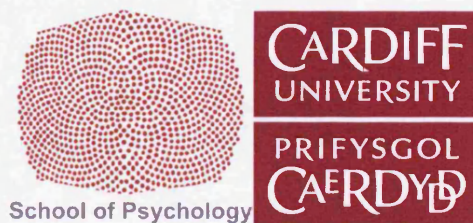# The Motivational and Emotional Dynamics of Social Values

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for the degree of Doctor of Philosophy
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Acknowledgements

Mostly, I am deeply indebted to my Mom for your support. Thank you for always having faith in me. Finally, I would like to acknowledge God's power and grace. Without all the miracles that happened, this thesis would not have been possible.

Thesis Summary

This research examined theoretical and emotional interrelations among social values, emotion, and action. Data from nine experiments revealed some novel and important findings. Experiments 1 to 3 examined the motivational dynamics of values by observing the effects of priming motivationally opposing values on judgment and behaviour. The results showed that priming tradition values reduced the better-than-average effect, but priming stimulation values increased it. Also, priming security values increased cleanliness behaviour, but priming self-direction values decreased it. Similarly, security values decreased curiosity behaviours, but priming self-direction values increased it. These findings supported the circular model's assumption about motivational interconnections between values.

Experiments 4-9 examined the motivational dynamics of values by observing the effects of priming emotion on the importance of motivationally opposing values. Three types of negative emotion were primed: sadness, disgust, and shame. The results revealed that the context of the emotions determined their effect on values. Experiments 4 and 5 found that death-related sadness (e.g., passing away of a family member), but not failure-related sadness, led to increased importance of self-transcendence values (e.g., helpfulness) and decreased importance of self-enhancement values (e.g., self-success). Experiments 6 and 7 found that moral disgust (e.g., terrorists), but not hygiene disgust, led to increased importance of self-transcendence values and decreased importance of self-enhancement values. Experiment 8 found that moral shame, but not performance shame, led to increased importance of conservation values (e.g., conformity) and decreased importance of openness to change values (e.g., independence). Experiment 9 found that the context of shame interacts with prior individual differences to shape values and that these effects extend to value-relevant behaviour.

Together, these findings provide novel support for important assumptions about motivational interconnections between values, while connecting these assumptions to extant evidence regarding the effects of goal and value priming on action and to evidence regarding the effects of emotion on social judgment and action. In addition, the results provide novel evidence in support of the importance of emotion appraisal processes in value-relevant judgment and behaviour.

Table of Contents

Chapter 1: Introduction

1.1 Chapter Overview

"It is preoccupation with possessions, more than anything else, that prevents us from living freely and nobly."

(Henry David Thoreau, b. 1817)

Henry David Thoreau, an American leading writer and transcendentalist in the nineteenth century (see Figure 1), posited that most of the luxuries and many of the comforts of life are not only overrated, dispensable, but more important, are also positive hindrances to the elevation of mankind. His ideas highlighted the conflict between greed, self-indulgence, and the development of an altruistic, humanistic society. His thoughts are parallel to one of the most famous contributions of Chinese culture to the world: Tao. The symbol of Tao has become a global icon representing the idea that balance is a part of nature and that we must strive for balance in our everyday life (see Figure 2). For instance, we must strike a balance between fulfilling self-interest and considering the well-being of the others. We may want to be a generous person, but it is not realistic to give away everything we own to help others. Similarly, as much as we may want to be wealthy and self-sufficient, we are social animals who need to engage with people, partly through offering help to others. These examples illustrate the core theme of the current research: the dynamic among competing values and its impact on judgment and behaviour.
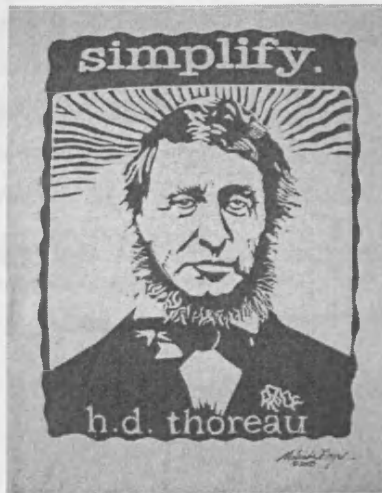
Figure 1: The sketch of Henry David Thoreau, together with one of his famous quotes.
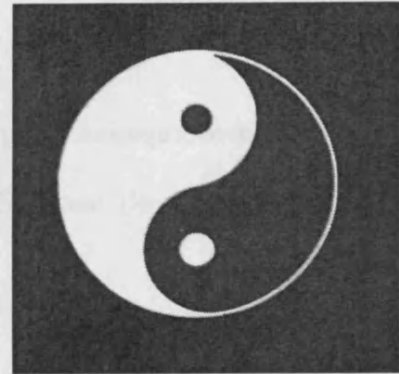
Figure 2: The symbol of Tao

Specific patterns of motivation interconnection have been described in an influential model of social values (Schwartz, 1992) and a more recent model of personal goals (Grouzet et al., 2005). The model of values focuses on abstract ideals that people regard as important guiding principles, such as freedom, equality, helpfulness, and enjoying life. The model of personal goals focuses on aims and aspirations the person has, such as self-acceptance, affiliation, physical health, and popularity. Despite their slightly different foci, the models both propose that there are "four occasionally overlapping but sometimes conflictual motivational systems that people must negotiate as they make their way through life" (pg.813, Grouzet et al., 2005). The motivational dynamics among goals have important implications for judgment and actions, but the focus of this thesis is the model of values proposed by Schwartz (1992) model of values. This model is the only one to focus on values per se, and it has received far more direct tests thus far.

In this chapter, I will review important properties of values, including the motivational dynamics proposed by Schwartz's model. I will describe mechanisms

involved in the activation of values. I will also highlight how these properties and mechanisms are relevant to understanding the effects of values on behaviour and the effects of emotions on values – the two topics that are the focus of this thesis. Finally, I will provide an overview of the structure of this thesis.

1.2 Values: The Power Field for Behaviour

Values are an important guiding force of behaviour (G. W. Allport, 1961; Bardi & Schwartz, 2003; Rokeach, 1973). The effect of values on behaviour can be explained in terms of cognitive processing and goal activation (see Rohan, 2000). In cognitive terms, the activation of values is a process of recollection and organization of previous evaluations of stimuli (Bargh, Chaiken, Govender, & Pratto, 1992). The organized information forms an analogical principle for further reference when encountering a similar stimulus or situation. Lewin (1952, p.41) compared value endorsement to goal activation:

> "values influence behaviour but have not the character of a goal (i.e., of a force field). For example, the individual does not try to "reach" the value of fairness, but fairness is "guiding" his behaviour. It is probably correct to say that values determine which types of activity have a positive valence and which types of activity have a negative valence for an individual in a given situation. In other words, values are not force fields, but they 'induce' force fields. That means values are constructs that have the same psychological dimension as *power fields*."

From this perspective, values create a framework after recollecting and evaluating previous experiences. This framework then further guides an individual as to what is important and what is not. This notion is consistent with the view that, when a previously encountered incident occurs, motivational goals make the

corresponding behaviours desirable (Aarts, Custers, & Holland, 2007; Aarts &

Dijksterhuis, 2000; Bargh, 1990; Bargh, Gollwitzer, Lee-Chai, Barndollar, &

Trotschel, 2001; A. W Kruglanski et al., 2002).

Values are conceptually related to goals and there are important distinctions

between them. As noted by Grouzet et al. (2005), values and goals are "closely related

but distinct" (p. 800). Recent models of goals serve to illustrate important links

between values and goals. For example, Kruglanski et al.'s (2002) theory of goal

systems suggests that goals are represented in complex cognitive structures, which

may entail representations of sub-goals and means to achieve goals. In this theory,

the highest-order goals are often more abstract and similar to the notion of a social

value (e.g., success, religiosity). Similarly, Grouzet et al.'s (2005) recent cross-

cultural model of goals indicates that values are higher-order ideals that organize

diverse goals (e.g., equality entails consideration of others), although values are more

prescriptive in nature. In fact, Grouzet et al. used Schwartz's (1992) model of values

to help identify some of the goals that they examined.

In addition, research that has purported to prime goals has, coincidentally,

been priming social values. For example, Bargh, Gollwitzer, Lee-Chai, Barndollar,

and Trotschel (2001) found that priming goals such as "compete", "succeed", and

"achieve" caused participants to better succeed at a subsequent word search task than

priming with neutral terms. A cursory glance at Table 1.1 shows that these goals can

also be labeled as values (e.g., achievement, success). Similarly, Macrae and

Johnston (1998) found that participants who were primed with the goal of

"helpfulness" were more likely to offer aid, as long as the aid was easy to perform.

Again, this goal can be labeled as a social value (see Table 1.1). Thus, these

4

important experiments may have revealed something important about goals *and* values.

This also fits evidence that the motivational and affective consequences of values can be modeled using the same approach as in research on self-regulation to other types of goals. In particular, Rees and Maio (2007) drew from Higgins's (1987; 1997; 2004) theory of self-regulation to predict that some values (such as those central to the self) are held as "ideals," which causes people to pursue them with a promotion-focused orientation and to experience dejection when the values are violated. In contrast, other values (such as those peripheral to the self) are held as "oughts," which causes people to pursue them with a prevention-focused orientation and to experience agitation when the values are violated (but only in a public context). Results of seven experiments supported these predictions, showing that values function in the same way as other goals that have been studied using Higgins's theory.

So what are the differences between values and goals? Although I have described how any value can function as a goal, values are typically more prescriptive from a normative, moral standpoint (Feather, 1990; Grouzet et al., 2005) and more strongly connected to a person's sense of self (Rokeach, 1973; Verplanken & Holland, 2002). Goals can possess these characteristics, but often do not. For instance, a person may not necessarily view it as immoral fail to live up to a goal to "go shopping", and this goal may have little connection to the person's sense of self. In contrast, perceived failure to live up to a personal value, such as helpfulness, does carry normative weight and has implications for the self concept.

1.3 Value Priming: Via a Cognitive Route or an Affective Route

What factors influence the activation of values? People usually attach at least some importance to diverse values. However, according to the values-as-truisms

hypothesis, people do not always have reasons readily accessible to support the importance of their personal values (Maio & Olson, 1998). People may even act consistently with their values without consciously thinking about them (Bardi & Schwartz, 2003).

This idea is consistent with the auto-motive model put forward by Bargh and Barndollar (1996). This model suggests that environmental cues can trigger a person's chronic motivations and goals through the retrieval from memory without conscious awareness. The activated goals then lead to relevant behaviours (Hertel & Kerr, 2001; Macrae & Johnston, 1998). For instance, participants playing the role of a fishing company who received an unobtrusive activation of the goal of cooperation voluntarily gave up their own profits and put more fish into a lake to maintain sufficient fish population than did participants in a control condition (Bargh et al., 2001).

1.3.1 Value Priming: The Cognitive Route

This process of activating a motive related concept from memory is called priming. Priming enhances the accessibility of the representation of the motive-relevant concept in memory (Aarts, Custers, & Holland, 2007; Feather, 1999), and further influences interpretations of a situation (Fazio, 1990; Fazio, Powell, & Herr, 1983). Priming can occur in diverse ways. For instance, a motive can be induced by recollection of a life incident (Fishbach & Labroo, 2007), environmental cues (Rydell & McConnell, 2006), and subliminal presentation of a goal concept (Aarts, Custers, & Holland, 2007). Similarly, if an experimenter wishes to prime a motive, he or she can ask participants to complete sentences that contain words referring to the motive. Experiments have found that such techniques can increase people's subsequent behaviour in pursuit of the motive (e.g., Bargh et al., 2001; Hertel & Kerr, 2001;

Macrae & Johnston, 1998). For example, Bargh et al. found that priming "compete", "succeed", and "achieve" caused participants to better succeed at a subsequent word search task than priming with neutral terms. Similarly, Macrae and Johnston (1998) found that participants who were primed with "helpfulness" were more likely to offer aid to an experimenter following a minor lab accident, as long as the aid was easy to perform. In both experiments, the behaviours were examined on the assumption that they would *affirm* the primed constructs, which also happen to be values described in Schwartz's (1992) model.

1.3.2 Value Priming: The Affective Route

Although judgments of value importance can be influenced by the presence of motive-related concepts, we are also strongly guided by our emotions and gut reactions to prioritize things that are worth attending to and act on (Damasio, 1996; Schwarz & Clore, 1996). For instance, people's affective responses to values predict their importance more strongly than their cognitive arguments for them (Maio, 2010; Maio & Olson, 1998). Hence, priming can operate through the affective route by promoting the desirability of the goals (Aarts, Custers, & Holland, 2007; Feather, 1999).

Before I proceed to discuss how emotions activate values, it will be useful to state how I use the term emotion. First, in line with the appraisal theory of emotion, I define emotion as processes that initiate adaptive behavioural reactions, depending on the individual's appraisal of the circumstances (Roseman, 2001; Scherer, 1984; Scherer, Scherr, & Johnstone, 2001; C. A. Smith & Scott, 1997). Secondly, consistent with the utilitarian view of emotion, I consider emotion as a state of synchronised response of organismic subsystems which occur when an internal or external event is evaluated to be of major significance for personal goals and needs (Scherer, 2004).

Specifically, there are several components of emotion involved in each appraisal or evaluation, which include cognitive processing, motor expression, and physiological responding (Scherer, 2005). During an appraisal episode, each of the components formulates a response and these processes are integrated cumulatively to generate a response tendency suitable for the corresponding goals and needs. Considering the limited capacity in consciousness, the synchronized processes and the response preparation are likely to occur largely through automatic regulation. At the same time, in order to maintain a higher level regulation and control, at least part of these processes is to emerge into consciousness (Scherer, 2005).

Scherer (2004) modelled these overlapping unconscious and conscious processes underlying emotional regulations using a Venn diagram (see Figure 3). There are three overlapping circles in this diagram, and each circle represents a different aspect of emotion monitoring (Kaiser & Scherer, 1997; Scherer, 1994). The first circle (A) represents the unconscious reflection and regulation, which monitors the representation of changes in all the synchronized processes, and integrates the representation of the central processing and somatosensory feedback (Iwamura, 1998). The integrated process representation occurs mainly unconsciously. It is essential for response preparation and hence behavioural adaptation.

The second circle (B) represents the conscious representation and regulation. The overlapping part between the first and the second circle stands for the part of the integrated process representation that enters awareness, which may be prompted by a high level of controlled regulation, or social communication. This circle also represents the subjective conscious feeling state generated by the eliciting event.

The third circle (C) represents the verbalization and communication of emotional experiences. This circle only overlaps partially with the conscious feeling

circle because we can only verbalize a small part of our conscious experience. Also, the ability to verbalize subjective experience varies across individuals.

In essence, during an emotional episode, the cognitive appraisal, the regulatory processes, and the response preparation may not be fully conscious to an individual. However, the individual can be aware of the conscious representation of the feeling and the outcome of the regulation.
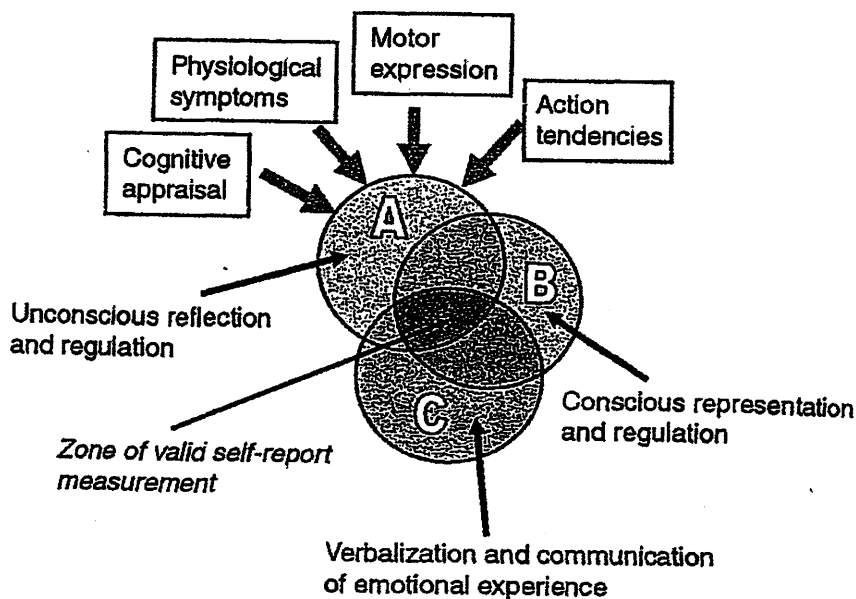
Figure 3: Three modes of the representation of changes in emotion components: unconsciousness, consciousness, and verbalization.

This representation of the conscious and unconscious emotion components matches the proposition that emotions can influence value-activation on a nonconscious level, while being aware of the feeling attached to the emotion episode. Indeed, Aarts, Custers, and Veltkamp (2008) found evidence supporting an "affective-motivational route" to nonconscious goal pursuit, and they posited that affect attached to the goal guides mental processes, perception, and behaviour. Their experiments

indicated that positive affect coactivated with the cognitive representation of a goal enhances the motivation to pursue the goal, while negative affect demotivates pursuit of the goal (Aarts, Custers, & Holland, 2007; Aarts, Custers, & Marien, 2008; Aarts, Custers, & Veltkamp, 2008). Fishbach and Labroo (2007) also found that compared to unhappy participants, happy participants are more likely to exercise self-control when a self-improvement goal is made accessible, and more likely to reduce self-control efforts when a mood-maintenance goal is made accessible. That is, happy participants more readily adjust themselves to attain a goal that is made salient to them, but the same adjustment does not occur among unhappy participants.

The expectancy-value perspective explains the effect of emotion on the activation of motives by focusing on how affect changes the desirability of the motive (Feather, 1990, 1995). According to this perspective, the mind evaluates the expected utilities of the outcome of behaviour. Behaviours that are consistent with a more important value would be considered as yielding more attractive outcomes. Hence, people sometimes act consistently with their values because the perceived attractiveness of the outcomes increases the likelihood of carrying out the behaviour.

The idea that emotions influence value endorsement and goal pursuit is consistent with findings in environmental. Emotions like indignation about insufficient sustainable political decision-making (Kals & Maes, 2002), and positive emotional affinity towards nature (Kals, Schumacher, & Montada, 1999) are found to be powerful predictor of sustainable and nature-protective behaviours.

Having described the "how" of values activation (i.e., cognitive retrieval from memory and affective influence), I describe below how values are connected to each other systematically and what happens to the value system when one value is activated.

1.4 Circular Patterns in Values

Schwartz's (1996) cross-cultural model of values indicates that values are self-imposed criteria that balance between individual needs, the co-ordination of social interaction, and group survival. As values co-ordinate these concerns, they come to express and serve ten types of motivation: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security (see Table 1.1 for more detail). More important, Schwartz (1992) suggested that these ten motives possess various conflicts and compatibilities. As shown in Figure 4, these motivational interconnections can be modelled in a circular structure. This structure plots values that express compatible motives adjacent to each other, whereas the structure plots values that express conflicting motives opposite each other. The structure yields two dimensions underlying four broad, higher-order types of values, which reflect motivational orientations that encompass the ten lower-order motives. One dimension contrasts self-enhancement values, which promote self interest (e.g., wealth, ambitious), with self-transcendence values, which transcend personal interest to consider the welfare of others (e.g., helpful, equality). The other dimension contrasts conservation values, which protect the status quo (e.g., family security, social order), with openness values, which follow intellectual and emotional pursuits in uncertain directions (e.g., creativity, curiosity).

Table 1.1

Schwartz's (1992) 10 Value Types and Their Principal Value Lables

Value type	Definition	Value labels
Power	Social status and prestige, control or dominance over people and resources	social power, wealth, authority, preserving my public image
Achievement	Personal success through demonstrating competence according to social standards	successful, ambitious, capable, influential
Hedonism	Pleasure and sensuous gratification for oneself	pleasure, enjoying life
Stimulation	Excitement, novelty, and challenge in life	varied life, daring, an exciting life
Self-direction	Independent thought and action-choosing, creating, exploring	creativity, freedom, independent, curious, choosing own goals
Universalism	Understanding, appreciation, tolerance and protection for the welfare of all	broadminded, wisdom, a world of beauty, equality, unity with nature, a world at peace, social justice, protecting the environment
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact	honest, loyal, helpful, forgiving, responsible
Tradition `	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self	respect for tradition, humble, accepting my portion in life, devout, moderate
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms	self-discipline, obedient, politeness, honouring of parents and elders
Security	Safety, harmony and stability of society, relationships, and self	family security, national security, reciprocation of favours, social order, clean

Self-Enhancement

POWER:
Authority
Influence

ACHIEVEMENT:
Ambition
Wealth

HEDONISM:
Pleasure
Enjoy life

SECURITY:
Social order
Clean

STIMULATION:
Varied life
Daring

Conservation

Openness

CONFORMITY:
Obedient
Polite

TRADITION:
Humble
Devout

SELF-DIRECTION:
Freedom
Independence

BENEVOLENCE:
Forgiveness
Helpfulness

UNIVERSALISM:
Environment
Equality

Self-Transcendence

Figure 4: The Schwartz (1992) circumplex value structure.

The circular model has been supported in studies of over 200 samples from more than 70 countries (Schwartz & Rubel, 2005). Most of these studies analyzed participants' responses to the Schwartz (1992) Value Survey, which asks respondents to rate the importance of 56 values (e.g., freedom) using a 9-point unipolar scale. Results revealed that the values cohered well within each of the ten motivation types (e.g., security, benevolence), forming reliable scales in aggregate measures of each motivational type. More important, patterns of correlations between individual values were consistent with the circular model. That is, adjacent values tended to be positively correlated, values at about 90 degrees tended to have less positive or null

13

correlations, whereas ratings of opposing values tended to have null or negative relations, and the ordering of the values in a two-dimensional map of value interrelations was consistent with the model (Schwartz, 1992).

In addition, the model successfully predicts patterns in value-relevant reasoning (Bernard, Maio, & Olson, 2003a, 2003b), the speed of value rating (Pakizeh, Gebauer, & Maio, 2007), value-behaviour relations (Bardi & Schwartz, 2003; Garling, 1999; Judge & Bretz, 1992), and the relations between values and other constructs (Roccas, Sagiv, Schwartz, & Knafo, 2002; Sagiv & Schwartz, 1995; Schwartz, 1992). These correlations often follow a sinusoidal wave form across the ten values around the circle (e.g., Kasser, Koestner, & Lekes, 2002). For instance, Sagiv and Schwartz (1995) found that readiness for contact with a dominant out-group was positively related to self-direction and universalism values, and negatively related to opposing conformity, tradition, and security values. Similarly, Roccas et al. found that the pattern of correlations between values and several dimensions of personality was consistent with the circular model, such that opposing value domains tended to have opposite directions of correlation with particular traits (e.g., extroversion).

Despite all of this evidence for the motivational interrelations proposed by Schwartz (1992), it is vital to examine these interrelations further. From my perspective, the extant research has not fully come to grips with the notion that Schwartz proposes a *motivational* dynamic between values. Such dynamic may have important implication on behaviour through simultaneous excitatory and inhibitory processes. But before elaborating this implication, I need to first illustrate the excitatory and inhibitory processes underlying behaviour.

1.5 The Excitatory and Inhibitory Effects on Behaviours

As noted by Bargh (2006), every promoted or primed motive may have excitatory *and* inhibitory effects on diverse behaviours. There is ample amount of research examining the excitatory effect of values on behaviour, and it refers to the promotion of behaviour that is consistent with the primed motive, as illustrated in section 1.3.

In contrast, the inhibitory effect has received less attention in research on goal pursuit. Hence, I turned to the research on working memory and information processing, which provides an explanation of the mechanism underlying the suppression of goal-irrelevant information. Inhibition occurs when the access of goal-irrelevant information to working memory is denied, suppressed, or removed (Hasher & Zacks, 1988). This phenomenon is often examined using the negative priming paradigm (D. A. Allport, Tipper, & Chmiel, 1985; Tipper & Cranston, 1985). This paradigm involves presenting pairs of a target stimulus and a distractor stimulus. The two stimuli in each pair are differentiated by their colour or location (see Grant & Dagenbach, 2000). In the priming trial, participants first attend to the target stimulus by naming it, giving its physical location, or classifying its semantic category. Then, in the probing trial, when the target stimulus has the same colour or is in the same position as the distractor stimulus in the preceding priming trial, participants took longer time to respond to it (Grant & Dagenbach, 2000; Hasher & Zacks, 1988). This result suggests that the previous priming condition has actively suppressed the representation of the ignored distractor stimulus. This process was identified as negative priming (Tipper & Milliken, 1996).

Another example is the multiple categorizations of stereotypes. When a target person possesses several social stereotypical categories (e.g., being both a female and

ethics minority), only one category out of the many might be consciously processed by the perceiver (Macrae, Bodenhausen, & Milne, 1995; Zarate & Smith, 1990). Similarly, the work on selective attention suggested that when there is a pool of available and relevant information or stimuli, only a part of the information is sufficiently activated to gain access to awareness (Broadbent, 1958; Dixon, 1987; Kahneman & Triesman, 1984; Perdue & Gurtman, 1990). The rest of the stimuli fail to enter awareness. Of interest, these stimuli are not simply neglected, but are actively inhibited (Macrae et al.,Bodenhausen, & Milne, 1995).

There are several ways to explain this inhibitory effect. The effect may economize mental effort (Bodenhausen, 1990; Chaiken, Liberman, & Eagly, 1989; Macrae et al., 1995; Macrae, Milne, & Bodenhausen, 1994), reserve attentional resources for differentiating relevant information as either a target or a distractor (Tipper & Driver, 1988), and ensure that the distractor attains a less activated mental state (Shallice, 1972). These findings have potential implications for the effects of values on behaviour. When one value is activated, several behaviours may become relevant. The excitation and inhibitory processes may operate by means of promoting behaviour consistent with the values, and suppressing behaviour consistent with opposing values.

This inhibition process may operate in different stages. The inhibition process may occur at the information level by blocking or suppressing information related to the values that are inconsistent to the current goal. Alternatively, it may operate at the behavioural level by impeding the tendencies leading to the behaviours that serve an opposing goal. There is reason to suggest that the inhibition process operate on the behavioural level. Pakizeh, Maio, and Gebauer (2007) found that, when participants rated the importance of values clustered in pairs, they took shorter time to rate the

second value in each pair when the two values were motivationally congruent or opposing than when the two values were unrelated. In other words, the activation of one value does not block the processing of the concept of another value that serves an opposing goal. This evidence indicates that the inhibition effect of values is unlikely to operate on a conceptual level. Instead, the inhibition may operate through directly suppressing behaviours that serve an opposing goal. Hence, even when given the opportunity to carry out the "distracting" behaviour, the occurrence would become less likely.

The above evidence suggests that there is a need to examine both the motivational excitatory and inhibitory effects of values on behaviour. But which behaviours are relevant? Below, I outline some important behavioural consequences that will be probed in this thesis.

1.6 Motivational Tensions Between Values: Implications for Behaviour

There is a need to understand which behaviours will be affected by each motive. For example, we know that priming money can decrease helpfulness (Vohs, Mead, & Goode, 2006). To this point, however, research on priming has not identified theory that can be used to give an *a priori* justification for treating different behaviours as outcomes that should be facilitated or inhibited by different primes. The application of the circular model can move researchers beyond intuitive guesses about how particular motives might affect attitudes and behaviour; instead, these models provide a strong theoretical grounding for predicting *which* behaviours and attitudes will be affected by *which* motives. Indeed, Burgoyne and Lea (2006) noted that the effects of money on (decreased) helping in the experiments by Vohs et al. is consistent with Grouzet et al.'s (2005) evidence that money and a sense of community are personal goals that serve opposing motives in their circular model. This finding also fits the

contrasting positions between the values of wealth and helpfulness in Schwartz's (1992) model of values.

