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Basic Human Values:
Implicit Structure, Dynamic Properties,
and Attitudinal Consequences

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Publications

This thesis contains findings that have been presented in the following submissions for publication.

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Abstract

The concept of values has long been suggested as an important concept across social sciences (e.g., Inglehart, 1977; Kluckhohn, 1951; Williams, 1968). Despite the lack of agreement on the content of values and also diversity of perspectives on the roles of values (Kluckhohn, 1951; Van Deth & Scarbrough, 1995) there is a general agreement about the vital role of values in human beings' lives (Dewey, 1939; Hechter, 1992; Joas, 1996; Kluckhohn, 1951; Mandler, 1993; Rokeach, 1973; Schwartz, 1992). To help to get a better idea about content and role of values, this thesis discusses important contemporary theories of values and then presents evidence testing one of these theories, which suggests a dynamic circumplex structure of values based on motivational conflicts and compatibilities among them (Schwartz, 1992). Six experiments provided strong support for this model of values. Experiments 1 to 3 provided support for the circumplex structure by revealing the first evidence of inter-value relations in memory. That is, they revealed that people judge the conceptual relations between pairs of motivationally congruent values and motivationally opposing values quicker than pairs of motivationally unrelated values. Moreover, the results explained how motivational conflicts and compatibilities affected response times over and above semantic relations. Experiment 4 supported the circumplex structure of values by providing evidence that prioritizing specific values not only increases the importance of the prioritized values and similar values, but also decreases the importance of opposed values. Experiment 5 revealed that priming a specific value increases likelihood of the value-relevant behaviours, while decreasing value-opposed behaviours. Finally, Experiment 6 found support for the influence of value conflicts on feelings of ambivalence. Overall, the results offered further support for the circumplex structure of values and extended prior research using new methods (e.g., measuring value associations in memory), designs (e.g., effects of value change on behaviours relevant to different values), and measures (e.g., feelings of ambivalence).

CHAPTER 1

Basic Human Values: Conceptualizations and Overview

1.1 Overview

The aim of this chapter is to provide a brief introduction to values by demonstrating a sample of value definitions and a variety of perspectives on the role of human values. The chapter emphasizes the complex nature of values by providing a collection of diverse, and in some cases ambiguous, perspectives on values across social sciences, while mentioning their general agreement on the vital role of values in human beings' lives.

1.2 Introduction

Once, as the chief deputy of one of Iran's universities, I went to negotiate with a group of students who were on a strike because of a delay in preparing the sport centre of the university. When I arrived, one of the students shouted at me angrily, and said "you are the most inefficient manager I have ever seen, and should resign immediately." While the other students were encouraging him by giving him a big clap, a student beside him pointed at me and whispered something in his ear. The first student hesitated a little, but replied angrily, "I know he is our lecturer, but I haven't played basketball for three weeks!" The night after the event, I spent hours thinking about what happened that day. My concern was not the students' rude behaviour to me personally; my concern was the general lack of "politeness" and "honouring teachers" which are among the most important values in Iranian culture. I asked myself what has happened to the new generation of students? Where are the values of "politeness" and "honouring teachers"? Is just three weeks deprivation of a favourite sport enough to motivate a student to shout at his lecturer so

rudely? Is it possible to do scientific research on these value changes? Surprisingly, I saw the student waiting in front of my office the next morning. “I’ve come to apologize, I can’t believe how rude I was yesterday” he said. After a friendly chat, I asked him, “By the way, what did your friend whisper in your ear yesterday?” He said, “My friend told me: ‘be polite! He is our lecturer’ ”.

This capacity for value negative and affirmation illustrates the primary focus of this thesis, which is the dynamic structure of human values. To explain this issue and my hypotheses, I provide a brief review of the psychological literature on basic human values. This review describes definitions of values and short explanations of their potential characteristics, antecedents, and consequences. General explanations of the structure and generality of values are introduced using Rokeach’s (1973) value theory and Schwartz’s (1992) model of values.

1.3 The Nature of Values

People rely on values by using them implicitly or explicitly to evaluate almost everything in their lives. On a daily basis, people have to evaluate and judge issues, events, and people as good or bad, right or wrong, useful or useless, etc. In theory, these judgements depend on considerations of how each object of judgment promotes or threatens values that are important to us. This notion is emphasized in the diverse literature with different perspectives on the concept of value and its role in people’s lives. Values are emphasized in theory and research on topics in sociology, anthropology, philosophy, politics, psychology, and medical science (Feather, 1996; C. Kluckhohn, Murray, & Schneider, 1953; F. R. Kluckhohn & Strodtbeck, 1961; M. Kluckhohn, 1951; Rokeach & Mezei, 1973; S. H. Schwartz, 1992). This diverse inquiry has led to a variety of definitions of values. Table 1.1 provides some well-known definitions of values.

Table 1.1

Definitions of values

Author	Definition of values
Braithwaite (1997, p. 403)	Values are prescriptive beliefs about desirable goals in life and modes of behaving that transcend specific objects and situations.
Feather (1996, p. 222)	I regard values as beliefs about desirable or undesirable ways of behaving or about the desirability or otherwise of general goals.
Glover, Bumpus, Logan, & Ciesla (1997, p. 1320)	Values are the individual's prescriptive beliefs concerning the desirability of certain modes of conduct or end-states of behaviour.
Hall (1994, p. 3)	Each of us has core values that give meaning to our lives, values that we feel are important in the workplace and that we need to survive on a daily basis.
Hechter (1992, p. 215)	Values are relatively general and durable internal criteria for evaluation.
Heider (1958, p. 223)	We shall use the term value as meaning the property of an entity (x has values) or as meaning a class of entities (x is a value) with the connotation of being objectively positive in some way.
Hofstede (1984, p. 389)	A value is a broad preference for one state of affairs over others.
Hogg and Vaughan (1995, p. 567)	A value is a higher order concept thought to provide a structure for organizing attitudes.
Jacoby (2004, p. 1)	Values can be defined as each individual's abstract, general conceptions about the desirable and undesirable end-states of human life.

Table 1.1 continued

<p>Kluckhohn (1951, p. 395)</p>	<p>A value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means, and ends of action.</p>
<p>Lewin (1952, p. 41) cited in Rohan (2000, p. 257)</p>	<p>Values influence behaviour but have not the character of a goal (i.e., of a force field). For example, the individuals does not try to “reach” the value of fairness, but fairness is “guiding” his behavior. It is probably correct to say that values determine which type of activity have a positive and which 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.</p>
<p>McLeod, Sotirovic, & Holbert (1998, p. 453)</p>	<p>We define the concept of values as a belief that a given end-state for the society is preferable to its opposite.</p>
<p>Meglino & Ravlin (1998, p. 354)</p>	<p>We define a value as a person’s internalized belief about how he or she should or ought to behave.</p>
<p>Rokeach (1973, p. 5)</p>	<p>A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.</p>
<p>Schwartz (1994, p. 21)</p>	<p>I define values as desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity.</p>
<p>Schwartz (1999, p. 24)</p>	<p>I define values as conceptions of the desirable that guide the way social actors (e.g., organizational leaders, policy makers, individual persons) select actions, evaluate people and events, and explain their actions and evaluations.</p>
<p>Schwartz, B. (1993, p. 155)</p>	<p>I take values to be principles, or criteria, for selecting what is good (or better, or best) among objects, actions, ways of life, and social and political institutions and structures.</p>

As can be seen in Table 1.1, the definitions of values vary across different disciplines. This variety is emphasized by Van Deth and Scarbrough (1995), as they stated that there is no consensus about the meaning of values across the social sciences or within any sub discipline. This diversity is also well-described by Kluckhohn (1951, pp. 389-390):

“In addition to the varied and shifting connotations of values in ordinary speech, the word is a technical term in philosophy, economics, the arts, and increasingly, in sociology, psychology, and anthropology..... Reading the voluminous, and often vague and diffuse, literature on the subject in the various fields, one finds values considered as attitudes, motivations, objects, measurable quantities, substantive areas of behaviour, affect-laden customs or traditions, and relationships such as those between individuals, groups, objects, and events.”

This variety of perspectives has led a diversity of foci in research on human values. For example, Parsons and Shils (1951) emphasized the role of values in social life and argued that social life is hardly possible without common values; Schwartz and Bilsky (1987; 1990) and Schwartz (1992; 1994) focused on the motivational conflicts and compatibilities among values; the main concern of Tetlock and his colleagues (Tetlock, 1986; Tetlock, Peterson, & Lerner, 1996) was ideological reasoning in value trade-offs; Lasswell (1951) focused on the universality of values; Kluckhohn and Strodtbeck (1961) conceptualized the relations between value orientations and cultures' reaction to cross-cultural questions; Inglehart (1977; 1990; 1992; 1997) investigated and conceptualized the role of industrialization and economic development on societal value change; and Braithwaite (1997) suggested a value structure that represents the role of value orientations in social and political evaluations.

Despite the variety of theories, definitions, and research foci, values have also been viewed as constructs that bridge the social sciences (Inglehart, 1997; M. Kluckhohn, 1951; Williams, 1968). In other words, as mentioned by Kluckhohn (1951, p. 389), the concept of values “supplies a point of convergence for the various specialized social sciences, and is a key concept for the integration with studies in humanities.” A common and core characteristic of most definitions is the notion that values are the criteria that people use to select and justify their actions, and to evaluate both their own and other’s behaviour. Thus, as a deduction from virtually all definitions of values presented in Table 1.1, it could be claimed that basic human values are defined as general desirable goals that are systematically organized, vary in importance, and serve as the evaluative standards and guiding principles in people’s lives (Hechter, 1992; M. Kluckhohn, 1951; Rokeach, 1973; S. H. Schwartz, 1992).

Moreover, despite the variety of perspectives and definitions, research on values has argued for a vital role of basic human values in human life. That is, research has suggested that valuing is unavoidable when people encounter the world (Mandler, 1993) because values are rooted in people (Dewey, 1939) and are the basis of goals (Joas, 1996). Thus, the importance of values as guides to action and evaluation is explicit in most perspectives on values.

These views have led to the emergence of values as core constructs for social psychologists (Feather, 1990; Rohan, 2000; Rokeach, 1973; S. H. Schwartz, 1992; Verplanken & Holland, 2002), perhaps because of values’ capacity to serve as internalized standards for judging objects, ideas, and policies in everyday life (Feather, Volkmer, & McKee, 1991; Rokeach, 1973). Research has since supported the view that values are among the most important predictors of attitudes and behaviour (Allport, Vernon, & Lindzey, 1960; Bardi & Schwartz, 2003; Maio & Olson, 1994, 1995; Maio, Olson, Allen,

& Bernard, 2001; Rokeach, 1973). Values motivate people to make decisions and act in certain ways (Feather, 1992b; Rokeach, 1973), help them to resolve their conflicts, determine positions on different social issues (Feather & Newton, 1982; Rohan, 2000), and choose political and religious affiliations (Barnea & Schwartz, 1998; Feather & Newton, 1982; Heaven, 1991; Mayton & Furnham, 1994). As standards, values help people to determine their future directions and justify their past actions, compare themselves with others, praise or blame themselves and others, take certain actions over others and influence them, and rationalize their attitudes and behaviour (Braithwaite & Scott, 1991; Feather, 1992b; M. Kluckhohn, 1951; Rokeach, 1973; S. H. Schwartz, 1992).

Researchers have also noted that the impact of values is not confined to positive or pro-social behaviours (which constitute a large part of the list above). People use values to rationalize even their personally and socially unacceptable attitudes and behaviours (Hurrelmann & Engel, 1992; W. B. Miller, 1958). Even the pursuit of a criminal life-style has been suggested to occur as the result of a conscious choice based on values (Kennedy & Baron, 1993). For example, a youngster may justify his/her predatory crime by stressing the importance of “respect from peers” (Seigal & Senna, 1991), and violence may be viewed as a “prestige-conferring behaviour” (Kennedy & Baron, 1993). Moreover, delinquency is likely to be justified by values such “excitement” and “daring” (W. B. Miller, 1958), and even by “success” and “status” (Hurrelmann & Engel, 1992).

Despite the focus of such research on specific values relevant to an issue (e.g., abortion, voting, minorities, homosexuality), psychologists believe that people’s behaviour and attitudes are influenced by sets of values rather a single value in isolation (Bardi & Schwartz, 2003; Rokeach, 1973; S. H. Schwartz, 1996). Moreover, it has been suggested that values are strongly interconnected and that a clear understanding of human values can be gained only by investigating value interrelations in the conceptual framework of values

that is known as the “value system”, which is the construct that is the central focus of this dissertation.

1.4 Summary and Preview of Thesis

To summarize, this chapter introduced the concept of values by providing definitions of values from a variety of fields of social sciences. I also provided some social scientists’ statements about ambiguity of the concept of values, while mentioning their general agreement on inter-disciplinary role of values in social sciences and the vital role of values in human beings’ lives. This chapter also mentioned the potential role of values in socially unacceptable attitudes and behaviours, and ended with a brief description of perspectives on inter-value relations in value systems.

To provide background information for understanding value systems and their importance, Chapter 2 will describe characteristics of values in more detail and then illustrate the typical measurement of values in social psychological research. In the subsequent sections of the chapter, a brief explanation of value antecedents and consequences will be provided. Because the purpose of this thesis is to investigate conflicts and compatibilities among values in value systems, a brief introduction of some of the first attempts to establish comprehensive understanding of value systems (Braithwaite, 1997; Inglehart, 1977, 1990; F. R. Kluckhohn & Strodtbeck, 1961; Lasswell, 1951) will be provided in Chapter 3. This issue will be further illustrated in the last section of the chapter, which introduces the two most widely used theories of value systems: Rokeach’s (1973) value theory and Schwartz’s (1992) model of values. The fourth chapter will investigate the latent structure of values by studying the associations among values in memory. The fifth chapter will focus on value change and changes in value-related behaviour by examining influence of induced changes in specific values on other different

values in value systems, and of value priming on changes in value-related behaviours.

Chapter 6 will examine the effects of attribution of compatible and conflicting values to individuals on feelings of ambivalence toward them. Finally, Chapter 7 will review the results of all of the experiments described in this thesis, describe implications of the results for a variety of real-life issues, and suggest some further studies.

CHAPTER 2

Value Characteristics, Antecedents, and Consequences

2.1 Overview

The aim of this chapter is to provide more detailed information about the concept of values, in order to describe potential inter-value relations in value systems. More specifically, in this chapter the generally accepted characteristics of values are introduced, then a brief description of value measurement and two of the most widely used measures of values are described. The last section of this chapter focuses on theoretical antecedents and consequences of values.

2.2 Value Characteristics

There are many perspectives on the core features of values (Rohan, 2000). The perspectives agree about several characteristics of values: belief expression, interest satisfaction, prioritization, prescription, motivation, and stability. Each of these characteristics is described below.

2.2.1 Belief expression. Human values are considered to be abstract and general beliefs about desirable goals that transcend specific behaviour (Rokeach, 1973; S. H. Schwartz, 1992; S. H. Schwartz & Bilsky, 1990). According to Marini (2000, p. 2828), values are “evaluative beliefs that synthesize affective and cognitive elements to orient people to the world in which they live.” Values have also been suggested as conceptual beliefs or preferences (Hall, 1994) and as the kinds of beliefs that judge objects based on their desirability or undesirability (Rokeach, 1973).

2.2.2 Interest satisfaction. As goals, values serve psychological interests (S. H. Schwartz & Bilsky, 1990). That is, values serve as socially acceptable and culturally defined ways of expressing and satisfying needs (Rokeach, 1973). They can be classified according to whether they serve individual interests (e.g., power, achievement), collective interests (e.g., tradition, conformity), or both types of interests (e.g., universalism, security) (S. H. Schwartz, 1992).

2.2.3 Prioritization. It is frequently held that values are prioritized in a hierarchical order based on their relative importance to individuals (Locke, 1991; Ralvin & Meglino, 1989; Rokeach, 1973). That is, different degrees of importance are assigned to different values, and these differences in importance are vital to understanding judgment and behaviour (Rokeach, 1973; S. H. Schwartz, 1992). The hierarchy of values is fundamental for people because, as emphasized by Locke (1991, p. 291), “since a person can only take, in effect, one action at a time, a person who did not have any hierarchy of values would be paralyzed by conflict and would be unable to act at all or to sustain an action once taken.”

2.2.4 Prescription. One of the most important characteristics of human values is their role as standards (Rokeach, 1973; S. H. Schwartz, 1994). In other words, values involve goodness and badness (Feather, 1994b); they serve as standards of “ought” and “should” (Rokeach, 1973); they are preferences (Williams, 1968) and abstract standards for evaluating actions (Feather, 1992b). They potentially serve as standards for people to determine their positions on different social issues, justify opinions and conducts, decide between different alternatives, compare themselves with others, influence others, choose their political and religious ideology, and evaluate and judge themselves, events, objects, and others (Feather, 1991, 1992b, 1994a; Feather & McKee, 1993; Pitts & Woodside, 1983; Rokeach, 1973; S. H. Schwartz, 1994)

2.2.5 Motivation. In theory, values express basic human needs (Rokeach, 1973; S. H. Schwartz, 1992; S. H. Schwartz & Bilsky, 1987, 1990) and therefore should motivate actions to satisfy human needs. Like other motives, values guide people's conduct in particular ways (Feather, 1992b; Rokeach, 1973). According to Feather (1992b, p. 111), values are motives because "the values that people hold affect their initiation of new goal-directed activities, the degree of effort that they put into an activity, how long they persist on an activity in the face of alternative activities, and the choices they make between alternative activities." Research also suggested that values motivate people to assume jobs that could satisfy them and make them feel fulfilled (Rokeach, 1980). Research also revealed that values motivate people to choose their best possible life-style based on their value priorities (Feather, 1982; Rohan, 2000).

2.2.6 Stability. There is a general agreement among researchers that values are relatively stable and at least somewhat resistant to change (England, 1967; Maio & Olson, 1998; Rokeach, 1975, 1985; Rokeach & Ball-Rokeach, 1989). According to Rokeach (1973, p. 6), the stability of values "arises mainly from the fact that they are initially taught and learned in isolation from other values in a absolute, all-or-none manner..... It is the isolated and thus absolute learning of values that more or less guarantees their endurance and stability." Values normally change in a gradual process (P. R. Brewer, 2003) especially due to economical developments and cultural changes (Inglehart, 1977, 1990, 1992, 1997; Inglehart & Baker, 2000), but a rapid and radical change in value priorities is also possible by traumatic events (Stewart & Joines, 1987). Research has also revealed that values can be changed by interventions that produce self-dissatisfaction (Rokeach & Ball-Rokeach, 1989).

2.2.7 Summary of characteristics. An important feature of these characteristics is that they constitute a set of theoretical assumptions and not a list of empirically-proven attributes. For example, research has not yet directly examined the varied potential uses of values as comparison standards; nor has research directly shown motivational qualities of values. Future research should examine these characteristics further and test whether these assumptions are correct.

2.3 Value Measurement

The most widely used methods for assessing values ask participants to rank or rate values (Alwin & Krosnick, 1985; Krosnick & Alwin, 1988; Maio, Roese, Seligman, & Katz, 1996). Ranking is a standardized method of ordering values in which people are asked to rank a set of values based on their competitive importance as guiding principles in the respondents' lives. Rokeach's (1973) Value Survey is the first well-known ranking measure of values. Each part of Rokeach's two-part survey contains an alphabetical list of instrumental or terminal values that are defined by short phrases (see Table 3.1 for the full list of values in Rokeach's Value Survey). The instrumental values portion asks respondents to rank the importance of 18 modes of conduct (e.g., capable, cheerful), whereas the terminal values portion asks participants to rank importance of 18 end-states of existence (e.g., freedom, equality). The logic behind this procedure is that (a) there is a fundamental distinction between instrumental and terminal values and (b) values are important in situations that force people to compare and choose between them. According to Rokeach (1973), ranking is a good method to indicate the relative importance of values in such situations.

Rating methods are a somewhat more recent approach to measuring values. In these methods respondents are asked to rate every value in a set of values based on their

importance as a guiding principle in their lives. Schwartz's Value Survey (1992) is the most widely used rating measure. In this measure, respondents are provided a list 56 values and they are asked to read all values. Using a nine-point scale from -1 (opposed to my values) to 7 (extremely important to me), participants first rate the most important and the least important values as guiding principles in their lives. Participants then rate values that are somewhere between the most and the least important values.

Ranking and rating measures each have advantages and disadvantages. For example, while Ball-Rokeach and Loges (1996) suggested that forced ranking choices are more realistic than rating methods, value-measurement literature has revealed problems that include the necessity of considerable cognitive concentration, high time consumption, the induction of arbitrary distinctions between values, and difficulties in data analyses (Alwin & Krosnick, 1985; McCarty & Shrum, 2000; Reynolds & Jolly, 1980). In contrast, rating methods are easily administrable and can be completed simply. Their disadvantages include more vulnerability to socially desirable responding and less differentiation between values (Greenleaf, Bickart, & Yorkston, 1999; McCarty & Shrum, 2000). Generally, researchers tend to prefer rating methods over ranking methods mainly because simpler methods of data analyses can be used to analyse data gathered from rating methods (McCarty & Shrum, 2000).

To overcome the main disadvantages of ranking and rating methods and to use their advantages, researchers have suggested a new measure that is called Rank-then-Rate (Crosby, Bitner, & Gill, 1990; Shrum, McCarty, & Loeffler, 1990). In this method, respondents are simply asked to first rank order a list of values based on their importance and then go through the list and rate each value based on its importance. Although Rank-then-Rate method still suffers from some disadvantages such as time-consumption and difficulty of administration, research has suggested that this method is a strong alternative

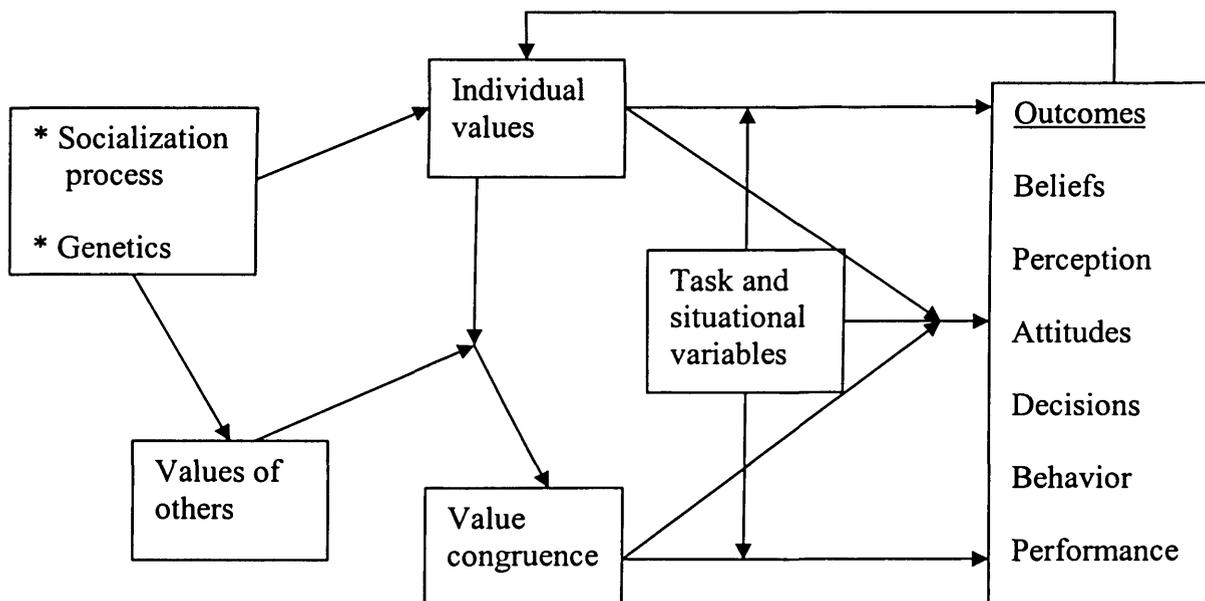
for a simple rating method because it provides a greater degree of differentiation between values (Beatty, Martin, Yoon, & Kahle, 1996; McCarty & Shrum, 1997).

2.4 Value Antecedents and Consequences

Research has examined a variety of factors that are often conceptualized as being antecedents or consequences of human values. Notwithstanding researchers' claims about the functions of different factors as antecedents or consequences, there is no firm evidence (thus far) that any specific variable functions as an antecedent and not as a consequence. The complex nature of values and the intricate interactions between value-related factors make it difficult to differentiate between the factors and categorize them clearly into either value antecedents or value consequences. This complexity is illustrated in Figure 2.1 (Meglino & Ravlin, 1998, p. 366).

Figure 2.1

A framework of value effects (Meglino & Ravlin, 1998, p. 366)



My depiction of variables as antecedents and consequences is a theoretical convention based on prior speculations in the literature. This convention also serves a useful means for partitioning the diverse literature on values.

2.5 Value Antecedents

Research has examined a variety of factors that are often conceptualized as being antecedents of human values. This section provides a brief introduction to the main value antecedents, including biology, gender, self-concept, social identity, personality, worldview, parental style and family structure, society and culture, field of study, religion, race and ethnicity, and social class and occupation.

2.5.1 Biology. A considerable amount of evidence has suggested that biology and genetics are among the roots of values (Cavalli-Sforza, 1993; Franklin, 1993; Michod, 1993; S. H. Schwartz, 1992; S. H. Schwartz & Bilsky, 1987, 1990; Tiger, 1993). For example, Michod (1993, p. 269) emphasized the evolutionary transmission of values by suggesting that “The capacity to have values is based on sophisticated neural and hormonal systems that are costly.... Evolution may have produced the capacity to have values without providing much guidance concerning what values individuals adopt.” Kluchohn (1951, p. 418) suggested that values are founded on “the fundamental biological similarities of all human beings.” Using abundant amount of evidence that support neural bases of pleasure and pain, Franklin (1993) suggested an evolutionary biological root of values that can be investigated by studying brain mechanisms and the biological history of the species.

Research has also indicated substantial heritability of specific values. For example, Tellegen, Lykken, Bouchard, and Wilcox (1988) found that genetic parameters estimate around 50% of variations of characteristics, such as harm avoidance, achievement, and control; Rushton (1986) found that around 50% of the variance in characteristics, such as

altruism and assertiveness can be explained by genetic parameters; and Keller, Bouchard, Arrey, Segal, and Dawis (1992) in a study on twins reared separately, found that over 40% of the variance in work values can be explained by genetic factors. Additional evidence supports the role of biology and culture in the maintenance of values in populations (Cavalli-Sforza, 1993). Other researchers have mentioned the possibility of links between values and inborn temperaments by conceptualizing values as constructs that represent basic human needs, including biological and social needs (S. H. Schwartz, 1992; S. H. Schwartz & Bilsky, 1987, 1990).

2.5.2 Gender. Research has shown strong associations between gender and values (Beutel & Marini, 1995; Halaby, 2003; Marini, Fan, Finley, & Beutel, 1996; P. B. Smith & Schwartz, 1997; Xiao, 2000). World-wide research has revealed that men possess individualistic value orientations, whereas women possess collectivist value orientations (Hofstede, 1984; Schein & Mueller, 1992; P. B. Smith & Schwartz, 1997). For example, Smith and Schwartz (1997) reported that the results of all the 47 national samples of Schwartz's studies of human values revealed that women perceived benevolence values as being more important than did men, and perceived power and achievement values as being less important than did men. Research has also revealed that women value "compassion" and "meaning in life" more than "materialism" and "competition" (Ball-Rokeach, Rokeach, & Grube, 1984; Beutel & Marini, 1995; Rokeach, 1980, 1986); they perceive intrinsic, altruistic, equality, a world of beauty, universalism, spiritualism, and social recognition as being more important than do men; and women perceive individualistic values, power, leadership, hedonism, and freedom as being less important than do men (Feather, 1987; Marini et al., 1996; Verkasalo & Lindeman, 1994). Researchers have also found that women are more concerned and responsible for the well-being of others (Beutel & Marini,

1995), less competitive within the same jobs (Spence & Helmreich, 1983), and perceive jobs that involve helping others as more important than do men (Finley, Fan, Marini, & Beutel, 1993).

Power and benevolence values are the most different across gender (Feather, 1987; Pohjanheimo, 1997; Verkasalo & Lindeman, 1994). This difference may occur because values reflecting ambition, competence, independence, and responsibility, are associated with masculinity, whereas values emphasizing forgiveness, helpfulness, and a world of beauty are related to femininity (Feather & Peay, 1975). Several theorists have speculated that such differences should occur because men and women undergo two different processes of socialization (Fromm, 1973; Kohlberg, 1970; Weber, 1990), wherein women learn a collectivist value orientation and men learn an individualistic value orientation (Adler & Izraeli, 1989; Gibson, 1993; Schein & Mueller, 1992).

2.5.3 Self-concept. Research from different perspectives has suggested an association between values and the self (Feather, 1992a, 1995; M. Kluckhohn, 1951; Rokeach, 1973, 1980; M. B. Smith, 1991). Hultman (2003, p. 2) emphasized the impact of self-esteem on values by stating that “the specific values people choose reflect their current level of self-esteem. Those with low self-esteem gravitate toward defensive and self-protective values; those with high self-esteem gravitate toward growth and self-actualization values. This accounts for the vast differences in human behaviour which is why one person becomes a rocket scientist and another a monk.” To other researchers, the influence of the self on values is not so straightforward and clear. For example, some researchers believe that values are assimilated within the personal self-concept (M. B. Brewer & Roccas, 2001) and have an essential role in the formation of personal identity (Hitlin, 2003). Due to this role, values can protect individuals’ self-esteem (Mayton, Ball-

Rokeach, & Loges, 1994). Indeed, Feather (1995) suggested that values are closely involved with individuals' sense of self, and Rokeach (Rokeach, 1973, 1980) proposed that values are maintained insofar as they promote a positive self-concept — clashes with the self-concept can cause value change — so people manipulate values to fit the self-concept.

2.5.4 Social identity. Social identity has been suggested as among the important antecedents of values (Feather, 1994c; Gouveia, de Albuquerque, Clemente, & Espinosa, 2002; Heaven, 1999; Heaven, Stones, Simbayi, & Le Roux, 2000; Vaughan & Hogg, 1995). Research has suggested that social identities arise from in-group and out-group comparisons and determine the group's (societal) acceptable behaviours, attitudes, and ways of thinking. As a result, individuals with similar social identities have compatible attitudes, goals, norms, and values (Gouveia et al., 2002; Vaughan & Hogg, 1995). Research has also revealed empirical evidence for the influence of social identities on values. For example, Feather (1994c) found that hedonism and security are among the most important predictors of Australian national identity and showed that people who identify themselves as Australian value security, achievement, hedonism, and stimulation more than tradition, benevolence, and universalism. Heaven (1999) studied relations between values and identification with 12 possible social groups. He found that people who identified themselves as being environmentalists, global citizens, and socialists endorsed international harmony and equality more than national strength and order, whereas people who identified themselves as capitalists endorsed national strength and order more than international harmony and equality. Heaven et al. (2000) showed that South Africans who identified themselves as "Black South African" valued international harmony and equality more than did the participants who identified themselves as "Afrikaners".

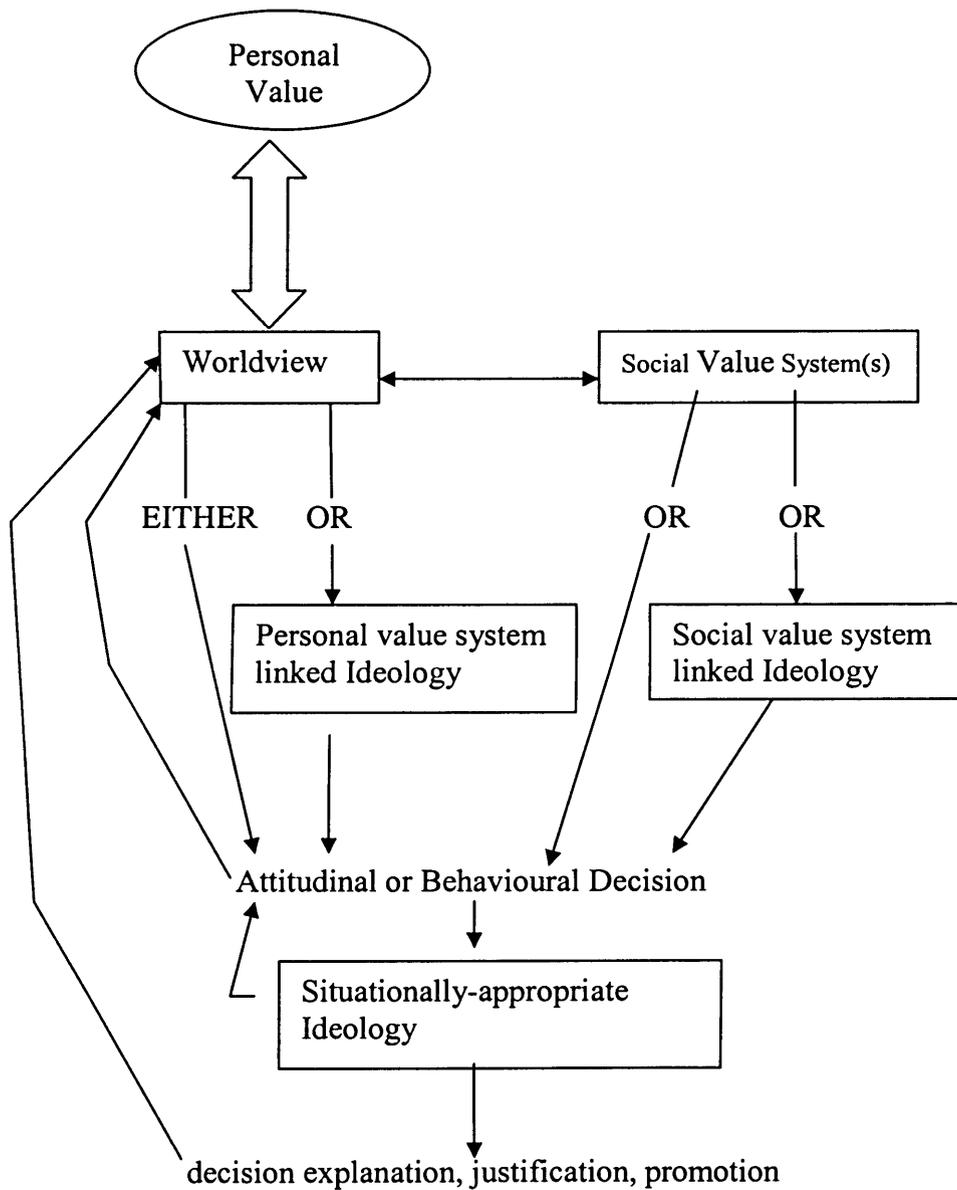
2.5.5 Personality. Many studies have revealed relations between values and personality (Aluja & Garcia, 2004; Bilsky & Schwartz, 1994; Dollinger, Leong, & Ulicni, 1996; Heaven, 1993; Luk & Bond, 1993; Olver & Mooradian, 2003; Roberts & Robins, 2000; Roccas, Sagiv, Schwartz, & Knafo, 2002; Yik & Tang, 1996). For example, in a comprehensive study, Roccas et al. (2002) found that people who scored high on the openness to experience dimension of the five-factor model of personality also rated universalism, self-direction, and stimulation values as more important, and conformity, security, and tradition values as less important; those who scored high on the agreeableness factor rated benevolence, tradition, and conformity as more important, but power and achievement values as less important; the more extroverted participants rated achievement, stimulation, and hedonism as more important, but rated tradition values as less important; participants who scored high on the conscientiousness also rated achievement, conformity, and security as more important, but rated stimulation values as less important. These findings are consistent with the view that traits shape our values, but do not rule out the possibility that values also shape personality.

2.5.6 Worldview. Worldview has been defined as a general assumption about the world that underlies the way people adapt their behaviour to the environment around them (F. R. Kluckhohn & Strodtbeck, 1961; Lerner, 1980; Rohan, 2000). Research has revealed a strong link between people's worldview and their value priorities (Altemeyer, 1998; Feather, 1991; Inglehart, 1977; Parsons, 1951). For example, Feather (1991) found that people who believe in a just world perceive conformity, social order, and obedience as more important; Altemeyer (1998) found that people with a right-wing authoritarian worldview perceive tradition and conformity as more important, whereas people with social dominant orientation (SDO) worldview perceive power values as more important. As

shown in Figure 2.2, Rohan's (2000) review of research led to the conclusion that worldview affects and is affected by the values of individuals and their societies in complex ways, which have not yet been empirically disentangled.

Figure 2.2

Proposed relations among values, worldviews, ideologies, and attitudinal and behavioural decisions (Rohan, 2000, p. 271).



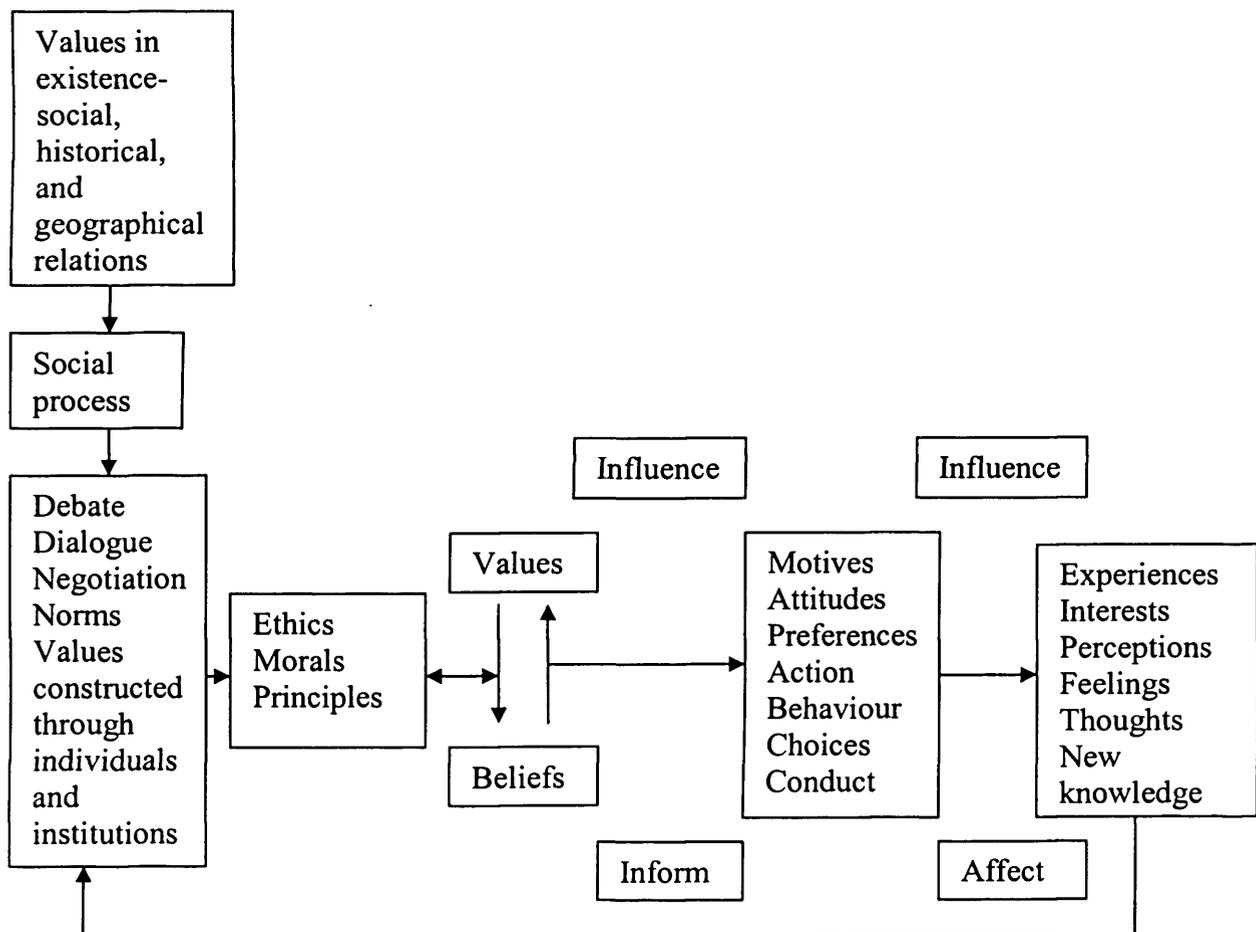
2.5.7 Parental style and family structure. Family function affects the transmission of values to children (Gecas & Seff, 1990; Hoge, Petrillo, & Smith, 1982; Kohn, Slomczynski, & Schoenbach, 1986; Simons, Whitbeck, Conger, & Melby, 1990; Whitbeck & Gecas, 1988). Researchers have proposed that structural characteristics of families (e.g., democratic decision-making), parenting styles (Hoge et al., 1982; Kasser, Ryan, Zax, & Sameroff, 1995; Luster, Rhoades, & Haas, 1989; Schonpflug, 2001), and parents' occupational and social class (Gecas & Seff, 1990) have very important roles in the transmission of parents' values to children. For example, parents with low education emphasize conformity-oriented socialization more than do highly educated parents (Nauck, 1987, 1994). Research has also revealed asymmetries in parents' influence on the transmission of values to children (Taris & Semin, 1997; Taris, