the jeans item could be due in part to participants recalling the “correct” answer for how much they themselves should spend. A quick analysis shows only 24 of 155 (15%) participants used this strategy and, in each condition, apart from the extra-high anchor, some participants reported a figure even higher than the threshold provided. This suggests the majority of the participants used the anchor simply as a guide, as I intended. There is also no reason to suggest those who did use the anchor provided were making an incoherent estimate for their situation. Additionally, the reason I assessed a range of items with different prices was to ensure the effects I reported were not simply due to specific use of the provided price anchors for jeans.

A related point is the use of the extra-high anchor in Study 3. It was the only condition in either of the anchoring studies where participants did not suggest a “should” value beyond the given threshold. In combination with the qualitative feedback mentioned earlier, this result suggests that the extra-high anchor was indeed at the edge of plausibility. However, it was certainly not completely implausible, so I cannot use the data here to suggest what would happen if a completely implausible anchor (e.g. £10,000 for a pair of jeans) was used in this study design. It may be that this would undermine the credibility of the entire video and potentially the study itself. Such effects could produce the attenuation response that

attitudinal research predicts for extreme anchors (Wegener et al., 2010), but perhaps more worryingly may even stop the participants taking the research seriously.

### **Future Research Ideas**

The confluence of anchoring, hypocrisy and ethical consumption has produced some fascinating first findings, but more research is required before robust conclusions can be drawn. The links between anchoring, hypocrisy and morality open up wider areas of interest.

For example, uncertainty (Milkman, 2012), product attributes (Luchs, Naylor, Irwin & Raghunathan, 2010), knowledge (Mussweiler & Strack, 2000), thresholds for action (MacCoun, 2012), perceived agency (Antonetti & Maklan, 2014), emotional state (Polman & Ruttan, 2013; Ruedy, Moore, Gino & Schweitzer, 2013), concern for sustainability (Balderjahn et al., 2013), group identity (Valdesolo & DeSteno, 2007) and ethical identity (Sparks & Shepherd, 1992; Oh & Yoon, 2014) are all highly relevant constructs that have been shown to relate directly to ethical intentions. Integration of these variables into research on anchors and hypocrisy would therefore add to our understanding of how anchoring, hypocrisy and ethical behaviour interact.

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Given this diversity of potential research paths, I therefore present the following ideas as a mere subset of future directions that are worth pursuing. Firstly, it would be worth evaluating the effects of anchoring and hypocrisy in a between-participants design. Although my findings indicate a remarkable willingness to report inter-personal hypocrisy in a within-participants design, it is likely that such effects will be stronger when participants respond to questions about themselves or people in general in separate conditions. The between-participants design may also be more ecologically valid, as people are rarely asked to explicitly consider should-actual contrasts for the self and others concurrently, though perhaps such comparisons do take place more implicitly, in a normative sense.

Future work could also analyse similar datasets in combination with other potentially explanatory factors. For example, noting how thresholds work in relation to individual differences. Advice tends to be used when it is already close to current perceptions (Yaniv, 2004), so baseline measures of existing beliefs and knowledge relating to ethical situations could help explain when different thresholds are more effective. Gender analyses are also of interest, given the potential perception of ethical consumption as a more feminine activity (Shang & Pelozo, 2015). Although no effects of gender were found in my research, it is possible an individual's attitudes towards ethical consumption in general could be a useful additional predictor. Finally, should and actual responses could be evaluated separately, to note which measure is more prone to movement. However, this might be more appropriate if the **data are** collected in a manner that makes the contrast less explicit.

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Existing research suggests a range of other mechanisms that could illuminate the anchoring effects further. For example, a construal level approach (Trope & Liberman, 2010) could increase the perceived temporal distance of the ethical commitment to see if this increases the impact of the higher anchors, as more distant future choices tend to carry a greater attachment to "should" over "want" responses (Rogers & Bazerman, 2008). A power manipulation could be used to see if this reduces the impact of the higher anchors, given higher feelings of power have been shown to produce less ethical decision making (Dubois et al., 2015). Cognitive load has been shown to impact upon anchoring judgements in several, sometimes opposing, ways (Wegener et al., 2010), and manipulating this factor could show the extent to which anchors in an ethical domain are susceptible to such effects. This is particularly important, given how often ethical information is presented in a context of competing distractions.

Finally, national contexts drive different perceptions of ethical consumption (e.g. Arizfía et al., 2014; Varul, 2009), so the relationships studied here need validation in a wider

range of cultural settings. It is important to acknowledge that ethical concerns are also affected by their social context (Starr, 2009) and psychological mechanisms relating to concerns regarding sustainability therefore need to be understood at a group level and not just with a focus on individual moral responsibility (Akenji, 2014; Low & Davenport, 2007; Markowitz, Grasso & Jamieson, 2015; Moisander, 2007; Papaoikonomou et al., 2012). This socially focused approach fits with Bandura's (1999) suggestion that moral safeguards need to be considered at the level of social systems.

I have suggested a variety of future research ideas because this exploratory line of work opens up many avenues of interest. The issue of ethical consumption is an area that has attracted a lot of research outside of psychology, yet the need for further psychological explanations of how ethical information is perceived, elaborated upon and acted upon is clear. The combination of established socio-cognitive findings relating to anchoring and hypocrisy, and the associated experiments reported above, have shown one potential pathway for pursuing a greater psychological understanding of how people try to act pro-socially in a globalised and complex marketplace. Additionally, it is worth noting that life satisfaction and pro-environmental consumption have been shown to correlate, even controlling for demographic factors and environmental attitudes (Welsch & Kuhling, 2010). If we can thus understand further how hypocrisy works in the realm of consumption, there are potential benefits for producers, consumers and the wider world.

## **Conclusion**

Ethical consumption is an important representation of pro-social behaviour, as it can act as a daily reminder of how our actions have an impact on the environment and the people involved in production. My research suggests that setting the bar comparatively high can lead to a greater perceived gap between should and actual behaviour, which in part reflects a

greater concern for others. Alongside this core finding, the higher thresholds for ethical consumption work differently in judgements of how the self should behave, in contrast to how others should behave. These are tentative findings and much further work needs to be done if we are to guide policy in this area. However, given that price is often reported as the primary concern for those considering an ethical purchase (Bray et al., 2011) and that money is such a psychologically powerful concept (Zhou, Vohs & Baumeister, 2009), there is much merit in using monetary thresholds and ethical consumption as an ecologically valid research model for testing further the tensions between self and other concern. This is important research to push forward if we are to ensure consumption is working for, rather than against, human needs, as Stearns (2006), and I, would encourage.

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## Chapter 4: Complexity and Moral Judgement

### Introduction

When Alan Perlis (1982), the acclaimed computer scientist and inaugural winner of the Alan Turing award, was asked for a series of epigrams reflecting his experiences in developing programming languages, he came up with several relating to complexity, including: “Fools ignore complexity. Pragmatists suffer it. Some can avoid it. Geniuses remove it.” (p. 10). The general introduction outlined how changing social contexts can lead to radically diverse and increasingly complex challenges for humanity. This chapter investigates the extent to which we need to understand complexity and its relationship with moral judgement further.

Baumeister (1987) and Cushman (1990) contrasted different historical periods from within the last ten centuries, but both made the point that comparatively rapid industrial, technological and social change has presented problems for self-identity. It is important to consider how such problems for the self may also point towards problems for moral judgement, particularly given the potential for strong links between self-definition and moral identity (Aquino & Reed, 2002). Part of the problematisation described in historical treatments of self-identity relate to the diffusion of social impact. Essentially, we now live within social structures where our thoughts and actions are broader in scope than ever before. We no longer live in small and isolated communities, where our own and others’ actions and consequences were easier to comprehend. From the perspective of SCMT, there is thus a potential mismatch between our desire to understand moral responsibility in social contexts, and our current social structures, which contain levels of complexity that prevent simple analyses of how people can have an impact on the world. Figure 4.1 below, models this issue in relation to this chapter.

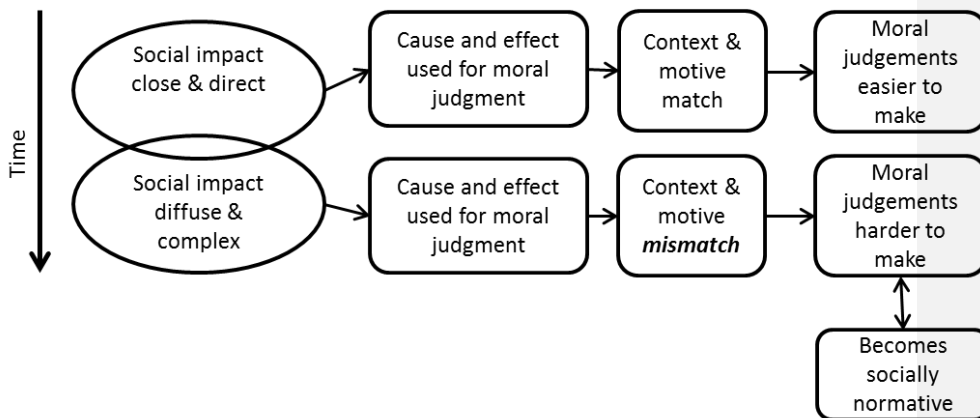


Figure 4.1: Model of SCMT to explain how complexity can problematise moral judgement.

There is an important potential philosophical debate about whether societal complexity is reliant on moral complexity. Edwards (1975) suggests a relativistic approach, whereby different Kohlbergian moral stages are suitable for face-to-face communities, compared to nation states. The oft-used contrast in academic literature between developing and developed societies clearly implies one group is the finished product, whilst the other group is heading towards the same destination but is yet to complete its journey. This assumption may well be problematic. For instance, Edwards' analysis of the historical evidence is notably less absolute, with the emphasis placed on different ways of moral thinking being more or less appropriate for different types of social system. Regardless of which perspective is taken, there still remains the question as to the extent to which there is an identifiable relationship between the complexity of a social system and judgements of morality.

This issue is also relevant to how people conceptualise challenges that face societies. Narvaez (2010) outlined both the massive scale and complexity of the challenges that face

humanity today. Whilst history can offer some examples of how collective action and public policy have been utilised effectively to overcome relatively complex issues, such as infectious diseases and sanitation infrastructure in Victorian Britain (Gill, 2000), the need for international cooperation on contemporary issues such as climate change, financial regulation and extreme poverty appears to require an unprecedented scale of coordination. The sheer temporal and psychological distance between cause and effect may well hinder individual and collective action on such issues, driven alongside the lack of urgent moral intuition that issues such as climate change appear to generate (Markowitz & Shariff, 2012). However, an even bigger factor that may make such problems appear difficult to solve, is the high level of perceived complexity that accompanies them.

This complexity is important because it has been argued collective issues can be addressed only when people recognise their part in how the problems arise. Ostrom (2014) suggested that shared resource dilemmas can often be solved by giving control to the users of the resource, rather than allowing them to be simply managed by national government agencies or private companies. Furthermore, she suggested a similar approach could work for large-scale issues such as climate change, with responsibility being spread across local, regional and national levels, though she recognised the greater difficulty such an approach has at a truly global level (Ostrom, 2009). A core part of her approach, however, requires that participants recognise that they are part of the complex resource system, making it vital to understand further how complexity affects our moral judgement processes.

To tackle this question about complexity and moral judgement, this chapter will summarise research concerning moral judgement and causation, as well as considering the specific domain of blame. It will also address the relevant dispositional construct of attributional complexity (Fletcher, Danilovics, Fernandez, Peterson & Reeder, 1986). The focus will reside at a broader level of analysis compared to the majority of theoretical

approaches in this domain. This will allow me to outline how a greater understanding of perceptions of complexity might help contribute to explanations concerning many of the more specific findings relating to moral decision-making. The principal hypothesis is that the more a process is perceived as complex, the more lenient people will be in their moral judgements of that process.

The literatures on causality and cognition, attribution of responsibility, intentionality, moral judgement and blame are all hence relevant. However, their theoretical perspectives often have different foci and are thus not easily integrated. Fortunately, my aim is simply to outline how a broader understanding of the relationship between complexity and morality can inform each of these literatures. Cushman (2008) noted how he used “moral judgement” as an umbrella term to capture evaluations that refer to each of the concepts described above, whilst also acknowledging how such concepts notably differ. I use a similar approach to consider moral judgement in the present research.

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### **Moral Judgement and Causation**

Humans naturally construct directional relationships from cause to effect in order to understand real-world processes (Sloman & Lagnado, 2015). The central aspect of the research described in this chapter is to consider whether causal chains that are perceived as more complex lead to changes in moral judgements, which in turn produce differences in willingness to act.

Haidt’s (2001) seminal research initially challenged the traditionally rationalist approaches to moral judgement by highlighting the role of intuition and social influence, while acknowledging the role of reasoning processes (Greene & Haidt, 2002). The importance of both intuition and reasoning was later reflected in Greene’s (2007) dual-process theory of moral judgement, which portrays a representation of moral decision-making

that has been prominent in recent research. This theory suggests that moral judgements can be made via deliberative cognitive appraisals or via more intuitive gut instincts. The extent to which the dual processes concerned are in conflict or may coexist continues to be debated today (Cushman, 2013). However, there does appear to be a relationship between both processes and utilitarian vs. deontological decision making. Utilitarian decision-making tends to focus on the outcome of the act, whereas deontological decision-making tends to focus on the moral facets of the act itself. There is evidence that deliberative thinking facilitates utilitarian responding, whilst deontological responses are more likely following the activation of intuitive and automatic processes (Greene, Morelli, Lowenberg, Nystrom & Cohen, 2008). Importantly, recent evidence suggests deontological and utilitarian judgements are not in opposition, as many experimental studies necessarily placed them, and are instead independent from one another (Conway & Gawronski, 2013).

This independence is a factor in the present research. Whereas most of the scenarios created in moral psychology utilise the distinction between utilitarian and deontological judgements, the present research was aimed at utilising a judgement scenario wherein both deontological and utilitarian judgements could support either position in the scenario. This is also useful, given the tendency for much psychological research to conflate optimal moral behaviour and utilitarianism (Bartels & Pizarro, 2011). As shown below, I focused on a non-hypothetical context (investment banking) wherein utilitarian and deontological perspectives could argue for the same decisions. The key issue in these scenarios was the perceived complexity of the connections between actions and consequences.

If increasing complexity does discourage deliberation, then increased cognitive load should decrease utilitarian responding (Greene et al., 2008). However, there are current disagreements as to whether cognitive load also affects deontological judgements (Conway & Gawronski, 2013). Related to this, indirect and direct relationships between cause and effect

are likely to be judged differently, in part because indirect situations often also require more cognitive elaboration. For instance, installing deviance in the causal chain of hypothetical immoral actions has been shown to reduce assigned moral responsibility to the individual agent (Pizarro, Uhlmann & Bloom, 2003). Similar effects of directness on agency can be found when participants evaluate situations involving harmful actions at a group level. Participants assigned less responsibility to an organisation that caused a rise in drug prices by selling them to another company, than one that imposed the price rises directly themselves (Paharia, Kassam, Greene & Bazerman, 2009). Additionally, coherence between the agent and the action, such as heroes committing positive acts and villains committing negative acts, encourages greater attribution of intention (Hughes & Trafimow, 2014). Again, such coherence is likely to be correlated with less elaboration and cognitive load.

An important limitation of the past research is that it does not address the concern that direct and coherent scenarios were simpler to digest than the indirect and incoherent scenarios. Hence any finding of reduced perceptions in moral responsibility may actually be due in part to the perceived complexity of the process involved, rather than actual differences in moral judgement. The indirect causal paths that attracted lower ratings of agency and moral responsibility described above might thus have done so because of the increased complexity of the situations involved. For example, a scenario that involves a second intermediary pharmaceutical company in the raising of a drug price is more complicated than one that involves just one company raising the price (Paharia et al., 2009). Similarly, a deliberate act of stabbing someone with a knife is much simpler to process than one in which the murderer is knocked by an on-coming jogger and yet still ends up stabbing his enemy (Pizarro et al., 2003). An interesting issue is therefore whether these effects could be explained, at least in part, via perceived complexity *per se*. Are people more willing to assign moral responsibility when the scenarios are seen as less complex?

In order for responsibility for an outcome to be assigned, people need to perceive some element of causation between the agent or cause and the consequence. People will make assessments of probabilities of each part of a causal chain, which then result in an overall calculation of responsibility (Spellman, 1997). Manipulations that affect the causal chain will thus change attributions of responsibility. For example, perceptions of moral responsibility can be attenuated for an agent who commits immoral acts under situational constraints brought about by a third party (Phillips & Shaw, 2014). As with the previous research concerning directness however, the issue of complexity is again raised. The inclusion of a third party introduces a higher degree of complexity which could explain some of the reduction in attributed responsibility.

A final relevant area of research examines the side effects of actions. In an influential study, Knobe (2003) found that participants were willing to assign greater intentionality to a chief executive who implemented a new program that had the inadvertent side-effect of causing harm to the environment than when it inadvertently helped the environment. This finding suggested the valence of the side effect could alter the initial intentionality judgement, even when the statement of intention was identical. Recent research suggests the effect is actually generated because the idiosyncratic nature of the scenarios effectively shifts the focus of the participants between the initial action and the side effect (Laurent, Clark & Schweitzer, 2015). Laurent and colleagues (2015) point out how some scenarios are inherently more intuitive than others and such differences can confound explanations of altered intentionality judgements. This argument fits with the hypothesis that perceived complexity of a process can impact upon several different components that contribute to a moral judgement. In real-world situations, unintended and often unforeseen side effects nearly always accompany everyday decision-making. Indeed it is difficult to think of a realistic moral scenario where such effects do not arise. Accordingly, the present research

probed whether moral judgements of agents causing side effects could be influenced via perceived complexity, regardless of the valence of the side effect, which was held consistent across conditions.

## **Blame**

Since Heider's (1958) initial work outlined several factors relevant to attribution of responsibility, a number of models of blame have been suggested (e.g. Alicke, 2000; Cushman, 2008; Malle, Guglielmo, & Monroe, 2014; Mikula, 2003; Shaver, 1985). According to Malle et al. (2014) blame is a concept that carries both a social element of expression, as well as a cognitive element of judgement, and it is distinguishable from the broader notion of moral judgement. For instance, Malle and colleagues' (2014) recent theory of blame explicitly outlined the need to consider blame as a construct separable from anger, judgements of wrongness and attributions of responsibility.

Each of the models noted above present evidence describing conditions that are necessary for blame to occur, relating to aspects such as intentionality, causality, foreseeability, obligation, character, outcome and norms (for a review, see Malle et al., 2014). The differences are not relevant here, but there are some elements of the models that are pertinent to the core hypothesis tested in this chapter. For example, Cushman (2008) suggests wrongness judgements arise via an assessment of intentions, whereas judgements of blame require both intention and causality to be considered present. He also delineated between belief and desire in intentionality. He suggested that belief an outcome may occur is more important than the desire that it does, when it comes to assigning blameworthiness. Additionally, he provided evidence to show that people were judged more leniently when they tried, but failed, to cause harm, if the victim happened to suffer from an independent source (compared to if they simply tried and failed). He suggested this showed evidence of



“blame blocking”, whereby individuals look for alternative causes of the harmful outcome and thus reduce attributions relating to the agent’s intentions. However, similar to the research regarding moral judgement, these scenarios of blameworthiness differ in complexity. The situation where a perpetrator intends to cause harm directly, but fails, is simpler to understand than a situation where the perpetrator intends to cause harm, fails, but the victim then hurts themselves by some alternative means. Again, this shows the need to consider the complexity of the scenarios being presented to participants as a potential factor of importance.

Additionally, none of the prior research has manipulated perceived complexity by altering causal chains without changing the information presented. Perhaps the closest methodological match is research that found participants assigned greater blame to actions that occurred later in a causal chain than earlier, by simply switching the location of events in the chain (Lagnado & Channon, 2008), again keeping the actual information presented consistent. However, it is also feasible to keep the information and order consistent, which I aimed to do in this series of studies.

### **Attributional Complexity**

Given my interest in manipulating the perceived complexity of a causal chain, I wanted to check whether any effects would be moderated by individual differences relating to attributional preferences. The Attributional Complexity (AC) scale (Fletcher et al., 1986) measures the extent to which people report a preference for simple or complex explanations for human behaviour. Related studies have found that AC is somewhat lower as people age, but higher among people who are higher in trait openness (Hess, Osowski & Leclerc, 2005). Young adolescents who scored highly on the scale have demonstrated greater social competence (Sultan & Hagger, 2014) and students with higher scores also scored more highly

on components of emotional intelligence (Fitness & Curtis, 2005), showed greater positive social skills (Fast, Reimer & Funder, 2008) and used a more postconventional style of moral judgement (Derryberry, Wilson, Snyder, Norman & Barger 2005). Professionals with higher levels of AC also demonstrated greater transformational leadership skills (Sun & Anderson, 2012). AC is therefore associated with a diverse range of factors relevant to morality and decision making.

Another individual differences measure relevant to AC is Need for Cognition (NFC; Cacioppo & Petty, 1982). This construct reflects the tendency to seek out and enjoy effortful cognitive tasks. AC and NFC are moderately positively correlated (Fletcher et al., 1986). Accordingly, NFC was also included in the first study, in case it offered greater explanatory power.

### **Present Research**

Models of blame and evidence regarding moral judgement and causation have thus advanced our knowledge greatly in terms of why people are motivated to attribute responsibility for actions. However, the question of how perceived complexity plays a role in these findings remains unanswered. People have a general preference for logical, coherent and intuitive explanations (Hughes & Traifmow, 2014), which could arguably be represented in part by greater simplicity. The previous sections have explicated how different models suggest a range of processes as potentially responsible for moral decision making, and how complexity might add to the explanatory power of many of these theoretical positions. Methodologically I also sought to use the novel approach of keeping the information and order of the cause-effect chain consistent in my manipulation and I wanted to offer a more ecologically valid context within which to embed the research.

Much of the research cited above follows a common methodology of presenting hypothetical moral scenarios that manipulate factors such as coherence, utilitarian or deontological framing and agent status (e.g. Amit & Greene, 2012; Conway & Gawronski, 2013; Greene et al., 2008). The most well-known example of these is the trolley dilemma. In this scenario, participants must choose between doing nothing and thus allowing a trolley to continue its path to kill multiple people, or intervening in one of various ways to save the group, but sacrificing an innocent victim as a result. These scenarios are useful in the experimental control they offer. For example, they have helped to isolate the role of embodied cognition in moral judgement by showing the specific impermissibility of intervening with personal force (Greene et al., 2009). Similarly, such dilemmas have shown the comparative acceptability of intervening at the point of the agent (trolley), but not at the patient (innocent victim) (Waldmann & Dieterich, 2007). However, the price of this control is ecological validity. Researchers within the field now call for researchers to consider methods that do not rely on simple written scenarios but rather address more realistic situations that people might face (Hughes & Trafimow, 2014). Furthermore, the wording of scenarios is crucial and contrasts that initially appear academically well-defined may actually represent radically different interpretations by participants (Laurent et al., 2015). Thus for several reasons, the present research aimed to use a video presentation of a real-world issue to test broad moral judgements, keeping the relevant causal chain of information consistent across conditions. Using a video, rather than text, to convey the manipulation also helped to reflect the likely consumption of such information in the real world and enhance participant interest.

Accordingly I chose the topic of financial speculation in food markets (for an overview of the issue see Wahl, 2009). Ethical finances are an area of ethical consumerism that is vastly understudied at present (Lotz & Fix, 2014). Financial speculation in the food markets is morally debatable because it causes volatility in food prices, which can then

increase starvation in poorer countries (Spratt, 2013). Moreover, financial speculation is a context that is useful in a number of ways. Firstly, financial speculation in food markets is a contemporary real world issue that carries enough controversy to be morally stimulating. Secondly, it has ambiguous intentional elements throughout the causal chain, which are more realistic than standard scenario-based studies (e.g., trolley paradigm). Thirdly, financial speculation in food markets was likely to be a novel topic to most participants, thereby helping to avoid effects of knowledge and identity (Kahan, 2015). Fourthly, the topic made it possible to explain simple and complex alternatives within a short manipulation.

The principal hypothesis of this research was that increased perceptions of complexity would lead to greater lenience in moral judgements. Of secondary interest, was whether any such shifts in moral judgement would then impact on a willingness to act. As with my conceptualisation of moral judgement, the exploratory nature of this research necessarily placed my interest in people's intentions at a broad level. Alongside the measures of moral judgement and responsibility, I thus also took measures relating to self-efficacy (Bandura, 1977), collective efficacy (Bandura, 2000), personal action and collective action tendencies (van Zomeren, Spears, Fischer & Leach, 2004).

### **Study 1**

To explore the ideas outlined above, the first hypothesis to test was whether increased perceptions of complexity would lead to greater ratings of the acceptability of food speculation. Secondly, I wanted to test whether any such increases in complexity would directly or indirectly (via moral judgement) lower participants' willingness to take relevant personal action. Additionally, I wanted to test the role of AC (Fletcher et al., 1986) and NFC (Cacioppo & Petty, 1982) as potentially influential dispositional measures. I did not have a specific hypothesis in terms of how the individual differences measures might interact with

the relationship between perceived complexity and moral judgement, but I wanted to capture them as part of this initial exploratory analysis.

## Method

### Participants

Participants were 40 individuals (31 women, 9 men) known to the researcher who took part for entry into a prize draw. They were between 18 and 55 years of age ( $M = 24$ ). Participants completed the study on a laptop computer in a location that was convenient for them. The data were collected by a research assistant.

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### Excluded Participants

Two participants were excluded for reporting high levels of previous knowledge about food speculation. I set the cut-off point as 9 or higher on the 1-11 scale described in the procedure section. One participant was excluded for being a notable outlier on the two manipulation check measures<sup>10</sup>.

### Design

A 2-level between-participants design was used. Participants were randomly allocated to either the simple or complex condition and then completed the dependent measures.

### Procedure

Following an instructions page, participants saw either the simple or complex version of the video. They were then asked to confirm they were able to see and hear the video. The

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<sup>10</sup> A linear regression assessing perceived model complexity and understanding of the video identified this individual case as an outlier with a Cook's distance of greater than 1 (see Field, 2013).

manipulation check items and dependent variables were then presented. Next, participants were given the knowledge check and they then completed the AC and NFC scales. Participants then completed an item asking them how much they knew about food speculation prior to the study and demographic items assessing their age and gender. Having completed the study, participants were probed for suspicion, debriefed and thanked for their time.

### **Manipulation Checks**

Two manipulation checks were used. The primary check asked participants to rate the complexity of the model they saw; answers were provided on a scale from 1 (*very simple*) through 6 (*neutral*) to 11 (*very complex*). The secondary check asked them to rate how easy it was to understand the video in general; answers were provided on a scale from 1 (*very difficult*) through 6 (*neutral*) to 11 (*very easy*).

### **Experimental Manipulation**

Participants saw a two-minute presentation of text and images specifically prepared for these studies. The first half of the video provided a brief summary of the process of food speculation, mentioning the positive economic effects and potential ethical issues involved. The second half of the video presented a flowchart style model of the process (see Appendix J). The model contained the following six pieces of information in sequential order: “Person A works for an investment bank; their job is to guess whether the price of a foodstuff (e.g. wheat) will go up or down; this speculation makes the price of the foodstuff more volatile; i.e. it goes up and down more than it would without this action; more volatile prices make food unaffordable for millions of people; this leads to increased hunger for millions of people in the developing world”.

In the simple condition (Foad, 2013g), participants were told the model was “quite simple” and the presented model included three steps. In the complex condition (Foad, 2013h) participants were told the model was “quite complicated” and the presented model included six steps. Importantly, the information in the causal chain of the two models was always identical, because the six steps (complex model) simply disaggregated information presented in the three steps (simple model). To be precise, the simple model added the first and second, third and fourth, and fifth and sixth pieces of information outlined above, into individual steps. Additional boxes in the complex model (represented by dashed lines in Appendix J) were added in the last few seconds of the video. These boxes were introduced as being other factors that are relevant to the model, however, they were not described further and the video did not encourage attention to be paid to their content. Their role was thus simply to increase the perception of complexity of the model. Both models were on screen for the same amount of time and used exactly the same voiceover.

### **Dependent Measures**

Moral judgement of food speculation was assessed with two items. The first asked participants to rate the action of speculating on food markets and the second asked them to rate the morality of “Person A” from the video they had seen. Answers were provided on a scale from 1 (*morally wrong*) through 6 (*morally neutral*) to 11 (*morally right*). Two further items tested how acceptable participants thought it was for financial institutions to influence the price of food and to make money from speculating on food markets. These items were designed to assess how participants perceived the role of the organisation in such processes. Answers were again provided on a scale from 1 (*completely unacceptable*) through 6 (*neutral*) to 11 (*completely acceptable*). A final item asked participants the extent to which they would be interested in moving their bank account to a financial institution that chooses

not to make money from food speculation. Answers were provided on a scale from 1 (*not at all interested*) through 6 (*somewhat interested*) to 11 (*definitely interested*).

### **Knowledge Check**

Participants were given a multiple choice question regarding an amount of money mentioned in the video. Participants were asked “How many pounds did the video suggest Barclays made on average per year from speculating on food markets?”. They were asked to select from eight options ranging from £1 million to £423 million. The correct answer was £340 million.

### **Individual Differences**

Two individual differences measures were used to assess participants’ Attributional Complexity (AC; see Appendix K), using the 28-item scale (Fletcher et al., 1986), and Need for Cognition (NFC; see Appendix L), using the 45 item scale (Cacioppo & Petty, 1982). The AC scale includes items such as “I think a lot about the influence that society has on my behaviour and personality” and “I really enjoy analysing the reasons or causes for people’s behaviour”. There are 14 reverse-coded items. The scale forms a single factor and displayed good reliability ( $\alpha = .91$ ). Answers were provided on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The NFC scale includes item such as “I really enjoy a task that involves coming up with new solutions to problems” and “I believe that if I think hard enough, I will be able to achieve my goals in life”. There are 23 reverse-coded items. The scale forms a single factor and displayed good reliability ( $\alpha = .91$ ).

### **Knowledge about Food Speculation**

Participants rated their knowledge about food speculation prior to the study, using a scale from 1 (*none*) through 6 (*a little*) to 11 (*a lot*).



## Results and Discussion

Only 23 of the 37 participants passed (62%) passed the knowledge check question. This suggests the item difficulty was too high to use as a basic check and instead represents an indicator of level of attention and involvement with regards to the manipulation. The success rates were similar in future studies and the two groups show some interesting discrepancies. Accordingly, for consistency of presentation, I present results both for the whole sample and for the subset who passed the knowledge check in each study. The differing performance in relation to the knowledge check will be revisited in the general discussion.

A series of preliminary regression analyses showed neither of the individual difference measures (AC and NFC) interacted with the manipulation for either the manipulation checks or the moral judgement items, with the exception of one interaction with attributional complexity in Study 2. For this reason and for the sake of brevity, these individual differences are not included in the analyses described below.

### Manipulation Checks

As expected, the two manipulation check items were negatively correlated ( $r = -.61$ , 95% BCa CI  $[-.79, -.38]$ ,  $p < .001$ ). This shows a strong relationship between the perceived complexity of the model presented and a broader measure capturing how well participants felt they understood the whole video. Despite the strong correlation, I analysed the impact of the manipulation on each item separately to provide the most thorough test of the effectiveness of the manipulation.

For the whole sample, the model in the complex video was seen as significantly more complex ( $M = 5.74$ ,  $SE = 0.63$ ) than the simple model ( $M = 2.28$ ,  $SE = 0.39$ ), mean difference

= 3.46, BCa 95% CI [1.93, 4.99],  $t(35) = 4.60$ ,  $p < .001$ ,  $d = 1.55$ . Similarly, for participants who passed the knowledge check, the complex video was seen as significantly more complex ( $M = 4.82$ ,  $SE = 0.84$ ) than the simple model ( $M = 1.75$ ,  $SE = 0.35$ ), mean difference = 3.07, [1.23, 4.90],  $t(21) = 3.48$ ,  $p < .01$ ,  $d = 1.52$ . In both samples, the means in each condition were below the mid-point of the scale, so neither the complex nor the simple models were rated as particularly complex.

For the whole sample, the complex video was seen as significantly less easy to understand ( $M = 7.42$ ,  $SE = 0.49$ ) than the simple model ( $M = 9.17$ ,  $SE = 0.36$ ), mean difference = -1.75, [-2.99, -0.50],  $t(35) = -2.85$ ,  $p = .01$ ,  $d = -0.96$ . Similarly, for participants who passed the knowledge check, the complex video was seen as marginally significantly less easy to understand ( $M = 7.64$ ,  $SE = 0.68$ ) than the simple model ( $M = 9.33$ ,  $SE = 0.50$ ), mean difference = -1.70, [-3.43, 0.03],  $t(35) = -2.04$ ,  $p = .05$ ,  $d = -0.89$ . In both samples, the means in each condition were above the mid-point of the scale. This suggests the video was relatively easy to understand in general and that the manipulation simply attenuated the strength of understanding in the complex condition.

Together, these results confirm the effectiveness of the manipulation. The effect sizes all appear large and thus suggest a substantial impact of the manipulation.

### **Moral Judgement**

For the whole sample, participants in the complex condition tended to rate speculation on food markets as more morally right ( $M = 4.95$ ,  $SE = 0.35$ ) than participants in the simple condition ( $M = 4.17$ ,  $SE = 0.38$ ), but this difference was not statistically significant, mean difference = 0.78, [-0.28, 1.84],  $t(35) = 1.50$ ,  $p = .14$ , though the effect was of a medium size,  $d = 0.51$ . Similarly, for those who passed the knowledge check, participants in the complex condition tended to rate speculation on food markets as more morally right ( $M = 4.91$ ,  $SE =$

0.42) than participants in the simple condition ( $M = 4.50, SE = 0.49$ ), but this difference was not statistically significant, mean difference = 0.41, [-0.93, 1.75],  $t(21) = 0.64, p = .53$ , and here the effect was small,  $d = 0.28$ . Each of the means was below the mid-point of the scale, suggesting a general condemnation of the process.

With regard to judgements of the morality of Person A, the whole sample tended to rate the person as more morally right in the complex condition ( $M = 6.11, SE = 0.35$ ) than in the simple condition ( $M = 5.11, SE = 0.40$ ), although this difference did not quite reach the conventional threshold for reliability, mean difference = 0.99, [-0.09, 2.07],  $t(35) = 1.87, p = .07$  and the effect was of a medium size,  $d = 0.63$ . For participants who passed the knowledge check, Person A was seen as more morally right in the complex condition ( $M = 6.36, SE = 0.49$ ) than in the simple condition ( $M = 4.75, SE = 0.48$ ), and this difference was statistically significant, mean difference = 1.61, [0.19, 3.04],  $t(21) = 2.35, p = .03$ ; the effect size was large,  $d = 1.03$ .

Taken together, these results suggest that the manipulation of complexity had some impact on moral judgements, as predicted, although the effects are only significant when the question relates to Person A. It is conceivable that there are potentially different effects of manipulating complexity for the judgement of person and process, a point I revisit in the general discussion.

### **Organisational Acceptability**

For the whole sample, participants in the complex condition tended to think it was more acceptable for financial institutions to influence the price of basic foodstuffs ( $M = 4.21, SE = 0.44$ ), compared to participants in the simple condition ( $M = 3.67, SE = 0.41$ ), but this difference was not statistically significant, mean difference = 0.54, [-0.69, 1.78],  $t(35) = 1.50, p = .38$  and the effect size was small,  $d = 0.30$ . Similarly, for participants who passed the

knowledge check, those in the complex condition tended to think such behaviour was more acceptable ( $M = 4.36$ ,  $SE = 0.45$ ), compared to those in the simple condition ( $M = 3.75$ ,  $SE = 0.62$ ), but again this difference was not statistically significant, mean difference = 0.61, [-1.00, 2.23],  $t(21) = 0.79$ ,  $p = .44$  and the effect size was small,  $d = 0.34$ .

The same pattern of results presented itself for the reported acceptability of financial institutions making money from food speculation. For the whole sample, those in the complex condition tended to think food speculation was more acceptable ( $M = 4.53$ ,  $SE = 0.50$ ), compared to those in the simple condition ( $M = 4.06$ ,  $SE = 0.45$ ), but this difference was not statistically significant, mean difference = 0.47, [-0.90, 1.84],  $t(35) = 0.70$ ,  $p = .49$ ,  $d = 0.24$ . For participants who passed the knowledge check, those in the complex condition tended to think it was more acceptable ( $M = 4.73$ ,  $SE = 0.78$ ), compared to those in the simple condition ( $M = 4.08$ ,  $SE = 0.69$ ), but this difference was also not statistically significant, mean difference = 0.64, [-1.48, 2.23],  $t(21) = 0.63$ ,  $p = .53$ ,  $d = 0.28$ .

Each of these trends are in line with the moral judgement items: participants in the complex condition reported higher levels of organisational acceptability when it comes to food speculation. However, none of the results are statistically significant and cannot thus conclusively support the principal hypothesis.

### **Personal Action**

As with the moral acceptability items, the items tapping interest in taking direct personal action were in the direction expected but are not statistically significant. For the whole sample, participants in the complex condition were somewhat less likely to report interest in taking direct personal action relating to food speculation ( $M = 5.53$ ,  $SE = 0.66$ ) than those in the simple condition ( $M = 5.67$ ,  $SE = 0.59$ ), but the difference was not statistically significant, mean difference = -0.14, [-1.94, 1.66],  $t(35) = -0.16$ ,  $p = .88$  and the

effect size was very small,  $d = -.05$ . Similarly, for participants who passed the knowledge check, those in the complex condition tended to be less interested in taking action ( $M = 4.73$ ,  $SE = 0.80$ ) than those in the simple condition ( $M = 5.92$ ,  $SE = 0.71$ ), but again this difference was not statistically significant, mean difference =  $-1.19$ ,  $[-3.41, 1.03]$ ,  $t(21) = -1.12$ ,  $p = .28$ , though the effect was of a medium size,  $d = -0.49$ .

### **Mediation Analyses**

The evidence above suggested an impact of manipulating complexity on moral judgements of Person A, but no direct effect on interest in taking personal action. Ordinarily, it is preferable to use existing theory to guide the selection of a mediating variable. However, given the novel nature of the independent and dependent variables, as well as the exploratory nature of the research and the fact that both the indirect and direct pathways reported are theoretically relevant to the construct being tested, it was considered important to conduct the mediation analyses in this and the following studies. To test for potential indirect effects, I hence ran analyses to test whether moral judgements of Person A might mediate the relationship between condition and personal action.

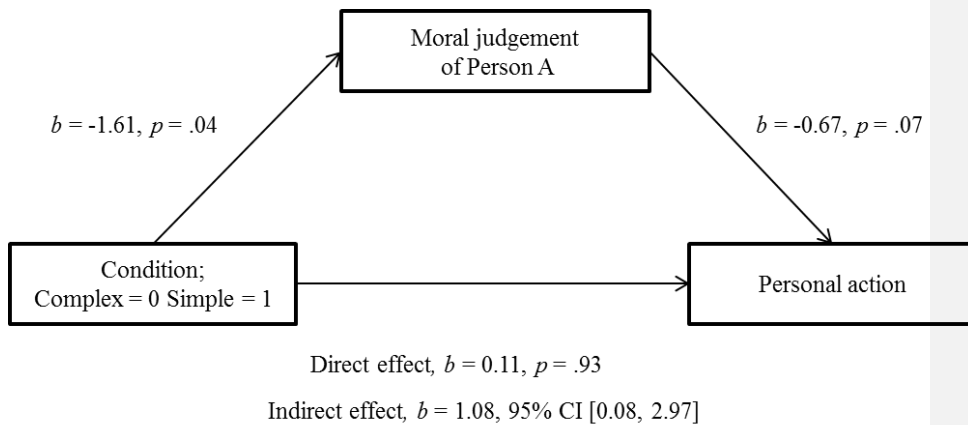


Figure 4.2: Mediation model (Study 1) of complexity as a predictor of personal action, mediated by moral judgement of Person A. Bootstrapped CIs based on 1000 samples.

The indirect effect was not significant for the whole sample. However, for participants who passed the knowledge check, there was a significant indirect effect of the manipulation on interest in taking action through moral judgement of Person A, as shown in Figure 4.2. This result indicates the potential for moral judgement to act as a mediator between perceived complexity and an individual's interest in taking action in that context. That is, participants who saw the more complex version of the video were less likely to judge Person A harshly, which in turn marginally lowered their willingness to take action in relation to food speculation.

## Attributional Complexity and Need for Cognition

Table 4.1

*Correlations between Attributional Complexity, Need for Cognition and dependent variables*

	Whole sample ( <i>N</i> = 37)		Knowledge check pass ( <i>n</i> = 23)	
	Attributional Complexity	Need for Cognition	Attributional Complexity	Need for Cognition
Model complexity	.37* [.08, .61]	.32† [.02, .58]	.21 [-.16, .52]	.25 [-.18, .60]
Video understanding	-.28† [-.59, .08]	-.18 [-.52, .23]	-.18 [-.54, .23]	-.12 [-.59, .34]
Food speculation judgement	-.26 [-.53, .05]	-.26 [-.54, .05]	-.53** [-.74, -.29]	-.28 [-.62, .15]
Person A judgement	-.31† [-.53, -.07]	-.26 [-.55, .04]	-.43* [-.68, -.14]	-.13 [-.54, .30]
Influencing price acceptable	-.22 [-.49, .05]	-.30† [-.55, -.01]	-.30 [-.63, .03]	-.21 [-.59, .23]
Making money acceptable	-.31† [-.61, .01]	-.12 [-.52, .22]	-.42* [-.42, -.03]	-.11 [-.62, .43]
Personal action	.26 [-.05, .56]	.08 [-.28, .45]	.20 [-.21, .59]	.05 [-.43, .53]

Note: † $p < .10$ ; \* $p < .05$ , \*\* $p < .01$ . BCa bootstrap 95% CIs reported in brackets.

Although Attributional Complexity (AC; Fletcher et al., 1986) and Need for Cognition (NFC; Cacioppo & Petty, 1982) did not moderate the effects of the manipulation, it was important to explore their potential direct relations with moral judgements. Similar to Fletcher and colleagues' initial work (1986), my analysis showed that the two scales correlated to a moderate extent,  $r = .37$ , [.01, .66],  $p = .02$ . Participants higher in AC were more likely to judge the issue of food speculation more harshly. However, as Table 4.1 shows, only AC showed significant relationships with the manipulation checks and dependent variables. Accordingly, NFC was not used in future studies.

## **Study 2**

Study 1 provided some interesting first insights into how complexity might impact upon moral judgement and how this in turn could also affect interest in taking action relating to food speculation. Study 2 further probed these effects by including four amendments to the previous design. Firstly, the sample size in Study 1 was quite small, particularly once the knowledge check had been taken into account, so I aimed for a larger sample. Secondly, given their relevance to processes of attribution, the study included some additional measures relating to individual and organisational responsibility, as well as individual and collective efficacy and collective action, all in the context of financial ethics. Thirdly, I wanted to simplify the manipulation to see if a more subtle difference could still have an impact. Finally, for pragmatic reasons, the voiceover to the video was changed, as the researcher for Study 2 was to be the same person who had provided the voiceover for Study 1.

The principal hypothesis for this research is that increased perceptions of complexity will lead to greater moral leniency. Accordingly, I predicted that the complex model, compared to the simple model, would lead to less harsh moral judgements of food speculation and a reduced willingness to take action. In line with this hypothesis, I also expected the complex model to lead to an increase in agreement with additional dependent variables regarding responsibility, self-efficacy, collective efficacy and collective action.

## **Method**

### **Participants**

Participants were 71 undergraduate students at Cardiff University (68 women, 3 men) who took part for course credit. They were between 18 and 21 years of age ( $M = 19$ ). Participants completed the study in individual sessions in the laboratory.



### **Excluded Participants**

One participant was excluded for routinely selecting the same score on the dependent variables. No other participants required exclusion.

### **Design**

As with Study 1, a between-participants design was used. Participants were randomly allocated to either the simple or complex condition and then proceeded to the dependent measures.

### **Procedure**

The procedure was essentially identical to Study 1, with the only amendments being the extra dependent variables outlined below and the removal of the Need for Cognition scale. Having completed the study, participants were probed for suspicion, debriefed and thanked for their time.

### **Experimental Manipulation**

There were two differences from the manipulations used in Study 1. A female voiceover was used for both videos, as the male from Study 1 was collecting the data for this study. More importantly, the simple condition remained as in Study 1, but the complex condition was made simpler by removing the extra boxes that did not relate to the causal chain (i.e., the dashed lines in Appendix J).

### **Dependent Measures**

The same items from Study 1 were used as manipulation checks and as measures for moral judgement, organisational acceptability and personal action. In addition to the previous dependent variables, I included two measures of responsibility as well as measures of self-

efficacy, collective efficacy and collective action. Answers to these new items were all given on a scale from 1 (*strongly disagree*) through 4 (*neither agree nor disagree*) to 7 (*strongly agree*). The responsibility items asked participants to rate the extent to which they thought financial institutions should be socially responsible and not simply use the law as a guide to judge what is acceptable, and the extent to which they thought people should be responsible for the actions of the financial institutions they use. The self-efficacy item asked participants to rate the extent to which they thought their own actions could contribute to encouraging moral standards (negative or positive) in financial institutions. The collective efficacy item asked participants to rate the extent to which they thought people could work together to hold financial institutions to account when it came to controversial business practices. The collective action item asked participants to rate the extent to which they would be interested in signing an existing customer charter that insists on strict ethical standards for every financial institution.

### **Knowledge Check**

Participants were given the same multiple choice question regarding an amount of money mentioned in the video, as described in Study 1.

### **Individual Differences**

The Attributional Complexity Scale (AC; Fletcher et al., 1986) was administered as before and again showed good reliability ( $\alpha = .91$ ).

### **Knowledge about Food Speculation**

Participants again rated their knowledge about food speculation prior to the study, using the same scale as described in Study 1.

## Results and Discussion

Similar to Study 1, only 42 of the 70 participants (60%) passed the knowledge check question. As before, the results are presented for both the whole sample and the subset that passed the knowledge check.

### Manipulation Checks

For the whole sample, the model in the complex video was seen as significantly more complex ( $M = 4.43$ ,  $SE = 0.36$ ) than the simple model ( $M = 3.37$ ,  $SE = 0.36$ ), mean difference = 1.06, [0.04, 2.08],  $t(68) = 2.07$ ,  $p = .04$ ,  $d = 0.50$ . For participants who passed the knowledge check, the complex video tended to be seen as more complex ( $M = 4.20$ ,  $SE = 0.43$ ) than the simple model ( $M = 3.32$ ,  $SE = 0.39$ ), but here the difference was not significant, mean difference = 0.88, [-0.31, 2.08],  $t(40) = 1.49$ ,  $p = .14$ ,  $d = 0.47$ . The subtler manipulation (compared to Study 1) thus appears to have had an effect on the whole sample, but this effect was no longer significant when I analysed the subset that passed the knowledge check. As with Study 1, all the means are below the midpoint of the scale, suggesting that both models were seen as relatively simple.

For the whole sample, the complex video was seen as somewhat less easy to understand ( $M = 7.77$ ,  $SE = 0.28$ ) than the simple model ( $M = 8.49$ ,  $SE = 0.39$ ), but this difference was not statistically significant, mean difference = -0.71, [-1.70, 0.27],  $t(68) = -1.45$ ,  $p = .15$ ,  $d = -0.35$ . Similarly, for participants who passed the knowledge check, the complex video was seen as less easy to understand ( $M = 8.00$ ,  $SE = 0.30$ ) than the simple model ( $M = 8.18$ ,  $SE = 0.50$ ), but not significantly so, mean difference = -0.18, [-1.40, 1.03],  $t(40) = -0.30$ ,  $p = .76$ ,  $d = -0.10$ . Again, the means were above the mid-point of the scale, suggesting that the video was not difficult to understand in either condition.

These results provide mixed support for the effectiveness of the manipulation. The more subtle complex model does appear to have been rated as more complex, although this effect was not significant for participants who passed the knowledge check. The effects of the manipulation on understanding of the video from Study 1 trend in the same direction here, but were not significant. It appears that the more subtle manipulation could be close to the boundary of what is required to produce significant differences in perceived complexity.

### **Moral Judgement**

For the whole sample, those in the complex condition rated speculation on food markets as somewhat more morally right ( $M = 4.80$ ,  $SE = 0.24$ ) than those in the simple condition ( $M = 4.57$ ,  $SE = 0.26$ ) but this difference was not statistically significant, mean difference = 0.23, [-0.49, 0.95],  $t(68) = 0.63$ ,  $p = .53$ ,  $d = 0.15$ . Similarly, for participants who passed the knowledge check, those in the complex condition rated speculation on food markets as somewhat more morally right ( $M = 5.10$ ,  $SE = 0.35$ ) than those in the simple condition ( $M = 4.50$ ,  $SE = 0.36$ ). However, this difference was also not statistically significant, mean difference = 0.60, [-0.44, 1.64],  $t(40) = 1.16$ ,  $p = .25$ ,  $d = 0.37$ . As with Study 1, each of the means were below the mid-point of the scale, suggesting general condemnation of the process.

In terms of judging the morality of Person A, the whole sample rated them as somewhat more morally right in the complex condition ( $M = 5.37$ ,  $SE = 0.28$ ) than those in the simple condition ( $M = 5.31$ ,  $SE = 0.31$ ), but this difference was not significant, mean difference = 0.06, [-0.80, 0.92],  $t(68) = 0.13$ ,  $p = .90$ ,  $d = 0.03$ . For participants who passed the knowledge check, Person A was seen as more morally right in the complex condition ( $M = 6.15$ ,  $SE = 0.35$ ) than those in the simple condition ( $M = 5.05$ ,  $SE = 0.38$ ). This difference

was statistically significant, mean difference = 1.11, [0.06, 2.15],  $t(40) = 2.14$ ,  $p = .04$ , and the effect was of a medium size,  $d = 0.68$ .

The comparatively weaker manipulation of complexity used in this study revealed the same trends as in the prior study. However, as with Study 1, the only significant effect occurred for the judgement of Person A, rather than with the judgement of the process of food speculation. The mean differences on this item vary notably between the whole sample and participants who passed the knowledge check, indicating a possible interaction between the manipulation and the level of information processing by the participants.

### **Organisational Acceptability**

For the whole sample, participants in the complex condition thought it was significantly more acceptable for financial institutions to influence the price of basic foodstuffs ( $M = 4.66$ ,  $SE = 0.33$ ), than did participants in the simple condition ( $M = 3.54$ ,  $SE = 0.32$ ), mean difference = 1.11, [0.18, 2.05],  $t(68) = 2.38$ ,  $p = .02$ ,  $d = 0.58$ . Similarly, for participants who passed the knowledge check, those in the complex condition thought this behaviour was significantly more acceptable ( $M = 5.30$ ,  $SE = 0.48$ ), compared to those in the simple condition ( $M = 3.64$ ,  $SE = 0.43$ ), mean difference = 1.66, [0.33, 2.99],  $t(40) = 2.53$ ,  $p = .02$ ,  $d = 0.80$ .

For the whole sample, those in the complex condition thought it was somewhat more acceptable for financial institutions to make money from food speculation ( $M = 4.46$ ,  $SE = 0.37$ ), compared to those in the simple condition ( $M = 4.14$ ,  $SE = 0.41$ ), but this difference was not significant, mean difference = 0.31, [-0.80, 1.43],  $t(68) = 0.56$ ,  $p = .58$ ,  $d = 0.14$ . Similarly, for participants who passed the knowledge check, those in the complex condition thought this behaviour was somewhat more acceptable ( $M = 5.20$ ,  $SE = 0.50$ ), compared to

those in the simple condition ( $M = 4.27$ ,  $SE = 0.53$ ), but again this difference was not significant, mean difference = 0.93, [-0.61, 2.47],  $t(40) = 1.22$ ,  $p = .23$ ,  $d = 0.38$ .

Both of these trends are in line with the moral judgement items: participants in the complex condition reported higher levels of organisational acceptability when it comes to food speculation. Furthermore, the effects of the manipulation are significant with regards to the acceptability of influencing prices.

### **Personal Action**

For the whole sample, those in the complex condition were somewhat less likely to report interest in taking direct personal action relating to food speculation ( $M = 5.40$ ,  $SE = 0.30$ ), compared to those in the simple condition ( $M = 5.60$ ,  $SE = 0.38$ ), but this difference was not statistically significant, mean difference = -0.20, [-1.20, 0.80],  $t(68) = -0.40$ ,  $p = .69$ ,  $d = -.10$ . Similarly, for participants who passed the knowledge check, those in the complex condition were somewhat less interested in taking action ( $M = 4.85$ ,  $SE = 0.45$ ), compared to those in the simple condition ( $M = 5.73$ ,  $SE = 0.54$ ), but again, this difference was not statistically significant, mean difference = -0.88, [-2.29, 0.54],  $t(40) = -1.26$ ,  $p = .22$ ,  $d = -0.40$ .

## Secondary Dependent Variables

Table 4.2

*Means for secondary dependent variables (Study 2)*

	Whole sample ( $N = 70$ )				Knowledge check pass ( $n = 42$ )			
	Complex		Simple		Complex		Simple	
	$M (SE)$	$M (SE)$	$t$	$d$	$M (SE)$	$M (SE)$	$t$	$d$
Institution responsible	5.60(0.15)	5.57(0.13)	0.14	0.03	5.55(0.22)	5.50(0.20)	0.17	0.05
People responsible	4.11(0.26)	4.40(0.26)	-0.78	-0.19	4.00(0.34)	4.23(0.32)	-0.49	-0.15
Self efficacy	3.83(0.25)	4.57(0.19)	-2.36*	-0.57	3.75(0.37)	4.64(0.24)	-2.04*	-0.65
Collective efficacy	4.74(0.21)	5.40(0.15)	-2.52*	-0.61	4.55(0.28)	5.55(0.16)	-3.21**	-1.01
Collective action	4.46(0.19)	5.03(0.19)	-2.13*	-0.52	4.40(0.26)	4.91(0.27)	-1.36	-0.43

Note: † $p < .10$ ; \* $p < .05$ , \*\* $p < .01$ . Higher means represent greater agreement.

Table 4.2 shows how the manipulation affected each of the secondary dependent variables. There were no significant effects of the manipulation on perceptions of responsibility for either financial institutions or people generally. Participants in the simple condition did, however, report a greater sense of self-efficacy and collective efficacy for both the whole sample and those who passed the knowledge check. Additionally, for the whole sample, the simple condition encouraged greater intention to take collective action, however, this effect was not significant in the subset of participants who passed the knowledge check. Together, these results suggest participants who were presented with a simpler model were more likely to think their own actions could have an impact, to think that people could work together to hold institutions to account and to intend to take part in collective action.

## Mediation Analyses

As with Study 1, the evidence above suggested an impact of manipulating complexity on moral judgements of Person A, but no direct effect on interest in taking personal action. To test for the indirect effect that represented this path in Study 1, I ran the same mediation

analyses as before. Again, the indirect effect was not significant for the whole sample. However, the significant indirect effect was again found for participants who passed the knowledge check, as shown in Figure 4.3. This result provides further support for the argument that increasing perceptions of complexity can lead to a less harsh moral judgement, which in turn can lead to a reduced interest in taking relevant action.

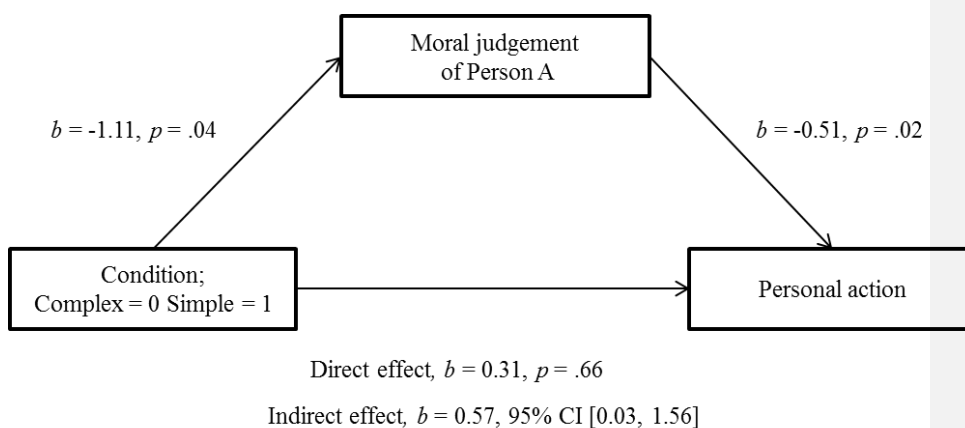


Figure 4.3: Mediation model (Study 2) of complexity as a predictor of personal action, mediated by moral judgement of Person A. Bootstrapped CIs based on 1000 samples.

The results from the secondary dependent variables suggested direct effects of the manipulation on self-efficacy, collective efficacy and collective action. Although the additional five items were not designed as a single scale, they were all positively correlated and formed a potentially reliable factor (Cronbach's  $\alpha = .75$ ), representing a broad measure of interest in recognising the issue and belief in tackling the problem. To avoid having to report lengthy mediation analyses on every item, these items were combined together as part of an exploratory investigation. I therefore created an aggregate score by taking the mean of the five items, such that higher scores indicated greater support for the merits of holding financial institutions to account in general. The pattern of results was similar to that found for personal



action, as the mediation was not significant for the whole sample, but was significant for participants who passed the knowledge check (see Figure 4.4). The results suggest further support for the mediating role of moral judgement in encouraging action relating to food speculation.

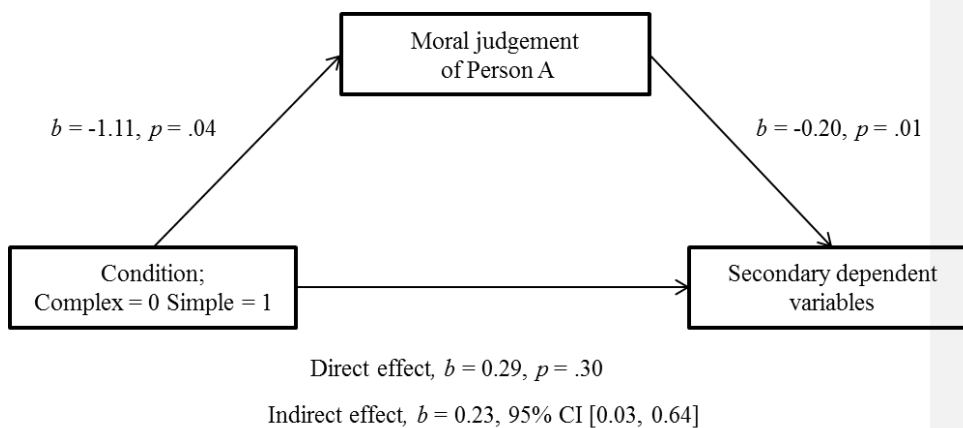


Figure 4.4: Mediation model (Study 2) of complexity as a predictor of the secondary dependent variables, mediated by moral judgement of Person A. Bootstrapped CIs based on 1000 samples.

### Attributional Complexity

The general pattern of correlations mimicked those of Study 1, as Attributional Complexity (AC) tended to correlate positively with personal action and the secondary dependent variables, whilst correlating somewhat negatively with items relating to moral judgement and organisational acceptability. However, only one of the correlations was statistically significant; for the whole sample, participants with higher AC indicated lower acceptability of financial institutions making money from food speculation,  $r = -.25, [-.43, -.10], p = .03$ .

### **Study 3**

Study 2 provided further evidence for the role of complexity in moral judgement and willingness to take action, even with a subtler manipulation. However, the manipulation check data were noticeably weaker compared to Study 1. The three main methodological differences were the purely student sample, the different gendered voiceover and the weakened manipulation. To ensure it was the weaker manipulation that produced the weaker effects, and not the other two alterations, the experiment was re-run, but returning to the complex version of the video used in Study 1.

### **Method**

#### **Participants**

Participants were 85 undergraduate students at Cardiff University (73 women, 12 men) who took part for course credit. They were between 17 and 24 years of age ( $M = 19$ ). Participants completed the study in individual sessions in the laboratory.

#### **Excluded Participants**

Eleven participants moved on from the video before it had finished, two participants were excluded for routinely selecting the same score on the dependent variables and one participant reported having a high level of previous knowledge about food speculation. Due to an overlap of issues in one case, this resulted in 13 participants being excluded.

#### **Materials, Procedure and Design**

The materials were identical to Study 2 apart from the change to the manipulation. The video thus used the same female voiceover as before but now used the more complex flowchart from Study 1. The procedure and design were the same as Study 2.

## Results and Discussion

Similar to the other studies, only 52 of the 72 participants (72%) passed the knowledge check question. As before, the results are presented for both the whole sample and the subset that passed the knowledge check.

### Manipulation Checks

For the whole sample, the model in the complex video was seen as significantly more complex ( $M = 4.82$ ,  $SE = 0.32$ ) than the simple model ( $M = 3.05$ ,  $SE = 0.26$ ), mean difference = 1.77, [0.96, 2.58],  $t(70) = 4.36$ ,  $p < .001$ ,  $d = 1.04$ . For participants who passed the knowledge check, the complex video was also seen as significantly more complex ( $M = 4.88$ ,  $SE = 0.41$ ) than the simple model ( $M = 2.93$ ,  $SE = 0.28$ ), mean difference = 1.95, [0.96, 2.94],  $t(50) = 3.96$ ,  $p < .001$ ,  $d = 1.12$ . The stronger manipulation has thus reproduced the larger effect sizes seen in Study 1.

For the whole sample, the complex video was seen as somewhat less easy to understand ( $M = 8.03$ ,  $SE = 0.32$ ) than the simple model ( $M = 8.32$ ,  $SE = 0.32$ ), but this difference was not significant, mean difference = -0.29, [-1.20, 0.63],  $t(70) = -0.63$ ,  $p = .53$ ,  $d = -0.15$ . Similarly, for participants who passed the knowledge check, there was only a nonsignificant trend to see the complex video as less easy to understand ( $M = 7.75$ ,  $SE = 0.37$ ) than the simple model ( $M = 8.54$ ,  $SE = 0.40$ ), mean difference = -0.79, [-1.91, 0.34],  $t(50) = -1.41$ ,  $p = .17$ ,  $d = -0.40$ .

These results provide mixed support for the manipulation. The stronger manipulation reproduced large effects relating to model complexity. However, in terms of understanding the video, whilst the trends continued to point in the same direction as previous studies, they were not significant here.

## Moral Judgement

For the whole sample, those in the complex condition rated speculation on food markets as less morally right ( $M = 3.62$ ,  $SE = 0.26$ ) than those in the simple condition ( $M = 4.21$ ,  $SE = 0.19$ ). This difference was marginally significant, mean difference =  $-0.59$ ,  $[-1.24, 0.05]$ ,  $t(70) = -1.84$ ,  $p = .07$ ,  $d = -0.44$ . For participants who passed the knowledge check, those in the complex condition rated speculation on food markets as significantly less morally right ( $M = 3.46$ ,  $SE = 0.26$ ) than those in the simple condition ( $M = 4.25$ ,  $SE = 0.23$ ), mean difference =  $-0.79$ ,  $[-1.50, -0.09]$ ,  $t(50) = -2.26$ ,  $p = .03$ ,  $d = -0.64$ . These results are in the reverse direction to my principal hypothesis and suggest that the manipulation of complexity has not affected moral judgement in this sample in the same way as it did in the previous studies.

In terms of judging the morality of Person A, the whole sample did not rate them as significantly more morally right in the complex condition ( $M = 5.26$ ,  $SE = 0.23$ ), compared to the simple condition ( $M = 5.16$ ,  $SE = 0.30$ ), mean difference =  $0.11$ ,  $[-0.66, 0.87]$ ,  $t(70) = 0.28$ ,  $p = .78$ ,  $d = 0.07$ . Similarly, for participants who passed the knowledge check, Person A was not seen as significantly more morally right in the complex condition ( $M = 5.13$ ,  $SE = 0.29$ ), compared to the simple condition ( $M = 5.04$ ,  $SE = 0.36$ ), mean difference =  $0.09$ ,  $[-0.88, 1.06]$ ,  $t(50) = 0.19$ ,  $p = .85$ ,  $d = 0.05$ .

The lack of effects relating to Person A and the reversed direction of the effects relating to the process of food speculation do not conform to the findings of the first two studies and thus represent a challenge for the principal hypothesis. Given that the design of this study was a virtual replication of Study 1, the different results may be a result of a change in the sample. This issue will be considered in the general discussion, after the results from all four studies have been reported.

### **Organisational Acceptability**

For the whole sample, those in the complex condition thought it was marginally less acceptable for financial institutions to influence the price of basic foodstuffs ( $M = 3.24$ ,  $SE = 0.31$ ), compared to those in the simple condition ( $M = 4.00$ ,  $SE = 0.33$ ), mean difference =  $-0.77$ ,  $[-1.69, 0.16]$ ,  $t(70) = -1.65$ ,  $p = .10$ ,  $d = -0.39$ . For participants who passed the knowledge check, those in the complex condition thought this behaviour was significantly less acceptable ( $M = 3.25$ ,  $SE = 0.40$ ), compared to those in the simple condition ( $M = 4.32$ ,  $SE = 0.32$ ), mean difference =  $-1.07$ ,  $[-2.13, -0.01]$ ,  $t(50) = -2.03$ ,  $p = .05$ ,  $d = -0.57$ .

For the whole sample, participants in the complex condition did not report that it was less acceptable for financial institutions to make money from food speculation ( $M = 3.44$ ,  $SE = 0.32$ ), compared to participants in the simple condition ( $M = 3.76$ ,  $SE = 0.35$ ), mean difference =  $-0.32$ ,  $[-1.32, 0.67]$ ,  $t(68) = -0.65$ ,  $p = .52$ ,  $d = -0.15$ . Similarly, for participants who passed the knowledge check, those in the complex condition did not report that this behaviour was less acceptable ( $M = 3.54$ ,  $SE = 0.40$ ), compared to those in the simple condition ( $M = 4.04$ ,  $SE = 0.43$ ), mean difference =  $-0.49$ ,  $[-1.70, 0.71]$ ,  $t(50) = -0.82$ ,  $p = .41$ ,  $d = -0.23$ . As with the moral judgement items, the effects for both the organisational acceptability items did not support the principal hypothesis.

### **Personal Action**

For the whole sample, participants in the complex condition were no more likely to report interest in taking direct personal action relating to food speculation ( $M = 5.65$ ,  $SE = 0.39$ ), compared to those in the simple condition ( $M = 5.63$ ,  $SE = 0.33$ ), mean difference =  $0.02$ ,  $[-1.02, 1.05]$ ,  $t(70) = 0.03$ ,  $p = .98$ ,  $d = 0.01$ . For participants who passed the knowledge check, those in the complex condition were also no more likely to report interest in taking action ( $M = 5.58$ ,  $SE = 0.48$ ), compared to those in the simple condition ( $M = 5.68$ ,  $SE =$

0.42), mean difference = -0.10, [-1.38, 1.19],  $t(50) = -0.15$ ,  $p = .88$ ,  $d = -0.04$ . As with the previous two studies, the manipulation has not had a direct impact on willingness to take personal action.

### Secondary Dependent Variables

Table 4.3

*Means for secondary dependent variables (Study 3)*

	Whole sample ( $N = 72$ )				Knowledge check pass ( $n = 52$ )			
	Complex		Simple		Complex		Simple	
	$M(SE)$	$M(SE)$	$t$	$d$	$M(SE)$	$M(SE)$	$t$	$d$
Institution responsible	5.65(0.15)	5.21(0.17)	1.88†	0.45	5.63(0.16)	5.14(0.19)	1.87†	0.53
People responsible	3.91(0.20)	3.95(0.24)	-0.11	-0.03	3.83(0.24)	3.68(0.26)	0.42	0.12
Self efficacy	3.97(0.22)	4.32(0.19)	-1.16	-0.28	3.88(0.29)	4.21(0.22)	-0.93	-0.26
Collective efficacy	4.82(0.22)	4.74(0.19)	0.30	0.07	4.75(0.27)	4.71(0.22)	0.10	0.03
Collective action	5.00(0.21)	4.58(0.19)	1.47	0.35	5.00(0.29)	4.54(0.21)	1.36	0.39

Note: † $p < .10$ ; \* $p < .05$ , \*\* $p < .01$ . Higher means represent greater agreement.

There were no significant effects of the manipulation on the secondary dependent variables, as shown in Table 4.3. As with the other dependent variables in this study, these results do not align with the data from Study 2, and do not offer support for the hypothesis that greater complexity would lead to less willingness to recognise the issue and intentions to act.

### Mediation Analyses

Unlike the first two studies, there was no evidence of an impact of the manipulation on moral judgement. Accordingly, the mediation pathways evidenced as present in the previous studies were not replicated here, in either the whole sample or the subset that passed the knowledge check.

### **Attributional Complexity**

Unlike the dependent measures, the general pattern of results relating to Attributional Complexity (AC) did not fit with the two previous studies, as AC correlated somewhat positively with personal action and the secondary dependent variables, whilst generally correlating somewhat negatively with items relating to moral judgement and organisational acceptability (Person A was the only exception to this trend in this study). However, only one of the correlations was statistically significant; for the whole sample, AC was positively correlated with the collective efficacy measure ( $r = .24$ , [0.01, 0.45],  $p = .04$ ), suggesting those higher in AC more strongly agreed with the notion that it was possible to hold financial institutions to account by working together.

### **Study 4**

Study 3 failed to replicate the findings of the first two studies. The manipulation check relating to complexity indicated the stronger version of the independent variable had been seen as more complex. However, the link between the manipulation and moral judgement had not arisen as expected. Given the surprising results of Study 3, I decided to run a final study to ascertain whether the effects found in the first two studies could be replicated in an appropriately powered public sample, while attempting to rule out the gender of the voiceover as influencing the relationship between complexity and moral judgement.

### **Method**

#### **Participants**

Participants were 234 members of the public, recruited via an online research company (122 women, 109 men, 3 preferred not to say), who took part for small financial credit. They were between 19 and 76 years of age ( $M = 49$ ).

### **Excluded Participants**

Forty-seven participants failed to watch the 130-second video for an appropriate length of time, either moving on before it had finished or staying on the page for a particularly long time (i.e., more than 30 seconds). These participants were thus excluded from the analyses, because the video viewing times suggested they were not watching the video and then moving straight on to the dependent measures, as requested. In addition, 41 participants routinely selected the same score on the dependent variables, fifteen participants reported having a high level of previous knowledge about food speculation, and one participant stated they had problems hearing the video. Due to an overlap of some of these issues, 79 participants were excluded in total, leaving a final sample of 155.

### **Design**

A 2 x 2 between-participants design was used. Participants were randomly allocated to either the simple or complex condition and heard either a male or female voiceover. The dependent measures were the same as in Studies 1 and 2.

### **Procedure**

The procedure was essentially identical to the previous studies, except that it was run online. Participants who did not consent to taking part were thanked for their time; those who did consent proceeded to the study. An initial video check ensured participants could see the image of an animal and hear the noise of a different animal, thus ensuring they were able to see and hear the video in the study. Upon completion, all participants were given a debrief page which outlined the purposes of the study, provided with the researchers' contact details and thanked for their participation.



### **Experimental Manipulation**

As indicated in the design, both female and male voiceovers were used in the manipulation, to test whether any previous differences between studies may have arisen because of this difference. Aside from this factor, the same complex model used in Study 1 and Study 3 was employed again here. Again, the simple model did not change.

### **Dependent Variables and Other Measures**

The study included the same manipulation checks, dependent variables and AC scale from the previous two studies.

## **Results and Discussion**

Ninety-seven of the 155 participants (63%) passed the knowledge check question. This proportion is in line with the success rates of the previous three studies. Once more, the results are presented for the whole sample and the subset that passed the knowledge check.

### **Gender**

Preliminary analyses revealed no consistent effects of participant gender, nor voiceover gender. There were also no significant interactions between these factors and the manipulation. This data suggests the gender of the voiceover can be ruled out as explaining any of the differences between the studies above. It also makes it possible to collapse across these factors and maintain focus on the effect of condition.

### **Manipulation Checks**

For the whole sample, the model in the complex video was seen as significantly more complex ( $M = 5.60$ ,  $SE = 0.27$ ) than the simple model ( $M = 4.42$ ,  $SE = 0.30$ ), mean difference = 1.19, [0.35, 2.02],  $t(153) = 2.81$ ,  $p < .01$ ,  $d = 0.45$ . Similarly, for participants who passed

the knowledge check, the complex video was seen as significantly more complex ( $M = 4.91$ ,  $SE = 0.37$ ) than the simple model ( $M = 3.60$ ,  $SE = 0.40$ ), mean difference = 1.30, [0.23, 2.38],  $t(94) = 2.41$ ,  $p = .02$ ,  $d = 0.50$ . These effects thus continue to show the complex model successfully manipulating participants' perception of complexity.

For the whole sample, the complex video was seen as marginally less easy to understand ( $M = 7.48$ ,  $SE = 0.24$ ) than the simple model ( $M = 8.13$ ,  $SE = 0.28$ ), mean difference = -0.64, [-1.37, 0.08],  $t(153) = -1.75$ ,  $p = .08$ ,  $d = -0.28$ . For participants who passed the knowledge check, the complex video was seen as significantly less easy to understand ( $M = 7.92$ ,  $SE = 0.29$ ) than the simple model ( $M = 8.84$ ,  $SE = 0.34$ ), mean difference = -0.91, [-1.81, -0.02],  $t(94) = -2.02$ ,  $p = .05$ ,  $d = -0.42$ . As with the other three studies, the video containing the more complex model has been reported as harder to understand. In tandem, these results provide good support for the reliability of the effects of the manipulation on perceptions of complexity.

### **Moral Judgement**

For the whole sample, participants in the complex condition rated speculation on food markets as somewhat less morally right ( $M = 4.07$ ,  $SE = 0.23$ ) than participants in the simple condition ( $M = 4.25$ ,  $SE = 0.28$ ), but this difference was not statistically significant, mean difference = -0.18, [-0.90, 0.55],  $t(153) = -0.49$ ,  $p = .63$ ,  $d = -0.08$ . For participants who passed the knowledge check, those in the complex condition rated speculation on food markets as somewhat more morally right ( $M = 4.00$ ,  $SE = 0.28$ ) than those in the simple condition ( $M = 3.51$ ,  $SE = 0.32$ ). This difference was also not statistically significant, mean difference = 0.49, [-0.37, 1.35],  $t(94) = 1.13$ ,  $p = .26$ ,  $d = 0.23$ .

In terms of judging the morality of Person A, the whole sample tended to rate the person as more morally right in the complex condition ( $M = 4.93$ ,  $SE = 0.21$ ) than in the

simple condition ( $M = 4.60$ ,  $SE = 0.27$ ), but this difference was not significant, mean difference = 0.33, [-0.35, 1.01],  $t(153) = 0.96$ ,  $p = .34$ ,  $d = 0.16$ . For participants who passed the knowledge check, Person A was seen as significantly more morally right in the complex condition ( $M = 5.02$ ,  $SE = 0.27$ ) than in the simple condition ( $M = 3.84$ ,  $SE = 0.30$ ), mean difference = 1.18, [0.35, 2.01],  $t(153) = 2.83$ ,  $p = .01$ ,  $d = 0.58$ .

These results replicate the findings from the first two studies. No significant effects occurred for judgements of food speculation, but judgements of Person A were less negative after being given the complex model of food speculation, compared to the simple model. As in the first two studies, this difference was significant only in the subset that passed the knowledge check, an issue that will be discussed further later.

### **Organisational Acceptability**

For the whole sample, participants in the complex condition tended to indicate that it was more acceptable for financial institutions to influence the price of basic foodstuffs ( $M = 3.54$ ,  $SE = 0.29$ ), than did participants in the simple condition ( $M = 3.10$ ,  $SE = 0.28$ ), but this difference was not significant, mean difference = 0.45, [-0.36, 1.25],  $t(153) = 1.09$ ,  $p = .28$ ,  $d = 0.58$ . For participants who passed the knowledge check, those in the complex condition thought this behaviour was marginally significantly more acceptable ( $M = 3.81$ ,  $SE = 0.39$ ), compared to those in the simple condition ( $M = 2.77$ ,  $SE = 0.32$ ), mean difference = 1.05, [-0.04, 2.13],  $t(94) = 1.92$ ,  $p = .06$ ,  $d = 0.40$ .

For the whole sample, participants in the complex condition thought it was somewhat more acceptable for financial institutions to make money from food speculation ( $M = 3.59$ ,  $SE = 0.30$ ), compared to participants in the simple condition ( $M = 3.39$ ,  $SE = 0.32$ ), but this difference was not significant, mean difference = 0.20, [-0.67, 1.07],  $t(153) = 0.46$ ,  $p = .65$ ,  $d = 0.07$ . Similarly, for participants who passed the knowledge check, those in the complex

condition thought this behaviour was somewhat more acceptable ( $M = 3.81, SE = 0.41$ ), compared to those in the simple condition ( $M = 3.21, SE = 0.39$ ), but again this difference was not significant, mean difference = 0.60, [-0.53, 1.73],  $t(94) = 1.06, p = .29, d = 0.22$ .

### Personal Action

For the whole sample, participants in the complex condition tended to report less interest in taking direct personal action relating to food speculation ( $M = 5.25, SE = 0.33$ ), compared to those in the simple condition ( $M = 6.00, SE = 0.31$ ), but this difference was not statistically significant, mean difference = -0.75, [-1.66, 0.16],  $t(153) = -1.62, p = .11, d = -.26$ . For participants who passed the knowledge check, those in the complex condition were significantly less interested in taking action ( $M = 5.04, SE = 0.37$ ) than those in the simple condition ( $M = 6.33, SE = 0.37$ ), mean difference = -1.29, [-2.36, -0.22],  $t(94) = -2.39, p = .02, d = -0.49$ . These results suggest the manipulation has had some direct impact upon participants' willingness to engage in action to tackle food speculation, as predicted.

### Secondary Dependent Variables

Table 4.4

*Means for secondary dependent variables (Study 4)*

	Whole sample ( $N = 155$ )				Knowledge check pass ( $n = 94$ )			
	Complex		Simple		Complex		Simple	
	$M (SE)$	$M (SE)$	$t$	$d$	$M (SE)$	$M (SE)$	$t$	$d$
Institution responsible	5.28(0.15)	5.86(0.14)	-2.84**	-0.46	5.21(0.20)	5.95(0.14)	-2.93**	-0.60
People responsible	4.46(0.14)	4.86(0.14)	-2.06*	-0.33	4.34(0.18)	4.91(0.16)	-2.30*	-0.47
Self efficacy	4.30(0.13)	4.72(0.13)	-2.20*	-0.36	4.23(0.17)	4.77(0.17)	-2.25*	-0.46
Collective efficacy	4.76(0.14)	5.22(0.14)	-2.23*	-0.36	4.62(0.20)	5.40(0.17)	-2.92**	-0.60
Collective action	4.29(0.19)	4.93(0.14)	-2.67**	-0.43	4.36(0.24)	5.09(0.15)	-2.59*	-0.53

Note: † $p < .10$ ; \* $p < .05$ , \*\* $p < .01$ . Higher means represent greater agreement.

Each of the secondary dependent variables was significantly affected by the manipulation, as shown in Table 4.4. Participants in the whole sample and those who passed the knowledge check showed greater agreement with items relating to institutional responsibility, personal responsibility and the measures of efficacy and collective action, when they had seen the simple model in the video than the complex video. This evidence provides strong support for the relationship between perceived complexity and a broad measure of interest in working towards better ethical positions in finance.

### **Mediation Analyses**

In the first two studies, the evidence suggested an impact of manipulating complexity on moral judgements of Person A, but no direct effect on interest in taking personal action. In this study, the manipulation did affect interest in taking personal action directly, as those who passed the knowledge check and saw the simple video were comparatively more likely to support switching bank accounts to an ethical alternative. To test whether the indirect path found in the previous studies was still significant, I ran the same mediation analyses as described previously. Again, the indirect effect was not significant for the whole sample. However, for participants who passed the knowledge check, the same indirect path was present, as shown in Figure 4.5. This result continues the line of evidence which suggests that increasing perceptions of complexity can lead to a less harsh moral judgement, which in turn can lead to less interest in taking action.

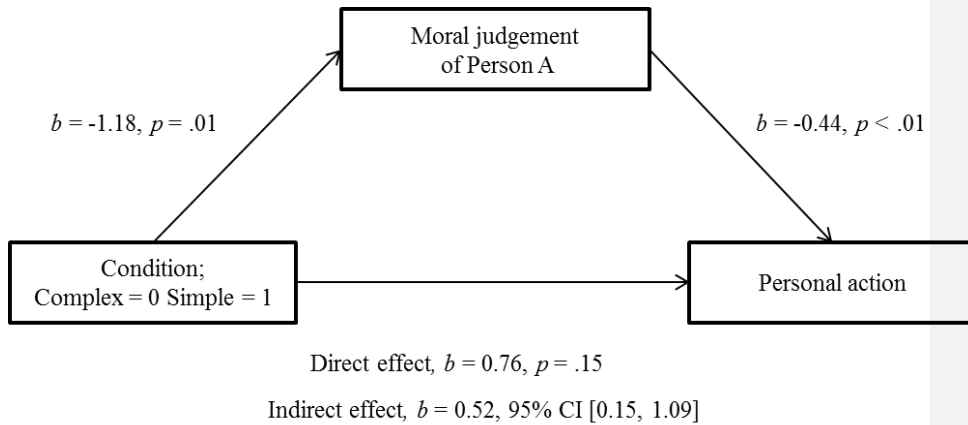


Figure 4.5: Mediation model (Study 4) of complexity as a predictor of personal action, mediated by moral judgement of Person A. Bootstrapped CIs based on 1000 samples.

The results from the secondary dependent variables suggested direct effects of the manipulation on every item. As with Study 2, these items were all positively correlated and formed a potentially reliable factor ( $\alpha = .77$ ), hence the mean of the five items was used. The pattern of results for this variable was similar to that found for personal action, as the mediation was not significant for the whole sample, but was significant for participants who passed the knowledge check (see Figure 4.6). The results suggest further support for the mediating role of moral judgement in encouraging action relating to food speculation, although in this case the direct effect remains significant, indicating partial rather than complete mediation in this sample.

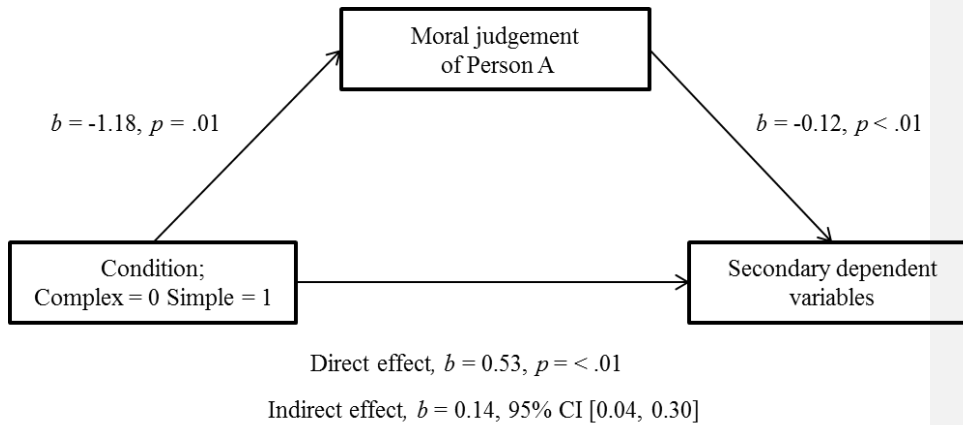


Figure 4.6: Mediation model (Study 4) of complexity as a predictor of the secondary dependent variables, mediated by moral judgement of Person A. Bootstrapped CIs based on 1000 samples.

### Attributional Complexity

The general pattern of correlations was in line with the three previous studies, as AC correlated positively with personal action and the secondary dependent variables, whilst correlating negatively with items relating to moral judgement and organisational acceptability. Each item was in the predicted direction. For the whole sample, eight of the ten correlations were significant, one was marginally significant and one was non-significant. The correlations ranged in size from .08 to .39. For participants who passed the knowledge check, six of the ten correlations were significant and the other four were marginally significant. The correlations ranged in size from .16 to .38. These data provide consistent evidence that AC is a useful individual differences measure to further our understanding of how people respond when faced with items regarding moral judgement, accountability, efficacy and intention to act. In this context, participants higher in AC were harsher in their

moral judgements of food speculation in general and accordingly were also more willing to see action against it as possible and worthwhile.

### **General Discussion**

The manipulation checks showed that the complex model of causal chains increased participants' perception of complexity of food speculation in comparison to the simple model. In the public samples (Studies 1 & 4), the complex causal chains also reduced the general understanding of the video. Although the evidence for the effect on self-reported understanding was weaker and less consistent than the effect on perceptions of complexity, the results in combination support the efficacy of the manipulation for shaping perceptions of the complexity of the processes in food speculation.

The critical question was whether these increased perceptions of complexity would lead to less harsh moral judgements of food speculation. Studies 1, 2 and 4 all offered some support to this principal hypothesis. Although there were no consistent effects of the manipulation on responses to the item examining beliefs about food speculation *per se*, there were consistent effects on how people perceived the morality of the agent in the model (Person A). Other items relevant to moral judgement also exhibited the expected pattern (Studies 2 & 4). For instance, the complex model led participants to see individuals and institutions as less morally culpable than the simple model. Additionally, the complex model led participants to be less willing to participate in collective action designed to address unethical behaviour.

The studies also measured Attributional Complexity (AC; Fletcher et al., 1986) as a relevant individual differences measure of potential importance, but had no specific hypothesis as to its specific role as a moderating influence. All four studies showed no moderating role for AC. Nevertheless they also showed that participants who scored more



highly in AC were more likely to judge the process of food speculation harshly and act accordingly. In short, those who tend to prefer more complex attributions for behaviour were prepared to see a potentially intricate process as morally concerning. This may be because those who are higher in attributional complexity are more used to recognising processes as complex and are thus more willing to attribute responsibility to a relevant agent in a complex chain, whereas those who prefer simpler explanations for behaviour are more likely to see complicated situations as carrying less responsibility for those involved.

Given the manipulation did not interact with AC, the manipulation and the measure of the individual differences appear to exert independent additive effects on moral judgement. This pattern fits the assumption that both the manipulation and the individual difference may be tapping the same construct, perceptions of complexity of food speculation, albeit in different ways.

The mediation analyses in studies 1, 2 and 4 also provide support for the relationships between perceived complexity, moral judgement and a willingness to engage with food speculation as an ethical concern. Whilst these analyses were exploratory in nature, they outlined the potential role of moral judgement as a mediator between perceived complexity and interest in tackling ethical issues.

Together this evidence provides good support for the principal hypothesis that increased perceptions of complexity lead to less harsh moral judgements. In this research, these judgements were particularly sensitive to complexity when the agent of the causal pathway was considered. Additionally, such evaluations can in turn lead to less willingness to assign responsibility to individuals and organisations, reduce people's sense of self-efficacy and collective efficacy, as well as reducing their intentions to act against unethical behaviour.

## Knowledge Check

An unexpected part of the research was the comparatively low success rate of the knowledge check, which varied across the studies from 60-72%. For this reason, the chapter presented the results for individuals who passed this check and those who did not. The differences between participants who passed and the whole sample were minimal across the studies for the manipulation checks and the secondary dependent variables. That is, of the 21 potential effects across studies 2, 3 and 4, there were only two occasions where the whole sample produced a significant effect where the subset of those who passed the knowledge check did not. There were differences, however, for the significant effects of complexity on the moral judgement of Person A. In studies 1, 2 and 4 the effects were significant for the subset that passed the knowledge check, but not for the whole sample. Also, judgements of Person A mediated the effect of complexity on personal action and the secondary dependent variables in the group that passed the knowledge check, but not in the whole sample. It is possible therefore that a certain level of information elaboration is required if complexity is to influence moral judgements of relevant individuals and willingness to act. The upcoming section on why Study 3 failed to replicate the other studies is also relevant to this point.

Related to this idea, increased cognitive load has been shown to reduce utilitarian responding (Conway & Gawronski, 2013; Greene et al., 2008). Perhaps participants who failed the knowledge check were devoting less cognitive resources to the video and in turn were less likely to use a utilitarian mode of thinking. If so, it may be the case that this mode of thinking is a prerequisite for an effect of complexity on moral judgement. However, the effects on the secondary dependent variables in Studies 2 and 4 occurred irrespective of whether the knowledge check was passed. These differences reveal the potential for different psychological pathways to be involved. Some psychological paths from complexity to judgement and action may require higher levels of attention to causal information than others.

**Commented [CF27]:** References alphabetical.

### Study 3

The one set of results that did not conform to my hypotheses came from Study 3. Despite a successful manipulation check in relation to perceived complexity, no significant findings were reported in the whole sample, and participants who passed the knowledge check exhibited two effects in reverse of the predicted direction. Whilst the other studies provided trends and significant effects consistently in line with the principal hypothesis, Study 3 makes salient that there may be important factors that augment or attenuate the moral judgement processes being examined.

Two main findings came to light in further analysis of this issue. Firstly, despite being asked explicitly not to do so, 11 of the participants in this sample (13%) failed the timing check as they moved on to the next screen before the video had finished; no participants did this in the other student sample (Study 2). The difference in failure rates between these samples is significantly different,  $\chi^2(1) = 9.89, p = .001$ . This difference suggests that participants in this sample were notably different in their approach to the study. Study 3 was carried out at the start of the academic year, whereas Study 2 was carried out towards the end of the second semester. It may well be that the Study 3 sample thus contained participants who were particularly keenly motivated by gaining the required credit for passing the course and hence aimed to complete the research successfully, but with a quicker and less intrinsically motivated approach to the experiment. Alternatively, a minority of students at the very early stages of the year may have been less used to research practices and were thus less likely to follow basic instructions.

Both of these interpretations are also congruent with a second finding. Specifically, Studies 1, 2 and 4 had large correlations between responses to the two items assessing judgements of food speculation as a process and judgements of Person A,  $r$ s ranging from .66

to .77, as expected. In contrast, this correlation dropped to .38 for the whole sample and .31 for participants who passed the knowledge check in Study 3. This discrepancy suggests a notable reduction in the validity of the structure of the data for Study 3.

Nevertheless, Study 3 presented the highest rate of participants passing the knowledge check (72%, compared to 60-63% in the other studies). It may therefore be the case that participants paid more attention to the earlier portion of the video, but less attention afterward. Participants might have also attempted to satisfice their participation by searching for the socially desirable attitude quickly and then providing the “correct” moral condemnation of food speculation consistently. Although any interpretation of the cause for this change is speculative, it is clear that there are comparatively more issues with the validity of the supplied data among the sample in Study 3. For this reason, I suggest that the other studies, particularly participants drawn from public samples, provide a more convincing reflection of the generalised psychological mechanisms of interest in this research.

### **Person A vs. Process**

Despite the previously noted strong correlation between participants’ moral judgement of the process of food speculation and their judgement of Person A, the predicted effects of the manipulation only appeared for Person A. As outlined in the introduction to the chapter, people tend to give primary importance to human agency when it comes to assigning causation in a chain of events (Hilton, McClure & Sutton, 2010). It is possible therefore that the effect of perceived complexity is stronger when human agents are involved, as their involvement augments perceptions of causality. Additionally, the ratings of moral culpability for Person A were always higher (less harsh) than those for the process of food speculation. This may be because Person A was only seen as relevant to part of the causal chain, whereas

Commented [CF28]: Hyphen removed

the overarching judgement related to every part of the process. This difference is relevant to one of the potential future research directions considered below.

### **A Construal Level Theory Approach**

The manipulation of perceived complexity could be seen in some ways as a manipulation relevant to psychological distance, similar to construal level theory (CLT; Trope & Liberman, 2010). Amit and Greene (2012) recommended integrating construal level theory and the dual-process theory of moral judgement, as their research indicated a link between concrete construals and deontological judgements, whilst abstract construals related to utilitarian judgements. Similarly, agents with distal intent, which broadly relates to utilitarian judgement, are assigned greater moral responsibility by participants using a high-level (abstract) construal, compared to a low-level (concrete) construal (Plaks, McNichols & Fortune, 2009). These findings present conflicting hypotheses for my interest in how a moral judgement could be affected by seeing a process as simple or complex. If increased complexity does increase psychological distance, then the construal of the process could be seen at a more abstract level, leading to greater deliberative and utilitarian outcomes. Alternatively, the perception of complexity could also be used as a heuristic whereby people deliberate less when complexity is high and instead make their moral judgement using more intuitive and social inputs. A third possibility is that higher complexity encourages a different heuristic pathway, where a default position, such as moral neutrality, is relied upon. The results favour the final two explanations, though each one is undoubtedly worthy of further consideration in the future.

### **Implications and Future Directions**

In the introduction, I outlined particular findings in moral dilemmas that could potentially be confounded with perceptions of complexity, such as causal deviance (Pizarro et

al., 2003), locus of the intervention (Waldmann & Dieterich, 2007) and third party involvement (Phillips & Shaw, 2014). Given the previously reported links between cognitive load and moral judgement (Greene et al., 2008; Conway & Gawronski, 2013) and the relationship between agent coherence and attributed intention (Hughes & Trafimow, 2014), it is important to consider further whether these findings may in part be explained by differences in perceived complexity of the situations participants were judging. Research could thus examine whether the manipulations in the aforementioned research do produce different perceptions of complexity and, if they do, seek ways to minimise this issue. For example, it is important to consider how third parties can be included in moral dilemmas (Phillips & Shaw, 2014) whilst keeping the perceived complexity of the process constant. This will provide greater scope for testing real-world moral dilemmas, which often have more contributory factors than the simplified hypothetical scenarios used in much moral psychology.

There may also be interesting interactions or additive effects involving the previously manipulated factors and perceived complexity. For example, manipulating the severity of consequences can alter the confidence participants report in moral judgements (Wiegmann & Waldmann, 2014) and it would be interesting to see if increased severity of consequences, in combination with lower perceptions of causal complexity, leads to greater moral condemnation. Additionally, it would be worth investigating if the valence of a side effect (Knobe, 2003) interacted with perceptions of complexity. For example, does a greater sense of complexity lead to a general increase in the moral rating for both positive and negative consequences? Or does complexity encourage a general shift to a more neutral position, driven perhaps by confidence in the evaluations being made? These questions could also fit with the CLT approach outlined above.

**Commented [CF29]:** Garonski to Gawronski (also three other places).

As previously stated, the primary aim was to test for a broad relationship between perceived complexity and moral judgement. Given the provocative evidence in this chapter, it is now important to consider how this relationship may relate to more specific factors that are relevant to moral judgement. For example, we need to understand further how perceived complexity could interfere with processes of moral judgement that occur as a result of differing intentions (Cushman, 2008). If wrongness judgements rely principally on the intentions of the agent, but blame requires an element of causality (Cushman, 2008), then might perceived complexity play a role in one or both of these processes? Similarly, if blame needs an agent to target, but wrongness judgements can work on broader notions of generalised behaviour (Malle et al., 2014), might perceived complexity be more effective in a blame context, given the differing findings for judgements of food speculation versus judgements of Person A? Manipulations of complexity thus need to be integrated with existing theoretical positions such as these, in order to isolate both the extent to which perceived complexity can influence decision making within each aspect of morality and the contexts within which it does not have an influence.

Outside of the specifics of the decision-making process, broader identification measures also need to be pursued concurrently with complexity, as they can be strong motivators underpinning the extremity of judgement (Reynolds & Ceranic, 2007). For instance, a simple explanation might increase moral responsibility towards a controversial act in a low identification context, but not in a high identification context, as people might use the closeness in identity to justify the initial moral action. Conversely, a complex explanation might reduce moral responsibility in a low identification context, as people might feel uncertain about judging an identity to which they have little attachment. Identity and perceived complexity are thus worthy of further integrative approaches.

Furthermore, the role of moral emotions in attributing responsibility for events is critical (Rudolph & Tschaktschew, 2014) and it is important to test how perceptions of complexity might enhance or subdue each emotion in a decision-making environment. For example, perceived complexity could dampen down emotional responses in general, if the earlier stated hypothesis of complexity as a heuristic is accurate. Similarly, seeing a process as more simple might heighten emotional responses and lead to greater motivation to act accordingly.

Models of blame have described several further factors that could share variance with perceived complexity. For example, greater foreseeability leads to increased attributions of causality and blame (Lagnado & Channon, 2008); however, if participants perceive greater foreseeability on behalf of an agent, they may also be perceiving a comparatively simpler process from cause to effect. Future research could test the role of perceived complexity in other factors that are known to influence blameworthiness, such as indirectness of the causal chain (Paharia et al., 2009), prototypicality of the moral act (Malle et al., 2014) and the perception of free will in the agent (Clark et al., 2015). Each of these factors could easily relate to explanations via complexity. For example, more direct and prototypical acts are simpler processes to understand compared to their counterparts and thus people are likely to be more willing to assign responsibility in these contexts. Additionally, such changes in perceived responsibility also appear to extend to behaviour, as intermediaries in resource allocation games can reduce perceptions of responsibility and thus allow individuals to increase self-interested actions (Hamman, Loewenstein & Weber, 2010).

Two further methodological approaches are worth mentioning. Firstly, reaction time data has been used to show that time spent deliberating on a moral dilemma was influenced by a tendency to provide a utilitarian response (Baron, Gürçay, Moore & Starcke, 2012). It would be worthwhile to gather reaction time data for simple and complex versions of the



same causal chain, in order to begin understanding how perceived complexity might relate to cognitive processing and other relevant factors, such as cognitive load. Secondly, economic game theory has been used to show how the Knobe effect can be present or absent in contexts that do not rely on language but instead present actions and side effects in monetary allocations between two players (Utikal & Fischbacher, 2014). For instance, they showed how the usual effects of attribution by an observer only arose if the agent had a comparatively stronger economic status (higher starting allocation of the two players) rather than a lower status. As outlined earlier, the language in moral dilemmas can appear initially consistent, yet actually represent important differences in the complexity of the information. It would thus be interesting to pursue this economic methodology (Utikal & Fischbacher, 2014) to assess whether manipulating levels of complexity (e.g. different calculation processes) results in interactions with the findings they report relating to the relative status of the agent and their choices.

Aside from identifying factors and methodological techniques of interest, it is also important to take the broader context into account. The ability to identify processes of causation has been found in children as early as 15 months of age (Cohen, Rundell, Spellman & Cashon, 1999), and the ability to use intentionality to make moral judgements exists from 6 years of age (Berg-Cross, 1975). Importantly, Berg-Cross argues that tasks that are greater in complexity push young children to use heuristics, such as level of harm done, to make moral judgements. Complexity in moral dilemmas can thus encourage simplifying strategies from an early stage in life, and linking this research to developmental approaches could be fruitful in ascertaining how such heuristics might change across the lifespan.

There are also additional factors that could have a broad main effect, such as people's general inclination for human agency (Hilton et al., 2010; McClure, Hilton & Sutton, 2007) and narrative structures (Sloman & Lagnado, 2015). Research could thus be helpful in

identifying how complexity might relate to these basic judgement preferences, that are potentially underpinned by processes relevant to universal moral grammar (Mikhail, 2007) and moral evolution (Descioli & Kurzban, 2013).

If there is a relatively basic tendency to use perceived complexity as a heuristic for judgement, then it may well be moderated by social and cultural experience. Although I used general public samples in two of my studies, it is important to test these preliminary effects in a diverse range of samples. Increases in social experience can lead to more sophistication in social cognition (Hess et al., 2005) and different cultural contexts can encourage different moral norms (Edwards, 1975). For example, external attributions about surviving the war were made more by Holocaust survivors than an age-matched Jewish control group (Suedfeld, 2004), and South Koreans tended to consider information in a more holistic style and make more external attributions compared to Americans (Choi, Dalal, Kim-Prieto & Park, 2003). Testing with diverse cultural samples can help to ascertain whether the processes examined here depend on social and cultural experience.

Understanding the impact of perceived complexity on moral judgement could also help with designing interventions to encourage pro-social actions or behaviour change. For example, recent theoretical integration of social identity, collective action and moral convictions, offered several different pathways for moral judgement to inspire collective action (van Zomeren, Postmes & Spears, 2008; van Zomeren, Postmes & Spears, 2012; van Zomeren, Postmes, Spears & Bettache, 2011). Future studies could investigate whether perceived complexity has an impact even in areas of strong moral conviction where politicised identities are powerful (van Zomeren et al., 2012). It is possible that simplifying the perception of a process could lead to more people adopting stronger moral stances or help those with already existing strong positions to feel able to take action.

## **Limitations and Future Directions**

Finally, it is worth noting a few future directions that specifically arise as a result of this research design. The broad examination of moral judgement has been a useful first step in testing the potential role of perceived complexity, but it also invites further questions regarding where this process has an impact. This issue is relevant to the design of the video manipulation, which included three points of difference. Firstly, there was the verbal prime that presented each model as either simple or quite complicated. Secondly, there was the number of steps in the causal chain, which varied between three and six. Thirdly, there was the use of additional boxes that were irrelevant to the causal chain, but designed to increase perceptions of complexity. Study 2 omitted these additional boxes and still showed effects that supported the principal hypothesis, but the other two factors were always present. It would thus be interesting to see if both factors were necessary to shift perceptions of complexity. However, it is also reasonable to argue that perceptions of complexity in the real world are inevitably multi-faceted, and the present manipulation accurately represents this situation.

In addition, the two moral judgement measures were aimed at different foci of the causal chain. Whilst the role of Person A is clearly present throughout the causal chain, it is possible that the item relating to Person A particularly encouraged judgement towards the start of the chain, whereas the item relating to the process of food speculation encouraged participants towards a more holistic overview. This may also partly explain why the manipulation had much stronger effects for Person A, as it encouraged participants to think about the causal model specifically, rather than the whole video. Future measures should thus consider this issue of focus, as it has been shown to be important in side-effect dilemmas (Laurent et al., 2015). Additionally, a CLT approach could help in understanding whether

representing information in a greater number of stages affects the perceived concreteness of the process and thus the associated moral judgements (Amit & Greene, 2012).

A notable issue specific to using moral contexts which participants have little or no previous experience of is the contrasts it allows to be drawn. The items in this research would not have been conducive to a pure baseline control group who received no information about the process of food speculation. However, this does mean the contrasts between the simple and complex conditions cannot yet reveal exactly which mechanisms are at work. It could be that increased complexity leads to greater lenience, but it could also be that increased simplicity leads to more confident evaluations. Tapping into more familiar contexts, as outlined below, could help to address this issue.

Lastly, the principal hypothesis was that increased perceptions of complexity would lead to a decreased willingness to morally condemn the behaviour, and the evidence supports this position. However, conceptualising moral judgement with such breadth inevitably involves some sacrifice in specificity. It would require further research to show how this effect works in different moral constructs and scenarios. For example, I deliberately used a real-world moral dilemma that was relatively unknown and tended to attract condemnation. The dual-process model suggests greater use of intuitive processes leads to increased deontological judgements (Greene, 2007), however, it is not clear whether a novel situation inhibits reliance on intuitive or deliberative processes. It would be worthwhile to test future contexts where the dilemma is well-known (e.g., climate change) or where the person involved is carrying out a positively regarded action (e.g. ethical consumption) and measure how complexity encourages different judgement processes in these scenarios. It would also be worth evaluating different types of scenario that addressed more specific concepts of moral decision-making, such as intentionality, wrongness and blame. For example, scenarios relating to acts of commission attract much greater blame than those of omission (Malle et

al., 2014), and an interesting issue is whether complex vs. simple models therefore operate differently for acts of commission vs. omission, both in the realms of moral judgement and blameworthiness.

## **Conclusion**

This research has used a novel methodology to show how increased perceptions of complexity can lead to more lenient moral judgements, even when the causal chain of events is identical. This lenience creates less willingness to feel able and willing to make a difference in a global ethical issue. As the world continues to grow in societal complexity, it is vital to understand how such changes affect our moral concerns, as we need solutions to the paradox that massive international problems do not easily stimulate moral intuitions (Markowitz & Shariff, 2012). It is possible that the basic cognitive perceptual processes surrounding cause and effect that we have relied on to understand the world actually prevent us from acting in ways that fit with our moral concerns. In a complex world, using perceived complexity as a heuristic for avoiding moral judgement might well be a strategy that costs lives. We thus need to take seriously how our more instinctive moral intuitions are able to function in the interests of everyone in modern society. Perhaps, rather than consistently accepting narratives of complexity, we need to follow Perlis's (1982) recommendations and find ways of removing it, if we are to communicate and negotiate the huge global issues we face today.

## **Chapter 5: Social Context Mismatch Theory: Evidence and Future Directions**

This thesis began by outlining social context mismatch theory (SCMT) and its connections to social psychology. The next three chapters examined specific issues relevant to different parts of SCMT. The three core chapters produced a diverse array of results, each of which have their own specific implications, as well as a more general link to SCMT. The more specific implications have been dealt with in the associated discussion sections for each core chapter. The aim of this final chapter is to provide a broader context for discussion, where the conclusions of the four chapters can be summarised, related back to SCMT and the implications of the research can be explored further.

### **Results Summary**

Chapter 1 outlined how SCMT can be a useful framework for integrating research in an interdisciplinary manner. A core part of the theory is the need to maintain a proportionate focus on the impact of context on behaviour. The dangers of not doing so are that theoretical positions do not cohere (Bevan, 1991), that human motives become incorrectly seen as inevitable (Miller, 1999) and that we mistakenly focus on dispositional rather than situational factors to tackle immoral conduct (Zimbardo, 2007).

Nonetheless, whilst the argument for greater contextual consideration is important, it is not a new debate. Classic social psychological papers describing the fundamental attribution error (Ross, 1977), conformity via group pressure (Asch, 1956), obedience to authority (Milgram, 1963) and tyrannical behaviour (Haney, Banks & Zimbardo, 1973) have all inspired contextual explanations for behaviour. However, SCMT goes further by asserting the need to consider *multiple* contexts and the *transition between contexts*. People's benevolent intentions are not overwhelmed simply because of the scale of global poverty. The problem is caused by the rapid transition from historical contexts where empathy was

direct and relatively bounded, to contemporary contexts where such caring processes are impossible to consistently maintain. SCMT predicts greater hypocrisy in places where the transitions between contexts has been comparatively vast and/or fast, as individual-level and group-level adaptation processes have yet to catch up.

The aim of SCMT is thus to encourage research capturing aspects of these multiple contexts. We need to understand further how people perceive their lives, choices and motives as varying between contexts, similar to the way in which Chapter 2 examined perceived value change over time. We need to understand further how the potentially problematic outcomes of contextual mismatches unfold, similar to the way in which Chapter 3 examined the effects of providing information about the context in which clothing goods are produced. We need to understand further the types of factors that have changed between contexts and that have a significant impact on pro-social values, attitudes, intentions and actions, similar to the way in which Chapter 4 examined the role of perceived complexity in judgements of behaviour. This work necessarily requires a wide range of data sources, experimental methods and expertise in several literatures. Each chapter has thus shown how the broad framework of SCMT can be used to inform comparatively specific and well-defined psychological processes. The model also inherently encourages the bridging of theoretical spaces that currently exist within psychology. Filling these spaces is crucial if social psychology is to play a greater role in tackling the problems it theoretically addresses (Ellemers, 2013).

Chapter 2 showed that people perceive their own values as changing over time. Additionally, the findings indicated that people did not see the motivational oppositions between values that have been found in previous research (Schwartz, 1992; Schwartz & Boehnke, 2004). This tells us two important things in relation to SCMT. Firstly, people are comfortable with changing the importance they attach to values depending on contexts, which in this case were time points across the lifespan. Secondly, thinking about values over

time does not cause people to see the inherent conflicts that concurrent pursuit of the values is likely to cause (e.g., aspiring for greater wealth, power and equality in later life). Whilst it is not possible to take a comparable values measure from individuals living in past social contexts, the historical evidence presented in the general introduction (Baumeister, 1987; Cushman, 1990) makes it plausible that people would have felt less free to alter their values over their lifespan. This lack of freedom may also have been accompanied with reduced ambition in pursuing oppositional values, as flexibility in primary motives was not seen as possible or perhaps even desirable.

The contemporary perceived variability in values could be a positive outcome, if individuals feel truly free to shift their values depending on context and this offers paths to greater autonomy and wellbeing. Indeed, the evidence of a relative increase in the importance attached to values (particularly those relating to openness) from Study 2 suggests that taking a temporal perspective can help people to take an aspirational perspective on their values. However, the well-being data from Study 3 suggests that variance in different values is associated with both negative and positive states of wellbeing. From the perspective of SCMT, it is thus important that we understand further the real world effects of perceiving flexibility in values. Ideas that could address these effects will be discussed further in the future directions section.

Chapter 3 investigated how ethical information can impact upon hypocritical intentions in the domain of purchasing. The findings showed that people could present a range of hypocritical positions. Initially, people demonstrated an intra-personal discrepancy of frugality and an inter-personally hypocritical suggestion that others were less frugal. Information about the human and environmental costs of manufacturing inverted this position and led people to demonstrate an intra-personal discrepancy of spending too little on a range of items. Again, the inter-personal hypocrisy came as they demanded others alter their



behaviour comparatively more, in light of the ethical information they had seen. Interestingly, this inter-personal hypocrisy appeared even in within-participants designs, suggesting that people were somewhat comfortable with demanding more from other people than they would demand from themselves. The addition of anchors into the ethical information provided the finding that higher anchors in general were more effective at increasing the gap between ought and actual estimates.

These studies were revealing from the perspective of SCMT, as they highlighted the diversity of hypocritical positions available to people in a contemporary context. Individuals felt pressured from opposite directions to spend both more and less, and their stated should-actual positions were strongly affected by the framing of the decision. This shows how people struggle to consume in ways that fit their values. Furthermore, as outlined in the introduction chapter, the majority of human societies have traded and consumed goods in production chains that were relatively direct and simple to understand. However, the rise of ever more complex production systems has led to consumers being ever more distant from producers, which has contributed to a weaker understanding of the consequences and side effects of purchasing. This contemporary perception of complex marketplaces and low consumer power makes trying to act in a morally consistent manner very difficult. Self-interest in saving money could be one area where people feel they still have some control and this could help explain why bargain hunting is so prevalent (Darke, Freedman & Chaiken, 1995). Unfortunately, the consequence of consumer pressure for cheaper prices is often one of exploitation of people and/or the environment in the production chain. Encouragingly, the information about the human cost of manufacturing had a substantial effect, suggesting that people do care about the distant consequences of their actions. A key objective for psychology is discovering how such benevolent concerns can survive in a modern context where, as economists often say, price is king.

One potential approach tackles the perceived complexity of the decisions directly. Chapter 4 outlined how perceived complexity can lead to less strong moral condemnation of a controversial behaviour. In line with existing theories of moral judgement (Hilton et al., 2010) and blame (Malle et al., 2014), these effects were most pronounced when human agency was the focus of the question. Additionally, greater perceived complexity led to lower levels of perceived responsibility, self-efficacy, collective efficacy and collective action tendencies. Of importance, this effect of perceived complexity emerged even though the information given was essentially the same; it was merely chunked in a simpler or more complex manner. It matters whether the cause and effect process chains merely *look* simple or complex.

A key aim of SCMT is to identify and isolate contextual differences that have changed over time. Contemporary societies undoubtedly contain more diffuse and complex networks relating to people and objects than their historical counterparts. Such complexity makes it harder for people to be confident in assigning responsibility, and this leads to the hypothesis that increased perceptions of complexity cause less willingness to morally condemn a problematic action. Our social cognition processes developed in societies where cause and effect could be more easily identified. In today's world these processes find it difficult to cope with the intricate nature of society, leaving us in the position where we know an action leads to an outcome, but we cannot track the trajectory of the process. In other words, although we know more of action A leads to more of consequence B and we accept that consequence B is undesirable, we cannot easily use our existing judgement processes to assign responsibility to the cause of (or agent responsible for) action A. This leaves us in a position where behaviours become socially normal, despite seeming morally wrong. SCMT can help identify factors, such as perceived complexity, that have changed across contexts

and thus highlight reasons underpinning why morally wrong actions seem to maintain their prevalence, legality and legitimacy.

### **Future Directions**

There a number of specific future directions that are worth pursuing in the short-term. The following suggestions are diverse and not easy to integrate smoothly with one another. I hence hope that the overarching theoretical position of SCMT helps keep the narrative coherent in this section, whilst also illustrating the potentially exciting research on offer.

SCMT is a theory defined by contextual influences. It is important that these influences continue to be acknowledged. Studying and treating individuals in complete isolation leads to theory with weak explanatory power (Haslam, Jetten, Reynolds & Reicher, 2011). For example, an investigation into recycling found that the theoretical explanatory power of the theory of planned behaviour (Ajzen, 1985) was significantly reduced in areas where facilities were notably poorer (Knussen, Yule, MacKenzie & Wells, 2004). This important theory in social psychology focuses on individual-level predictors of behaviour (attitudes, norms, and perceived behavioural control), without explicitly modelling the context (except insofar as it is reflected through the individual-level variables). When it comes to generalising social psychological theory, context really matters.

Consequently, one useful future research direction entails the examination of habits. Habits are routine behaviours that are automatically cued by contextual information (Neal, Wood, Labrecque & Lally, 2012). Accordingly, if we can set initial habits in motion which are closely aligned with people's values, we may be able to harness the power of habitual behaviour for self-congruent actions when self-control is depleted (Neal, Wood & Drolet, 2013). Habits could thus be a vital tool in challenging context mismatches, even when willpower is low, as they allow people to act in accordance with the values they consider

**Commented [CF30]:** Spelling corrected.

most important. If the cherished value entails caring for others (which is one of the highest-rated values globally, e.g., Bardi et al., 2009), this would mean setting habits that focus on benevolent values. For example, people can be encouraged to set aside a regular amount of time to devote to actions that align with their self-transcendence values. This could involve direct action to help other people, such as volunteering. Alternatively, less concrete forms of action, such as practicing mindfulness (Brown & Ryan, 2003) could help people both with their well-being and their broader life goals. Such regular activities would provide a balance against the contemporary context of feeling powerless and overwhelmed at the scale of vulnerability in the world. In this way, habits can constrain the chances for hypocrisy in one's everyday life.

Another important direction for future study involves considering how, as outlined in the introduction chapter, the accusation of hypocrisy can be a potent threat to self-integrity. Such threats can lead to defensive responding, rather than positive change (Sherman & Cohen, 2006). Self-affirmation theory (Steele, 1988) suggests that being reminded of positive aspects of the self can reduce defensiveness and it has been used in several contexts to show that such defensiveness can be reduced. For example, recalling previous episodes of personal kindness helped reduce denial and increased pro-environmental intentions (Sparks, Jessop, Chapman & Holmes, 2010). Additional evidence suggests that self-affirmation processes work when focussing on intrinsic aspects of the self, rather than achievements (Arndt, Schimel, Greenberg & Pyszczynski, 2002) and that the boost to the self comes because of a specific focus on the self-transcendent aspect of people's values, rather than simply boosting the self-concept in general (Crocker, Niiya & Mischkowski, 2008). Furthermore, self-affirmation procedures are more likely to work if the affirmation comes before the threat, rather than after a defensive response has been formulated (Critcher, Dunning & Armor, 2010). If people are to succeed in overcoming negative outcomes caused by context

mismatches, we will need to integrate the findings above into any manipulations that could elicit feelings of the self being threatened. More broadly, it is important to understand further how people can strive for greater pro-social behaviour without suffering from the potentially deleterious effects of perfectionism (Terry-Short, Owens, Slade & Dewey, 1995). Ironically, if we are to reduce hypocrisy in the world, we may first need to learn how to accept that we all often act hypocritically. The key aspect of this recognition is ensuring hypocrisy does not then become normalised and socially entrenched, as has arguably happened for self-interest (Miller, 1999).

Aside from reducing defensiveness and considering explicit responses, it is also important to consider indirect measures that might help us understand how contexts encourage the prevalence of different types of hypocrisy. Indeed, using multiple methods in social psychology is vital if we are to truly understand the strengths and limitations of a theoretical position (Ellemers, 2013). Since the creation of implicit association tests (Greenwald, McGhee & Schwartz, 1998) they have been used to capture subconscious aspects of morality (Perugini & Leone, 2009). In addition, they have been used to calculate contrasts between explicit and implicit measures of attitude to test for potential heightened ambivalence (Briñol, Petty & Christian, 2006). Given SCMT's assumption that the 21<sup>st</sup> century is a particularly productive context for hypocrisy, it would be worth investigating whether larger contextual mismatches lead to greater explicit-implicit ambivalence, particularly in moral domains. If implicit measures predict moral behaviour, but explicit measures predict action in hypothetical situations (Perugini & Leone, 2009), then implicit association tests would undoubtedly be a useful tool to consider, alongside the more explicit self-report measures of hypocrisy used in the studies reported above and elsewhere.

These potential agendas are important in part because of many positive aspects of decreasing hypocrisy. Integrity can be seen as standing up for what you believe, but aside

from self-consistency it also carries a dimension of needing to act with society's interests in mind (Sparks & Farsides, 2011). Sparks and Farsides (2011) note that integrity is an understudied topic and suggest that addressing this issue would also help us understand the concept of hypocrisy further. From the perspective of SCMT, it is important to understand factors and individual differences that allow people to act with integrity when faced with competing motives derived from separate contexts. There are people who generally act pro-socially and can influence others to do the same (Weber & Murnighan, 2008) and such individuals should be studied further to see whether they are also likely to act with greater integrity.

Additionally, whilst understanding how to decrease people's tendency for hypocrisy in general is a worthwhile aim, hypocrisy might also be a useful construct to encourage breaking down some of the barriers to pro-social action. Empathy has been used as an effective tool to encourage people to care about previously stigmatised groups (Batson, Chang, Orr & Rowland, 2002), although it appears important that individuals feel autonomous over the empathetic process (Pavey, Greitemeyer & Sparks, 2012). If defensive processes can be avoided, hypocrisy could be used to increase autonomously motivated empathy, as the motivation to act would be highly relevant to the individual's personal standards and not simply a reminder of normative pro-social behaviour.

We thus have a range of tools to help people be more who they want to be. The research ideas outlined briefly above show how SCMT can be integrated into existing theory to help make these tools more effective. At the same time, however, we need to consider how at a fundamental level we can avoid the negative effects of perfectionism, whilst harnessing the positive effects of striving to be the best we can be (Terry-Short et al., 1995). As a society, we thus need to consider how we avoid feeling overwhelmed by complexity and thus comparatively morally powerless, or we risk living in a world where the gaps between what

we think we should do and what we actually do will continue to grow. SCMT can help scientists and the public understand why such discrepancies exist, which in turn can lead to positive action.

### **Practical Implications**

The previous section identified specific areas of social psychological research that SCMT could usefully work alongside. However, there are broader implications that SCMT produces that sit more at the boundaries of interdisciplinary science and contemporary politics. This section aims to outline how SCMT can work at these boundaries, to help encourage a more pro-social world.

Habits were earlier introduced as a potential tool for helping people act more in alignment with the pro-social values they support, thus reducing hypocrisy. However, context mismatches cannot be solved by individual action alone. Organisations and governments also need to play a role in helping people live in a world that acts in accordance with their values. Presently, governments in most countries continue to pursue economic growth as the main path for national stability and progress (Eckersley, 2000), yet there is considerable evidence to question the logic of such a strategy. There is little or no relationship between increasing wealth and happiness, especially in already wealthy nations (Oswald, 1997) and pursuing perpetual economic growth poses a genuine threat to the very social stability it aims to nurture (Jackson, 2009). Furthermore, in the face of truly international challenges such as climate change, it is plausible to suggest that the current system of global governance is ill-equipped to deal with these issues, as a key goal of each individual nation is to focus on their own best interests in the short-term (Attfield, 2003).

Potentially then, we currently live in a world where our international systems of governance are not fit for purpose, at the same time as our national governments pursue

policies that threaten prospects of sustainability which do not even bring happiness in the short-term. Moreover, as outlined in the introduction chapter, the individual norm of self-interest (Miller, 1999) is continually reinforced. The result is that businesses, social institutions and governments act in ways that are far removed from the pro-social values people tend to prioritise. SCMT can help to illustrate why such illogical tendencies exist and help to design interventions to break these apparent paradoxes.

For example, one pilot study I ran looked at whether historical examples of successful social change could reduce the sense of being overwhelmed by current problems and thus inspire equivalent pro-social collective action in contemporary contexts. An additional factor of interest was whether framing past successes and failures as the responsibility of human efforts or technological efforts might moderate any inspiration effect. Accordingly, participants saw videos about the successful eradication of polio in India, or the failure to eradicate polio in Pakistan, with associated framing variants of human collective action or technological progress. Preliminary analyses suggested that the video that highlighted success via human action was the most likely to encourage positive ratings of self-efficacy, collective efficacy and collective action in other domains (e.g. tackling global poverty). Manipulating perceptions of contextual overlap could thus help reduce hypocrisy, from the individual level to the international governmental level.

Of course, a key facilitator of long-term social change is the law. Ruhl (1996) outlined how the dynamic relationship between the law and society cannot be easily explained with reductionist scientific procedures. In order to understand how the law has developed over time to represent normatively desirable boundaries in society, he suggests we need to consider the multiple contextual influences that contribute to a dynamic system, similar to complexity theory in biology (Ruhl, 1996). A related concern for SCMT is that historical contexts continue to drive actions in contemporary contexts, long after they were helpful.



For example, the issue of food speculation used in Chapter 4 is one where no true cause and effect, between the individual speculator and the associated suffering of a person in the developing world some time in the future, could be realistically isolated. Yet, we can empirically demonstrate correlations between speculation, price volatility and starvation. A law primarily based on cause and effect may thus have worked effectively throughout the majority of human development, when societal complexity was much less intricate and hence where the link between perpetrator and victim could be easily drawn. However, we currently live within complex networks where cause and effect cannot be easily identified. In combination with the earlier points made regarding the suitability of global governance systems, this leads to dilemmas around how to deal with multifaceted issues, such as who should be held accountable for the Holocaust (Jones, 1999), how can countries be incentivised and legally accountable for their actions in relation to climate change (von Stein, 2008) and how can corporations act both in the interests of society and their own financial performance (Devinney, 2009).

If we continue to rely on causality to infer moral responsibility, we are unlikely to meet the challenges of living within such complex networks. Using SCMT, we can identify how historical legal precedents may no longer be appropriate for contemporary contexts and I would argue that this may require a fundamental shift towards a more correlational morality, supported by law. People use heuristics to make judgements in uncertain situations (Gilovich, Griffin & Kahneman, 2002) and one such shortcut people may employ is the law as a heuristic for moral acceptability, by essentially thinking “if it were that bad, it would be illegal”. Unfortunately, as social contexts have become more complex, behaviours that produce anti-social consequences, but whose responsibility cannot be assigned to an individual, have increased in likelihood. This issue relates to Freudenberg’s (2014) analysis of corporate actions that he terms as “Lethal But Legal”.

Legal frameworks can help us adapt society's needs to contexts that change over time. But adapting laws and regulations can be a very time consuming process and contexts can change in other ways too. This dissertation focussed on how context mismatches can occur because of changes over time. However, geographical distance, technological development and psychological distance are other factors that could also be used to explain why people act hypocritically. For instance, the model could test whether people are more likely to act in alignment with the values they support when they are further away from their usual context. Might someone be as likely to act pro-socially if they are away on holiday and see a person in need, as they would were they in their home town or country? Equally, the pace of technological change is having fundamental impacts on social behaviour. Greenfield (2014) indicated how the current post-internet generation are facing new social problems, such as cyber-bullying and internet addiction, caused by ever greater integration between technology and society. Within a generation, our methods for meeting basic human social needs have changed considerably. A key question from the perspective of SCMT is thus whether greater contextual change, brought about via technological development, is making it more difficult for us to act in alignment with our intrinsic concerns. SCMT should thus be extended to incorporate other factors that cause contexts to change and could thus cause context mismatches.

Aside from how contexts can change, SCMT suggests that hypocrisy becomes deep-rooted via cyclical feedback processes that make hypocritical tendencies socially normative (see Figure 1.4). It has been shown that recalling past social transgressions can effectively numb one's conscience, thus lowering the required standard for acting pro-socially (Cojoc & Stoian, 2014). Similar processes may well occur at a more diffuse level with hypocrisy. If we do live in a time where people find it particularly difficult to consistently act in line with their values, then people may well normalise such discrepancies. This process would then become

cyclical and effectively form a meta-hypocritical position, where it becomes seemingly acceptable to act unacceptably and high levels of hypocrisy become viewed, wrongly, as merely being part of human nature. Humans are necessarily imperfect, but that should not inhibit us from trying to be the best we can be.

### **Limitations**

Before concluding this chapter, it is important to consider four limitations to SCMT in its current state. Firstly, the very early stages of this theoretical development and its necessarily broad position, combine to make the theory and the exact definitions of its component parts yet to be fully realised. Whilst all theories are flawed (Festinger, 1987/1999), there is a great deal of work to be done to give SCMT the kind of precision that other theories in social science can offer. Although the current description offers a useful foundation for the theoretical architecture, the walls and the roof have yet to be completed.

Secondly, the three core chapters presented here act only as examples of how the theory can be used to inform research. They do not act as unequivocal support for the theory, but they do show how it can help illuminate contemporary psychological processes in a way that existing treatments do not. The discussion sections within each chapter and this general discussion show how SCMT can be helpful in offering a different perspective on existing psychological questions.

Thirdly, subjective interpretation is required in SCMT. As Baumeister (1987) and Cushman (1990) argued in their previously described works, evaluating historical data is a qualitatively different style of analysis compared to standard empirical methods in psychology, but the benefits of using such sources are far greater than the costs. Understanding the varying social contexts of history may demand that researchers consider information that is notably far removed from their usual data sources and may also offer less

opportunity for pure objective rigour. However, a historical perspective offers the potential for greater insight, and the risk of overstretching this perspective can be managed carefully if there is an ongoing, recursive dialogue bridging historical insights and data as they emerge.

Finally, there is an important philosophical limitation. Furia (2009) provides a summary of why some political theorists and philosophers suggest that taking a stance of anti-hypocrisy is dangerous. To some extent, the arguments for avoiding an anti-hypocritical stance map onto the reasons to be wary of perfectionism. For example, if we set impossibly high standards for our leaders, we might never be able to trust them sufficiently in order to achieve positive social outcomes (Shklar, 1984). Additionally, acting defensively or using self-deception systems to avoid feeling hypocritical can be beneficial to the welfare of the individual in some circumstances (Critcher et al., 2010; von Hippel & Trivers, 2011). There are thus reasons to counter-balance SCMT's general emphasis on hypocrisy as being a broadly negative state. However, like Furia (2009) I would argue that hypocrisy is more of a threat than anti-hypocrisy to democratic societies, which aim to work in the interests of the many. Nonetheless, it is important to continue to develop both the philosophical and scientific elements of SCMT, as it progresses from its current formative stage.

### **Final Conclusion**

SCMT is a model that asks us to pay attention to multiple contexts and consider the simultaneous trajectories of change in contextual factors and motives. A key aim of this model is to be both theoretically robust enough to further our scientific understanding of human behaviour, but also accessible enough to non-scientists. Public interest in the science behind satisfaction with life can be seen by the growth of books written particularly for public consumption. Many of these books focus on modern contexts as being responsible for serious personal and social issues. The contexts include overwhelming amounts of

information (Brabazon, 2013), a lack of corporate legal progress (Freudenberg, 2014), rapid technological development (Greenfield, 2014), materialism (James, 2007) and social pressures to excel (Foley, 2010). Other books also show how we have evolved to make decisions that are often seen as sub-optimal in modern contexts, leading to irrationality (Sutherland, 1992), a disproportionate focus on short-term gains (Kahneman, 2012) and hypocrisy (Kurzban, 2012). Together, these texts demonstrate a wealth of evidence for interest in contextual mismatches, but what is lacking is a framework to integrate these different types of evidence within. SCMT can help fill this gap.

This dissertation started with a quotation relating to obesity and then extended the analogy to social psychological concerns. Returning briefly to this comparison, obesity has arisen not simply because of industrialised processes allowing calorific food to be comparatively cheap and abundant. Societies suffering from obesity epidemics also tend to have reliable sources of tap water, but there is not an equivalent epidemic of people suffering from hyponatremia. Similarly for psychological processes, social and cultural changes do not necessarily cause hypocrisy. Indeed, many positive consequences have resulted from human development. Nonetheless, certain contextual changes, in combination with important human motives, have led to problems for people trying to live in alignment with their core beliefs. It is thus the combination of previous contexts, current contexts and current motives that need to be considered concurrently if we are to understand why problems occur. The three central chapters of this dissertation have shown how SCMT can help address such concerns. Value instability, ethical consumption and the use of complexity as a heuristic for moral judgement, are all examples of how SCMT is applicable to contemporary scientific and social issues.

SCMT is in its early stages but it has powerful potential. It is also a theory that encourages greater attention towards multiple contexts for understanding how people and society interact. As stated previously, SCMT is an optimistically grounded theory and as

such, the more we can help people be who they truly want to be, the more we will see a pro-social world. We currently live in a world where power is very unequally distributed, leading to the startling coexistence of super-yachts and starving children. Furthermore, such outcomes appear to have become popularly regarded as an unavoidable result of global economic, political and social complexities, and anybody who challenges this assumption is likely to face accusations of over-simplicity and naivety. SCMT offers a path away from this self-fulfilling prophecy, by providing contextual evidence that shows the flexibility in human potential. It is worrying that people who try and act pro-socially sometimes face antagonistic responses, possibly based on the consequent apparent threat to others' sense of moral worth (MacFarquhar, 2015). However, as MacFarquhar (2015) notes, people who act heroically and pro-socially in times of crisis do not tend to face such accusations. We currently live in a world of daily crises, but perhaps because they are daily, they are reframed as non-critical or lacking in urgency. A broader contextual overview, via SCMT, would help us all see that such reframing is not inevitable. It is thus important to reaffirm that the current context is one of urgency.

The potential outcome of SCMT is a win-win situation. Not every pro-social action is cost-free in the short-term. However, as outlined in this thesis, there is a wealth of evidence that well-being for the self and society can be substantially enhanced by living in greater accord with the pro-social values humans strongly support. If we can appreciate the wider contextual influences on our behaviour, highlighted by SCMT, we might all be happier in the short-term and the long-term. We will also then devote resources and attention away from things that fail to bring us fulfilment and towards those who need the resources and attention more – the vulnerable people in the world who have very little choice over how they cope with their suffering. SCMT is a theory of hope in humanity. A compassionate world is a possibility.

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## Appendices

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Appendix A; Scrambled sentences task

Instructions: Please make a grammatical sentence out of each set of words. Each sentence should be four words long (leaving one word unused).

Self Enhancement Sentences

myself without I after looked  
was powerful John always index  
chair great feels achieving things  
Matt great switch authority had  
wealth Thursday Greg's liked I  
being people keyboard like successful  
oak capably they things distributed  
man the ambitious was midnight  
being sale important is influential  
sister had bracket prestige Suzie's  
woman status base the had  
great thumb showed Sarah dominance  
liked competent being Mark speak  
indicative money cherished Luke his  
along she coming enjoyed rug  
the image Jim valued shopkeeper  
was mousse recognition reached social  
Louise page power admired social  
enjoyed cat having James control  
persistent goals her Jo reached

Self Transcendence Sentences

others without I after looked  
was dependable John always index  
chair great feeling benevolent is  
Matt very switch broadminded was  
wisdom Thursday Greg's liked I  
being people keyboard like peaceful  
oak equally they things distributed  
man the helped really midnight  
being sale important is honest  
sister was bracket forgiven Suzie's  
woman loyal base the was  
great thumb showed Sarah responsibility  
liked being tolerant Mark speak  
indicative friendship valued Luke his  
along she came faithfully rug  
the genuinely Jim acted shopkeeper  
was mousse justice reached social  
Louise page global admired beauty  
enjoyed cat natural James surroundings  
persistent environment the Jo protected

Filler Sentences

asleep Friday the fell dog  
was the inflated thirsty tyre  
Emma yellow are lemons often  
cheetahs can alternative fast run  
watched the lines television girl  
fresh kicked John ball the  
she bed purple to went  
their mild today is it  
the notify book he read  
schedule pasta liked child the

## Appendix B: Values over time measure

### Values list

You will now be presented with a list of ten values. People tend to vary in their ratings of the relative importance of these values. We would like you to rate each value in three ways:

1. How important you think this value has been as a guiding principle in your life to you in the past.
2. How important you think this value is as a guiding principle in your life now.
3. How important you think this value will be as a guiding principle in your life in the future.

Rather than simply complete the list in the order they are presented, we would like you to do three things:

1. Look over the whole list of values so you are aware of each one (they are presented below).
2. Begin by rating the values that are either most important to you or least important to you.
3. Then move onto completing the values that you feel fall somewhere in between.

Here is the list of values:

- Helpfulness (working for the welfare of others)
- Power (control over others, dominance)
- Responsibility (acting with others in mind)
- Success (achieving goals)
- Forgiveness (willing to pardon others)
- Wealth (making money)
- Equality (equal opportunity for all)
- Ambition (hardworking, aspiring)
- Honesty (genuine, sincere)
- Influence (having an impact on people and events)

...

Helpfulness (working for the welfare of others)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Power (control over others, dominance)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Responsibility (acting with others in mind)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Successes (achieving goals)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Forgiveness (willing to pardon others)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Wealth (making money)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Equality (equal opportunity for all)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ambition (hardworking, aspiring)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Honesty (genuine, sincere)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Influence (having an impact on people and events)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Values list

You will now be presented with a list of ten values. People tend to vary in their ratings of the relative importance of these values. We would like you to rate each value in three ways:

1. How important you think this value has been as a guiding principle in your life to you in the past.
2. How important you think this value is as a guiding principle in your life now.
3. How important you think this value will be as a guiding principle in your life in the future.

Rather than simply complete the list in the order they are presented, we would like you to do three things:

1. Look over the whole list of values so you are aware of each one (they are presented below).
2. Begin by rating the values that are either most important to you or least important to you.
3. Then move onto completing the values that you feel fall somewhere in between.

Here is the list of values:

- Creativity (uniqueness, imagination)
- Politeness (acting in alignment with social norms)
- Adventurous(daring, happy to engage in risk)
- Moderate(tend to stay near the middle ground)
- Curious(interested in finding out about different ideas and beliefs)
- Respect for tradition (preservation of time honoured customs)
- An exciting life(stimulating experiences)
- Obedience(following instructions from others)
- A varied life (filled with challenge, novelty and change)
- Devotion(holding to religious faith or spiritual belief)

...



Creativity (uniqueness, imagination)	Opposed to my values	Not important			Moderately important			Very important	Of supreme importance
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Pottiness (acting in alignment with social norms)	Opposed to my values	Not important			Moderately important			Very important	Of supreme importance
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Adventurous (daring, happy to engage in risk)	Opposed to my values	Not important			Moderately important			Very important	Of supreme importance
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Moderate (tend to stay near the middle ground)	Opposed to my values	Not important			Moderately important			Very important	Of supreme importance
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Curious (Interested in finding out about different ideas and beliefs)	Opposed to my values	Not important			Moderately important			Very important	Of supreme importance
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Respect for tradition (preservation of time honoured customs)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

An exciting life (stimulating experiences)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Obedience (following instructions from others)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A varied life (filled with challenge, novelty and change)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Devotion (holding to religious faith or spiritual belief)	Opposed to my values	Not important	Moderately important				Very important	Of supreme importance	
	-1	0	1	2	3	4	5	6	7
In the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix C; Preference for Consistency Scale (Cialdini, Trost, & Newsom, 1995).

## **Task 3**

### **Questionnaire**

Your final task is to complete the following questionnaire. Please read each statement carefully and then circle your chosen response on the scale where you feel appropriate.

I prefer to be around people whose reactions I can anticipate:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

It doesn't bother me much if my actions are inconsistent:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

Even if my attitudes and actions seemed consistent with one another to me, it would bother me if they did not seem consistent in the eyes of others:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

It is important to me that those who know me can predict what I will do:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I want to be described by others as a stable, predictable person:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

It is important that my actions are consistent with my beliefs:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

Admirable people are consistent and predictable:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

The appearance of consistency is an important part of the image I present to the world:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

It bothers me when someone I depend on is unpredictable:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I don't like to appear as if I'm inconsistent:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I get uncomfortable when I find my behaviour contradicts my beliefs:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

An important requirement for any friend of mine is personal consistency:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I typically prefer to do things the same way:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I dislike people who are constantly changing their opinions:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I want my close friends to be predictable:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

It is important to me that others view me as a stable person:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I make an effort to appear consistent to others:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

I'm uncomfortable holding two beliefs that are inconsistent:

Strongly Disagree	Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7	8	9

*Thank you – that completes this task.*

Appendix D; Value instantiation items.

Here are the scenarios. Please think about participating in each one and decide the extent to which your decision would be driven by personal interest vs. the needs of others.

	Entirely driven by personal interest		Mostly driven by personal interest		Driven by a balance between personal and others' needs		Mostly driven by the needs of others		Entirely driven by the needs of others
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
If you are deciding which career to pursue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are asked to sign a petition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are deciding which course to study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are buying a car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are asked to help organise a party for a friend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are deciding whether to donate some money to charity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are voting in a student election	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are buying some clothes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are voting in a general election	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you are buying some food in a supermarket	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix E: Satisfaction With Life Scale (SWLS)

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale provided, indicate your agreement with each item by choosing the appropriate number. Please be open and honest in your responding.

In most ways, my life is close to ideal

The conditions of my life are excellent

I am satisfied with my life

So far I have gotten the important things I want in life

If I could live my life over, I would change almost nothing



## Appendix F: Scale of Positive and Negative Experience (SPANE)

Thanks for those responses. Now we would like you to think about what you have been doing and experiencing during the past four weeks. Then please report how much you experienced each of the following feelings, using the scale below. For each item, simply select a number from 1 to 5.

Positive

Negative

Good

Bad

Pleasant

Unpleasant

Happy

Sad

Afraid

Joyful

Angry

Contented

## Appendix G: Flourishing Scale (FS)

Thanks for those answers. Finally, please rate your agreement or disagreement with each of the following statements. There are eight statements to answer.

I lead a purposeful and meaningful life

My social relationships are supportive and rewarding

I am engaged and interested in my daily activities

I actively contribute to the happiness and well-being of others

I am competent and capable in the activities that are important to me

I am a good person and live a good life

I am optimistic about my future

People respect me

## Appendix H: Identification With All Humanity (IWAH)

How close do you feel to each of the following groups?

1 = not at all close

2 = not very close

3 = just a little or somewhat close

4 = pretty close

5 = very close

- a. People in my community
- b. People in my country
- c. People all over the world

How often do you use the word “we” to refer to the following groups of people?

1 = almost never

2 = rarely

3 = occasionally

4 = often

5 = very often

- a. People in my community
- b. People in my country
- c. People all over the world

How much would you say you have in common with the following groups?

1 = almost nothing in common

2 = little in common

3 = some in common

4 = quite a bit in common

5 = very much in common

- a. People in my community
- b. People in my country
- c. People all over the world

Please answer all remaining questions using the following choices:

- 1 = not at all
- 2 = just a little
- 3 = somewhat
- 4 = quite a bit
- 5 = very much

Sometimes people think of those who are not a part of their immediate family as “family”. To what degree do you think of the following groups of people as “family”?

- a. People in my community
- b. People in my country
- c. All humans everywhere

How much do you identify with (that is, feel a part of, feel love toward, have concern for) each of the following?

- a. People in my community
- b. People in my country
- c. All humans everywhere

How much would you say you care (feel upset, want to help) when bad things happen to:

- a. People in my community
- b. People in my country
- c. People anywhere in the world

How much do you want to be:

- a. A responsible citizen of my community
- b. A responsible citizen of my country
- c. A responsible citizen of the world

How much do you believe in:

- a. Being loyal to my community
- b. Being loyal to my country
- c. Being loyal to all mankind

When they are in need, how much do you want to help:

- a. People in my community
- b. People in my country
- c. People all over the world

## Appendix I: Humanity Esteem scale

Instructions: The following statements ask about your beliefs and perceptions of human beings in general, regardless of religion, ethnicity, or gender. That is, what are your thoughts about the average human being? Please rate the extent to which you agree or disagree with each of the following statements using the scale below each statement.

1. I feel that the human species is very valuable, at least on an equal plane with other species in the universe.
2. I feel that human beings have a number of very good qualities.
3. All in all, I am inclined to regard the human species as a failure.
4. Human beings are able to prosper as well as any other species in the universe.
5. I feel that human beings do not have much to be proud of.
6. I take a positive attitude toward humanity.
7. On the whole, I am satisfied with the evolution of humanity.
8. I wish I could have more respect for humanity in general.
9. Human beings are useless at times.
10. At times I think that human beings are no good at all.  
(items 1-10 scale from -3 *strongly disagree* to +3 *strongly agree*)

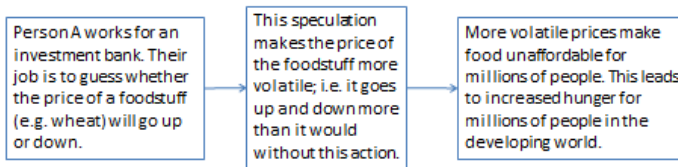
11. Overall, how favourable are you toward human beings in general?

(item 11 scale from -4 *extremely unfavourable* to +4 *extremely favourable*)

Appendix J; Models of food speculation used in video manipulation

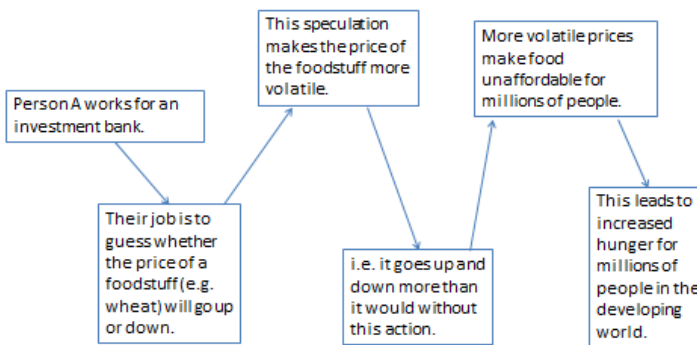
Simple model:

The model is quite simple...

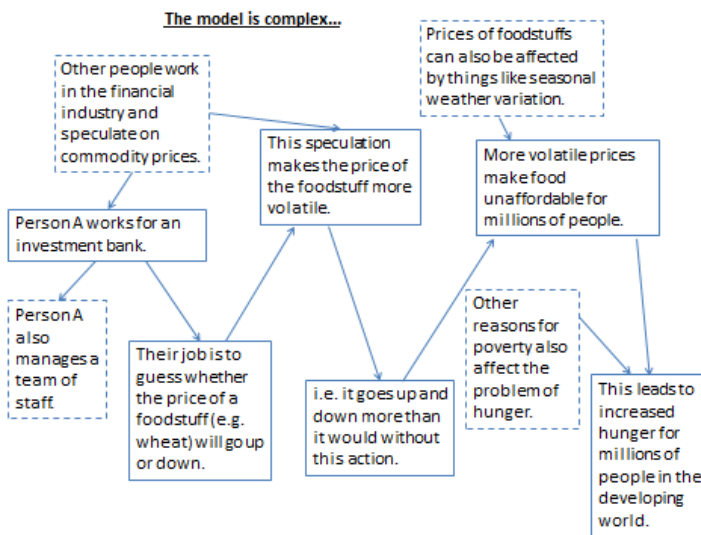


Complex model (Study 2):

The model is quite complex...



Complex model (Studies 1, 3 & 4):



Appendix K: Attributional Complexity (AC) scale

**Q21**

Please rate the statements on the following scale:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I don't usually bother to analyse and explain people's behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once I have figured out a single cause for a person's behaviour I don't usually go any further.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe it is important to analyse and understand our own thinking processes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think a lot about the influence I have on other people's behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have found that the relationships between a person's attitudes, beliefs and character traits are usually simple and straightforward.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q22**

Please rate the statements on the following scale:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
If I see people behaving in a really strange or unusual manner I usually put it down to the fact that they are strange or unusual people and don't bother to explain it any further.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have thought a lot about the family background and personal history of people who are close to me, in order to understand why they are the sort of people they are.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't enjoy getting into discussions where the causes of people's behaviour are being talked over.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have found that the causes for people's behaviour are usually complex rather than simple.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very interested in understanding how my own thinking works when I make judgements about people or attach causes to their behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q23

Please rate the statements on the following scale:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I think very little about the different ways people influence each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand a person's personality/behaviour I have found it is important to know how that person's attitudes, beliefs and character traits fit together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I try to explain other people's behaviour I concentrate on the person and don't worry too much about all the existing external factors that might be affecting them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have often found that the basic cause for a person's behaviour is located far back in time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really enjoy analysing the reasons or causes for people's behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q24

Please rate the statements on the following scale:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I usually find that complicated explanations for people's behaviour are confusing rather than helpful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I give little thought to how my thinking works in the process of understanding or explaining people's behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think very little about the influence that other people have on my behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have thought a lot about the way that different parts of my personality influence other parts (e.g. beliefs affecting attitudes or attitudes affecting character traits).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think a lot about the influence that society has on other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q25



Please rate the statements on the following scale:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
When I analyse a person's behaviour I often find the causes form a chain that goes back in time, sometimes for years.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not really curious about human behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer simple rather than complex explanations for people's behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When the reasons I give for my own behaviour are different from someone else's, this often makes me think about the thinking processes that lead to my explanations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q26



Please rate the statements on the following scale:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I believe that to understand a person you need to understand the people who that person has close contact with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to take people's behaviour at face value and not worry about the inner causes of their behaviour (e.g. attitudes, beliefs etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think a lot about the influence that society has on my behaviour and personality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have thought very little about my own family background and personal history in order to understand why I am the sort of person I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Appendix L: Need for Cognition (NFC) scale

I really enjoy a task that involves coming up with new solutions to problems.

I believe that if I think hard enough, I will be able to achieve my goals in life.

I am very optimistic about my mental abilities.

I would prefer a task that is intellectual, difficult and important to one that is somewhat important but does not require much thought.

I tend to set goals that can be accomplished only by expending considerable mental effort.

When something I read confuses me, I just put it down and forget it.

I take pride in the products of my reasoning.

I don't usually think about problems that others have found difficult.

I am usually tempted to put more thought into a task that the job minimally requires

Learning new ways to think doesn't excite me very much

I am hesitant about making important decisions after thinking about them.

I usually end up deliberating about issues even if they don't affect me personally.

I prefer just to let things happen rather than try to understand why they turned out that way.

I have difficulty thinking in new and familiar situations.

The idea of relying on thought to make my way to the top does not appeal to me.

The notion of thinking abstractly is not appealing to me.

I am an intellectual.

I find it especially satisfying to complete an important task that required a lot of thinking and mental effort.

I only think as hard as I have to.

I don't reason well under pressure.

I like tasks that require little thought once I've learned them.

I prefer to think about small, daily projects to long term ones.

I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

I find satisfaction in deliberating long and hard for hours.

I think primarily because I have to.

I more often talk with other people about the reasons for and possible solutions to international problems than about gossip and tidbits of what famous people are doing.

These days, I see little chance for performing well, even in "intellectual" jobs, unless one knows the right people.

More often than not, more thinking just leads to more errors.

I don't like to have the responsibility of handling a situation that requires a lot of thinking.

I appreciate opportunities to discover the strengths and weaknesses of my own reasoning.

I feel relief rather than satisfaction after completing a task that required a lot of mental effort.

Thinking is not my idea of fun.

I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.

I don't like to be responsible for thinking of what I should be doing with my life.

I prefer watching educational to entertainment programmes.

I often succeed in solving difficult problems that I set out to solve.

I think best when those around me are very intelligent.

I am not satisfied unless I am thinking.

I prefer my life to be filled with puzzles I must solve.

I would prefer complex to simple problems.

Simply knowing the answer rather than understanding the reasons for the answer to a problem is fine with me.

When I am figuring out a problem, what I see as the solution to a problem is more important than what others believe or say is the solution.

It's enough for me that something gets the job done, I don't care how or why it works.

Ignorance is bliss.

I enjoy thinking about an issue even when the results of my thought will have no effect on the outcome of the issue.