According to the circular model, *priming* values should activate the compatibilities and conflicts within the whole system. The interconnections between motives expressed by values should cause the pursuit of values that serve the same motives to be enhanced, whereas the pursuit of values that serve opposing motives should be thwarted, and the pursuit of values that serve orthogonal motives should be unaffected. For example, if a set of values (e.g., success, capable) expresses an achievement motive, as predicted by the circular model, then any intervention that activates these values should promote achievement behaviour (e.g., success at a puzzle), similar to past findings (Bargh et al., 2001). At the same time, such an intervention should *decrease* the performance of behaviour that serves opposing motives, such as benevolence toward others, because of the reciprocal latent connection between these motives predicted by the model (see Figure 4, p. 13). According to the model, the activation of achievement-promoting values would introduce a self-enhancing motivational focus that subtracts from the motivational orientation underlying the opposing, benevolent values (e.g., helpfulness), which instead rely on a motivational focus that transcends the self. This would make people more likely to construe a subsequent behavioural opportunity in terms of an achievement motive and less likely to construe the behaviour in terms of a benevolent motive.

There is evidence supporting these predictions (Maio et al., 2009). Specifically, Maio et al (2009, Experiment 5) conducted an experiment that primed either achievement values or benevolence values and then measured an achievement-related behaviour and a benevolent behaviour (see Maio et al., 2009, Experiment 5). The

achievement-related behaviour was participants' level of success at detecting hidden

words in a word puzzle, whereas the benevolent behaviour was the amount of time

that participants agreed to volunteer for future research (without payment or course

credit). As expected, the effects of the value primes depended on which behaviour

was analysed. Activating achievement and benevolence values increased the

likelihood of behaviour affirming the motive expressed by the primed values (e.g.,

increased benevolence after benevolence primes), while decreasing the likelihood of

behaviour affirming values that opposed the primed values (e.g., decreased

achievement after benevolence primes).

These findings are provocative because they expand our understanding of the

effects of motivational priming to include effects beyond those that occur merely for

behaviour that is consistent with the primed motives. The findings provide a powerful

basis for *a priori* predictions about the effects of priming specific values on behaviour

consistent with values that serve opposing motives. However, the findings were

limited by a focus on only one of the dimensions in the circular model of values: the

dimension from self-transcendence values to self-enhancement values.

A complete test requires evidence of similar patterns on the second dimension in

Schwartz's model: the dimension from conservation values to openness to change

values. The circular model suggests that priming a conservation or openness to

change value should have consequences that go beyond the effects on the specific

values that have been primed, because of the impact of these interventions on

underlying motivational tensions that connect the values or personal goals. Priming

conservation values should both increase the likelihood of action that supports these

values *and* decrease the likelihood of action that supports openness to change values.

Conversely, priming openness to change values should both increase the likelihood of

action that supports these values and decrease the likelihood of action that supports conservation values. These predictions were tested in the first stream of research that I conducted for my doctoral thesis.

1.7 Motivational Tensions Between Values: Implications for Emotion

Just as the motivational interconnections between values have important ramifications for understanding value-relevant action, these interconnections have important ramifications for understanding the link between values and emotion. Thus, there is a need to map the common goal shared by emotions and values.

Many current theories on emotions emphasize the functions of emotions on goal activation, both in terms of eliciting action tendencies and inducing subsequent behavioural consequences. For instance, several appraisal theories of emotions posit that the evaluation of a particular situation can be relevant to one's personal goals or concerns (e.g., Frijda, 1988; Lazarus, 1991; Oatley & Johnson-Laird, 1987; see Scherer, 1999, for an overview). According to these theories, the elicitation of a particular emotional state signals the presence of opportunities or obstacles to the attainment of a goal. Also, the functional account of emotions put forward by Keltner and Gross (1999) is also consistent with the idea that emotions are connected to goals in guiding people's actions and decisions. This account states that an emotional state induces a motivational tendency to attain or maintain a particular emotional-end-state. In other words, emotions motivate action that lead to goal attainment. Considering that both values and emotions can be regarded as motivational constructs, some values and emotions may share a common goal.

Nelissen, Dijker, and de Vries (2007) provided an important step toward this proposition by examining correlations between ratings of the importance of values and the frequency of different emotions in daily life. Value importance was assessed

using the Schwartz Value Survey (Schwartz, 1994), and eleven types of emotions (e.g., shame, disgust, excitement and pride) were measured. Most of the values were significantly correlated with specific types of emotions. For instance, people who considered power values to be highly important experienced anger more frequently, and people who considered achievement values to be highly important experienced pride more frequently. These findings supported the hypothesis that values and emotions have shared goals, such as striving for social dominance in the case of anger and self-fulfilment in the case of pride.

However, the correlations between emotions and values do not provide enough information to infer the causal effects of emotions on values and vice-versa. For instance, these correlations do not tell us whether or not motivationally opposing values have different effects on the emotions that people tend to experience. In addition, the correlations do not tell us whether or not the experience of specific emotions has different effects on values that serve opposing motives. Both of these questions have strong basic and applied importance.

Some basic issues in emotion theory and research led me to pursue the latter question (the effect of emotion on values) in this thesis. In other words, I wanted to discover how emotional experience shapes the values we hold. A key reason for this interest is found within appraisal theories of emotions (e.g., Frijda, Kuipers, & ter Schure, 1989; Lazarus, 1991; Oatley & Johnson-Laird, 1987). The core-relational theory of emotions posits that emotion is a product of individuals' appraisal of the environment, the involvement of the self, and individuals' goals (Lazarus, 1991). Goal relevance is crucial for any emotion to emerge. If the situation is goal congruent, the emergent emotion will be positive (e.g., happiness, pride). On the contrary, if the situation is goal incongruent, the emergent emotion will be negative (e.g., sadness,

disgust). Furthermore, emotions sharing the same valence can be distinguished by their motivational functions (and core relational theme). The motivational functions can be understood as reactions to environmental conditions, which then trigger a compelling urge toward actions to achieve the relevant goal. Hence, negative emotions can lead to implicit mood-repair motives and guide goal-related behaviour (Baumann, Cialdini, & Kenrick, 1981; Cialdini, Darby, & Vincent, 1973). For instance, sadness is often induced by the sense of loss or absence of a reward (Lazarus, 1991). This feeling might then elicit reward acquisition goals and lead to a preference for high risk and high-reward options (Raghunathan & Pham, 1999).

Similarly, the feeling-as-doing theory conceptualizes emotions as motivational processes (Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008; Zeelenberg, Nelissen, & Pieters, 2007; Zeelenberg & Pieters, 2006). This theory proposes that emotions guide actions and decision making by providing a favoured heuristic for a corresponding action readiness. Action readiness involves a range of motivational states that are associated with goal priority, attentional focusing, arousal, action, and felt readiness (Zeelenberg et al., 2008). For example, when feeling angry, moving against the source of the anger has priority over other goals or actions.

Taken together, these theories suggest that emotions activate specific motivations for related action tendencies (Nelissen, Dijker, & De Vries, 2007; Roseman, Wiest, & Swartz, 1994). However, through their attention to effects of the situation, the theories also raise fundamental questions about the extent to which each emotion leads to the same motivation consistently across all contexts. Abundant recent research has started pointing out the crucial impact of context on social cognition, by referring to "situated" social cognition (Reis, 2008; E. R. Smith & Semin, 2007), and this perspective is becoming evident in studies of emotion. For

instance, Cowie, Douglas-Cowie and Cox (2005) analyzed conversations rich in genuine emotion. They found that social situations like watching a football match, chairing a meeting, and standing waiting for a friend provide different contexts for the perception and expression of emotions. The sense of emotionality was mainly derived from the present surrounding, its association with other situations remembered, and the anticipation of the outcome from the situation. Building on these findings, Cowie, Douglas-Cowie, and Cox developed a list of contexts that researchers could specify when describing or inducing an emotion. The list incorporates factors such as the overall communication goal (e.g., to claim, to sway, to share a feeling), the intended audience (e.g., kin, colleagues, public), and social constraints (e.g., pressure to expressiveness, pressure to formality).

This variation between contexts is important partly because studies often use different contexts to induce the same emotion. Diverse contexts are easily discernible for three emotions that were the focus of the present research: sadness, disgust, and shame. Research often induces sadness by leading people to recall a sad experience. In many instances, people end up recalling the death or illness of a friend or family member (Fishbach & Labroo, 2007; Lazarus, 1991). In other cases, they may remember a personal failure, entailing the potential loss of positive regard of another person (Fishbach & Labroo, 2007; Lazarus, 1991). These contexts involve a different initial bearer of the suffering (e.g., being an onlooker or a victim).

Similarly, disgust is a response to both moral transgressions and physical objects associated with toxicity and disease (Chapman, Kim, Susskind, & Anderson, 2009; Haidt, 2003; Rozin, Haidt, & Fincher, 2009; Rozin, Haidt, & MaCauley, 2000). These contexts involve a violation of different social norms (i.e., justice violation vs. purity violation).

Also, common antecedents of shame are personal violations of social rules or standards (D. Lewis, 2004) and performance failures (Keltner & Buswell, 1996; Tangney, Miller, Flicker, & Barlow, 1996). When a social rule or standard is violated (e.g., lying or breaching a pledge), the harm is done to others, whereas performance failure involves harm done to the self (through the visibility of self-incompetence). The different contexts of these emotions may have divergent implications for motivation, action, and values. For instance, when the context makes people aware of other people's feelings (e.g., when there is another's sadness from death or another's anger upon failure), people may adjust their own demands and goals accordingly. In a negotiation, when an opponent displays sadness, the perceiver either shows compassion or interprets the emotion as a sign of weakness and becomes less likely to concede (Li & Roloff, 2006; Tiedens, 2001). When an opponent displays anger, the perceiver will become more likely to concede (Van Kleef, De Dreu, & Manstead, 2004a, 2004b). The particular individuals who are brought to mind might also matter. Whitesell and Harter (1996) found that anger induced by close friends and casual acquaintances activated different coping mechanisms related to relationship preservation. Together, this evidence fits the hypothesis that the interpersonal context of emotions may also be pivotal for shaping their effects on values. This issue will be the focus of the second stream of research described within this thesis.

1.8 The Current Research

This chapter has reviewed properties of values and provided background information for understanding the effects of priming values on behaviours and the effects of emotions on values. Taken together, there are two research questions to be addressed.

The novel and provocative findings obtained by Maio et al..(2009, Experiment 5) focused on one of the dimensions in the circular model of values, from self-transcendence values to self-enhancement values. Hence, the first question to be addressed is whether systemic effects of values on behaviours occur for the second dimension in this model, from conservation values to openness to change values. Chapter 2, "Motivational Dynamics and Behavioural Changes in Conservation Values and Openness to change Values" describes three experiments that examined this issue. I predicted that priming conservation values and openness values would cause systemic changes in value-relevant behaviour that fit the motivational relations described by the circular model.

The second research question probed the effects of emotions on values. The function of emotions is often framed in motivational terms and there is evidence suggesting an important link between values and emotions (Nelissen, Dijker, & De Vries, 2007). However, the extant literature has not illuminated the causal effect of emotional experiences on the activation of values. Further, the context of emotions is often neglected in the understanding of the motivational functions of emotions. This Thesis addressed these issues by examining three specific negative emotions: sadness (Chapter 3), disgust (Chapter 4), and shame (Chapter 5). I predicted that each emotion would lead to (1) increased importance for values that share common goals with the emotion in its specific context, (2) decreased importance for values that share conflicting goals with the emotion in its specific context.

1.9 Chapter Summary

In sum, motivational conflicts and compatibilities are intrinsic to the contemporary understanding of values, but the ramifications of these links have not been fully explored. Research supporting Schwartz's model of motivational

interrelations between values has focused on relations between values, changes in values, and associations with other constructs. The purpose of this doctoral thesis is to explore important implications of the motivational interrelations for understanding action and emotion – two constructs most intimately connected to the construct of motivation. First, the thesis will provide a deeper understanding of how motivational dynamics of values lead to behavioural changes. Second, it will test whether emotions alter values in a manner that is congruent with the hypothesized motivational dynamics of values and with social-appraisal perspectives on emotion.

To this point, I have described the background for this research broadly. The two streams of research are not sequential progressions from one to another; instead, they deal with separate, but interrelated, aspects of the hypothesis that there are basic motivational interconnections between values. Together, the streams shed light on three important psychological constructs: values, emotion, and human behaviour. In subsequent chapters, I provide more specific information relevant to each stream of research, including information that explains the experimental methodologies.

Chapter 2: Motivational Dynamics and Behaviour

2.1 Chapter Overview

As noted in the Introduction to this thesis, a prior experiment examining the effect of value priming on judgment and behaviour supported the circular model's assumptions about motivational interconnections between self-enhancement values and self-transcendence values (Maio et al., 2009, Experiment 5). However, this experiment focused on only one of the dimensions in the circular model of values – the dimension from self-enhancement to self-transcendence values. The aim of this chapter is to test the circular model's assumption about motivational interconnections along the other value dimension, from conservation values (tradition values and security values) to openness to change values (stimulation values and self-direction values).

This aim was achieved through three experiments. Experiment 1 examined the effects of priming tradition values (on the conservation end of the continuum) and stimulation values (on the openness end of the continuum) on a self-evaluative judgment related to tradition values: being humble. Experiment 2 looked at the effects of priming security values (on the conservation end of the continuum) and self-direction values (on the openness end of the continuum) on a behaviour related to security values: cleanliness. By examining judgments and behaviours related to tradition and security values, Experiments 1 and 2 focused on actions that promoted conservation values. In contrast, Experiment 3 examined the effects of priming security values (on the conservation end of the continuum) and self-direction values (on the openness end of the continuum) on a behaviour related to self-direction values: curiosity. Together, these experiments provided the first systematic examination of implications of motivational conflict between conservation values and

openness to change values for behaviour. In this way, they provide vital tests of the motivational conflicts assumed by the circular model.

2.2 Conservation Values, Openness to Change Values and Behaviour

Schwartz's (1992) circular model indicates that stimulation values (e.g., a varied life, daring) express a search for arousal that is sensationally or affectively pleasant, whereas tradition values (e.g., humble, accepting one's portion in life) respect and accept the imposition of external limits. These two sets of values belong to different and opposing categories of the higher-order value types: stimulation values belong to the higher-order category of "openness to change" values, whereas tradition values reside in the higher-order category of "conservation" values.

There is evidence supporting the connection between these two types of values and behaviour. Bardi and Schwartz (2003) found that each of these values is associated to a set of behaviours. For instance, people who attach more importance to tradition values are more likely to behave more modestly with regard to their achievements and talents. Also, people who attach more importance to self-direction values tend to examine the ideas behind rules and regulations before obeying them. More important, Bardi and Schwartz found that modelling these values-related behaviours and others relevant to different values forms a circular model like the Schwartz model of values. This result provides initial evidence that these values-related behaviours exhibit the same motivational interconnections as their corresponding values.

However, Bardi and Schwartz assessed these behaviours using self-report scales. It remains uncertain whether values lead to actual behavioural changes compatible with the circular model's assumptions about motivational interrelations between values. To consolidate the function of values in real behaviour, Experiments 2 to 3

examined the effect of value priming on actual behaviour. I predicted that the activation of openness values to *decrease* behaviour that affirms conservation values, whereas priming conservation values should of course increase behaviour that affirms these values.

2.2.1 *Overview of Experiments*

In the following three experiments, I searched for systemic effects of priming conservation values and openness to change values on value-related judgments and behaviours. On one hand, I examined the effect of priming values on judgments and behaviours that are consistent with the target values. Similar to the extant literature on goal priming (e.g., Chartrand & Bargh, 1996), I presented value-related words in order to prime the target values. This values priming procedure is not to be confused with other procedures that purely activate mental representation of concepts. Forster, Liberman and Friedman (2007) listed seven principles of goal activation, two of which are that goal priming involves (positive or negative) value association and the inhibition of conflicting goals. In my values priming procedure, many of the value-related words were paired with positive associations. For instance, tradition values (restraining anger) were associated with the word "admirable" in one of the priming sentences. Hence, it matches the former goal activation criteria I listed above.

The latter principle of goal activation listed above was examined by testing the effect of priming values on judgments and behaviours that are consistent with the *opposing* values. This procedure examined the proposition that the presentation of a value prime can lead to an inhibition of a behaviour that is consistent with a value not presented in the priming procedure.

Experiment 1 tested whether or not priming tradition values promotes modest self-comparison, while priming stimulation values decreases it. Experiment 2 tested

whether or not priming security values increases cleanliness, while priming self-direction values decreases it. Experiment 3 tested whether security values decreases curiosity-driven behaviour, while priming self-direction values increases it. These designs tested the hypothesis that the activation of one set of values would not only promote behaviour consistent with the primed values, but also diminish behaviour consistent with motivationally opposing values.

2.3 Experiment 1

Experiment 1 focused on the effect of priming tradition values and stimulation values on a judgment related to tradition values, being humble. Specifically, I examined the effect of priming these values on the better-than-average effect (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995), which is the tendency to express more superior evaluations of the self compared to others. This effect is relevant to tradition values because self-enhancement bias in general is fed by difficulties in recognizing one's own "place" (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006) and limitations (Kruger & Dunning, 1999). Tradition values emphasize accepting such constraints in a manner that diminishes the personal self. This emphasis is best characterized by the tradition values of *humble, accepting my portion in life*, and *moderate* (see Table 1.1, pg. 7). People primed with these values should experience a stronger motivation to be modest, causing a lower better-than-average effect.

More novel, the circular model predicts that the motivational orientation served by tradition values competes with the motivational orientation served by stimulation values. Core examples of the latter values are *daring, a varied life*, and *an exciting life*. These values promote excitement, novelty, and challenge. By emphasizing personal pursuits and satisfaction, they subtract from tradition values' emphasis on the

connections between self and others (e.g., Streib, 1999). Indeed, stimulation values are virtually adjacent to self-enhancement values in the circular model (because Schwartz indicates that the intervening, hedonism values can be considered to be self-enhancement or openness values), and self-enhancement values directly involve this self-inflation. It is therefore plausible that stimulation values involve a motivational orientation that is antithetical to the self-effacing mindset that promotes modesty in the better-than-average effect. People primed with these values should experience less motivation to be modest, causing a higher better-than-average effect.

However, the better-than-average effect may occur through two different mechanisms: self-enhancement and denial (Paulhus, 2002). Self enhancement is about promoting positive attributes, and denial is about disavowing negative attributes (Paulhus & Reid, 1991). Both mechanisms serve to maintain relatively high levels of self-esteem (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Taylor & Lobel, 1989), and it is conceivable that tradition values lead to lower self-enhancement or less denial or both. To examine these possibilities, I included positive *and* negative traits in the measurement of the better-than-average effect.

2.3.1 *Methods*

Participants

Participants were 116 Cardiff University undergraduate students who took part for course credit. The sample included 84 women and 32 men, with a mean age of 21.17 years ($SD = 3.49$). Participants were tested in a group setting with a maximum group size of six. They were informed that there were several tasks to complete. I presented the experimental manipulation, followed by two measures that were irrelevant to the better-than-average effect and then the task measuring the better-

than-average effect. Participants also completed a funnel debriefing and thanked for their participation.

Procedure

Experimental Manipulation. Participants first completed the value priming manipulation, which presented tradition values, stimulation values, or neutral sentences (control condition). As in prior research (Chartrand & Bargh, 1996), the priming task involved unscrambling 15 sentences containing values or control items. The sentences included stimulation values (e.g., *stimulation, an exciting life, a varied life*), tradition values (e.g., *moderate, tradition, humble*), or the names of furniture items (e.g., table, drawer, armchair).

Tradition Judgment. To examine the better-than-average effect, participants rated the extent to which they possessed 20 positive traits (e.g., intelligent, respectful) and 20 negative traits (e.g., deceptive, disobedient) when compared to an average student in the same university, using the same traits as used in research by Alicke et al. (1995). Participants responded to each trait using a scale from 1 (much less than average university student) to 9 (much more than average university student). The scores of the negative traits were reverse scored so that a higher value reflected a higher positive bias. There were 2 positive and 2 negative traits on each page, and the ten pages were given to the participants in a randomized order.

Finally, participants completed a funnel debriefing interview similar to the debriefing approach used in past research (Bargh & Chartrand, 2000; G. M. Fitzsimons & Bargh, 2003). This interview began with global questions about the session (e.g., "were there any hypotheses that you thought we should, could, or would test?") to a more specific explanation of the experiment and pointed questions about their experience. No participants reported suspicions relevant to my hypotheses.

2.3.2 Results

I conducted a 3 (stimulation vs. tradition vs. control) x 2 (trait valence) x 2 (gender) mixed-model ANOVA on participants' ratings of themselves relative to the average person.[1] The results indicated a main effect of trait valence, $F(1, 103) = 4.94$, $p < .03$, such that participants rated themselves as being more superior to the average person on negative traits ($M = 115.86$; $SE = 1.63$) than on positive traits ($M = 112.45$; $SE = 1.57$).

This effect was qualified by a significant interaction between the value priming manipulation and trait valence, $F(2, 103) = 3.17$, $p < .05$. To interpret this interaction, I examined the effects of the value primes on the magnitude of the better-than-average effects for the positive traits and for the negative traits (see Figure 5). There were no significant differences in the magnitude of the better-than-average effects for the positive traits, $ps > .20$ ($Ms = 111.10$, 112.45, and 113.79, in the tradition, control, and stimulation conditions, respectively). In contrast, the better-than-average effect for the negative traits was significantly weaker after the tradition values were primed ($M = 109.56$, $SE = 2.83$) than after the control primes ($M = 116.62$, $SE = 2.98$), $t(103) = 2.97$, $p < .01$, and significantly stronger after the stimulation values were primed ($M = 121.39$, $SE = 2.67$) than in the control condition, $t(103) = 2.09$, $p < .05$.

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[1] The sample in this experiment was large enough to control for a potential effect of gender on better-than-average scores, which was important because of gender differences in self-effacement (e.g., Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997).
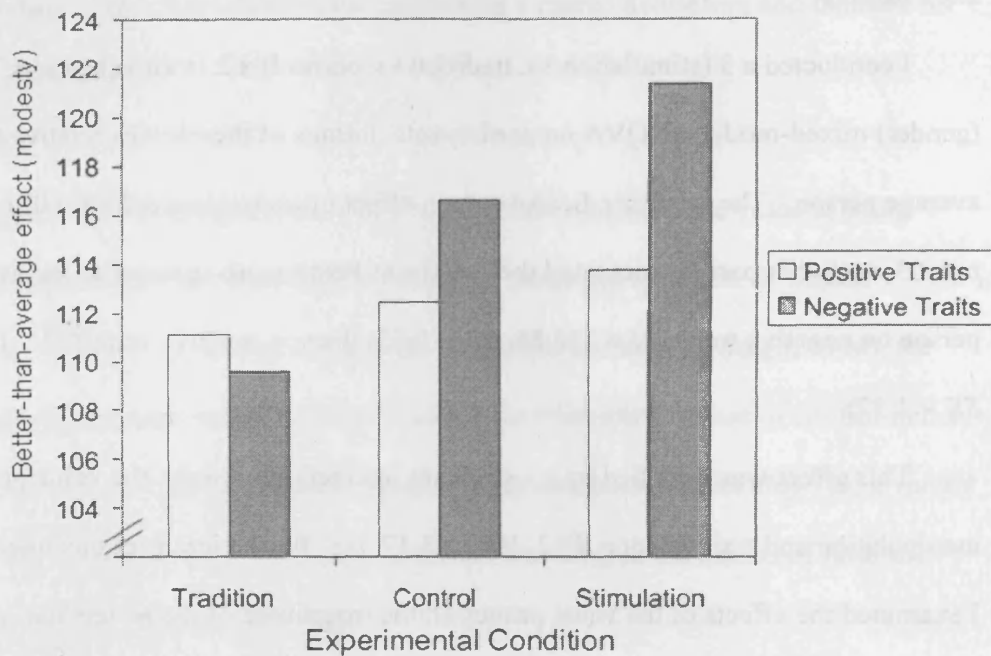
Figure 5: Experiment 1: Tradition judgment (modesty in the better-than-average effect) for positive and negative traits in each value-priming condition.

2.3.3 *Discussion*

The results supported the hypothesis that priming tradition values causes more modesty in self-evaluative judgment. This modesty was significantly lowered when values that express an opposing motive (stimulation) were activated. Nevertheless, these effects occurred only when I examined personal ratings on negative traits, but not the ratings on positive traits. The negative trait ratings tap the denial component of the better-than-average effect, whereas the positive trait ratings tap the self-enhancement component of the effect (Paulhus, 2002). The results indicate that value primes affect the extent to which the people deny negative attributes, whereas their tendency to self-enhance is relatively robust and resistant to interference. This observation converges with other evidence for relatively robust self-enhancement effects (Alicke, 1985; Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995):

Self-enhancement may be too basic and powerful to be influenced by a very recent, brief priming event, whereas the denial effect may be more multiply determined and therefore amenable to influence. Future research is needed to discover why the mechanism underpinning self-enhancement is more robust in the face of brief value primes. This issue aside, the results clearly supported the hypotheses that priming with tradition and stimulation values causes *opposing* effects on modesty in self-evaluations, congruent with the circular model of values (Schwartz, 1992).

2.4 Experiment 2

While Experiment 1 examined a value-related judgment, Experiment 2 extended the investigation by examining changes in value-relevant behaviour. Experiment 2 examined the effects of priming two different sets of values: security values (e.g., *social order, clean*) and self-direction values (e.g., *creativity, curious*). According to Schwartz's (1992) model of values, security values help to avoid the threat of uncertainty and to conserve the existing order, whereas self-direction values promote exploration and independence. Like the tradition and stimulation values examined in Experiment 1, security and self-direction values lie in opposing positions on the dimension from conservation values to openness to change values (see Figure 4, p. 13). Thus, participants should demonstrate more behaviour affirming the primed values than participants who are primed with the opposing value, with the control group in between.

To examine this hypothesis, Experiment 2 tested whether the activation of security values increases behaviour that promotes security, whereas the activation of self-direction values decreases this behaviour. Experiment 2 tested this prediction using a measure of security promoting behaviour: cleanliness. As shown at the bottom of Table 1.1 (p. 12), cleanliness is one of the security-promoting values in

Schwartz's circular model. Cleanliness is a security-promoting value because it contributes to safety, harmony with others, and adherence to social norms. Thus, any task that primes security-oriented values should also increase concern with cleanliness.

More important, the circular model also predicts that this security orientation is opposed by self-direction values, which emphasize exploration and independence. Self-direction values entail a creative, exploratory mindset that is less concerned with prevailing social standards. Creativity itself entails following novel directions without rigid application of fixed rules and norms (Kuhnen, Hannover, & Schubert, 2001). Thus, although this pursuit can entail cleanliness (as in five-star restaurants and some art studios), it involves a mindset that can often be inimical to this behaviour. Indeed, people rate cleanliness and other security values as stronger reflections of what they "ought to do" than of what they "ideally would do," whereas the opposite occurs for creativity and other self-direction values (Rees & Maio, 2007). This competition should cause self-direction value primes to reduce behaviour that affirms security values, including cleanliness. Overall, then, I expected that security value primes would increase cleanliness, whereas self-direction value primes should reduce cleanliness.

2.4.1 *Methods*

Participants

Participants were 58 Cardiff University undergraduate students who took participated for £3. The sample included 52 women and 6 men, with a mean age of 19.83 years (SD = 4.01). Participants were tested individually and were informed that there were several tasks to complete.

Procedure

Experimental Manipulation. Participants completed an experimental

manipulation similar to the manipulation used in Experiment 1, except that

participants rearranged scrambled sentences including self-direction values (e.g.,

choosing own goals, curiosity, freedom), security values (e.g., *national security,*

social order, clean), or the names of clothing items (e.g., skirt, shoes, boots).

Security Behaviour. Participants were then given a slightly leaky pen to

complete the remaining tasks (e.g., consumer preference ratings, problem solving).

One of the tasks required that participants join broken lines in a picture of dolphin,

before colouring it with old, used crayons that were messy and slightly sticky.

Cleaning wipes and tissues were provided next to crayons on the desk at which the

participants were seated for all of their tasks. I recorded the interval at which the

participants requested another pen or used the cleaning wipes. This interval recording

constituted the measure of cleanliness behaviour, such that higher scores were given

for attempts to be clean in an earlier task. That is, participants received a "4" if they

first used a new pen or the cleaning wipes while doing the initial consumer preference

task, a score of "3" if the pen or wipes were first used while doing the drawing and

colouring task, a score of "2" if the pen or wipes were used only after these tasks at

the end of the experiment, and a score of "1" if the clean pen or wipes were not used.

Participants were probed for suspicion and debriefed using the funnel debriefing

procedure described in Experiment 1.

2.4.2 *Results*

To examine the effects of the manipulation of priming condition (self-direction

vs. security vs. control) on cleanliness behaviour, a one-way ANOVA was conducted.

37

The results revealed a main effect of condition, $F(2, 55) = 4.35$, $p = .02$, with

participants in the security condition ($M = 3.21$, $SE = .92$) requesting another pen or

using the cleaning wipes earlier than participants in the self-direction condition ($M =$

2.30, $SE = .87$), $t(55) = -2.93$, $p = .01$ (see Figure 6). A planned pairwise comparison

revealed that participants in the security condition tended to request another pen or

use the wipes earlier than participants in the control condition ($M = 2.84$, $SE = 1.12$),

but this contrast did not reach conventional levels of significance, $t(55) = 1.17$, $p =$

.24. In contrast, participants primed with self-direction values delayed cleanliness to a

marginally greater extent than participants in the control prime condition, $t(55) =$

1.74, $p = .08$. The direction of these contrasts was again consistent with the

predictions derived from the circular model.
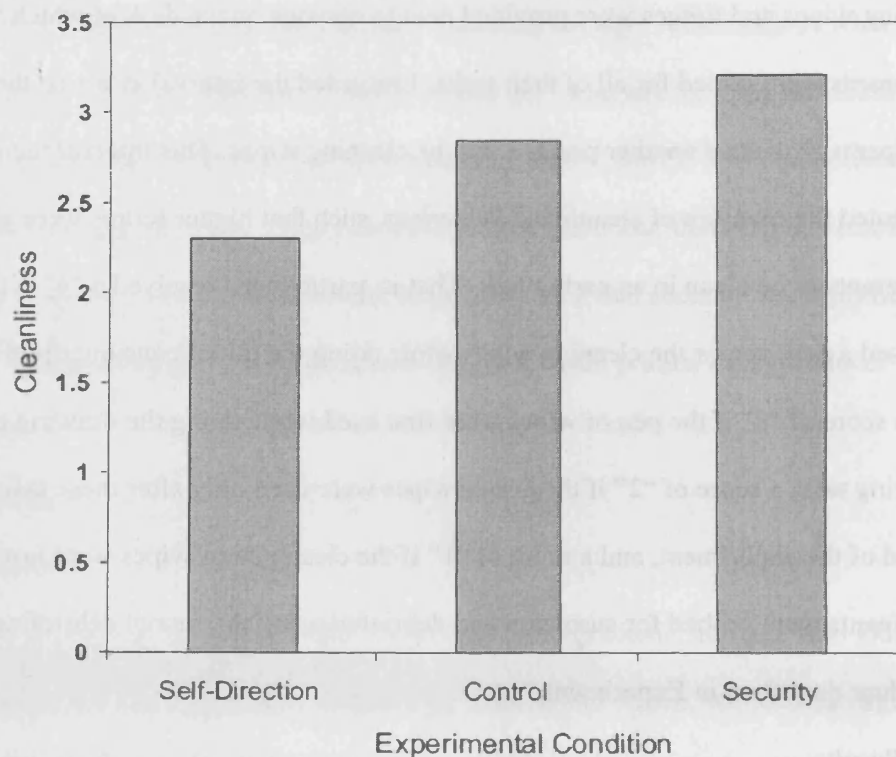
Figure 6: Experiment 2: Security behaviour (cleanliness) in each value-priming condition.

2.4.3 *Discussion*

The results from Experiment 2 provided further evidence that priming one value not only promotes behaviour that fulfils the motive expressed by the value, it also decreases behaviour consistent with a motive expressed by opposing values. In this case, participants' cleanliness decreased after being primed with self-direction values, relative to the effect of being primed with security values. Although the main effect was significant and consistent with the predictions, the specific comparisons with the control condition did not reach conventional levels of significance. Nonetheless, the tendency for the self-direction prime to decrease cleanliness was reliable using a one-tailed test ($p < .04$), which is justified by the *a priori* hypotheses. This particular comparison is more central to the predictions (than the comparison between the security prime and control) because of its relevance to the latent motivation conflicts that I am attempting to illustrate. Nonetheless, it was useful to conduct another experiment testing the hypotheses regarding the security to self-direction dimension.

2.5 Experiment 3

By concentrating on a behaviour that affirmed security values, Experiment 2 examined only one-half of the potential systemic effect of priming self-direction and security values. The other half of the systemic effect is that behaviour promoting self-direction values should increase following the activation of these values, but decrease after the activation of security values. Experiment 3 tested these predictions.

Experiment 3's behavioural measure was based on the value of curiosity, which is one of the self-direction values identified in Schwartz's (1992) circular model. I examined curiosity by giving participants an opportunity to request information about the answers to diverse quiz questions. Curiosity about the answers should be

enhanced after the activation of curiosity and other self-direction values, which explicitly promote an exploratory, independent mindset. The circular model predicts that this mindset is negated by the uncertainty-avoiding mindset that underpins security values, which are more concerned with stability and avoidance of threat. Indeed, this view fits several major theoretical perspectives proposing that social order, commitment to groups, and positive group feeling serve partly to *reduce* psychological uncertainty (Lawler, Thye, & Yoon, 2000). This view also fits the frequent use of authoritarian belief scales (which tap pro-security motives, see Oesterreich, 2005) to help assess an aversion to uncertainty (Sorrentino et al., 2008). Thus, a confluence of perspectives supports the hypothesis that the activation of security values may reduce the strength of curiosity-driven behaviour.

2.5.1 *Methods*

Participants

Participants were 60 Cardiff University undergraduate students who took part for course credit. The sample included 49 women and 11 men, with a mean age of 21.17 years ($SD = 4.22$).Participants were tested either individually or in a group with a maximum number of five. They were informed that there were several tasks to complete. These tasks included the experimental manipulation and a measure of self-direction behaviour. Then, the participants were probed for suspicion and debriefed using the funnel debriefing procedure described in Experiment 1.

Procedure

Experimental Manipulation. I attempted to conceptually replicate the effects obtained in Experiments 1 and 2 by using a different priming task. Specifically, I used a sorting task to activate values, as in prior research (Maio et al., 2009, Experiment 5). In each priming condition, participants were asked to complete a sequence of tasks.

First, they were given a table including values (and near-synonyms of the values) from the primed value domain (e.g., self-direction) and the names of some items of clothing (e.g., boots). The values were printed adjacent to positive adjectives (e.g., happy, excellent, ideal, perfect, pretty), and the clothing items were printed adjacent to neutral adverbs (e.g., normal, usual, typical, ordinary, common).[2] The values and items of furniture were located in a column labelled main terms, and the positive and neutral adjectives were located in an adjacent column labelled adjectives.

Participants were asked to memorize main terms and their adjectives and then, after 3 minutes, to recall and write down the main terms and their adjacent adjectives. I asked participants whether or not they noticed any meaningful categories of main terms and their adjectives while trying to memorize them. I then explained that the main terms could be divided into clothing and social concept categories and that the adjectives could be divided into positive and neutral categories. Participants were then given another set of clothing items, values, and adjectives to memorize based on their categories, with the explanation that the experimenter wished to see whether they could memorize more terms after the categories were made known to them.

After three minutes, participants were again asked to recall and write down the main terms and their adjectives. Participants in the self-direction condition always received self-direction values (e.g., *choosing own goals, curiosity, freedom*) across the two memorization tasks, whereas participants in the security condition always received security values across the tasks (e.g., *national security, social order, clean*). Participants in the control group went through almost the same process as for the

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[2] This pairing with positive adjectives was used because the chosen values are all associated with high importance and positive feelings (Maio & Olson, 1998; Schwartz, 1992). Thus, the pairing reflects the natural affective associations that participants already possess for the values.

priming conditions, except that they received names of colours as "categories" instead of values.

Self-direction behaviour. Next, I measured the promotion of self-direction by examining post-manipulation curiosity (i.e., openness and eagerness to acquire new information). Participants responded to 48 quiz questions about various topics, including history, movies, sports, music, science, geography, celebrities, politics, literature, myths, and legend. In each response, participants indicated whether they knew the answer and whether they would like to receive further information about the answer. To calculate curiosity from these responses, I calculated the ratio of the questions each participant wanted to know more about to the number of questions for which they did not know the answer. Higher ratios thus indicated higher levels of curiosity (independent of actual knowledge).

2.5.2 *Results*

To examine the effects of the priming manipulation (self-direction vs. security vs. control) on value-consistent behaviours, a one-way ANOVA was conducted. The results revealed a main effect of condition on curiosity behaviour, F (2, 57) = 4.92, p = .02, with the self-direction condition (M = .46, SE = .28) showing higher curiosity than the security condition (M = .24, SE = .18), t (57) = 3.13, p < .01 (see Figure 7). Planned pairwise contrasts with the control condition revealed that participants who were primed with self-direction values tended to exhibit greater curiosity than participants in the control group (M = .36, SE = .21), t (57) = 1.35, p = .18, but this contrast did not reach conventional levels of significance. In contrast, participants primed with security values exhibited marginally less curiosity than participants in the control group, t (57) = 1.78, p = .08. The direction of these planned comparisons was consistent with the predictions derived from the circular model.
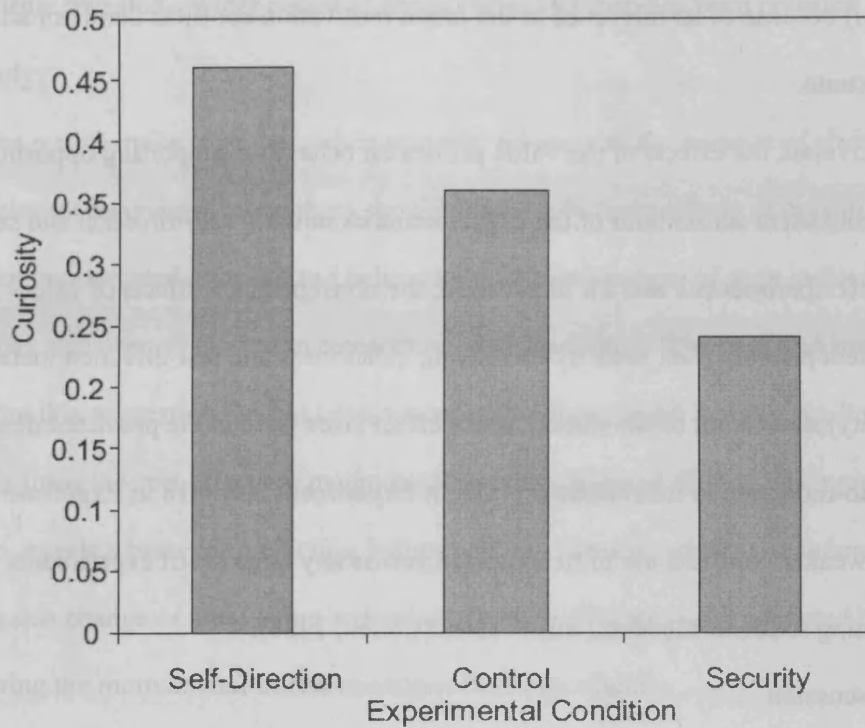
Figure 7: Experiment 3: Self-direction behaviour (curiosity) in each value-priming condition.

2.5.3 *Discussion*

The data from Experiment 3 provided novel evidence that priming a set of values both promotes behaviour that is consistent with the values and decreases behaviour consistent with opposing values. In this case, participants' curiosity decreased after being primed with security values, relative to the effect of being primed with self-direction values. As in Experiment 2, the main effect was significant and consistent with the predictions, but the specific comparisons with the control condition did not reach conventional levels of significance. Nonetheless, the tendency for the security prime to decrease curiosity was reliable using a one-tailed test ($p <$ .04), which is justified by the *a priori* hypotheses. This particular comparison is more central to my predictions (than the comparison between the self-direction prime and

control) because of its relevance to the latent motivation conflicts that I am attempting to illustrate.

Overall, the effects of the value primes on behaviour supporting opposing values were consistent across both of the experiments examining self-direction and security values (Experiments 2 and 3). In addition, the nonsignificant effects of value-consistent priming (i.e., security increasing cleanliness and self-direction increasing curiosity) should not be dismissed: these effect sizes were in the predicted direction, small-to-moderate in magnitude ($r = .16$ in Experiment 2, $r = .18$ in Experiment 3). Some weaker contrasts are to be expected across any large set of experiments examining small-to-moderate effect sizes (Cohen, 1988).

2.6 Discussion

The results across three experiments revealed that *priming* conservation values or openness to change values increases judgment and behaviour that affirms the values, while decreasing judgment and behaviour that affirms a set of opposing values. The consistent pattern across the measures of judgment and actual behaviour in the priming experiments provides additional support for the notion that values map onto latent motivational conflicts and compatibilities, as predicted by the circular model of values (Schwartz, 1992). These results consolidated the findings obtained by Maio et al.(2009, Experiment 5), which focused on the effects of priming self-enhancement versus self-transcendence values on behaviour. Together, the two sets of experiments provide provocative support for the motivational compatibilities and conflicts predicted by the circular models. Such systemic effects provide a significant extension of prior studies that examined the effects of value priming on only value-congruent behaviour (e.g., Bargh et al., 2001; Macrae & Johnston, 1998). The

experiments revealed a wider potential impact of values than has been revealed previously.

The results make clear that, when priming values with the purpose of altering value-relevant behaviour, researchers should consider indirect effects of prioritized values on non-targeted attitudes and behaviours. The importance of such indirect effects has also been suggested in research on attitude change (Fishbein & Ajzen, 1981), but this suggestion has not been accompanied by a model that can predict the nature of these indirect effects or methods of detecting indirect effects. The present research reveals a basis for predicting indirect effects. That is, when a procedure entails value change or mere value activation, indirect effects can be predicted by considering the motivational interconnections between values.

This evidence makes it compelling to also test whether indirect effects of other constructs that are linked to motives can be modelled in a similar way, including personal goals and aspirations. For instance, when a procedure entails change or activation of personal goals, it should be useful to know the motivational interconnections between them. Grouzet et al.'s model (2005) of conflicts and compatibilities between personal goals provides the most appropriate basis for examining the effects of latent motivational conflicts from personal goals. In theory, personal goal change and priming should increase the importance and pursuit of adjacent goals, diminish the importance and pursuit of opposing goals, and have no effect on orthogonal goals. These results would provide important support for the model's claims about the motivational interconnections between personal goals. If these results occur, an intriguing and useful follow-up would examine the extent to which the motivational interconnections between values and between personal goals yield distinct contributions to behaviour. These aims were beyond the scope of the

present investigation, but the evidence provides a provocative basis for expecting that these topics are worth investigating.

2.7 Chapter Summary

This research presented important evidence that values express systemic relations between latent motivations. As a result, priming a particular value has predictable effects on judgments and behaviours that express *different* values. The precise pattern of these effects can be predicted using the circular model of the motivational conflicts and compatibilities expressed by values. This evidence helps to enhance our ability to predict the effects of value priming on a range of behaviours, addressing a crucial issue in studies of goal priming more generally (Bargh et al., 2001). In this manner, the evidence productively integrates research on values with basic theory and evidence about links between motives and behaviour.

Other than activating values through a cognitive route, the experience of emotions can also lead to the activation of values. This makes it interesting to investigate the connections between emotion and values and examine the subsequent systemic changes of values predicted by the circular model's assumptions about motivational conflict between values. The next three chapters focus on this issue.

Chapter 3: The effect of Contextualized Sadness on Values

3.1 Chapter Overview

Many causes attempt to solicit support by eliciting feelings within us. Charities

helping victims of famine attempt to elicit sadness at the sight of others' hunger.

Environmental organizations attempt to elicit disgust at the sight of irresponsible

businesses dumping toxic waste. Anti-war campaigners attempt to elicit feelings of

shame over our nation's war atrocities. The assumption is that the emotions are

needed to stir people and get them to act, by invigorating our defence of values, like

helpfulness, protection of the environment, and a world at peace.

Despite the pervasiveness of these emotional appeals, there are basic

psychological questions about the role of emotion in the maintenance and expression

of values. Values are abstract goals that are based heavily on emotional responses

partly because of strong consensual support for them (Maio, 2010; Maio & Olson,

1998). As a result, people maintain a dedication to values without it even being

necessary to develop arguments in support of them. Instead, people can rely on strong

affective support for the values. But how do values react to emotions? Do emotions

like sadness, disgust, and shame facilitate the values that campaigners seek to

motivate? The second stream of this thesis addressed these issues by considering not

only the motivational tensions of values, but also the *context* of emotions.

The research described in this chapter provided the first examination of the

effects of emotion on values, attempting to detect patterns of effect that fit the circular

model's assumptions about motivational conflict and compatibility between values.

The research focused specifically on the effects of sadness on values. Despite the

prevalence of research on the motivational function of sadness, the direct associations

between sadness and values have not been empirically examined. Experiment 4 asked

participants to recall any sadness experience they had. A post-experimental coding of

participants' report of their experience found two main themes: death-related sadness

and personal failure sadness. The results showed that participants who experienced

death-related sadness attached less importance to self-enhancement values and more

importance to self-transcendence values than participants in a control condition.

Experiment 5 ruled out the non-controlled differences in self-selection of emotion

context as an alternative explanation of the effect by manipulating the emotion

context. The results of Experiment 5 replicated the findings in Experiment 4. This

research highlights the importance of context of sadness and the motivational

interrelations between values in predicting the effects of sadness on values.

3.2 Reconciling the Contradicting Motivational Functions of Sadness

Previous research on sadness has revealed effects on motivation that appear

inconsistent at first glance. On the one hand, some research has found that sadness

interferes with self-improvement and decreases self-control (Fishbach & Labroo,

2007). Similarly, there is evidence that negative affect demotivates goal pursuit

(Aarts, Custers, & Holland, 2007; Aarts, Custers, & Marien, 2008; Aarts, Custers, &

Veltkamp, 2008). For instance, Aart, Custers, and Holland (2007) found that people

became less motivated to party when the partying goal is coactivated with negative

affect.

On the other hand, there is evidence showing that negative moods like sadness

can motivate mood-repair mechanisms, which cause sad individuals to become more

generous (Baumann, Cialdini, & Kenrick, 1981; Cialdini, Darby, & Vincent, 1973;

Manucia, Baumann, & Cialdini, 1984). Small and Lerner (2008) found that, when

sadness is associated with appraisals that external circumstances led to another

person's misfortune, sadness led to an increased in support for welfare assistance.

Also, negative emotional reactions to pictures or videos of sad peers promoted pro-social and helping behaviour (Eisenberg & Miller, 1987; Leiman, 1978; J. Solomon, 1985; Weston & Main, 1980).

The former, motivational-damping effects could be reconciled with the latter, motivation-enhancing effects by considering the types of goals involved. Research suggesting that sadness demotivates goal pursuit has focused on goals related to self-control, self-improvement, and pleasure seeking (partying). These goals and activities have a clear focus on the self and are related to self-enhancement values. On the other hand, research suggesting that sadness motivates goal pursuit often refers to goals that focus on the well-being of others. These goals include helping and caring for others, which are consistent with self-transcendence values.

The different focus on the self versus others embedded in goals may have important implication on its association with emotions. An emotion induced by a self-focused or other-focused context is likely to activate a goal with a matching focus. Hence, sadness induced by a self-focused context may produce a motivational-damping effect and may not lead to any activation of values. On the other hand, an emotion induced by an other-focus context may produce motivation-enhancing effects and activate pro-social goals. According to Schwartz's circular model of values (1992), the self-enhancement value domain and the self-transcendence value domain serve opposing motives. Consequently, sadness induced by an other-focused context might *increase* self-transcendence values, while *decreasing* self-enhancement values.

3.3 Contextualized Sadness and Values

There is evidence supporting that these self versus others contexts exist in the experience of sadness. Research often induces sadness by leading people to recall a sad experience. In many instances, people recall the death or illness of a friend or

family member. In other cases, they may remember a personal failure, entailing the potential loss of positive regard of another person (Fishbach & Labroo, 2007; Lazarus, 1991). These contexts involve a different initial bearer of the suffering (e.g., being an onlooker or a victim). These different contexts may activate different amounts of focus on others versus the self, with consequences for the importance attached to self-enhancement and self-transcendence values.

In order to take a closer look at whether the context of the recalled sadness changes its effects on values, Experiment 4 recorded the contexts that participants spontaneously included in recollections of sad events.

3.3.1 *Overview of Experiments*

In the following two experiments, I searched for evidence of distinct effect of contextualized sadness on values. Experiment 4 examined the effects of freely recalled sadness on values, while Experiment 5 controlled for the differences in the self-selection of emotion context by randomly determining whether participants recalled a sad experience related to one of the themes revealed in Experiment 4 or a control experience. As elaborated below, these designs tested the hypothesis that the experience of sadness would lead to (1) increased importance for values that share common goals with sadness in its specific context, (2) decreased importance for values that share conflicting goals with sadness in its specific context.

3.4 Experiment 4

Participants in Experiment 4 were asked to recall a sad or a neutral experience prior to completing a measure of values. I coded the content of the sad experiences to test whether the context of sadness determined its effects on values. For this initial experiment, I did not form predictions for the direction of the effects of sadness on values, because the variation in emotion context was not yet clear. The principal

prediction was that any obtained effects on values (dependent on context) would reflect the motivational relations described by the circular model. Support for this prediction would provide a basis for a follow-up experiment manipulating emotion and emotion context.

3.4.1 *Methods*

Participants

Participants were 54 Cardiff University undergraduate students who took part for course credit. The sample included 42 women and 12 men, with a mean age of 20.13 years ($SD = 2.00$).

Procedure

Participants took part either individually or in groups of seven or less, seated approximately five feet apart. Participants were told that they would be taking part in several studies. Participants started with the emotion manipulation task, which was presented as a study of emotion recall. The manipulation asked participants to write a personal event associated with an intense emotion of sadness (Fishbach & Labroo, 2007; Tangney, 1993). The control group was asked to write a description of an ordinary school day.

Next, participants completed the dependent measure, which was the Portrait Values Questionnaire (PVQ; Schwartz et al., 2001). The PVQ contains forty brief paragraphs that describe different individuals' goals, aspirations, and wishes. These descriptions each point implicitly to the importance of particular values. For example, the importance of helpfulness is assessed using the following item: "It's very important to her to help the people around her. She wants to care for their well-being."

Participants rated the extent to which they considered the person described in each item to be like them, using a 7-point scale from 1 (not like me at all) to 7 (very much like me). Male participants received a version of the PVQ containing items that referred to men (e.g., ""He thinks it is important to be ambitious. . ."), whereas female participants received a version that referred to women (e.g., "She thinks it is important to be ambitious. . ."). Each participant received seven to thirteen items for each of the four higher-order value domains, which included openness to change, conservation, self-enhancement, and self-transcendence. Each of the four higher-order value scales exhibited satisfactory internal consistency ($\alpha s > .70$). I therefore based the analyses on the four higher-order value domains.[3]

After completing the PVQ, participants in the sadness condition rated how intensely they experienced sadness during their recall task, while participants in the control condition rated the intensity of any emotion they experienced during their recall task. Participants gave the emotion intensity rating using a scale from 1 (not at all) to 9 (very strongly). Finally, participants were asked to recall a happy event (in order to restore positive mood), probed for suspicion, and debriefed.

3.4.2 Results

Manipulation Check

As expected, participants in the sadness condition reported a significantly higher intensity of emotion during the recall task ($M = 4.73$, $SE = 1.66$) than did participants in the control condition ($M = 3.18$, $SE = 1.66$), $t (52) = 3.43, p = .001$.

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[3] The lower-order values of the four higher-order value domains in study 4-9 also showed satisfactory internal consistency ($\alpha s > .70$). I therefore based the analyses on the four higher-order value domains in all studies.

Effects of Sadness on Values

I conducted one-way ANCOVAs on each of the four higher-order value

domains, with the experimental manipulation (sadness versus control) as the two-level

independent variable. The average of each participant's ratings of all of the values

was entered as a covariate to control for individual differences in general value

endorsement (Schwartz, 2007). Results revealed no significant differences between

the sadness condition and control condition. The mean and standard errors of the

values ratings are reported in Table 3.1.

	Experimental Group			
Values	Sad condition - aggregated	Control condition	F	η_p^2
Self-enhancement	4.11a (.11)	4.34a (.10)	2.32	.04
Self-transcendence	4.56a (.11)	4.32a (.10)	2.63	.05
Openness to Change	4.34a (.13)	4.45a (.12)	.43	.008
Conservation	3.73a (.09)	3.68a (.08)	.21	.004

Table 3.1
Experiment 4: Effect of Sadness on Values
Note. Standard errors appear in parentheses below means. Means with differing
subscripts within rows are significantly different at the $p < .05$.

Two Contexts of Sadness: Death-Related versus Personal Loss

As described earlier, the context of the experienced emotions may have

divergent implications for motivation and goals. Participants' descriptions of a sad

experience revealed two main themes: the passing away of family members or friends

and personal failure. These are common themes in tasks that ask participants to recall

sad events (Fishbach & Labroo, 2007; Lazarus, 1991).

Two independent judges exhibited perfect agreement in their coding of

participants' sadness experience into these two themes. Their coding revealed that

fifteen participants (58%) wrote about death-related events, such as the loss of

relatives. Eleven participants (42%) wrote about personal failure, such as poor

examination results and failure on a driving test. One participant wrote about the loss

of a football team in a match. This participant's event was different from the two

major themes and was therefore excluded from the analysis of the effects of emotion

context.

The means and standard errors of the values ratings across the types of sadness

are listed in Table 3.2. To examine the effect of the two types of sadness on value

ratings, I again conducted one-way ANCOVAs on the four higher-order value

domains, but this time with the types of sadness (death-related sadness versus

personal loss sadness versus control) as the independent variable.

Table 3.2
Experiment 4: Effect of Contextualized Sadness on Values

	Experimental Group				
Values	Sad condition - death related	Sad condition - personal failure	Control condition	F	η_p^2
	3.93z	4.35zb	4.34b	2.99†	.11
Self-enhancement	(.14)	(.16)	(.10)		
Self-	4.74z	4.32zb	4.32b	3.28*	.12
transcendence	(.14)	(.16)	(.10)		
Openness to	4.41a	4.24a	4.45a	.43	.02
Change	(.17)	(.19)	(.12)		
Conservation	3.69a	3.79a	3.68a	.24	.01
	(.12)	(.13)	(.08)		

Note. $* = p < .05$, $† = p < .06$. Standard errors appear in parentheses below means.
Means with differing subscripts within rows are significantly different at the $p < .05$
based on Fisher's LSD post hoc paired comparisons. Means sharing the subscript z
within rows are marginally different at $p < .07$.

The type of sadness had a marginal effect on the self-enhancement value

domain, $F (2, 50) = 2.99, p = .06, \eta_p^2 = .11$. Participants who thought about death-

related sadness ($M = 3.93, SE = .14$) subsequently considered self-enhancement

values to be marginally less important than did participants who thought about

sadness related to personal failure (M = 4.35, SE = .16), t (50) = 1.88, p = .07 and

significantly less important than did participants in the control condition (M = 4.34,

SE = .10), t (50) = 2.34, p = .02. The importance of self-enhancement values did not

significantly differ between participants who thought about personal failure sadness

and participants in the control condition, t (50) = .02, p = .99.

The type of sadness had a significant impact in the opposite direction on self-

transcendence values, F (2, 50) = 3.28, p = .05, η_p^2 = .12. Participants who thought

about death-related sadness (M = 4.74, SE = .14) subsequently considered self-

transcendence values to be marginally more important than did participants who

thought about sadness related to personal failure (M = 4.32, SE = .16), t (50) = 1.95, p

= .06, and significantly more important than control participants (M = 4.32, SE = .10),

t (50) = 2.46, p = .02. The importance of self-transcendence values did not

significantly differ between participants who thought about personal failure sadness

and participants in the control condition, t (50) = .02, p = .98.

An additional test on the associations between sadness intensity and the changes

in values among the participants who thought about death-related sadness was

performed to consider the mechanisms underlying the changes in values. The

correlations between the intensity of sadness and each of the four values were not

significant, rs (15) < .26, ps > .05. Thus, the levels of sadness per se did not account

for the effect of different sadness contexts on values.[4]

3.4.3 Discussion

The results of Experiment 4 indicated that death-related sadness led people to

attach less importance to self-enhancement values and more importance to self-

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[4] Similar analyses were performed in Experiment 5-9, and the intensity of the emotion was not
associated with any of the changes in values. It may suggest that context alone elicited the changes in
values, or that the combination of specific emotion and the context produced the effect. These
interpretations were further discussed in Chapter 6.

transcendence values. These reciprocal effects fit the circular model's prediction that self-enhancement and self-transcendence values serve opposing motives. Any variable that increases the importance of one of these two types of values should decrease the importance of the other type of value. Of importance, the context of sadness was critical to determining its effects on values. Death-related sadness makes people aware of an event that has ended the life of another person, promoting awareness of others. It then promotes self-transcendence values, which stresses benefits for other people. At the same time, the focus on self-benefit in self-enhancement values is not compatible with death-related sadness and is suppressed.

There results may help to integrate a variety of prior findings. In addition to fitting the extant literature on emotion and motivation, the effects of death-related sadness are consistent with the terror management theory (TMT), which proposes that self-esteem within the context of one's culture provides protection from the fear of death (Becker, 1971, 1973; Greenberg, Solomon, & Pyszczynski, 1997; S. Solomon, Greenberg, & Pyszczynski, 1991). TMT research has demonstrated that mortality salience can lead to socially destructive consequences, such as prejudice and aggression (e.g., Greenberg et al., 1990; McGregor et al., 1998), or socially constructive outcomes, such as benevolence to others (Jonas, Schimel, Greenberg, & Pyszczynski, 2002). The type of outcome depends on whether the salience of death is accompanied by the salience of cultural values, such as egalitarianism (Gailliot, Stillman, Schmeichel, Maner, & Plant, 2008). In Experiment 4, remembering the experience of a loved one's death triggered sadness in association with the scenes of family members being together and offering help to each other. The feeling of sadness then induced the urge and motivation to endorse self-transcendence values.

In contrast, similar changes in self-enhancement values and self-transcendence values did not occur when I examined sadness related to personal failure or sadness per se. Sadness related to personal failure should activate feelings of low self-efficacy and self-esteem (Brown & Mankowski, 1993; Brown & Marshall, 2001). These changes may temporarily cripple the mood recovery mechanism and hence prevent the activation of relevant values. This interpretation is consistent with the prevalent view of sadness as a de-motivator of goal pursuit (Aarts, Custers, & Holland, 2007; Aarts, Custers, & Marien, 2008; Aarts, Custers, & Veltkamp, 2008). For example, Fishbach and Labroo (2007) found that sad participants were less ready to adjust themselves and attain a salient (self-enhancement related) goal than happy participants. Also, sadness was found to decrease helping when the emotion focuses attention inwardly (Barnett, Howard, Melton, & Dino, 1982; Eisenberg & Fabes, 1990). Integrating these findings with the results of Experiment 4, sadness may demotivate goal pursuit when the emotion has a self-oriented source, but not when it has an other-focused source.

3.5 Experiment 5

Experiment 4 relied on a post-experimental coding of participants' report of their sadness experience to determine the effect of emotion context. This method leaves open the possibility that non-controlled differences in the self-selection of emotion context might explain its effects. To address this limitation, Experiment 5 manipulated the emotion context. Specifically, this experiment randomly determined whether participants recalled a sad experience related to death, a sad experience related to personal failure, or a control experience.

In addition, this experiment checked whether the emotion priming procedure induced emotions other than sadness, by using the Positive Affect and Negative

Affect scale (Watson & Clark, 1988). Because of their relevance to death-related experience, sympathy and affection were also measured.

If the findings of Experiment 4 reflect a causal effect of each contextualized emotion, participant primed with death-related sadness should subsequently consider self-enhancement values to be less important and self-transcendence values to be more important. In contrast, participants primed with sadness related to personal failure should not show any difference in value endorsement when compared to participants in the control condition.

3.5.1 *Methods*

Participants

Participants were 101 Cardiff University undergraduate psychology students who took part for course credit. Five participants were excluded from the sample because their descriptions focused on emotions different from the one I requested. The remaining 96 participants included 81 women and 15 men, with mean age of 19.44 ($SD = 1.38$).

Procedure

Participants took part either individually or in groups of seven or less, seated approximately five feet apart. Participants were told that they would be taking part in several studies. The manipulation was presented as a study of emotion recall. Some participants were asked to write about a death-related personal event associated with an intense feeling of sadness. Other participants were asked to write about a personal failure associated with an intense feeling of sadness. The control group was asked to write a description of an ordinary school day.

Next, all participants completed the Portrait Values Questionnaire (PVQ; Schwartz, 2001), as in Experiment 4. Participants then rated how intensely they

experienced a list of emotions during the recall task. The list included sadness, affection, sympathy and 20 emotions from the PANAS (e.g., irritable, determined). Participants responded to each emotion using a scale from 1 (not at all) to 5 (very strongly). Responses to the 10 positive emotions (e.g., determined, strong) and the 10 negative emotions (e.g., distressed, ashamed) from the PANAS were averaged to form a positive affect (PA) score and a negative affect (NA) score, respectively (both αs > .74). Sympathy and affection were significantly correlated, r (94) = .50, p < .001 and were therefore averaged into one "sympathy-affection" score.

Finally, participants were asked to recall a happy event, probed for suspicion, and debriefed.

3.5.2 Results

Manipulation Checks

Sadness intensity. A one-way (death-related sadness versus failure related sadness versus control) ANOVA revealed that participants in the three experimental conditions experienced sadness at different levels of intensity, F (2, 93) = 32.54, p < .001. Post-hoc t-tests indicated that participants in both the death-related sadness condition and personal failure sadness condition reported a significantly higher intensity of sadness than did participants in the control condition (M = 1.22, SE = .48), t (93) = 7.81, p <.001, and t (93) = 5.57, p <.001, respectively. Participants in the death-related sadness condition experienced sadness more intensely (M = 3.52, SE = 1.36) than did participants in the personal failure sadness condition (M = 2.87, SE = 1.48), t (93) = 2.16, p =.03.

Positive and negative affect. Participants in the three experimental conditions did not experience different levels of positive affect, F (2, 93) = .78, p = .46. On the other hand, participants experienced different levels of negative affect, F (2, 93) =

15.90, $p < .001$. Participants in the death-related sadness condition ($M = 1.99$, $SE = .90$) and the personal failure condition ($M = 2.26$, $SE = .93$) experienced more negative affect than did participants in the control condition ($M = 1.23$, $SE = .29$), $t (93) = 4.02$, $p < .001$, and $t (93) = 5.41$, $p < .001$, respectively. The difference in intensity of negative affect experienced by the participants in the death-related sadness condition and the personal failure condition was not significant, $t (93) = 1.41$, $p = .16$.

A one-way ANOVA revealed that participants in the three manipulation condition experienced different levels of sympathy-affection, $F (2, 93) = 23.09$, $p < .001$. As expected, participants in the death-related sadness condition felt sympathy-affection more intensely ($M = 3.16$, $SE = 1.23$) than did participants in the personal failure condition ($M = 1.65$, $SE = 1.16$), $t (93) = 5.86$, $p < .001$, and the control condition ($M = 1.66$, $SE = .58$), $t (93) = 5.91$, $p < .001$. The level of sympathy-affection did not significantly differ between participants who thought about personal failure sadness and participants in the control condition, $t (93) = .04$, $p = .97$.

Taken together, the results showed that the manipulation was successful. The two sadness manipulations caused a higher intensity of sadness and negative affect than did the control condition. The death-related sadness manipulation also led to a higher level of other-focused emotions (sympathy and affection) than did the personal failure sadness condition and the control condition.

Effect of Contextualized Sadness on Values

To examine the effect of the two types of sadness on values, I conducted one-way ANCOVAs on each of the four higher-order values, with the experimental manipulation (death-related sadness versus personal failure sadness versus control) as the independent variable. The average of each participant's ratings of all of the values

was entered as a covariate. The mean and standard errors of all dependent variables

(values ratings) are reported in Table 3.3.

Emotion priming had a significant effect on self-enhancement values, F (2, 92)

= 4.42, p = .02, η_p^2 = .09. Death-related sadness caused self-enhancement values to

become less important to participants (M = 3.84, SE = .11) than personal failure

sadness (M = 4.27, SE = .11), t (92) = 2.79, p = .007, and the no sadness control

condition (M = 4.19, SE = .11), t (92) = 2.29, p = .02. The importance of self-

enhancement values did not significantly differ between the personal failure sadness

condition and the control condition, t (92) = .53, p = .60.

Table 3.3
Experiment 5: Effects of Contextualized Sadness on Values

	Experimental Group				
Values	Sad condition - death related	Sad condition - personal failure	Control condition	F	η_p^2
Self-enhancement	3.84a (0.11)	4.27b (0.11)	4.19b (0.11)	4.42*	.09
Self-transcendence	4.55a (0.08)	4.28b (0.08)	4.33b (0.08)	3.27*	.07
Openness to Change	4.50a (0.11)	4.15b (0.11)	4.34ab (0.11)	2.63	.05
Conservation	3.60a (0.09)	3.67a (0.09)	3.59a (0.09)	.19	.004

Note. * = p < .05. Standard errors appear in parentheses below means. Means with differing subscripts within rows are significantly different at the p < .05 based on Fisher's LSD post hoc paired comparisons.

In contrast, emotion priming had a significant effect in the opposite direction on

self-transcendence values, F (2, 92) = 3.27, p = .04, η_p^2 = .07. Death-related sadness

caused the self-transcendence values to become significantly more important (M =

4.55, SE = .08) than personal failure sadness (M = 4.28, SE = .08), t (92) = 2.37, p =

.02, and no sadness (M = 4.33, SE = .08), t (92) = 2.04, p = .05. On the other hand, the

importance of self-transcendence values did not significantly differ between the

personal failure sadness and control conditions, $t(92) = .38$, $p = .71$. Taken together, when compared to the personal failure sadness and control condition, death-related sadness suppressed self-enhancement values and promoted self-transcendence values, replicating the effects revealed in Experiment 4.

Mediation: Death related Sadness, Sadness Intensity, and Sympathy

A series of regression analyses tested whether sadness intensity and sympathy-affection mediated the observed effects of death-related sadness on self-enhancement and self-transcendent values, in comparison to the control condition. As in the above analyses, the average of each participant's ratings of all of the values was also entered in each of the analyses.

In order to examine this indirect effect, I used the product-of-coefficients strategy with bootstrapping proposed by Preacher and Hayes (2004; 2008). This strategy provides an estimate of indirect effect obtained from 10000 bootstrapped re-samples, which overcomes problems with non-normally distributed variables such as power problems. The indirect effect was estimated by first regressing sadness intensity (mediator) on death-related sadness priming (independent variable), and then regressing self-transcendence values or self-enhancement values (dependent variable) on sadness intensity (mediator) and death-related sadness priming (independent variable). I also controlled for the average of each participant's ratings of all of their values. These analyses produced two mean bootstrapped sample estimates of the regression coefficients and the product of these estimates revealed the strength of the indirect effect. The estimated standard error of the mean indirect effect was derived from the standard deviation of the estimate of the indirect effect (Preacher & Hayes, 2004). This provided the bootstrap confidence intervals for the indirect effect.

Results from the regression analysis revealed no direct effect of sadness intensity on self-enhancement values and self-transcendence values, $\beta = -.06$, $t (62) = -.80$, $p = .43$, and $\beta = .05$, $t (62) = .88$, $p = .38$, respectively. Thus, higher levels of sadness intensity experienced by the participants who recalled death-related sadness did not account for the effect of different sadness contexts on values.

On the other hand, results from the regression analysis revealed a direct effect of sympathy-affection on self-enhancement values, $\beta = -.20$, $t (62) = -2.74$, $p = .008$. Results from bootstrapping yielded a significant mean indirect effect of death-related sadness on self-enhancement values through sympathy-affection of $\beta = -.31$ (SE = .12), with a 95%-confidence interval from -.55 to -.08. Similar analyses testing the mediation role of sympathy-affection on self-transcendence values revealed a marginally direct effect of sympathy-affection, $\beta = .11$, $t (62) = 1.76$, $p = .08$. The mean indirect effect of death-related sadness on self-transcendence values through sympathy-affection was significant, $\beta = .16$ (SE = .08), with a 95%-confidence interval from .0005 to .33.

Together, these results indicate that the effects of death-related sadness on values were driven by changes in felt sympathy after the sadness manipulation. These changes in sympathy led to the decrease in focus on the self and the enhanced prioritization of others through values.

3.5.3 Discussion

Experiment 5 once again showed that death-related sadness causes people to attach less importance to self-enhancement values and more importance to self-transcendence values. By manipulating the context in the emotion induction, I ruled out the possibility that non-controlled prior differences in context salience elicited the effects. Hence, the changes in values occur both when people spontaneously thought

about sadness in the two contexts and when people were asked to think about sadness in the two contexts.

To further disentangle the differences between the two contexts of sadness, I examined other emotional reactions that may be associated with the contexts. I found that death-related sadness did not differ from personal failure sadness by the level of positive affect and negative affect experienced. Although death-related sadness caused participants to experience a higher intensity of sadness than did personal failure sadness, the mediational analyses showed that the intensity of sadness per se did not elicit the changes in values. In contrast, death-related sadness caused participants to experience higher intensity of sympathy, which then mediated the effect of contextualized sadness on values.

The mediating role of sympathy supports the hypothesis that death-related sadness induced a greater focus on others' well-being than personal failure sadness and that this effect was responsible for the effect of death-related sadness on self-enhancement and self-transcendence values. Being able to feel for the suffering of others is a part of human nature (de Waal, 1996). Sympathy is a emotional response to others' suffering and it is considered to be a part of the "other suffering emotions" (Haidt, 2003). These emotional responses motivate attempts to help the sufferer (Harris, 1989; Zahn-Waxler, Radke-Yarrow, & King, 1979).

Crucially, the evidence goes beyond the past evidence by showing that sympathy affects much more than helpfulness per se. This emotional response inspires greater importance to a broad set of self-transcendence values. Not only does sympathy make people place more importance on helpfulness, it makes them place more importance on maintaining justice, equality, being broad-minded, and caring for the environment. At the same time, the manipulation decreased the importance

attached to a broad set of values that focuses on self-interest (e.g., gaining social recognition, being wealth, successful, and influential). These reciprocal effects are consistent with Schwartz's cross-cultural model of values. By incorporating this model into the experimental design, the data showed that the effects of sadness in a sympathetic context extend far beyond effects on a helping orientation alone. The elicitation of sadness in a sympathetic context may increase desire to promote a variety of self-transcending, social justice motives. Moreover, the effects occur in a manner that is consistent with prior theory and evidence about motivational conflict and compatibility between values.

3.6 Chapter Summary

The research in this chapter focused on the effect of contextualized sadness on values. The findings shed light on a puzzle in past evidence, wherein sadness was sometimes found to be motivational-damping, and, at other times, motivational-enhancing. The results revealed no effects of personal failure sadness on values, and this null effect is potentially consistent with evidence suggesting that sadness is a demotivator of goals (Aarts, Custers, & Holland, 2007; Aarts, Custers, & Marien, 2008; Aarts, Custers, & Veltkamp, 2008; Fishbach & Labroo, 2007). In contrast, death-related sadness led to an increased importance in self-transcendence values. This finding matches evidence that sadness motivates mood-repair mechanisms, which cause sad individuals to become more generous (Baumann, Cialdini, & Kenrick, 1981; Cialdini, Darby, & Vincent, 1973; Manucia, Baumann, & Cialdini, 1984).

Overall, then, I was able to detect these differences in effect on values by examining sadness in two contexts. These effects may help to explain divergent effects of sadness on other judgments and behaviour. However, the next step in my

doctoral research was to test whether other contextualized emotions affect values in a

similar way, congruent with the circular model's assumptions about motivational

conflict and compatibility between values.

Chapter 4: The Effect of Disgust on Values

4.1 Chapter Overview

This Chapter moved on from the focus on sadness to disgust. Disgust is a negative emotion like sadness, but has a higher activation level (Watson & Clark, 1988). Across the two experiments, I investigated the impact of contextualized disgust on values. Experiment 6 asked participants to recall a disgust experience. A post-experimental coding of participants' experiences revealed two main themes: moral disgust and hygiene disgust. The results showed that participants who experienced moral disgust attached less importance to self-enhancement values and more importance to self-transcendence values. Also, participants who experienced hygiene disgust attached less importance to openness to change values and more importance to conservation values. Experiment 7 manipulated the emotion context and replicated part of the findings in Experiment 6. Moral disgust again led to the changes in self-enhancement values and self-transcendence values, but the effect of hygiene disgust was not found. This research highlights the importance of the context of disgust and motivational interrelations between values in predicting the effects of disgust experiences on values.

4.2 Context of Disgust

Rozin et al. (2000) suggest that disgust possesses different functions in different contexts. According to Rozin et al., these functions reflect evolutionary processes, culture, and individual development. In the initial stages of development, disgust elicitors like bad taste and bodily waste help people to stay away from poison, disease, and infection. In later stages of development, the disgust elicitors can be sex, death, and hygiene. By denying these aspects of animal nature, disgust partly functions as a denial of mortality. The role of disgust then expands on an

interpersonal and moral level. Through avoiding direct or indirect contact with strangers, undesirables, and some moral offences, the feeling of disgust protects both the body and the social order. At this stage, physical contaminants and morally equivocal behaviour can both elicit disgust reactions. Disgust in a physical context helps distance the self from the physical environment, whereas disgust in a social or moral context helps consolidate moral standards.

Rozin et al.'s (2000) perspective is consistent with the hypothesis that the effects of disgust on values should depend on the context of disgust. Moral disgust is an other-condemning emotion that focuses on the characterological flaws of others (Giner-Sorolla, Bosson, Caswell, & Hettinger, 2010; Haidt, 2003; Roseman, Antoniou, & Jose, 1996; Schnall, Haidt, Clore, & Jordan, 2008). The negative feeling of disgust attached to the moral transgression of the others should trigger a downward contrastive response (R. H Smith, 2000). This type of response should motivate an individual to distinguish his or her own behaviour from the person who performed the immoral acts. Similarly, evolutionary theorists connect the function of moral disgust to the maintenance of reciprocal altruism, which concerns the motivation to cooperate with those who have cooperated in the past, and the motivation to avoid or to actively punish people who have tried to cheat or exploit them (see Haidt, 2003). Taken together, the experience of moral disgust should induce the urge to help and cooperate with others, and to maintain social justice.

The motivations induced by moral disgust are closely related to self-enhancement and self-transcendence values. These values are often in conflict within moral dilemmas, as illustrated by abundant theory and research on collective good problems (e.g., Van Lange, 1999) and numerous moral dilemmas (e.g., Greene, 2009). When participants relate feelings of disgust to a moral context, but not a hygiene

context, they should be motivated to consider the well-being of others. Therefore, the moral context should lead people to place less importance on (the motivationally inconsistent) self-enhancement values (e.g., achievement) and greater emphasis on self-transcendence (e.g., benevolence) values.

In addition, conservation and openness to change values may be influenced by hygiene or bodily disgust. Disgust in the hygiene context acts to protect health and safety, which are among the needs served by conservation values. Thus, the hygiene context should lead people to place less importance on (the motivationally inconsistent) openness values and greater emphasis on conservation values.

This reasoning has not been tested directly in past research. The most relevant evidence indicates that people who are highly sensitive to physical disgust are more likely to be politically conservative, rather than liberal (Inbar, Pizarro, & Bloom, 2009). This finding is consistent with the predicted effects on contextualized values because political shifts are observed more strongly on issues ostensibly related to moral judgments of purity and divinity (Inbar, Pizarro, & Bloom, 2009; Inbar, Pizarro, Knobe, & Bloom, 2009). However, it is not possible to map the political issues studied in past research onto self-enhancement, self-transcendence, openness, and conservation values in a simple, one-to-one manner. The issues tend to be linked to many of these values at once. By examining value shifts directly, I can gain more information about the precise motivational shifts elicited by the different types of disgust.

To begin to address this aim, Experiment 6 used a method similar to Experiment 4. Participants were asked to recall an experience of disgust and then complete a measure of values. I subsequently coded the occurrence of moral and hygiene themes

(among others) and tested whether the recalled context determined the impact of disgust on values.

4.2.1 *Overview of Experiments*

The following two experiments focused on the distinct effect of contextualized disgust on values. Experiment 6 examined the effects of freely recalled disgust on values, while Experiment 7 controlled for potential differences in the self-selection of emotion context by randomly determining whether participants recalled a disgusting experience related to morality, a disgust experience related to hygiene, or a control experience. These designs tested the hypothesis that the experience of moral disgust leads to (1) decreased importance of self-enhancement values and (2) increased importance of self-transcendence values. The designs also tested whether the experience of hygiene disgust leads to (1) decreased importance of openness to change values and (2) increased importance of conservation values.

4.3 Experiment 6

Participants in Experiment 6 were asked to recall a disgust experience or a neutral experience prior to completing a measure of values. I coded the content of the disgust experiences to test whether the context of disgust determined its effects on values. I based on previous research that examined the motivational function of disgust to predict the direction of the effects of disgust on values. Support for these predictions would provide a basis for a follow-up experiment manipulating emotion and emotion context.

4.3.1 *Methods*

Participants

Participants were 56 Cardiff University undergraduate psychology students who took part for course credit or for £2 reimbursement. The sample included 52 women and 4 men, with a mean age of 19.8 ($SD = 2.10$).

Procedure

Participants took part either individually or in groups of four or less, seated approximately five feet apart. Participants were told that they would be taking part in several studies. The experimental manipulation was presented as a study of emotion recall. This manipulation asked participants to write about a personal event associated with an intense feeling of disgust (Fishbach & Labroo, 2007; Tangney, 1993). The control group was asked to write a description about an ordinary school day.

Next, participants completed the Portrait Values Questionnaire (PVQ; Schwartz, 2001), as in Experiment 4. Participants in the disgust condition then rated how intensely they experienced the feeling of disgust during the recall task, while participants in the control condition rated the intensity of any emotion they experienced during the writing task. Participants responded using a scale from 1 (not at all) to 9 (very strongly). Finally, participants were asked to recall a happy event, probed for suspicion, and debriefed.

4.3.2 *Results*

Manipulation Check

As expected, participants in the disgust condition reported a significantly higher intensity of emotion ($M = 4.69$, $SE = 1.20$) than did participants in the control condition ($M = 1.69$, $SE = 3.02$), $t (53) = 3.19, p < .001$.

Effect of Disgust on Values

I used two-level (disgust vs control) one-way ANCOVAs to examine the effect

of the experimental manipulation on the importance of each higher-order value type.

The average of each participant's ratings of all of the values was entered as a

covariate to control for individual differences in general value endorsement

(Schwartz, 2007). The means and standard errors of the dependent variables (values

ratings) are reported in Table 4.1.

Table 4.1
Experiment 6: Effects of Disgust on Values

	Experimental Group			
Values	Disgust condition - aggregated	Control condition	F	η_p^2
Self-enhancement	4.02a (0.10)	4.51b (0.10)	12.45***	.19
Self-transcendence	4.67z (0.09)	4.43z (0.09)	3.93†	.07
Openness to Change	4.52a (0.11)	4.59a (0.12)	.18	.003
Conservation	3.92z (0.09)	3.69z (0.09)	3.47†	.06

Note. *** $= p \leq .001$, † $= p < .07$. Standard errors appear in parentheses below means. Means with differing subscripts within rows are significantly different at the $p < .05$ based on Fisher's LSD post hoc paired comparisons. Means sharing the subscript z within rows are marginally different at $p < .07$.

Results indicated that disgust priming affected self-enhancement values, self-

transcendence values, and conservation values. Specifically, the recollection of

feelings of disgust condition caused self-enhancement values to become significantly

less important ($M = 4.02$, $SE = .10$) than did the control task ($M = 4.51$, $SE = .10$), F

$(1, 53) = 12.45$, $p = .001$, $\eta_p^2 = .19$. In contrast, disgust caused self-transcendence

values to become significantly more important ($M = 4.67$, $SE = .09$) than the control

task ($M = 4.42$, $SE = .09$), $F (1, 53) = 3.93$, $p = .05$, $\eta_p^2 = .07$. Disgust priming also

exerted a marginal effect on conservation values, with the disgust condition eliciting

stronger conservation values ($M = 3.92$ $SE = .09$) than the control condition ($M = 3.69$, $SE = .09$), $F(1, 53) = 3.47$, $p = .07$, $\eta_p^2 = .06$.

Moral Disgust versus Hygiene Disgust

As in past research asking people to recollect disgust experiences (Chapman, Kim, Susskind, & Anderson, 2009; Haidt, 2003; Rozin, Haidt, & MaCauley, 2000), participants' descriptions of a disgust experience revealed two main themes: moral transgressions of other people (e.g., terrorists, health carer that didn't help an old lady in the hospital) and low standards of hygiene (e.g., stinky work environment, strong bodily odor). Consequently, two independent judges coded whether participant's recollections matched one of these themes, and they exhibited perfect agreement in their coding. Twenty out of twenty-nine participants (69 percent) in the disgust condition recalled an incident related to the moral transgression of other people, and nine out of twenty-nine participants (31 percent) recalled an incident related to poor hygiene standards or filthy environment.

The means and standard errors of the value ratings are reported in Table 4.2. To examine the effect of the different types of disgust on values, I conducted one-way ANCOVAs on each of the four higher-order value types, but this time with the type of disgust (moral disgust versus hygiene disgust versus control) as the three-level independent variable. The average of each participant's ratings of all of the values was entered as a covariate.

Emotion context had a significant effect on self-enhancement values, $F(2, 52) = 6.54$, $p = .003$, $\eta_p^2 = .20$. Participants who thought about moral disgust ($M = 3.96$, $SE = .12$) subsequently considered self-enhancement values to be less important than did participants in the control condition ($M = 4.51$, $SE = .10$), $t(52) = 3.55$, $p = .001$. Participants who thought about hygiene disgust ($M = 4.14$, $SE = .18$) exhibited a

73

marginal tendency to consider self-enhancement values to be less important than control participants, t (52) = 1.87, p = .07. The importance of self-enhancement values did not significantly differ between participants who thought about moral disgust and participants who thought about hygiene disgust, t (52) = .84, p = .41.

Table 4.2

Experiment 6: Effects of Contextualized Disgust on Values

| | Experimental Group | | | | |
Values	Disgust condition - moral	Disgust condition - hygiene	Control condition	F	η_p^2
Self-enhancement	3.96a (0.12)	4.14az (0.18)	4.51z (0.10)	6.54**	.20
Self-transcendence	4.75a (0.10)	4.48a (0.15)	4.43ba (0.09)	3.10†	.11
Openness to Change	4.69a (0.13)	4.15z (0.20)	4.59az (0.12)	2.75†	.10
Conservation	3.81a (0.10)	4.17b (0.15)	3.69a (0.09)	3.82*	.13

Note. ** = p < .01, * = p < .05, † = p < .08. Standard errors appear in parentheses below means. Means with differing subscripts within rows are significantly different at the p < .05 based on Fisher's LSD post hoc paired comparisons. Means sharing the subscript z within rows are marginally different at p < .08.

Emotion context had a significant effect in the opposite direction on self-transcendence values, F (2, 52) = 3.10, p = .05, η_p^2 = .11. Participants who thought about moral disgust subsequently considered self-transcendence values to be significantly more important (M = 4.75, SE = .10) than did control participants (M = 4.43, SE = .09), t (52) = 2.44, p = .02. In contrast, participants who thought about hygiene disgust did not rate self-transcendence values (M = 4.48, SE = .15) differently from participants who thought about moral disgust, t (52) = 1.48, p = .15, or about the control event, t (52) = 0.33, p = .74. Thus, when compared to the control condition, moral disgust tended to suppress self-enhancement values and promote self-transcendence values.

The effect of emotion context on openness to change values was marginally significant, $F(2, 52) = 2.75$, $p = .07$, $\eta_p^2 = .10$. The importance of openness values did not significantly differ between participants who recalled moral disgust ($M = 4.69$, $SE = .13$) and those who recalled a mundane event ($M = 4.59$, $SE = .12$), $t(52) = .56$, $p = .58$. Participants who recalled hygiene disgust subsequently rated openness values as less important ($M = 4.15$, $SE = .20$) than did participants in the control condition, $t(52) = 1.97$, $p = .055$. Also, participants who experienced moral disgust subsequently considered openness values to be more important than did participants who experienced hygiene disgust, $t(52) = 2.31$ $p = .03$.

Emotion context had a significant effect on conservation values, $F(2, 52) = 3.82$, $p = .03$, $\eta_p^2 = .13$. The importance of conservation values did not significantly differ between participants who experienced moral disgust ($M = 3.81$, $SE = .10$) and participants in the control condition ($M = 3.69$, $SE = .09$), $t(52) = 0.90$, $p = .37$. In contrast, participants who recalled hygiene disgust subsequently considered conservation values to be more important ($M = 4.17$, $SE = .15$) than did participants in the control condition, $t(52) = 2.77$, $p = .008$. Also, participants who recalled moral disgust subsequently considered conservation values to be less important than did participants who experienced hygiene disgust, $t(52) = 2.00$, $p = .05$.

4.3.3 Discussion

The results revealed that feelings of disgust cause people to attach less importance to self-enhancement values and greater importance to self-transcendence and conservation values. This finding extends understanding of the effects of disgust on moral judgment by showing a systematic pattern of effects on the values we prioritize. Moreover, the pattern fits the circular model of values to a large degree. As self-enhancement values weakened in importance, self-transcendence values gained in

importance. Contrary to the model, the marginal effect on conservation values was not met with an opposing effect on openness values, but this lack of opposing effects may be attributable to the weaker (i.e., marginal) effect on conservation values in the first place.

More relevant to the predictions regarding the importance of emotion context, analyses of the context of disgust revealed that the effects on self-enhancement and self-transcendence values were carried largely by participants' focus on moral disgust. Moral disgust, but not hygiene disgust, led participants to attach lower importance to self-enhancement values and greater importance to self-transcendence values. In some respects moral disgust resembles anger(Gutierrez & Giner-Sorolla, 2007), emerging because other people's morally disgusting acts appear to reflect an extreme level of self-indulgence. People therefore distance themselves from these acts by dampening their own egotistical, self-enhancing values and reinforcing their self-transcendence values.

In contrast, hygiene disgust helps the individual adapt to the dirty environment through avoiding the body from touching the elicitors of disgust and emphasising the importance of safety and security (Rozin, Haidt, & MaCauley, 2000), which are important among the needs served by conservation values. Indeed, hygiene disgust led to an increased importance of conservation values (e.g., cleanliness) and a decreased importance of openness values (e.g., daring, independence).

Together, these findings extend the understanding of the effects of disgust by showing a systematic pattern in its effects on values. When each type of disgust was considered separately, the value oppositions predicted by the circular model emerged. Once again, emotion priming led to reciprocal effects of values, depending on the context in which the emotion was experienced.

76

4.4 Experiment 7

Experiment 6 relied on a post-experimental coding of participants' report of a disgust experience to determine the effect of emotion context. This method leaves open the possibility that individual differences related to the self-selection of emotion context might explain its effects. To address this limitation, Experiment 7 manipulated the emotion context by randomly determining whether participants recalled an experience or moral disgust, an experience of hygiene disgust, or a mundane event.

If the findings of Experiment 6 reflect a causal effect of each contextualized emotion, participants primed with moral disgust should subsequently consider self-enhancement values to be less important and self-transcendence values to be more important than participants in the control condition. In contrast, participants primed with hygiene disgust should subsequently consider openness to change values (e.g., daring) to be less important and conservation values (e.g., security) to be more important than participants in the control condition.

4.4.1 *Methods*

Participants

Participants were 163 Cardiff University undergraduate psychology students who took part for course credit or for £2 reimbursement. Seven participants were excluded from the sample because their descriptions focused on emotions different from the one I requested. The remaining 156 participants included 125 women and 31 men, with a mean age of 20.49 ($SD = 3.53$).

Procedure

Participants took part either individually or in groups of seven or less, seated approximately five feet apart. Participants were told that they would be taking part in

several studies. The experimental manipulation was presented as a study of emotion recall. Some participants were asked to write about a personal event associated with an intense feeling of disgust at someone else's immorality. Other participants were asked to write about an event associated with an intense feeling of disgust at someone else's poor hygiene. The control group was asked to write about an ordinary school day.

Next, all participants completed the Portrait Values Questionnaire (PVQ; Schwartz, 2001). Participants then rated how intensely they experienced a list of emotions during the recall task, using the same response scale as in Experiment 5. The list included the PANAS emotions (e.g., irritable, determined) and disgust. Both the PA and NA scales exhibited good internal consistency (αs > .85). Finally, participants were asked to recall a happy event, probed for suspicion, and debriefed.

4.4.2 *Results*

Manipulation Checks

Disgust. A oneway (moral disgust versus hygiene disgust versus control) ANOVA revealed that participants in the three experimental conditions experienced feelings of disgust in different levels of intensity, F (2, 153) = 75.48, p < .001. Participants in the moral disgust condition (M = 3.58, SE = 1.23) and the hygiene disgust condition (M = 3.02, SE = 1.49) reported a higher intensity of disgust than did participants in the control condition (M = 1.02, SE = .14), t (153) = 11.68, p = < .001, and t (153) = 9.13, p < .001, respectively. Participants in the moral disgust condition experienced a higher intensity of disgust than did participants in the hygiene disgust condition, t (153) = 2.55, p = .01.

Positive and negative affect. A oneway (moral disgust versus hygiene disgust versus control) ANOVA revealed that participants in the three experimental

conditions experienced different levels of positive affect, $F(2, 153) = 10.40, p < .001$.

Participants in both the moral disgust condition ($M = 1.81, SE = .57$) and the hygiene

disgust condition ($M = 2.09, SE = .76$) experienced less positive affect than

participants in the control condition ($M = 2.47, SE = .87$), $t(153) = 4.53, p < .001$, and

$t(153) = 2.62, p = .009$, respectively. Participants in the moral disgust condition

experienced marginally less positive affect than did the participants in the hygiene

disgust condition, $t(153) = 1.91, p = .06$.

Participants in the three conditions also experienced different amounts of

negative affect, $F(2, 153) = 23.62, p < .001$. Participants in the both the moral disgust

condition ($M = 2.12, SE = .81$) and the hygiene disgust condition ($M = 1.73, SE =$

.75) experienced negative affect more strongly than participants in the control

condition ($M = 1.24, SE = .30$), $t(153) = 6.88, p < .001$, and $t(153) = 3.84, p < .001$,

respectively. The difference between the intensity of NA experienced by the

participants in the moral disgust condition and in the hygiene disgust condition was

also significant, $t(153) = 3.04, p = .003$.

Taken together, the results showed that the manipulation was successful. The

two disgust manipulations caused a higher intensity of disgust, less positive affect,

and more negative affect than did the control condition.

Effect of Contextualized Disgust on Values

To examine the effect of the different types of disgust on values, I conducted

one-way (moral disgust versus hygiene disgust versus control) ANCOVAs on each of

the four higher-order values. The average of each participant's ratings of all of the

values was entered as a covariate. The means and standard errors of the values ratings

are reported in Table 4.3.

Table 4.3

Experiment 7: Effects of Contextualized Disgust on Values

	Experimental Group				
Values	Disgust condition - moral	Disgust condition - hygiene	Control condition	F	η_p^2
Self-enhancement	3.95a (0.09)	4.13a (0.09)	4.26ba (0.09)	3.03*	.04
Self-transcendence	4.67z (0.07)	4.45b (0.07)	4.49zb (0.07)	2.55†	.03
Openness to Change	4.46a (0.08)	4.44a (0.08)	4.51a (0.08)	.21	.003
Conservation	3.81a (0.07)	3.85az (0.07)	3.69az (0.07)	1.69	.02

Note. * $= p \leq .05$, † $= p < .09$. Standard errors appear in parentheses below means. Means with differing subscripts within rows are significantly different at the $p < .05$ based on Fisher's LSD post hoc paired comparisons. Means sharing the subscript z within rows are marginally different at $p < .09$.

Contextualized disgust had a significant effect on self-enhancement values, F (2, 152) = 3.03, $p = .05$, $\eta_p^2 = .04$. Moral disgust caused self-enhancement values to become less important ($M = 3.95$, $SE = .09$) than did the control task ($M = 4.26$, $SE = .09$), t (152) = 2.45, $p = .02$. Self-enhancement values did not significantly differ between the moral disgust and hygiene disgust conditions ($M = 4.13$, $SE = .09$), t (152) = 1.44, $p = .15$, and between the hygiene disgust condition and the control condition, t (152) = 1.00, $p = .32$.

In contrast, contextualized disgust had a marginal effect in the opposite direction on self-transcendence values, F (2, 152) = 2.55, $p = .08$, $\eta_p^2 = .03$. Moral disgust caused self-transcendence values to become marginally more important ($M = 4.67$, $SE = .07$) than the control task ($M = 4.49$, $SE = .07$), t (152) = 1.73, $p = .09$, and significantly more important than hygiene disgust ($M = 4.45$, $SE = .07$), t (152) = 2.13, $p = .04$. Self-transcendence values did not significantly differ between the hygiene disgust and control conditions, t (152) = .40, $p = .69$. Thus, when compared

to the control condition, moral disgust tended to suppress self-enhancement values

and promote self-transcendence values.

Unlike in Experiment 6, contextualized disgust did not affect openness to

change values, $F(2, 152) = .21, p = .81, \eta_p^2 = .003$, and conservation values, $F(2,$

$152) = 1.69, p = .19, \eta_p^2 = .02$. Table 4.3 shows that the mean differences were in the

expected directions, but failed to achieve conventional levels of statistical

significance.

Mediation: Moral Disgust, Disgust Intensity, and Negative Affect

A series of regression analyses tested whether disgust intensity and negative

affect mediated the observed effects of moral disgust on self-enhancement and self-

transcendent values, in comparison to the control condition. As in the above analyses,

the average of each participant's ratings of all of the values was also entered in each

of the analyses.

I used the product-of-coefficients strategy with bootstrapping (Preacher and

Hayes, 2004; 2008) as described in section 3.5.2. Results from the regression analysis

revealed no direct effect of disgust intensity on self-enhancement values and self-

transcendence values, $\beta = .06, t(100) = .93, p = .35$, and $\beta = .006, t(100) = .11, p =$

.91, respectively. Thus, higher levels of disgust intensity experienced by the

participants who recalled moral disgust did not account for the effect of different

disgust contexts on values.

Similarly, results from the regression analysis revealed no direct effect of NA on

self-enhancement values and self-transcendence values, $\beta = -.03, t(100) = -.34, p =$

.73, and $\beta = .08, t(100) = .99, p = .32$, respectively. Thus, higher levels of NA

experienced by the participants who recalled moral disgust did not account for the

effect of different disgust contexts on values.

4.4.3 *Discussion*

The results of Experiment 7 showed that moral disgust causes people to attach less importance to self-enhancement values and marginally more importance to self-transcendence values. By manipulating the context in the emotion induction, I ruled out the possibility that individual differences in context selection are necessary to elicit these effects. The changes in values occur both when people spontaneously think about disgust in the two contexts and when people were asked to think about disgust in the two contexts.

To further disentangle the differences between the two contexts of disgust, I examined other emotional reactions that may be associated with the contexts. I found that moral disgust did not differ from hygiene disgust by the level of positive affect experienced. Although moral disgust caused participants to experience a higher intensity of disgust and NA than did hygiene disgust, the mediational analyses showed that the intensity of disgust and NA per se did not elicit the changes in values.

Nonetheless, Experiment 7 did not replicate the effect of moral and hygiene disgust on openness values and conservation values. Thus, I cannot rule out the possibility that some individual differences in predilection to recall each type of disgust contributed to the value changes observed in Experiment 6. Indeed, there is evidence that people's sensitivity to their own visceral reactions plays a role in the association between disgust and moral judgment (Schnall, Haidt, Clore, & Jordan, 2008). Only people who score high on the Private Body Consciousness scale (PBC) (L. C. Miller, Murphy, & Buss, 1981) react to a dirty and disgusting environment by forming harsher moral judgments. Hence, if individuals high in this sensitivity are more likely to spontaneously recall hygiene disgust experiences, this sensitivity might explain the differences in values. This hypothesis fits other evidence that examined

the connections between political conservatism and sensitivity to physical disgust

(Inbar, Pizarro, & Bloom, 2009; Inbar, Pizarro, Knobe, & Bloom, 2009).

4.5 Chapter Summary

The research in this chapter focused on the effect of contextualized disgust on

values. These effects of moral disgust on self-enhancement and self-transcendence

values help show a broad pattern in the effects of moral disgust on moral judgment,

complementing prior evidence that *bodily* disgust triggers harsher moral judgment

(Schnall, Haidt, Clore, & Jordan, 2008). Considering the nature and function of bodily

disgust, it may not have an impact on all domains of morality. Indeed, Horberg,

Oveis, Keltner and Cohen (2009) suggested that bodily disgust only amplifies the

moral significance of the purity domain. The purity domain concerns the purity and

contamination of the body, and it extends to concerns about physically and mentally

pure lifestyles. The findings of Experiments 6 and 7 suggest that there is a broader

impact of moral disgust on values and moral judgment. Disgust induced by moral

transgressions is likely to amplify the moral significance of other domains of morality

related to justice, harm or care. Moreover, it is likely to shape these judgments in a

manner that reflects the motivational opposition between self-enhancement and self-

transcendence values.

Chapter 5: The Effect of Shame on Values

5.1 Chapter Overview

This chapter focuses on the emotion of shame. It presents data testing whether this emotion affects values in a manner congruent with the prior evidence for the importance of emotion context and the motivational relations between values. In addition, it considered the role of individual differences in the response to emotion. Individual differences are pertinent to shame because of evidence that individual differences in prior social value orientation affect responses to shame (Van Lange, Otten, De Bruin, & Joireman, 1997). Hence, I examined potential interactions between the emotion context and social value orientation in determining the effects of shame on values. In addition, this chapter also extended the investigation by examining changes in value-relevant behaviour.

Experiment 8 asked participants to recall an experience of shame, and a post-experimental coding of participants' experiences revealed two main themes: moral shame and poor performance shame. The results indicated that participants who experienced moral shame attached less importance to openness to change values and more importance to conservation values.

Experiment 9 measured social value orientation, manipulated the emotion context, and replicated part of the findings in Experiment 8. Moral shame again led to the changes in openness values and conservation values, but only among pro-self individuals. Unexpectedly, both moral shame and performance shame led to a decrease in self-transcendence values among pro-self individuals. Moral shame also led to the increase of conformity behaviour, and this effect was mediated by the changes in both conservation values and openness values.

Together, both experiments highlight the importance of the context of shame, individual differences in the response to this emotion, and the motivational interrelations between values as determinants of the effects on values. Moreover, Experiment 9 helps to illustrate the potential relevance of these effects for predicting value-relevant behaviour.

5.2 Context of Shame

Shame is a concern that one has not lived up to other people's expectations (Bagozzi, Verbeke, & Gavino, 2003; Tangney, Miller, Flicker, & Barlow, 1996). Shame is also a response to a personal failure attributed to a flaw in the self (e.g.,M. Lewis, 1992; Tangney, Miller, Flicker, & Barlow, 1996). Hence, shame is conceptualized as both a "moral emotion" that helps regulate behaviour (Baumeister, Stillwell, & Heatherton, 1994; Eisenberg, 2000) and as a self-conscious emotion (e.g.,Kitayama, Markus, & Matsumoto, 1995; Tangney, Miller, Flicker, & Barlow, 1996) that creates a need for approval and acceptance from others (Bagozzi, Verbeke, & Gavino, 2003), leading to self-restorative behaviours (e.g., performing an achievement task) and self-protective behaviours (e.g., avoiding an achievement task) (De Hooge et al., 2009). The experience of shame triggers the need to belong to groups, leading people to navigate their behaviour to fit into groups without triggering the contempt, anger, and disgust of others (Baumeister & Leary, 1995; Haidt, 2003). Subsequently, shame activates action tendencies to hide, or make movement and speech more difficult and less likely (Asendorpf, 1990; Keltner & Buswell, 1997; M. Lewis, 1993; R. S. Miller, 1996). These changes reassure the others that the individual will behave in a timid, non-assertive manner, so as to reduce the chances of receiving attack or further punishment from the others (Haidt, 2003).

At the same time, shame is associated with narcissism (Gramzow & Tangney, 1992), and its concomitant self-focus interferes with empathic concern for others (Tangney, Marschall, Rosenberg, Barlow, & Wagner, 1994). The experience of shame sometimes leads to the failing to help another (see Tangney, 1996). This may be due to the feeling of worthlessness, the sense of control by others, and the perception of social interaction as sources of threat (Gilbert & Procter, 2006).

The seemingly contradictory descriptions of the motivational function of shame could be reconciled by considering the context associated with the emotion. Congruent with the hypotheses about the effects of other emotions, I expect that the effects of shame on values and social judgment differ in different contexts. The common antecedents of shame are violations to social rules or standards and poor performance (de Hooge, Zeelenberg, & Breugelmans, 2010; T. J. Ferguson, Stegge, & Damhuis, 1991; Keltner & Buswell, 1996; D. Lewis, 2004; Sabini & Silver, 1997; R.H Smith, Webster, Parrot, & Eyre, 2002; R. H Smith, Webster, Parrott, & Eyre, 2002; Tangney, Miller, Flicker, & Barlow, 1996). Both types of shame involve a negative self-evaluation, but the cause of the emotion involves a different focus of awareness. Shame related to the violation of social or moral norms (moral shame) involves bringing harm to others, whereas performance shame involves the experience of pain from the awareness of self-incompetence.

Moral shame functions as an emotional moral barameter, providing instant feedback on the social and moral acceptability of our behaviour (Tangney, Stuewig, & Mashek, 2007). Also, moral shame has a stronger other-focus, involves a concern with others' evaluation of the self, and hence should induce an urge to fit in with a group and comply with social norms. These needs are expressed in conservation values (e.g., obedient, conformity), but opposed by openness values (e.g., freedom,

independence), which encourage open expression of the self through independence and curiosity.

In contrast, performance shame has a self-focus and it comes with a negative judgment on the self. The sense of worthlessness, lack of control and fear of social interactions should interfere the ability to perform altruistic behaviour (Tangney et al., 1994). The experience of performance shame may therefore lead to a decrease in the importance of self-transcendence values and, following from the circular model (Schwartz, 1992) an increase in the importance in self-enhancement values.

5.2.1 Social Value Orientation and Shame

The consistent effects of emotion context in the prior chapters allowed me to raise the level of ambition for the research described in this chapter. One important reason for examining shame was that it provided an opportunity to detect potential interactions between the emotion context and individual differences. This possibility is pertinent because of evidence that individual differences in prior social value orientation affect responses to shame (Van Lange, Otten, De Bruin, & Joireman, 1997). Social value orientation reflects behavioural tendencies in hypothetical resource dilemmas wherein people can prioritize their own wishes or consider themselves and others (Messick & McClintock, 1968). Thus, in these hypothetical dilemmas, social value orientation is assessed by examining the extent to which people chose to allocate resources to themselves, others, or both themselves and others. Of importance, pro-self individuals tend to act competitively in actual social dilemmas, whereas pro-social individuals are more co-operative and tend to prefer equality of outcomes and reciprocate others' behaviour (Perugini & Gallucci, 2001).

There are also significant links between social value orientation and ratings of the importance of different values. People with a pro-self orientation rate self-

enhancement values as being higher in importance than people without this orientation, whereas people with a pro-social orientation rate self-transcendence values as being more important than do people without this orientation (Nelissen, Dijker, & De Vries, 2007).

Most relevant to this chapter, prior research has shown that the helping behaviour of the pro-socials is less affected by relevant feelings of shame than is the helping behaviour of pro-self individuals (de Hooge, Breugelmans, & Zeelenberg, 2008). Hence, any changes in values caused by the experience of shame may be more likely to arise among pro-self individual rather than pro-social individuals.

5.2.2 *Shame and Value-Relevant Behaviour*

In addition to examining the potential moderating effects of emotion context and individual differences in social value orientation on shame-induced changes in values, this Chapter extended my investigation by examining changes in value-relevant behaviour. Evidence for an effect on behaviour would help to show that the effects on values have broad implications. An effect on behaviour would show that contextualized emotion affects more than mere feelings about the importance of values; contextualized emotion should also shape opinions and actions that express the values. To address this issue, Experiment 9 examined the extent to which participants conformed to others' opinions about a debate on a controversial topic, rather than express a unique opinion reflecting their own independent points of view (Ashton et al., 2005). This measure reflected the extent to which the changes in values lead to behavioural changes.

5.2.3 Overview of Experiments

Two experiments focused on the effects of contextualized shame on values. Experiment 8 examined the effects of freely recalled shame on values. Experiment 9 measured social value orientation and randomly determined whether participants recalled a shameful experience related to moral, poor performance, or a control experience prior to rating their values. In addition, Experiment 9 measured the effects of shame on value-related behaviour. These designs tested the hypothesis that the experience of moral shame would lead to (1) increased importance of conservation values and (2) decreased importance of openness to change values. Also, the experience of performance shame would lead to (1) increased importance of self-enhancement values and (2) decreased importance of self-transcendence values. These effects of moral shame and performance shame should occur primarily among pro-self individuals. The changes in value caused by moral shame and performance shame should also increase conformity to consensus information.

5.3 Experiment 8

Participants in Experiment 8 were asked to recall a shame or a neutral experience prior to completing a measure of values. I coded the content of the shame experiences to test whether the context of shame determined its effects on values. I based on previous research that examined the motivational function of shame to predict the direction of the effects of shame on values. Support for these predictions would provide a basis for a follow-up experiment manipulating emotion and emotion context.

5.3.1 *Methods*

Participants

Participants were 63 Cardiff University undergraduate psychology students who received course credit for participation. The sample included 44 women and 19 men, with a mean age of 19.63 years ($SD = 2.81$). Three other participants were excluded from the analysis because their descriptions focused on emotions different from the one I requested.

Procedure

Participants took part either individually or in groups of ten or less, seated approximately five feet apart. As in the prior experiments, participants were told that they would be taking part in several studies, and the manipulation was presented as a study of emotion recall. This manipulation asked participants to write a personal event associated with an intense feeling of shame (Fishbach & Labroo, 2007; Tangney, 1993). The control group was asked to write a description of an ordinary school day.

Next, participants completed the dependent measure, which was the Portrait Values Questionnaire (PVQ; Schwartz, 2001). After completing the PVQ, participants were asked to recall a happy event, probed for suspicion, and debriefed.

5.3.2 *Results*

Effect of Shame on Values

I conducted one-way ANCOVAs on each of the four higher-order value types, with the experimental manipulation (shame versus control) as the independent variable. The average of each participant's ratings of all of the values was entered as a covariate to control for individual differences in general value endorsement (Schwartz, 2007). The mean and standard errors of the value ratings are reported in Table 5.1.

Table 5.1

Experiment 8: Effects of Shame on Values

| Values | Experimental Group | | | |
	Shame condition - aggregated	Control condition	F	η_p^2
Self-enhancement	4.09 (0.09)	3.96 (0.09)	1.01	.02
Self-transcendence	4.52 (0.09)	4.64 (0.08)	1.18	.02
Openness to Change	4.22a (0.11)	4.63b (0.10)	7.84**	.12
Conservation	3.78z (0.08)	3.57z (0.08)	3.73†	.06

Note. ** $= p < .01$, † $= p < .06$. Standard errors appear in parentheses below means. Means with differing subscripts within rows are significantly different at the $p < .05$ based on Fisher's LSD post hoc paired comparisons. Means sharing the subscript z within rows are marginally different at $p < .06$.

Shame priming exerted a significant effect on the openness to change values, F (1, 60) = 7.84, p = .007, η_p^2 = .12. Participants who thought about shame subsequently considered openness values (M = 4.22, SE = .11) to be less important than participants in the control condition (M = 4.63, SE = .10).

Shame priming also exerted a marginal effect in the opposite direction on the conservation values, F (1, 60) = 3.73, p = .06, η_p^2 = .08. As expected, participants who thought about shame considered conservation values to be more important (M = 3.78, SE = .08) than participants in the control condition (M = 3.57, SE = .08).

In contrast, shame priming did not have any effect on self-transcendence values and self-enhancement values, F (1, 60) = 1.18, p = .28, η_p^2 = .02, and F (1, 60) = 1.01, p = .32, η_p^2 = .02, respectively.

Moral Shame versus Performance Shame

Two independent judges who were unaware of each participant's experimental condition coded their descriptions of the shame event. They identified two main

themes in each participant's description of experiences of shame: breaching social

norms (e.g., lying to friends, not attending grandmother's funeral), and poor

performance (e.g., failed an exam, done badly in a cricket game). There were

disagreements between the judges in the coding of two descriptions, and these

disagreements were resolved after discussion.

Twenty out of thirty participants (67 percent) in the shame condition recalled an

incident related to breaching social norms (moral shame) and ten out of thirty

participants (33 percent) recalled an incident related to poor performance

(performance shame). The means and standard errors of all dependent variables

(values ratings) are reported in Table 5.2.

To examine the effects of each type of shame on values, I conducted one-way

ANCOVAs on each of the four higher-order values, with the experimental

manipulation (moral shame versus performance shame versus control) as the three-

level independent variable. The average of each participant's ratings of all of the

values was entered as a covariate.

Table 5.2

Experiment 8: Effects of Contextualized Shame on Values

Values	Experimental Group				
	Shame condition - moral	Shame condition - performance	Control condition	F	η_p^2
Self-enhancement	4.16 (0.12)	3.95 (0.16)	3.96 (0.09)	1.04	.03
Self-transcendence	4.48 (0.11)	4.59 (0.15)	4.65 (0.08)	.75	.03
Openness to Change	4.12a (0.13)	4.42a (0.18)	4.63ba (0.10)	4.82*	.14
Conservation	3.81za (0.10)	3.73a (0.14)	3.57za (0.08)	1.94	.06

Note. * = $p < .05$. Standard errors appear in parentheses below means. Means with differing subscripts within rows are significantly different at the $p < .05$ based on Fisher's LSD post hoc paired comparisons. Means sharing the subscript z within rows are marginally different at $p < .07$.

Contextualized shame exerted a significant effect on the openness to change values, $F(2, 59) = 4.82$, $p = .01$, $\eta_p^2 = .14$. Participants who recalled an experience of moral shame subsequently considered openness values ($M = 4.12$, $SE = .13$) to be less important than participants in the control condition ($M = 4.62$, $SE = .10$), $t(59) = 3.95$, $p = .003$. Participants who recalled performance shame did not rate openness values ($M = 4.42$, $SE = .18$) differently from participants who recalled moral shame, $t(59) = 1.35$, $p = .20$, or participants in the control condition, $t(59) = .1.03$, $p = .31$.

Contextualized shame exerted a nonsignificant effect in the opposite direction on conservation values, $F(2, 59) = 1.94$, $p = .15$, $\eta_p^2 = .06$. Given my *a priori* hypotheses, I conducted more specific planned comparisons. These analyses revealed that participants who thought about moral shame tended to consider conservation values to be more important ($M = 3.81$, $SE = .10$) than did participants in the control condition ($M = 3.57$, $SE = .08$), $t(59) = 2.39$, $p = .06$. Participants who thought about performance shame did not rate conservation values ($M = 3.73$, $SE = .15$) differently from participants who recalled moral shame, $t(59) = .47$, $p = .65$, and participants in the control condition, $t(59) = 1.02$, $p = .32$.

Unexpectedly, shame priming did not have any effect on self-transcendence values and self-enhancement values, $F(1, 59) = .745$, $p = .48$, $\eta_p^2 = .03$, and $F(1, 59) = 1.04$, $p = .36$, $\eta_p^2 = .03$, respectively.

5.3.3 *Discussion*

The results indicated that shame inhibits openness to change values. Openness to change values promote independent thought, direction of own action, and facing challenges in life. The notions of being independent and exposing oneself to uncertainty are incompatible with the needs of someone feeling ashamed. The

experience of shame involves a feeling of self-consciousness and a fear of rejection or negative evaluations from others (R. H Smith, Webster, Parrott, & Eyre, 2002; Tangney, Miller, Flicker, & Barlow, 1996). As such, a reduction in openness to change values may help protect a person who is experiencing shame by protecting the self from standing out and receiving condemnation from others.

At the same time, shame weakly promoted conservation values. These values help attain acceptance of others by adhering to social norms. Conservation values restrain actions and inclinations likely to upset others and violate social expectations. According to Schwartz, conservation values involve maintaining social order, being obedient, and showing respect for tradition. The endorsement of these values helps gain the acceptance of the other people and blur the salience of the self.

As expected, analyses of the context of shame revealed that the effects on openness values and conservation values depended on the focus of shame. Moral shame, but not performance shame, led participants to attach lower importance to openness values and (somewhat) greater importance to conservation values. This effect again supported the hypothesis that the effects of emotion on values depend on the context of emotion.

Nonetheless, shame did not have any effect on self-transcendence values and self-enhancement values. This may indicate that the experience of shame does not activate concern for the welfare of others or concern for self-interest. Another plausible explanation is that there are some individual differences in predilection to recall each type of shame. Indeed, there is evidence that individual differences in prior social value orientation affect responses to shame (de Hooge, Breugelmans, & Zeelenberg, 2008; Van Lange, Otten, De Bruin, & Joireman, 1997). I sought to examine the effect of shame on self-transcendence values and self-enhancement

values again with a more stringent design in Experiment 9, which included a measure of social value orientation.

5.4 Experiment 9

Experiment 8 relied on a post-experimental coding of participants' descriptions of a shame experience to determine the effect of emotion context. In contrast, Experiment 9 manipulated the emotion context by randomly determining whether participants recalled an experience of moral shame, an experience of performance shame, or a mundane event.

Experiment 9 also incorporated recent evidence that individual differences in prior social value orientation affect responses to shame (Van Lange, Otten, De Bruin, & Joireman, 1997). Prior research has shown that situational activation of a goal only elicits goal striving in people who do not already chronically strive for that goal (Higgins, 1996). It explains why the helping behaviour of the pro-social individuals is less affected by relevant feelings of shame than is the helping behaviour of pro-self individuals (de Hooge, Breugelmans, & Zeelenberg, 2008). Hence, if performance shame changes the importance of self-enhancement values and self-transcendence values, this effect may be more likely to arise among pro-self individuals than pro-social individuals. In addition, despite a lack of evidence suggesting any link between social value orientation and values on the conservation versus openness to change dimension (Nelissen, Dijker, & De Vries, 2007), proself individuals are less concerned about the norm of social responsibility and the norm of reciprocity (De Cremer & Van Lange, 2001). Hence, if moral shame changes the importance of conservation values and openness values, this effect may also be more likely to arise among pro-self individuals than pro-social individuals.

In addition to examining the potential moderating effects of emotion context and individual differences in social value orientation on shame-induced changes in values, Experiment 9 extended the investigation by examining changes in value-relevant behaviour. Evidence for an effect on behaviour would help to show that the effects on values have broad implications. An effect on behaviour would show that contextualized emotion affects more than mere feelings about the importance of values; contextualized emotion should also shape opinions and actions that express the values. To address this issue, I examined the extent to which participants conformed to others' opinions about a debate on a controversial topic, rather than express a unique opinion reflecting their own independent points of view (Ashton et al., 2005). This measure reflected the extent to which participants were motivated by conservation rather than openness motives.

Taken together, I predicted that participants who are induced to experience moral shame should subsequently attach more importance to conservation values (e.g., conformity) and less importance to openness values (e.g., freedom). On the other hand, participants who are induced to experience performance shame should subsequently attach more importance to self-enhancement values (e.g., achievement) and less importance to self-transcendence values (e.g., benevolence). These effects of moral shame and performance shame should occur primarily among pro-self individuals.

The effects of shame priming on conformity behaviour were somewhat more difficult to prefigure. Although it was clear that moral shame should increase conformity to consensus information, the potential effects of performance shame on conformity behaviour should depend on whether conformity promotes self-enhancement motives (by increasing personal chances of success through following

the view of the majority) in addition to conservation motives. If so, then performance shame could increase conformity behaviour, but primarily among those individuals whose self-enhancement values increase after shame (i.e., pro-self individuals).

5.4.1 *Methods*

Participants

Participants were 158 Cardiff University undergraduate psychology students who took part as a partial course requirement or for £2 reimbursement. Twenty-four participants were excluded because they could not be classified as either pro-social or pro-self using the measure described below. The remaining sample included 100 women and 34 men, with a mean age of 20.13 ($SD = 2.46$). 80 participants possessed a pro-social orientation, and 54 participants possessed a pro-self orientation.

Procedure

Participants took part either individually or in groups of up to three people, seated approximately five feet apart. Upon arrival at the laboratory, participants were told that the experimental session would comprise separate studies related to debate evaluations, values, and emotions. The experimenter then presented (a) the Social Values Orientation measure, (b) initial attitude measures on a controversial topic, (c) a debate on the controversial topic, (d) the shame priming task, (e) the Portrait Values Questionnaire, (f) consensus information on the controversial topic, (g) a post-experimental measure of attitude toward the controversial topic (the measure of conservation behaviour), and (h) emotion manipulation checks. Finally, participants were asked to recall a happy event in order to restore positive mood, probed for suspicion, and debriefed.

Social Value Orientations

The first study measured the pro-social or pro-self tendency using the Triple

Dominance Measure of Social Value Orientations (Van Lange, Otten, De Bruin, &

Joireman, 1997). This 9-item measure asks participants to choose among different

options of distributing points between the participant and an unknown other. The

divisions include choices that are pro-social (equal points distribution) and pro-self

(maximizing points for oneself). Participants who made six or more consistent choices

were classified as either pro-social or pro-self. I followed the standard procedure (de

Hooge, Breugelmans, & Zeelenberg, 2008; Van Lange, Otten, De Bruin, & Joireman,

1997) and excluded participants who could not be classified.

Initial Attitude Measures

The second task assessed initial attitudes toward two topics relevant to the

measure of conformity versus openness behaviour: wind power and public

surveillance. Participants rated their attitudes using a thermometer-like scale ranging

from 0 (extremely unfavourable) to 100 (extremely favourable) (Esses, Haddock, &

Zanna, 1993).

These two topics were selected because each one corresponds to a dimension in

Schwartz's (1992) circular model of values. Support for wind power is consistent with

the self-transcendences values, which concern the protection of environment and

being in unity with nature. On the other hand, the setting up of public surveillance

promotes social order, national security, and personal safety. These issues are

consistent with the motives served by conservation values. I included these two

themes in the measure of conservation behaviour to verify that the effect of shame on

conformity behaviour is independent of topic issue itself.

Initial Debate Evaluations

The participants then read debate arguments related to either wind power or public surveillance. In the wind power condition, there were two arguments in favour of wind power and two arguments against it. Similarly, in the public surveillance condition, there were two arguments supporting public surveillance and two arguments opposing it. After reading the debate arguments, participants indicated their opinions about which side won the debate, using a thermometer-like scale ranging from -50 (anti-wind-power or anti-surveillance won by an extremely large amount) to +50 (pro-wind-power or pro-surveillance won by an extremely large amount).

Shame Priming

The manipulation was presented as a study of emotion recall. Some participants were asked to write a personal event associated with an intense feeling of shame from breaching moral or social norms. Other participants were asked to write an event associated with an intense feeling of shame from personal poor performance. The control group was asked to write a description of an ordinary school day.

Values

All participants completed the Portrait Values Questionnaire (PVQ; Schwartz, 2001), as in Experiment 4.

Conformity

The measure of conformity versus openness closely followed a procedure used to assess these motives in prior research (Hodson, Maio, & Esses, 2001). The experimenter stated that other participants had also read the debate arguments and that the researchers were compiling a summary of participants' responses for another research unit. The response summary contained a 7-point rating scale ranging from -3

(*the pro-side arguments won definitely*) to +3 (the anti-side arguments won

definitely). The experimenter asked participants to add their opinion of the debate at

the appropriate place in the booklet. At this point, the experimenter exposed

participants to the consensus information by running her finger down the first two

pages of a three-page booklet, supposedly looking for the next available place for the

participants to place his or her own response. On these pages, the circled responses of

24 alleged participants suggested that the majority of previous participants favored

either the pro-side $(M = 1.29, SE = 1.43)$ or (in a counter-balanced condition) the

anti-side $(M = -1.29, SE = 1.43)$. The absolute difference between the participants'

rating and the consensus rating (conformity score) revealed how closely participants

adhere to the opinion of the majority. Smaller values therefore indicated closer

adherence to the consensus information and hence a higher degree of conformity.

Participants were given privacy for their response, assured of confidentiality, and

instructed to close the booklet before returning it to the experimenter.

Manipulation Checks

By the end of the experiment, participants rated how intensely they experienced

a list of emotions from the PANAS during the recall task, as in the prior experiments.

Participants responded using a scale from 1 (not at all) to 5 (very strongly). The PA

and NA scales again exhibited good internal consistency ($\alpha s > .89$). The NA scale

included a rating of shame, which enabled me to examine this emotion separately.

5.4.2 Results

Manipulation Checks

The experimental manipulation significantly influenced feelings of shame, F (2,

131) $= 44.18, p < .001$. Higher levels of shame were felt in the moral shame ($M =$

2.96, $SE = 1.40$) and performance shame ($M = 2.88, SE = 1.17$) conditions than in the

control condition ($M = 1.18$, $SE = .53$), t (131) =7.58, $p < .001$, and t (131) =7.21, $p <$

.001, respectively. The intensity of shame did not significantly differ between the

moral shame condition and the performance shame condition, t (131) = .33, $p = .74$.

A one-way ANOVA revealed that the experimental manipulation significantly

influenced levels of PA, F (2, 131) = 5.38, $p = .006$. The moral shame condition ($M =$

2.00, $SE = .74$) and performance shame condition ($M = 1.82$, $SE = .72$) caused

significantly lower PA than the control condition ($M = 2.31$, $SE = .67$), t (131) = 2.04,

$p = .04$, and t (131) = 3.25, $p = .001$, respectively. The intensity of PA did not

significantly differ between the moral shame condition and the performance shame

condition, t (131) = 1.28, $p = .22$.

The three experimental manipulation also influenced NA, F (2, 131) = 19.25, p

<.001. Levels of NA were significantly higher in the moral shame condition ($M =$

2.04, $SE = .83$) and performance shame condition ($M = 1.92$, $SE = .74$) than in the

control condition ($M = 1.19$, $SE = .43$), t (131) = 5.74, $p < .001$, and t (131) = 4.97, p

$< .001$, respectively. NA did not significantly differ between the moral shame

condition and the performance shame condition, t (131) = .76, $p = .45$.

As expected, there were no pre-manipulation differences in responses to the pre-

manipulation measures of attitudes toward wind power or public surveillance, F (2,

131) = .18, $p = .84$. Similarly, participants in the three experimental conditions did not

show any prior difference in their initial evaluations of the debate arguments, F (2,

131) = .45, $p = .64$.

Finally, there was no difference in the distribution of pro-selfs and pro-socials in

the three experimental conditions that were created after the measurement of social

value orientation, χ^2 (2, N = 134) = .33, $p = .85$. Thus, random assignment succeeded

at avoiding confounds on this dimension.

Values

To examine the effect of the different types of shame on values, I conducted

two-way ANCOVAs on each of the four higher-order values, with the experimental

manipulation (moral shame versus performance shame versus control) and social

value orientations (pro-self versus pro-social) as the independent variables. The

average of each participant's ratings of all of the values was entered as a covariate.

The means and standard errors of the values ratings are reported in Table 5.3.

Table 5.3
Experiment 9: Effects of Shame on Values in Proself and Prosocial individuals

Values	Shame condition - moral	Shame condition - performance	Control condition	F
	Prosocials			
Self-enhancement	4.02a	3.78a	3.99a	1.23
	(.12)	(.12)	(.13)	
Self-transcendence	4.66a	4.79a	4.58a	1.26
	(.09)	(.09)	(.10)	
Openness to Change	4.70za	4.57a	4.44za	1.54
	(.10)	(.11)	(.11)	
Conservation	3.54a	3.70a	3.77a	1.53
	(.09)	(.10)	(.10)	
	Proselfs			
Self-enhancement	4.32a	4.44a	4.20a	.68
	(.15)	(.14)	(.15)	
Self-transcendence	4.42a	4.21a	4.74b	5.76
	(.12)	(.11)	(.11)	**
Openness to Change	4.31z	4.64za	4.77a	3.25
	(.13)	(.13)	(.13)	*
Conservation	3.70a	3.60az	3.31z	2.99
	(.12)	(.12)	(.12)	*

Note. ** $= p < .01$, * $= p \le .05$. Standard errors appear in parentheses below means. Means with differing subscripts within rows are significantly different at the $p \le .05$ based on Fisher's LSD post hoc paired comparisons. Means sharing the subscript z within rows are marginally different at $p < .10$.

Significant effects were obtained for each of the four higher-order values. For conservation values, there was a significant interaction between shame priming and social value orientation, $F(2, 127) = 4.16$, $p = .02$, $\eta_p^2 = .06$. Simple effects tests showed that contextualized shame priming had no effect on conservation values among participants with a pro-social orientation, $F(2, 127) = 1.53$, $p = .22$. In contrast, contextualized shame priming had a significant effect on conservation values among participants with a pro-self orientation, $F(2, 127) = 2.99$, $p = .05$. In this group, moral shame caused higher subsequent importance of conservation values ($M = 3.70$, $SE = .12$) than did the control task ($M = 3.31$, $SE = .12$), $F(1, 127) = 5.60$, $p = .02$. Performance shame caused marginally higher importance of conservation values ($M = 3.60$, $SE = .12$) than did the control task, $F(1, 127) = 3.10$, $p = .08$. Conservation values did not significantly differ between the moral shame condition and the performance shame condition, $F(1, 127) = .44$, $p = .51$. The main effects of shame priming and social value orientation were not significant, $F(2, 127) = .57$, $p = .57$, $\eta_p^2 = .009$, and, $F(1, 127) = 2.11$, $p = .15$, $\eta_p^2 = .02$, respectively. Overall, then, this pattern of effects indicated that moral shame and performance shame increased conservation values among pro-self individuals, but not among pro-social individuals.

For openness to change values, the interaction between shame priming and social value orientation was significant, $F(2, 127) = 4.73$, $p = .01$, $\eta_p^2 = .10$. As expected, simple effects tests showed that contextualized shame priming had no effect on openness values among participants with a pro-social orientation, $F(2, 127) = 1.54$, $p = .22$. In contrast, contextualized shame priming had a significant effect on openness values among participants with a pro-self orientation, $F(2, 127) = 3.25$, $p = .04$. In this group, moral shame caused lower subsequent importance of openness values ($M = 4.31$, $SE = .13$) than did the control task ($M = 4.77$, $SE = .13$), $F(1, 127)$

= 3.25, p = .04, and marginally lower importance of openness values than did

performance shame (M = 4.64, SE = .13), F (1, 127) = 3.13, p = .08. Openness values

did not significantly differ between the performance condition and the control

condition, F (1, 127) = .58, p = .45. The main effects of shame priming and social

value orientation were not significant, F (2, 127) = .45, p = .64, η_p^2 = .007, and, F (1,

127) = .001, p = .98, η_p^2 < .001, respectively. Overall, then, this pattern of effects

indicated that moral shame, but not performance shame, decreased openness to

change values among pro-self individuals, but not among pro-social individuals.

For self-enhancement values, the main effect of social value orientation was

significant, F (1, 127) = 11.96, p = .001, η_p^2 = .09, with proself individuals attaching

more importance to self-enhancement values (M = 4.32, SE = .09) than did prosocial

individuals (M = 3.93, SE = .07). The main effect of shame priming was not

significant, F (2, 127) = .20, p = .82, η_p^2 = .003. Unexpectedly, the interaction between

shame priming and social value orientation was also not significant, F (1, 127) = 1.60,

p = .21, η_p^2 = .02.

For self-transcendence values, the main effect of social value orientation was

significant, F (1, 127) = 6.87, p =.01, η_p^2 = .05, with pro-self individuals attaching less

importance to self-transcendence values (M = 4.45, SE = .07) than did pro-social

individuals (M = 4.68, SE = .05). In addition, the interaction between shame priming

and social value orientation was significant, F (2, 127) = 6.46, p = .002, η_p^2 = .09. As

expected, simple effects tests revealed no significant effect of contextualized shame

priming on self-transcendence values among participants with a pro-social orientation,

F (2, 127) = 1.26, p = .29. In contrast, contextualized shame priming exerted a

significant effect on self-transcendence values among participants with a pro-self

orientation, F (2, 127) = 5.76, p = .004. In this group, performance shame resulted in

self-transcendence values being rated as lower in importance ($M = 4.21$, $SE = .11$) than did the control task ($M = 4.74$, $SE = .11$), $F(1, 127) = 11.71$, $p = .001$. Unexpectedly, moral shame also caused participants to attach lower importance to self-transcendence values ($M = 4.42$, $SE = .12$) than did the control task, $F(1, 127) = 3.78$, $p = .05$. Self-transcendence values did not significantly differ between the performance shame condition and the moral shame condition, $F(1, 127) = 1.97$, $p = .16$. This pattern of effects indicated that both moral shame and performance shame decreased self-transcendence values among pro-self individuals, but not among pro-social individuals.

Conformity

Conformity scores were subjected to a 3 (moral shame versus performance shame versus control) x 2 (proself versus prosocial) ANOVA. Results indicated a significant main effect of shame on conformity, $F(2, 128) = 4.97$, $p = .008$, $\eta_p^2 = .07$. Conformity was higher after recalling moral shame ($M = 1.38$, $SE = .17$) and performance shame ($M = 1.46$, $SE = .17$) than after the control condition ($M = 2.08$, $SE = .17$), $t(128) = 2.88$, $p = .005$, and $t(128) = 2.57$, $p = .01$, respectively. Conformity did not differ between the moral shame condition and the performance shame condition, $t(128) = .33$, $p = .74$.

In addition, there was a significant main effect of social value orientation, $F(1, 128) = 11.60$, $p = .001$, $\eta_p^2 = .08$. Participants with a prosocial orientation ($M = 1.30$, $SE = .13$) conformed more than did participants with a proself orientation ($M = 1.97$, $SE = .15$). The interaction between shame priming and social value orientation was not significant, $F(2, 128) = .90$, $p = .41$, $\eta_p^2 = .01$.

Mediation of Conformity Behaviour: Conservation and Openness Values

The above results show that moral shame increased the importance of conservation values and decreased the importance of openness values among proself individuals. Further, moral shame increased conformity. I carried out additional tests to see whether the effect of moral shame on conformity in proself individuals was mediated by the decreased importance of openness values and the increased importance of conservative values. (The self-transcendence values of pro-self individuals after experiencing moral shame were not associated with conformity behaviour, β = -.20, t (33) = .52, p = .61, and recall that self-enhancement values were not affected by shame priming.)

In order to examine this indirect effect, I used the product-of-coefficients strategy as described in section 3.5.2. Results from the regression analysis revealed a direct effect of openness values on conformity, β = .64, t (33) = 2.21, p = .04. Results from bootstrapping yielded a significant mean indirect effect of moral shame on conformity through openness values of β = -.31 (SE = .19) with a 95%-confidence interval from -.79 to -.04. Similar analyses testing the mediating role of conservation values revealed a direct effect of conservation values on conformity, β = -.68, t (33) = 2.08, p = .05. The mean indirect effect of moral shame on conformity through openness values was close to significant, β = -.27 (SE = .19) with a 95%-confidence interval from -.72 to .002. Thus, the effect of moral shame on conformity was statistically mediated by the impact of moral shame on conservation values and openness values.

For those who recalled an incident of performance shame, there were no significant associations between the pro-self individuals' conformity behaviour and their values, all ps > .35. Consequently, there was no basis for testing whether the

effect of performance shame on conformity among pro-self individuals was mediated by changes in their values. Thus, the results indicated a mediating role of value change among pro-self individuals after experiencing moral shame, but left the effect of performance shame on these individuals unexplained.

5.4.3 *Discussion*

Experiment 9 revealed different effects of moral shame and performance shame. As expected, moral shame caused pro-self individuals to attach less importance to openness to change values and more importance to conservation values. In other words, moral shame caused pro-self individuals' values to shift closer toward the chronic goals of pro-social individuals. Indeed, as expected, these value changes were detected only among participants with a proself orientation, but not among individuals with a pro-social orientation. This result is consistent with a number of studies showing that proselfs and prosocials respond differently to emotions like shame, guilt, and fear (de Hooge, Breugelmans, & Zeelenberg, 2008; de Hooge, Zeelenberg, & Breugelmans, 2007; Ketelaar & Au, 2003; Nelissen, Dijker, & De Vries, 2007). For instance, pro-self individuals are more cooperative in social bargaining games (Ketelaar & Au, 2003) and dyadic social dilemma games (de Hooge, Zeelenberg, Breugelmans, 2007) after experiencing guilt. The pattern of value change fits suggestions that proselves' chronic goals are less other-focused than prosocials' chronic goals (Cameron, Brown, & Chapman, 1998; De Cremer & Van Lange, 2001; Tangney, 1991). Consequently, proselves' chronic goals are more labile in response to emotions that activate the salience of social norms.

At the same time, both moral shame and performance shame caused pro-self individuals to attach less importance to self-transcendence values. This pattern suggests that a threat to self-transcendence values exists across the two contexts for

experiencing shame, and it fits ample research showing that shame is a painful experience that causes preoccupation with the self, making people less other-oriented, empathic, and aware of others' needs (Hoffman, 1984; Konstam, Chernoff, & Deveney, 2001; Tangney, 1991; Tangney, Marschall, Rosenberg, Barlow, & Wagner, 1994). Contrary to the circular model of values, however, the effect on self-transcendence values was not met with an opposing effect on self-enhancement values. In retrospect, this lack of opposing effects may be attributable to the sense of worthlessness and powerlessness produced by the experience of both moral shame and performance shame (Tangney, 1989; Tangney, 1991; Wicker, Payne, & Morgan, 1983). If shame induces a feeling of low personal efficacy, then shame may make it seem subjectively impossible to meet values that promote personal goals. The self-preoccupation induced by shame may undercut orientation to others, but not facilitate a compensatory focus on personal goals. This effect may explain why shame is reported as a crippling emotion (R. S. Miller, 1995; Orth, Berking, & Burkhardt, 2006; Tangney, 1991): it decreases the ability to transcend the self and focus on others, while failing to compensate by increasing the promotion of the self.

These effects on value changes are consistent with the hypothesis that the effects of shame on values depend on the context of the emotion and on individual differences in chronic goals beforehand. Experiment 9 also went further by examining effects on overt behaviour. Results indicated that moral shame and performance shame both led participants to conform more to consensus information about a controversial topic. However, only moral shame caused the change in openness values and conservation values, which mediated the effect of moral shame on conformity behaviour. The extension of the effect of moral shame to conformity behaviour shows that its effect on values has repercussions for overt action.

Surprisingly, performance shame affected conformity in a manner not explained by changes in values. As described above, performance shame activated a self-focus orientation and caused pro-self individuals to attach less importance to self-transcendence values. Performance shame also led to an increased in conformity behaviour, but this change in behaviour was not associated with the change in self-transcendence values. In retrospect, this change in behaviour may have been driven by the same sense of worthlessness and self-doubt that helps to explain the lack of effect of performance shame on self-enhancement values. As beings that have relied on group connections to promote survival, the salience of personal helplessness may foster a need to be closer to our in-groups, in order to compensate for our own weaknesses and self-doubts. This desire for closeness may not be expressed through changes in values because moral norms are not salient, but it may be experienced nonetheless.

This speculation raises an important point about the reasoning behind the hypotheses: I am *not* suggesting that every change in behaviour is driven by changes in values. Value changes should contribute to behaviour change, but value changes are not the only source of behaviour change. Similarly, I am not suggesting that every effect of emotion on social judgement and behaviour is driven by changes in values. There is ample potential for emotions to direct judgment and behaviour in ways that are nonconscious, automatic, and unrelated to conscious changes in values and goals. In this case, an effect of performance shame on conformity that is mediated by effects on low personal potency is commensurate with past research and the present pattern of value change.

5.5 Chapter Summary

The research in this chapter focused on (1) the effect of contextualized shame on values and (2) the moderating effect of individual differences in social value orientation on shame-induced changes in values, and (3) effects of contextualized shame and social value orientation on value-related behaviour. Across the two experiments, moral shame led to the same changes in openness values and conservation values.

Experiment 9 further showed that these effects of moral shame occurred primarily among individuals with a pro-self orientation. In addition, the impact of moral shame on conformity among pro-self individuals was mediated by the effects on openness values and conservation values, providing a broader picture of how these constructs are connected. The meditational analyses yielded provocative evidence that effects from emotions through values to behaviour are tenable.

Chapter 6: General Discussion

6.1 Chapter Overview

The aim of this chapter is to review the research presented in this thesis and to

discuss the implications of the findings. In the following sections, I summarize the

results of the nine experiments and discuss their implications for current

understanding of values, motivational functions of emotions, and methodology. I also

discuss limitations of this research and outline some potential directions for future

research.

6.2 Review of the Main Findings

Chapter 1 described basic properties of values and emotions. It also reviewed

evidence for systemic effects of values on behaviours and evidence attempting to

connect values and emotions. I argued that the extant literature has not thoroughly

explored the ramifications of the circular model's argument that there are systemic

motivational conflicts and compatibilities between values (Schwartz, 1992). To

capture motivational processes, it is imperative that influences on actual behaviour

and on emotion be examined. Chapter 1 noted the need for further research testing

whether effects of values on behaviour reflect the motivational interconnections

between values as postulated by Schwartz. This chapter also raised the need for

research examining effects of emotions on values and vice-versa. I noted that this

thesis would focus on the effects of emotion on values, attempting to detect whether

these effects reveal the motivational conflicts and compatibilities predicted by

Schwartz.

The subsequent experimental chapters (Chapters 2, 3, 4, and 5) elaborated these

points, highlighting additional areas where basic progress can be made. For example,

Chapter 3 explained how emotion context may moderate the effect of emotion on

values and may help to explain inconsistent effects of some emotions (esp. sadness) in past research. Each chapter then presented evidence that addressed the aims of the thesis. They each provided a deeper insight into how values are interconnected, and how contextualized sadness, disgust and shame lead to changes in values in a systemic manner.

6.2.1 Systemic Properties of Values

In Chapter 2, I provided evidence that the circular model's description of motivational interconnections between values provides a useful complement to theory and research on the processes that guide action. The results across Experiment 1 to 3 revealed that *priming* conservation values or openness to change values increases behaviour that affirms the values, while decreasing behaviour that affirms a set of opposing values. The consistent pattern across the measures of actual behaviour in the priming experiments provides additional support for the notion that values map onto latent motivational conflicts and compatibilities, as predicted by the circular model of values (Schwartz, 1992). These results consolidated the findings obtained in the fifth experiment reported by Maio et al. (2009), which focused on the effects of priming self-enhancement values and self-transcendence values. Together, the two sets of experiments provide provocative support for the motivational compatibilities and conflicts predicted by the circular models by showing their ability to predict systemic changes in actual behaviour. Such systemic effects provide a significant extension of prior studies that examined the effects of value priming on only in the targeted values (Rokeach, 1973) or value-congruent behaviour (e.g., Bargh et al., 2001; Macrae & Johnston, 1998). The experiments revealed a wider potential impact of values than has been revealed previously.

6.2.2 From Emotions to Values

Past theory has indicated that there are strong latent connections between values and emotion (Feather, 1995), while past research has revealed associations between values and chronic emotions (Nelissen, Dijker, & De Vries, 2007). Yet, these correlations cannot reveal whether specific emotions have a causal influence on values or vice-versa. The results across Experiment 4 to 9 indicated that the experience of contextualized emotions leads to a systematic change in values. These changes are predictable from the motivational interconnections between values, as predicted by Schwartz's (1992) circular model. Experiments 4 and 5 revealed that priming death-related sadness, but not personal failure sadness, decreases the importance of self-enhancement values and increases the importance of self-transcendence values. Similarly, Experiments 6 and 7 showed that priming moral disgust, but not hygiene disgust, decreases the importance of self-enhancement values and increases the importance of self-transcendence values. Experiment 8 showed that priming moral shame, but not performance shame, decreases the importance of openness values and increases the importance of conservation values. Experiment 9 replicated the findings of Experiment 8, but only among pro-self, but not pro-social individuals. Together, the experiments show that emotions can shape values in a very broad and systematic manner.

This consistent pattern across experiments also showed that the context of emotion is pivotal for predicting effects on values. These effects provide an important extension of prior studies that examined the motivational functions of emotions as isolated from its context (e.g., Frijda, Kuipers, & ter Schure, 1989; Lazarus, 1991; Oatley & Johnson-Laird, 1987). Although I do not deny that specific emotions can possess core features that are consistent across contexts, their effects on values require

an analysis that goes beyond their core features. Consistent with emotion appraisal

theory, the effects on values rely on an understanding of the context producing the

emotion in the first place.

It should be noted that context alone may not be sufficient to elicit the changes

in values. Recall that a similar personal failure-related context was identified in

sadness and shame experiences in Experiment 4 and Experiment 8 respectively. While

personal failure sadness did not lead to any changes in values, performance shame

caused proself individuals to attach less importance to self-transcendence values than

the no shame condition. These differences point to the possibility that some emotions

respond sensitively to context in the process of emotion regulation and response

preparation. Hence, emotion is not simply a by-product of the context present in an

emotion episode, but an active ingredient in generating motivational influences.

6.2.3 Summary

The research presented in this thesis has revealed that priming a set of values

has predictable implications via their motivational interconnections with other values.

Further, the induction of contextualized emotions leads to a systematic change in

values. Overall, the causal links between values, behaviour, and emotions are

consistent with the circular model's predictions about the motivational conflicts and

compatibilities between values. This support for the motivational relations between

values has broad relevance for understanding social judgment and behaviour. The

next section will address some of the broader theoretical, applied, and methodological

implications of the research findings, limitations of the experiments, and potential

directions for future research.

6.3 Research Implications

The studies that primed values (Experiment 1-3) offer a unique perspective on diverse applied issues that are connected to values. For instance, many theories suggest that conflict between values causes prejudice and discrimination toward diverse groups, including people with disabilities (Soder, 1990), homosexuals (Herek, 2000), obese people (Crandall et al., 2001), and Blacks (Katz & Hass, 1988). The attribution-value model of prejudice (Crandall et al., 2001; Crandall & Martinez, 1996), the aversive racism model (Gaertner & Dovidio, 1986, 2005), and the ambivalence model of prejudice (Katz & Hass, 1988) all stress conflict between benevolence-oriented and achievement-oriented cultural values as sources of prejudice toward people or groups. The results of the three experiments complement these insights by revealing that behaviour can be affected not only by increasing the activation of values promoting that behaviour, but also by decreasing the activation of opposing values. Given these results, discrimination may be reduced by increasing the perceived importance of values promoting benevolence *or* by decreasing the perceived importance of values promoting achievement, because changes in either set of values have reciprocal effects on the opposing values. This speculation is a straightforward extension of the evidence described in this thesis.

Other attitudes and behaviours may be made difficult because of latent conflict between relevant values. People wish to protect the environment, but actions often fail to match this value; people also wish to be healthy, but find themselves failing to eat right and exercise (see Maio et al., 2007, for a review). In each case, people may underestimate the effect of situational constraints on them, but they may also underestimate competing motives. If the circular model of values is correct in suggesting that protection of the environment is viewed in a way that requires

115

transcending one's own interests, then actions pursuing this value may seem

subjectively more difficult following activation of competing, self-enhancing motives.

This may occur even when there is no *real* tension between the environmental

behaviour of interest and self-enhancing motives. For instance, many energy-saving

measures are more cost-effective, even if they are automatically seen as an altruistic

sacrifice for the welfare of humanity. The latent motivational assumptions may

occasionally get in the way of reframing behaviours to reflect a lack of conflict. Thus,

these effects may be a hindrance to campaigns that attempt to elicit behavioural

change, making it important for campaigners to examine ways to address the latent

motivational assumptions.

The studies that primed emotions (Experiment 4-9) provide a powerful

argument for considering alternative methods for emotion priming in research that

examines the effects of emotions on social judgment and action. The most common

procedure induces emotions by asking people to recall an event that powerfully led to

the general emotion (de Hooge, Breugelmans, & Zeelenberg, 2008; de Hooge,

Zeelenberg, & Breugelmans, 2010; Fishbach & Labroo, 2007; Keltner, Ellsworth, &

Edwards, 1993; D.A Small & Lerner, 2008). The context of emotional incident is

often ignored, probably because it is assumed to be irrelevant to the key theoretical

assumptions (e.g.,Burns, Kubilus, & Bruehl, 2003; Damasio et al., 2000; Fitzgeraldd

et al., 2004). In some cases, contextual variation is reported, but treated as an

exploratory factor for which critical analyses are not conducted. For instance,

participants who completed a negative mood induction task in one study reported

sadness related to failures, the suffering or death of family members, breakups with

relationship partners, and so forth (Fishbach & Labroo, 2007). Although it can be

difficult to examine every specific context when many contexts are listed, important

effects may be missed if there is no evidence- and theory-based partitioning of contexts. Merely aggregating all participants who thought about different contexts of the target emotion as one group may wipe out the distinct effects of each nuanced emotion. I therefore recommend that researchers code the emotion contexts so that they can examine the effects *across* the contexts and differences *between* contexts. This approach should replicate the principal conclusions being drawn without the context coding, while revealing the extent to which contextual factors are critical. It may matter a great deal if the effect of a particular emotion (e.g., shame) emerges across several contexts, but is robust in one of them and negligible in the others.

This issue is also relevant to other common procedures of emotion induction, such as methods that present a specific emotional story or video (Forgas, 2002, 2007; Hills, Hill, Mamone, & Dickerson, 2001; Josephson, Singer, & Salovey, 1996; Keltner, Ellsworth, & Edwards, 1993; Palfai & Salovey, 1993). For instance, Keltner, Ellsworth, and Edwards (1993) asked participants to imagine the death of their mother in a sadness induction task. The present findings show that the effects of this type of task may differ greatly from a sadness induction procedure that focuses on a different common source of sadness, such as personal failure. By considering the context of emotions, its applied motivational function can be more clearly revealed.

At the same time, it is worth stating again that the findings do not dispel the value of viewing emotions as possessing common properties in the abstract. Indeed, the findings reinforce the notion that emotions possess approach and avoidance elements. These elements are revealed by the opposing effects of each emotion on different values. For instance, shame is often described as an emotion with a strong avoidance orientation (R. S. Miller, 1995; Orth, Berking, & Burkhardt, 2006; Tangney, 1991; Tangney, Miller, Flicker, & Barlow, 1996; Wicker, Payne, &

Morgan, 1983). This avoidance tendency is demonstrated by Experiment 8 and 9's evidence that moral shame decreases the pursuit of independence and stimulation, by decreasing the importance of openness values. However, this effect of moral shame was only half of the picture. The results also indicated that people who experience moral shame attach more importance to conservation values (e.g., respect for tradition). Put simply, moral shame leads to an avoidance tendency for goals that involve uncertainty, but also to an approach tendency for goals that help to create certainty. Similarly, Experiments 4 through 7 revealed that the same emotion (e.g., moral disgust) can simultaneously increase pursuit of values that promote others' well-being, while decreasing the pursuit of values that promote personal well-being. Thus, each emotion causes people to approach some aims, while avoiding others.

Of course, the effects on values are important partly because of how these effects may shape behaviour. This potential ramification was highlighted in Experiment 9, where shame increased conformity behaviour. Among pro-self-individuals, the effect of moral shame in particular was mediated by changes in conservation and openness values. In theory, the effects of death-related sadness and moral disgust on self-transcendence and self-enhancement values should also have repercussions for diverse social judgments and actions. For instance, both emotions may induce an increase in subsequent helping behaviour and a decrease in achievement behaviour through their effects on self-transcendence and self-enhancement values. These possibilities are likely given Experiment 9's meditational evidence and prior evidence of associations between values and behaviour (see Maio, 2010).

6.4 Limitations

Although the present research yielded consistent evidence for systemic effects of values and contextualized emotions leading to a systematic change in values, the limitations of the designs should be noted. For instance, the participant samples were always UK undergraduates, thus limiting the generalizability of the findings. In addition, I did not include conditions that primed orthogonal values in the studies of value priming in Chapter 2. Results in these conditions should have been more or less the same as those found in the control conditions, but it would be ideal to test this prediction.

Also, in the studies of priming values (Experiment 1-3), the dependent measure of behaviour may reflect constructs other than those that were primed (e.g., different goals, scripts). In the experiments, the dependent measures of behaviour could be plausibly linked to other values beyond those that were primed. The lack of value-behaviour specificity makes it important that a consistent pattern was revealed across experiments, but it is nonetheless important for future research to investigate methods for more closely tuning the measures of behaviour to the values that are primed.

In the studies of priming emotions (Experiment 4-9), the main focus was on the effect of emotions on values importance changes. I only looked at the effect of values on behaviour in Experiment 9. The inclusion of behavioural measures in the sadness and disgust experiments would have helped assess the extent of these emotions bring about changes in both cognitive and behavioural terms. For instance, both death-related sadness and moral disgust increased the importance of self-transcendence values and decreased the importance of self-enhancement values. It would be interesting to find out if the same pattern of values changes bring about parallel behavioural changes (e.g., changes in helping and achievement) based on the inherent

differences between the two emotions (D.A Small & Lerner, 2008; D. A Small, Lerner, & Fischhoff, 2006).

6.5 Future Research

Some interesting questions remain about the mechanisms that explain the effects of value priming. My research was guided by the circular model's prediction that values express specific motivational orientations, which conflict with other specific motivational orientations. For example, self-direction values reflect a desire to quest for uncertainty and independence, which conflicts with the desire to protect the status quo. In Experiment 3, priming self-direction values led to an increased desire to see the answers to quiz questions, while priming security values led to a decreased desire to see the answers. Extant evidence indicates that activation of a motive affects the way in which we construe situations, such that we are quicker to detect ways in which current actions, objects, and people can be used to fulfill our motives (e.g., M. J. Ferguson & Bargh, 2004; G. Fitzsimons & Shah, 2008). Consistent with this evidence, the desire to face uncertainty and attain independence should make us consider acquiring answers to quiz questions as an opportunity to fulfil the sense of curiosity, rather than see it merely as a boring task. Thus, if the activation of self-direction values increases the desire for independence and reduces the concomitant desire to protect the status quo (similar to Experiment 3), then people who have been primed with self-direction values should be both more likely to see the acquisition of answers to a quiz as a chance to affirm independence, and less likely to construe a chance to remain clean as a chance to be safe and secure.

Although the behavioural measures consistently fit the assumed mechanism, they cannot rule out all other possibilities. For instance, Kruglanski et al. (2002) articulate how goals can be arranged hierarchically, such that some goals are

subsumed by other goals. It is possible that the effects predicted by the circular model of relations occur partly because values that serve opposing goals are less likely to promote the same higher-order goal than are values that serve the same goal or an adjacent goal. For instance, it may generally be more difficult to view the values *wealth* and *helpfulness* as promoting the same goal than it is to view *wealth* and *power* as promoting the same goal (e.g., achievement). This mechanistic prediction is important because it is possible that the ease of mapping onto higher-order goals changes in different contexts. To continue the previous example, prior recitation of a list of philanthropists might make it easier to regard *wealth* and *helpfulness* as expressions of a compatible higher-order goal (e.g., benevolence) than prior recitation of a list of corporate leaders. Indeed, this speculation is consistent with other evidence indicating that the effects of value activation on subsequent action depend on the content of prior value instantiations (Maio, Hahn, Frost, & Cheung, 2009; Maio, Olson, & Bernard, 2001). In the long run, research should evaluate multiple perspectives on the mechanisms that mediate the effects of value priming.

Future research would also be useful for tackling three other questions of strong basic and applied importance. First, it would be interesting to examine the effects of contextualized positive emotions, such as hope and joy, on values and social judgment. For instance, women expect to have more rewards and fewer costs when they express positive emotion toward another person than when they express self-directed positive emotions (Stoppard & Gunn Gruchy, 1993). Similarly, researchers have distinguished elevation from other positive emotions, such as joy, interest, and contentment (Haidt, 2000; Haidt et al., 2000). Elevation is a warm, uplifting feeling and it occurs when people are inspired by others' acts of goodness, kindness and compassion (Haidt et al., 2000). Similar to death-related sadness and moral disgust,

elevation makes people aware of other people's feeling. This may explain why

elevation generates the desires to help others and to become a better person. Together,

these findings strongly suggest that the effects of context extend beyond the negative

emotions studied in my research. The effects of positive emotions may also depend

greatly on context.

Second, it would be useful to examine additional individual differences in the

use of contextualized emotion. Experiment 9 revealed that the effect of contextualized

shame on values occurs mainly in proself individuals, but social value orientation is

one of many relevant individual differences. For instance, some individual differences

are relevant to the experience of sadness, including level of depression (Beck, Steer,

Ball, & Ranieri, 1996). Other individual differences are relevant to the experience of

disgust, including sensitivity to disgust and bodily sensations (Haidt, McCauley, &

Rozin, 1994; Olatunji, Haidt, McKay, & David, 2008). The results of Experiment 9

provide a provocative indication that such individual differences may be important. At

the very least, research on the roles of these individual differences would help us to

understand the interplay between chronic and short-term emotional experiences in

effects on social judgments and actions more generally.

Finally, it remains an open question whether or not the associations between

emotion and values are bidirectional. As noted in the Introduction, Nelissen et al.

(2007) found important correlations between emotions and values, but these

correlations could not reveal the causal mechanisms responsible for the associations.

The present experiments took an important step forward by showing that sadness,

disgust, and shame can influence values in specific contexts. However, the

experiments did not test whether values can influence the emotions that people

experience in specific contexts. For instance, the experience of death-related sadness

increases self-transcendence values, but does an increase in the importance of self-transcendence values increase the tendency to experience sadness from death? Similarly, the experience of moral disgust elicits stronger self-transcendence values, but does activation of self-transcendence values increase the proclivity toward experiencing moral disgust? These questions could be addressed through paradigms that manipulate value importance (Maio et al., 2009) or measure value changes across time (Bardi, Lee, Hofmann-Towfigh, & Soutar, 2009).

6.6 Conclusion

This thesis presented important new evidence that values express systemic relations between latent motivations. As a result, priming a particular value has predictable effects on behaviours that express different values. The precise pattern of these effects can be predicted with the circular model of the motivational conflicts and compatibilities expressed by values. Also, by considering the social contexts of emotion and the motivational interconnections between values, this thesis has revealed a systematic pattern in the way that emotions affect broad social judgment and action.

This systematic pattern has been missing from previous research, which has focused on particular social judgments or actions. Recall that values are not any old construct; they are central to many theories of the functions of attitudes and behaviour (Grunerta & Juhl, 1995; Kahle, 1996; Kristiansen & Hotte, 1996; Maio & Olson, 1995; Murray, Haddock, & Zanna, 1996; Olson & Zanna, 1993; Sagiv & Schwartz, 1995; Schwartz, 1996). They have repercussions for *diverse* attitudes and behaviours. These repercussions appear to be implicit assumptions within social campaigns that attempt to solicit support by eliciting feelings within us through diverse images and stories. Images of others' dying of hunger should induce death-related sadness, the

sight of irresponsible businesses dumping toxic waste should induce moral disgust, and the stories of poverty caused by our quest for cheap goods made in destitute nations should induce moral shame. Campaigners seem to be hoping that these feelings will lead to a concern for others and for social justice. The evidence suggests that these intuitions may be justified, while also making clear that there can be effects on values not directly relevant to the campaigns (e.g., self-enhancement values, openness values, conservation values) and that the effects may depend on individual differences relevant to the emotion. The identification of specific motivational functions of contextualized emotions provides a useful reference point for framing social causes aimed at promoting values that guide action.

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Appendix A - Experiment 1

(Tradition Values Priming Condition)
Task 1a:
Scrambled sentence
    Below are ten scrambled sentences. Please rearrange the words or phrase to produce a complete sentence.

1. would rather / in life. / She / accept her / portion

    _____

2. views. / political / He / moderate / holds

    _____

3. that he / You can / tradition. / tell / respects

    _____

4. devoutly / is / My/ religious. / neighbour

    _____

5. detached from / He / worldly / is / concerns.

    _____

6. about / very humble / She's / success. / her

    _____

7. he / Admirably, / restrained / anger. / his

    _____

8. dedicated / He / scientific research./ to / his life/

    _____

9. part of / my / Coffee is / ritual. morning

    _____

10. was self-effacing / asked about / The captain / the team's successes. / when

    _____

Task 1b:

Anagrams

Below are 10 anagrams. Please rearrange each set of the letters to produce a word.

1. sfcar

_____

2. modtes

_____

3. trdaitino

_____

4. elmno

_____

5. hmubel

_____

6. inwdwo

_____

7. oondel

_____

8. reilgiuos

_____

9. poilet

_____

10. pneicl

_____

After finishing the above tasks, please report and return the materials to the experimenter.

(Stimulation Values Priming Condition)
Task 1a:
Scrambled sentence
    Below are ten scrambled sentences. Please rearrange the words or phrase to produce a complete sentence.

1. to go / would be / It / exciting / to Africa!

    _____

2. new / film. /This / a daring/ is

    _____

3. varied life./ He / a / to live / has chosen

    _____

4. the courses / students / The new / very stimulating./ find

    _____

5. and fearless / a / She is / climber./ bold

    _____

6. own business. / It was / her / to start / brave

    _____

7. courage to / have the / People should / for their beliefs. / stand up

    _____

8. city. / diverse / London / very / is a

    _____

9. other people's / It is / point of view. / to hear / interesting

    _____

10. the club / attractive. / to make/ We need / more

    _____

Task 1b:
Anagrams
Below are 10 anagrams. Please rearrange each set of the letters to produce a word.

11. sfcar

_____

12. inivgortaing

_____

13. fsacniatign

_____

14. elmno

_____

15. exhliaartnig

_____

16. wnidwo

_____

17. oondel

_____

18. exicteemnt

_____

19. exlpoirng

_____

20. pneicl

_____

After finishing the above tasks, please report and return the materials to the experimenter.

(Control Condition)
Task 1a:
Scrambled sentence
    Below are ten scrambled sentences. Please rearrange the words or phrase to produce a complete sentence.

1. the table / She is / behind us. / on / sitting

      _____

2. for / kept / I have / ten years. / this chair

      _____

3. the bottom / in / The socks / drawer. / are

      _____

4. several books / There / the shelves./ on / are

      _____

5. her new / She / me / wardrobes./ showed

      _____

6. is sleeping / sofa./ The cat / the / on

      _____

7. away / just now./ I / the footstool / threw

      _____

8. asleep / on the / He / armchair. / fell

      _____

9. need to / bookcases./ We / the / repaint

      _____

10. in / the plates / She / a cabinet./ keeps

      _____

Task 1b:
Anagrams
Below are 10 anagrams. Please rearrange each set of the letters to produce a word.

21. sfcar

———————————————————————

22. edb

———————————————————————

23. tbale

———————————————————————

24. elmno

———————————————————————

25. slehf

———————————————————————

26. wnidwo

———————————————————————

27. oondel

———————————————————————

28. crutian

———————————————————————

29. dvuet

———————————————————————

30. pneicl

———————————————————————

After finishing the above tasks, please report and return the materials to the experimenter.

Task 2:

Below are 16 questions concerning 8 pairs of trait dimensions. In the following 9-point scales, please rate yourself and an average college on the trait dimensions that you believe most accurately characterized yourself and the average college student.

1. Where do you think **you** fall into each of the categories below on the trait dimension **Immature - Mature?**

      1   2   3   4   5   6   7   8   9

extremely   extremely
immature   mature

2. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Immature - Mature?**

      1   2   3   4   5   6   7   8   9

extremely   extremely
immature   mature

3. Where do you think **you** fall into each of the categories below on the trait dimension **Irresponsible - Responsible?**

      1   2   3   4   5   6   7   8   9

extremely   extremely
irresponsible   responsible

4. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Irresponsible - Responsible?**

      1   2   3   4   5   6   7   8   9

extremely   extremely
irresponsible   responsible

5. Where do you think **you** fall into each of the categories below on the trait dimension **Maladjusted – Adjusted?**

      1   2   3   4   5   6   7   8   9

extremely   extremely
maladjusted   adjusted

6. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Maladjusted – Adjusted?**

      1   2   3   4   5   6   7   8   9

extremely   extremely
maladjusted   adjusted

7. Where do you think **you** fall into each of the categories below on the trait dimension **Unintelligent – Intelligent?**

	1	2	3	4	5	6	7	8	9	
extremely unintelligent										extremely intelligent

8. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Unintelligent – Intelligent?**

	1	2	3	4	5	6	7	8	9	
extremely unintelligent										extremely intelligent

9. Where do you think **you** fall into each of the categories below on the trait dimension **Cold – Warm?**

	1	2	3	4	5	6	7	8	9	
extremely cold										extremely warm

10. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Cold – Warm?**

	1	2	3	4	5	6	7	8	9	
extremely cold										extremely warm

11. Where do you think **you** fall into each of the categories below on the trait dimension **Incompetent – Competent?**

	1	2	3	4	5	6	7	8	9	
extremely incompetent										extremely competent

12. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Incompetent – Competent?**

	1	2	3	4	5	6	7	8	9	
extremely incompetent										extremely competent

13. Where do you think **you** fall into each of the categories below on the trait dimension **Humorless – Humorous?**

1	2	3	4	5	6	7	8	9

extremely   extremely
humorless   humorous

14. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Humorless – Humorous?**

1	2	3	4	5	6	7	8	9

extremely   extremely
humorless   humorous

15. Where do you think **you** fall into each of the categories below on the trait dimension **Unimaginative - Imaginative?**

1	2	3	4	5	6	7	8	9

extremely   extremely
unimaginative   imaginative

16. Where do you think an **average college student** falls into each of the categories below on the trait dimension **Unimaginative - Imaginative?**

1	2	3	4	5	6	7	8	9

extremely   extremely
unimaginative   imaginative

Appendix B - Experiment 2

(Self-direction Values Priming Condition)
Task 1:
Scrambled sentence
    Below are fifteen scrambled sentences. Please rearrange the words or phrase to produce a complete sentence.

1. self-respect. / He is / with a high / someone / sense of

   _____

2. her / decided to / own goals. / She / choose / has

   _____

3. suggest / enhances / Findings / that creativity / day dreaming.

   _____

4. is curious / Peter / about / around him. / everything

   _____

5. is essential / in a / Freedom / society./ democratic

   _____

6. its independence / 1821. / in / from Spain/ Mexico gained

   _____

7. a very / has / My brother / imagination./ vivid

   _____

8. of / impressed by / We were /his work. / the originality

   _____

9. from the windows./ looking out / see / inquisitive faces / She could

   _____

10. their autonomy / preserved / from / The universities / the government.

   _____

   _____

11. the stars. / had / interest in / an/ I've always

_____

12. the freedom of speech / For most citizens, / with liberty. / in a country / is
    essential

_____

_____

13. book / her new / found / very inspiring./ She

_____

14. look. / a questioning / She / me/ gave

_____

15. right to / the / All peoples / self-determination. / have

_____

(Security Values Priming Condition)
Task 1:
Scrambled sentence
    Below are fifteen scrambled sentences. Please rearrange the words or phrase to produce a complete sentence.

1. to ensure / the government / One role of / is / national security.

    _____

2. an important issue / of social order / in the city. / is / The maintenance

    _____

3. deepened / welcome / has / my sense of belonging. / His warm

    _____

4. maintained by / reciprocation of favors. / are / Mutual relationships

    _____

5. her / glow./ had given / The walk / a healthy

    _____

6. security / in the family. / to / Tom wants / ensure

    _____

7. clean. / are / Make / hands / sure your

    _____

8. you drive. / before / fasten/ your safety belt / Remember to

    _____

9. necessary / stability. / to ensure / It is / political

    _____

10. can prevent / of hygiene / the spread/ High standards/ of disease.

    _____

11. keep us / exercises / can / fit and well. / Regular

_____

12. to maintain / She always / environment. / a dirt free / tries

_____

13. myself. / Karate / defend / me to/ helps

_____

14. mind comes / along / A strong / a strong body. / with

_____

15. at / wear suits / to / It's regulation / the office.

_____

(Control Condition)

Task 1:
Scrambled sentence
    Below are fifteen scrambled sentences. Please rearrange the words or phrase to produce a complete sentence.

1. matched / The dress / with / the necklace. / well

   _____

2. for the / She has / the gloves / whole day. / put on

   _____

3. authentic / are / His shoes / leather. / made of

   _____

4. loves / She / skirt./ silky / her

   _____

5. funny / is a / print on / There / his shirt.

   _____

6. are / waterproof / These boots / made of / materials.

   _____

7. in all / He / this hat / occasions. / wears

   _____

8. to keep / a thick jacket / Please wear / warm. / yourself

   _____

9. her sleep. / to wear / She used / during / socks

   _____

10. of jeans. / He has / twenty / at least / pairs

   _____

11. trainers. / new pair / a / I need / of

   _____

12. with/ very beautiful / her gown. / The bride / is

_____

13. occasionally. / wears / trousers / He only / these

_____

14. that shorts / pass me / Please / in front / of you.

_____

15. Dinner suit? / new / like / Do you / my

_____

Task 2:

The following tasks are related to a consumer decision study. You need to evaluate a new product called "Excite". There will be two tasks and after that, you will have time to try the product. Part 1 is an information acquiring stage, and part 2 involves consumer decision scenarios that ask you to make some choices.

Before the start of part 1, you need to indicate what kind of information you would like to acquire for the evaluation of Excite and two other brands. In the following, you will see a 3 (brands) x 10 (attributes) matrix. You need to put numbers into the boxes to indicate the items you would like to receive and the order of acquiring them.

For each item of information, there will be a 2-minute audio recording. You can choose as many items of information as you wish. The total time needed for part 1 and 2 will be the same, regardless of how many pieces of information you chose to acquire. The more time spent on part 1, the less time there will be for part 2.

Matrix for Excite evaluation

	Excite	Brand C	Brand S
Functions			
Price			
Benefits			
Ingredients			
Product Design			
Target consumer			
Medical testing report			
Product's country of origin			
Possible allergic effect			
Comments from current user			

Task 3:

Task 4:

In the following five minutes, please describe any possible uses of a brick.

_____

_____

_____

_____

_____

_____

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_____
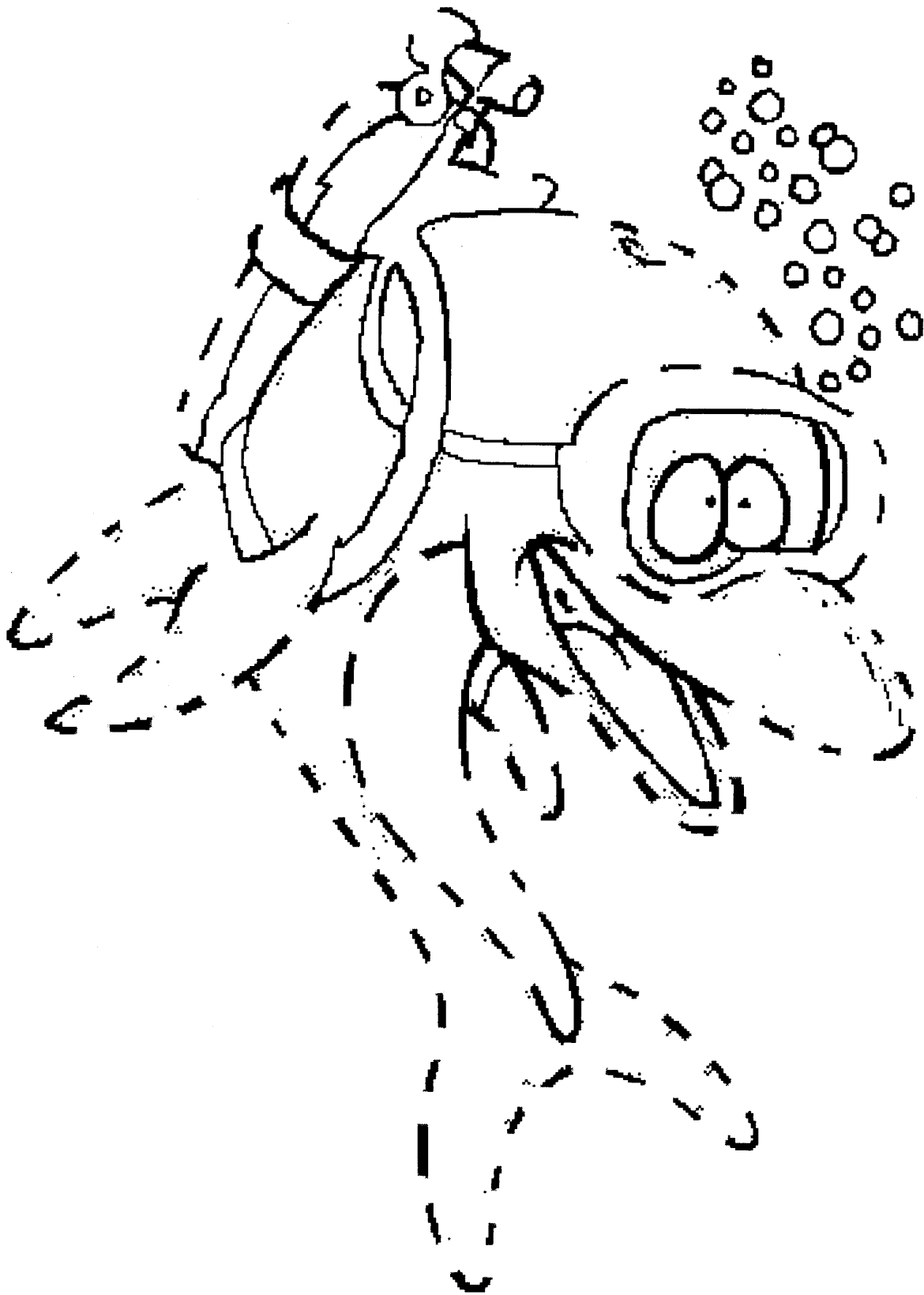
Appendix C - Experiment 3

(Self-direction Values Priming Condition)
Task 1:

Main Terms	Adjectives
Self-respect	Lucky
Table	Normal
Choosing own goal	Great
Settee	Ordinary
Creativity	Ideal
Bed	Average
Freedom	Fantastic
Stool	Satisfactory
Imagination	Terrific
Bath	Neutral

Main Terms	Adjectives
Independent	Happy
Cupboard	Usual
Curiosity	Pretty
Sofa	Moderate
Originality	Brilliant
Desk	Typical
Inquisitive	Attractive
Chair	Okay
Autonomy	Perfect
Chest of drawers	Common

Main Terms	Adjectives

Concept	Adjectives	Furniture	Adjectives

(Security Values Priming Condition)
Task 1:

Main Terms	Adjectives
National security	Lucky
Table	Normal
Social order	Great
Settee	Ordinary
Clean	Ideal
Bed	Average
Healthy	Fantastic
Stool	Satisfactory
Fit	Terrific
Bath	Neutral

Main Terms	Adjectives
Reciprocation of favours	Happy
Cupboard	Usual
Sense of belonging	Pretty
Sofa	Moderate
Hygiene	Brilliant
Desk	Typical
Stability	Attractive
Chair	Okay
Family Security	Perfect
Chest of drawers	Common

Main Terms	Adjectives

Concept	Adjectives	Furniture	Adjectives

(Control Condition)
Task 1:

Main Terms	Adjectives
Rabbit	Lucky
Table	Normal
Buffalo	Great
Settee	Ordinary
Chicken	Ideal
Bed	Average
Cat	Fantastic
Stool	Satisfactory
Kangaroo	Terrific
Bath	Neutral

Main Terms	Adjectives
Fox	Happy
Cupboard	Usual
Panda	Pretty
Sofa	Moderate
Bird	Brilliant
Desk	Typical
Sheep	Attractive
Chair	Okay
Elephant	Perfect
Chest of drawers	Common

Main Terms	Adjectives

Animals	Adjectives	Furniture	Adjectives

Task 2:

In the following, please mark a **X** on questions that you have already known the answer; or a √ if you want to know the answer. Please also write a **F** next to box if you're familiar to the topic issue (but not necessarily the questions in particular). For example, if you know history quite well in general, you can write down a F next to the box with a question related to history. If all cases don't apply, you can leave the item blank.

☐ The sinking of which famous German battleship was portrayed in the title of a 1960 film?

☐ Which historical figure is reputed to have laid his cloak over a muddy puddle so that Queen Elizabeth I would not get her feet dirty?

☐ In the Bible, by what name was Saul of Tarsus known following his conversion on the road to Damascus?

☐ What was the Christian name of Mr Smirnoff, the man behind the popular brand of vodka?

☐ Which car company manufactured models including the Maestro, Allegro and Cambridge?

☐ At which famous golf course is the US Masters played each year?

☐ The Statue of Zeus, one of the Seven Wonders of the World, was built in which ancient Greek town?

☐ After the break-up of the Beatles, which of their songs did John Lennon claim was the first ever heavy metal song, and is also the song on which Paul McCartney played lead guitar for the first time?

☐ Which chemical element has a symbol in the periodic table that is derived from the Latin name Aurum?

☐ Who led the first successful expedition to the South Pole?

☐ Under what name did Roman Emperor Gaius Octavius become best known, which a month of the year was later named after?

☐ Born in 1960, which TV and radio presenter was named the "most powerful man on the radio" by Radio Times in 2005?

☐ In a game of snooker, what colour ball is worth 3 points?

☐ What name is given to a baby marsupial?

☐ Which 21 year old model did Rod Stewart marry in 1990?

☐ Born in Israel, who was the first celebrity voted off the first series of "I'm A Celebrity, Get Me Out Of Here"?

☐ Which actress famously stripped off her bikini top in slow motion in the 1982 film "Fast Times At Ridgemont High"?

☐ Which female tennis player won the French Open and U.S. Open in both 1991 and 1992, but didn't compete in either of these events in 1993 or 1994?

☐ Who dated actress Elizabeth Hurley between 2000 and 2001 and denied he was the father of her son born in 2002 before a DNA test proved otherwise?

☐ By surface area, what is the largest loch in Scotland?

☐ Which U.S. President abolished slavery?

☐ Which girls name was extremely uncommon when the book `Peter Pan` was first published, but soon became popular because of the book?

☐ Fray Bentos is a town in which South American country?

☐ Who committed the first murder in the Bible?

☐ Alfred Nobel, the man after whom the Nobel Prizes are named, was originally well known for inventing what?

☐ On a standard dart board, what is the lowest number that cannot be scored with a single dart?

☐ Which politician was once replaced by a tub of lard on the TV show Have I Got News For You?

☐ What is the most common colour that appears in the flags of the world?

☐ In movies, who directed the Godfather trilogy?

☐ What is the name of the parliament of the Isle of Man?

☐ Which American state is known as the Sunshine State?

☐ What was the name of Elvis Presley's manager?

☐ In what year was the Bank of England founded?

☐ Which British footballer has the most number of International caps?

☐ Father Ted Crilly and Father Dougal McGuire lived on Craggy Island with which other priest?

☐ Which is the only X rated film to win an Oscar for Best Picture?

☐ Eye for eye, tooth for tooth. According to Exodus what comes next?

☐ What is the capital city of Belarus?

☐ Ganymede is the largest moon in the solar system, around which planet does it orbit?

☐ What was the nationality of Georges Bizet, composer of opera "Carmen"?

☐ What is the most frequently sung song in the language of English?

☐ What colour is the cross on the Swedish flag?

☐ Which famous book features the character of Bob Cratchit?

☐ In Greek legend, what is the name given to the creature that is half man and half bull?

☐ According to legend, who rode through the streets of Coventry naked and was seen by someone called Tom, leading to the phrase "Peeping Tom"?

☐ In which capital city is the largest museum in the world?

☐ Who painted "Portrait of Adele Bloch-Bauer I" which reportedly sold for a record 135 million dollars in June 2006?

☐ In a 2004 poll run by the BBC, which TV show won the title of "Best British Sitcom"?

Appendix D - Experiment 4

Task 1:

Task 1 (Sad Priming Condition)
Please write a vivid description of an event that you can recall from your life when you experienced very intensely the following emotion:
Sad and distressed
Please include in the description what happened on that day, how you felt, and whether the event elicited thoughts or imagery that intensified your emotion.

Task 1 (Control Condition)
Please write a vivid description of an ordinary school day.

Task 2

Person Profiles IVM

Here we briefly describe some people. Please read each description and think about how much each person is
or is not like you. Put an X in the box to the right that shows how much the person in the description is
like you.

HOW MUCH LIKE YOU IS THIS PERSON?

	Very much like me	like me	some-what like me	a little like me	not like me	not like me at all
1. Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.	☐	☐	☐	☐	☐	☐
2. It is important to him to be rich. He wants to have a lot of money and expensive things.	☐	☐	☐	☐	☐	☐
3. He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life.	☐	☐	☐	☐	☐	☐
4. It's very important to him to show his abilities. He wants people to admire what he does.	☐	☐	☐	☐	☐	☐
5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.	☐	☐	☐	☐	☐	☐
6. He thinks it is important to do lots of different things in life. He always looks for new things to try.	☐	☐	☐	☐	☐	☐
7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.	☐	☐	☐	☐	☐	☐
8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.	☐	☐	☐	☐	☐	☐
9. He thinks it's important **not** to ask for more than what you have. He believes that people should be satisfied with what they have.	☐	☐	☐	☐	☐	☐
10. He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.	☐	☐	☐	☐	☐	☐
11. It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.	☐	☐	☐	☐	☐	☐
12. It's very important to him to help the people around him. He wants to care for their well-being.	☐	☐	☐	☐	☐	☐
13. Being very successful is important to him. He likes to impress other people.	☐	☐	☐	☐	☐	☐
14. It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without.	☐	☐	☐	☐	☐	☐
15. He likes to take risks. He is always looking for adventures.	☐	☐	☐	☐	☐	☐

167

	Very much like me	like me	some-what like me	a little like me	not like me	not like me at all
16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.	☐	☐	☐	☐	☐	☐
17. It is important to him to be in charge and tell others what to do. He wants people to do what he says.	☐	☐	☐	☐	☐	☐
18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.	☐	☐	☐	☐	☐	☐
19. He strongly believes that people should care for nature. Looking after the environment is important to him.	☐	☐	☐	☐	☐	☐
20. Religious belief is important to him. He tries hard to do what his religion requires.	☐	☐	☐	☐	☐	☐
21. It is important to him that things be organized and clean. He really does **not** like things to be a mess.	☐	☐	☐	☐	☐	☐
22. He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things.	☐	☐	☐	☐	☐	☐
23. He believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to him.	☐	☐	☐	☐	☐	☐
24. He thinks it is important to be ambitious. He wants to show how capable he is.	☐	☐	☐	☐	☐	☐
25. He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned.	☐	☐	☐	☐	☐	☐
26. Enjoying life's pleasures is important to him. He likes to 'spoil' himself.	☐	☐	☐	☐	☐	☐
27. It is important to him to respond to the needs of others. He tries to support those he knows.	☐	☐	☐	☐	☐	☐
28. He believes he should always show respect to his parents and to older people. It is important to him to be obedient.	☐	☐	☐	☐	☐	☐
29. He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society.	☐	☐	☐	☐	☐	☐
30. He likes surprises. It is important to him to have an exciting life.	☐	☐	☐	☐	☐	☐
31. He tries hard to avoid getting sick. Staying healthy is very important to him.	☐	☐	☐	☐	☐	☐
32. Getting ahead in life is important to him. He strives to do better than others.	☐	☐	☐	☐	☐	☐
33. Forgiving people who have hurt him is important to him. He tries to see what is good in them and not to hold a grudge.	☐	☐	☐	☐	☐	☐
34. It is important to him to be independent. He likes to rely on himself.	☐	☐	☐	☐	☐	☐
35. Having a stable government is important to him. He is concerned that the social order be protected.	☐	☐	☐	☐	☐	☐

	Very much like me	like me	some-what like me	a little like me	not like me	not like me at all
36. It is important to him to be polite to other people all the time. He tries never to disturb or irritate others.	☐	☐	☐	☐	☐	☐
37. He really wants to enjoy life. Having a good time is very important to him.	☐	☐	☐	☐	☐	☐
38. It is important to him to be humble and modest. He tries not to draw attention to himself.	☐	☐	☐	☐	☐	☐
39. He always wants to be the one who makes the decisions. He likes to be the leader.	☐	☐	☐	☐	☐	☐
40. It is important to him to adapt to nature and to fit into it. He believes that people should not change nature.	☐	☐	☐	☐	☐	☐

Thank you for your cooperation!

Person Profiles IVF

Here we briefly describe some people. Please read each description and think about how much each person is
or is not like you. Put an X in the box to the right that shows how much the person in the description is like you.

HOW MUCH LIKE YOU IS THIS PERSON

	Very much like me	like me	some-what like me	a little like me	not like me	not like me at all
1. Thinking up new ideas and being creative is important to her. She likes to do things in her own original way.	☐	☐	☐	☐	☐	☐
2. It is important to her to be rich. She wants to have a lot of money and expensive things.	☐	☐	☐	☐	☐	☐
3. She thinks it is important that every person in the world be treated equally. She believes everyone should have equal opportunities in life.	☐	☐	☐	☐	☐	☐
4. It's very important to her to show her abilities. She wants people to admire what she does.	☐	☐	☐	☐	☐	☐
5. It is important to her to live in secure surroundings. She avoids anything that might endanger her safety.	☐	☐	☐	☐	☐	☐
6. She thinks it is important to do lots of different things in life. She always looks for new things to try.	☐	☐	☐	☐	☐	☐
7. She believes that people should do what they're told. She thinks people should follow rules at all times, even when no-one is watching.	☐	☐	☐	☐	☐	☐
8. It is important to her to listen to people who are different from her. Even when she disagrees with them, she still wants to understand them.	☐	☐	☐	☐	☐	☐
9. She thinks it's important **not** to ask for more than what you have. She believes that people should be satisfied with what they have.	☐	☐	☐	☐	☐	☐
10. She seeks every chance she can to have fun. It is important to her to do things that give her pleasure.	☐	☐	☐	☐	☐	☐
11. It is important to her to make her own decisions about what she does. She likes to be free to plan and to choose her activities for herself.	☐	☐	☐	☐	☐	☐
12. It's very important to her to help the people around her. She wants to care for their well-being.	☐	☐	☐	☐	☐	☐
13. Being very successful is important to her. She likes to impress other people.	☐	☐	☐	☐	☐	☐
14. It is very important to her that her country be safe. She thinks the state must be on watch against threats from within and without.	☐	☐	☐	☐	☐	☐
15. She likes to take risks. She is always looking for adventures.	☐	☐	☐	☐	☐	☐
16. It is important to her always to behave properly. She wants to avoid doing anything people would say is wrong.	☐	☐	☐	☐	☐	☐

	Very much like me	like me	some-what like me	a little like me	not like me	not like me at all
17. It is important to her to be in charge and tell others what to do. She wants people to do what she says.	☐	☐	☐	☐	☐	☐
18. It is important to her to be loyal to her friends. She wants to devote herself to people close to her.	☐	☐	☐	☐	☐	☐
19. She strongly believes that people should care for nature. Looking after the environment is important to her.	☐	☐	☐	☐	☐	☐
20. Religious belief is important to her. She tries hard to do what her religion requires.	☐	☐	☐	☐	☐	☐
21. It is important to her that things be organized and clean. She really does **not** like things to be a mess.	☐	☐	☐	☐	☐	☐
22. She thinks it's important to be interested in things. She likes to be curious and to try to understand all sorts of things.	☐	☐	☐	☐	☐	☐
23. She believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to her.	☐	☐	☐	☐	☐	☐
24. She thinks it is important to be ambitious. She wants to show how capable she is.	☐	☐	☐	☐	☐	☐
25. She thinks it is best to do things in traditional ways. It is important to her to keep up the customs she has learned.	☐	☐	☐	☐	☐	☐
26. Enjoying life's pleasures is important to her. She likes to 'spoil' herself.	☐	☐	☐	☐	☐	☐
27. It is important to her to respond to the needs of others. She tries to support those she knows.	☐	☐	☐	☐	☐	☐
28. She believes she should always show respect to her parents and to older people. It is important to her to be obedient.	☐	☐	☐	☐	☐	☐
29. She wants everyone to be treated justly, even people she doesn't know. It is important to her to protect the weak in society.	☐	☐	☐	☐	☐	☐
30. She likes surprises. It is important to her to have an exciting life.	☐	☐	☐	☐	☐	☐
31. She tries hard to avoid getting sick. Staying healthy is very important to her.	☐	☐	☐	☐	☐	☐
32. Getting ahead in life is important to her. She strives to do better than others.	☐	☐	☐	☐	☐	☐
33. Forgiving people who have hurt her is important to her. She tries to see what is good in them and not to hold a grudge.	☐	☐	☐	☐	☐	☐
34. It is important to her to be independent. She likes to rely on herself.	☐	☐	☐	☐	☐	☐
35. Having a stable government is important to her. She is concerned that the social order be protected.	☐	☐	☐	☐	☐	☐
36. It is important to her to be polite to other people all the time. She tries never to disturb or irritate others.	☐	☐	☐	☐	☐	☐

171

	Very much like me	like me	some-what like me	a little like me	not like me	not like me at all
37. She really wants to enjoy life. Having a good time is very important to her.	☐	☐	☐	☐	☐	☐
38. It is important to her to be humble and modest. She tries not to draw attention to herself.	☐	☐	☐	☐	☐	☐
39. She always wants to be the one who makes the decisions. She likes to be the leader.	☐	☐	☐	☐	☐	☐
40. It is important to her to adapt to nature and to fit into it. She believes that people should not change nature.	☐	☐	☐	☐	☐	☐

Thank you for your cooperation!

Appendix E - Experiment 5

Task 1 (Death-related Sadness Condition)

Please write a vivid description of an event that you can recall from your life when you experienced very intensely the following emotion:

Sadness from a death-related event

Please describe what happened on that day, how you felt, and whether the event elicited thoughts or imagery that intensified your emotion.

Task 1 (Personal Failure Sadness Condition)

Please write a vivid description of an event that you can recall from your life when you experienced very intensely the following emotion:

Sadness from personal failure

Please describe what happened on that day, how you felt, and whether the event elicited thoughts or imagery that intensified your emotion.

Task 1 (Control Condition)
Please write a vivid description of an ordinary school day.

Appendix F - Experiment 6

Task 1 (Disgust Priming Condition)
Please write a vivid description of an event that you can recall from your life when
you experienced very intensely the following emotion:
Disgust
Please include in the description what happened on that day, how you felt, and
whether the event elicited thoughts or imagery that intensified your emotion.

Task 1 (Control Condition)
Please write a vivid description of an ordinary school day.

Appendix G - Experiment 7

Task 1 (Moral Disgust Condition)

Please write a vivid description of an event that you can recall from your life when you experienced very intensely the following emotion:

Disgust at someone else's immorality

Please describe what happened on that day, how you felt, and whether the event elicited thoughts or imagery that intensified your emotion.

Task 1 (Hygiene Disgust Condition)

Please write a vivid description of an event that you can recall from your life when you experienced very intensely the following emotion:

Disgust at someone else's poor hygiene

Please describe what happened on that day, how you felt, and whether the event elicited thoughts or imagery that intensified your emotion.

Task 1 (Control Condition)
Please write a vivid description of an ordinary school day.

Task 1 (Shame Condition)
Please write a vivid description of an event that you can recall from your life when
you experienced very intensely the following emotion:
Shame
Please include in the description what happened on that day, how you felt, and
whether the event elicited thoughts or imagery that intensified your emotion.

Task 1 (Control Condition)
Please write a vivid description of an ordinary school day.

Appendix I - Experiment 9

Task 1

In this task we ask you to imagine that you have been randomly paired with another person, whom we will refer to as the "Other". This other person is someone you do not know and that you will not knowingly meet in the future. Both you and the "Other" person will be making choices by circling either the letter A, B, or C. Your own choices will produce points for both yourself and the "Other" person. Likewise, the other's choice will produce points for him/her and for you. Every point has value: The more points you receive, the better for you, and the more points the "Other" receives, the better for him/her.

Here's an example for how this task works:

	A	B	C
You get	500	500	550
Other gets	100	500	300

In this example, if you chose A you would receive 500 points and the other would receive 100 points; if you chose B, you would receive 500 points and the other 500; and if you chose C, you would receive 550 points and the other 300. So, you see that your choice influences both the number of points you receive and the number of points the other receives.

Before you begin making choices, please keep in mind that there are no right or wrong answer – choose the option that you, for whatever reason, prefer most. Also, remember that the points have value: The more of them you accumulate, the better for you. Likewise, from the "other's" point of view, the more points s/he accumulates, the better for him /her.

For each of the nine choice situations, circle A, B, or C, depending on which column you prefer most:

		A	B	C
(1)	You get	480	540	480
	Other gets	80	280	480

		A	B	C
(2)	You get	560	500	500
	Other gets	300	500	100

		A	B	C
(3)	You get	520	520	580
	Other gets	520	120	320

		A	B	C
(4)		A	B	C
	You get	500	560	490
	Other gets	100	300	490

(5)		A	B	C
	You get	560	500	490
	Other gets	300	500	90

(6)		A	B	C
	You get	500	500	570
	Other gets	500	100	300

(7)		A	B	C
	You get	510	560	510
	Other gets	510	300	110

(8)		A	B	C
	You get	550	500	500
	Other gets	300	100	500

(9)		A	B	C
	You get	480	490	540
	Other gets	100	490	300

Task 2: Debate Arguments Evaluations

Please read the following debate arguments related to **wind power**.

Introduction:

While the development of wind power may benefit both the society and the environment, some people are concerned about the changes created for people living close to the turbines. Listed below are the typical arguments from the Pro-wind-power side and the Anti-wind-power side.

Pro-wind-power side argument 1:

"Wind is a free source of energy. With modern technology, it can be captured efficiently with wind turbines. Although wind turbines can be very tall, each one takes up only a small plot of land. This means that the land below can still be used. This is especially the case in agricultural areas, where turbines can exist side-by-side with normal farming operations. In addition, wind turbines are available in a range of sizes which means a vast range of people and businesses can use them. Single households to small towns and villages can make good use of the range of wind turbines available today.

Anti-wind-power arguments 1:

"The strength of the wind is not constant and it varies from zero to storm force. This means that wind turbines do not produce the same amount of electricity all the time. There will be times when they produce no electricity at all. On top of that, large wind farms are needed to provide entire communities with enough electricity. For example, the largest single turbine available today can only provide enough electricity for 475 homes, when running at full capacity. How many would be needed for a town of 100 000 people?

Pro-wind-power argument 2:

"From an aesthetical point of view, many people find wind farms an interesting feature of the landscape. Also, remote areas that are not connected to the electricity power grid can use wind turbines to produce their own supply. The energy produced by wind turbines does not cause green house gases or other pollutants."

Anti- wind-power side argument 2:

"Many people feel that the countryside should be left in its natural form, without these large structures being built. In fact, many people see large wind turbines as unsightly structures and not pleasant or interesting to look at. They disfigure the countryside and are generally ugly and noisy. Each one can generate the same level of noise as a family car travelling at 70 mph."

On the scale below, please circle the number that corresponds to your overall evaluation of the debate. In other words, which side won and by how much?

+50 The PRO-wind-power position won by an extremely large amount
　　-
+40 The PRO-wind-power position won by a very large amount
　　-
+30 The PRO-wind-power position won by a large amount
　　-
+20 The PRO-wind-power position won by a quite large amount
　　-
+10 The PRO-wind-power position won by a slight amount
　　-
0　 Neither side won -- it was even
　　-
-10 The ANTI-wind-power position won by a slight amount
　　-
-20 The ANTI-wind-power position won by a quite large amount
　　-
-30 The ANTI-wind-power position won by a large amount
　　-
-40 The ANTI-wind-power position won by a very large amount
　　-
-50 The ANTI-wind-power position won by an extremely large amount

On the scale below, please circle the number that corresponds to your overall evaluation of the debate. In other words, which side won and by how much?

+50 The ANTI-wind-power position won by an extremely large amount
-
+40 The ANTI-wind-power position won by a very large amount
-
+30 The ANTI-wind-power position won by a large amount
-
+20 The ANTI-wind-power position won by a quite large amount
-
+10 The ANTI-wind-power position won by a slight amount
-
0 Neither side won -- it was even
-
-10 The PRO-wind-power position won by a slight amount
-
-20 The PRO-wind-power position won by a quite large amount
-
-30 The PRO-wind-power position won by a large amount
-
-40 The PRO-wind-power position won by a very large amount
-
-50 The PRO-wind-power position won by an extremely large amount

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Task 3 (Moral Shame Condition)
Please write a vivid description of an event that you can recall from your life when you experienced very intensely the following emotion:

Shame from breaching moral or social norms

Please describe what happened on that day, how you felt, and whether the event elicited thoughts or imagery that intensified your emotion.

Task 3 (Performance Shame Condition)
Please write a vivid description of an event that you can recall from your life when you experienced very intensely the following emotion:

Shame from personal poor performance

Please describe what happened on that day, how you felt, and whether the event elicited thoughts or imagery that intensified your emotion.

Task 3 (Control Condition)
Please write a vivid description of an ordinary school day.

Task 4a
PVQ (see Appendix D)

Debate Evaluations

DATA SUMMATION SHEETS

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side   Neither Side   ANTI-wind-power
Won Definitely   Won   Won definitely
-3   -2   -1   0   +1   +2   +3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

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-3	-2	-1	0	+1	+2	+3

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-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3

PRO-wind-power side Won Definitely			Neither Side Won		ANTI-wind-power Won definitely	
-3	-2	-1	0	+1	+2	+3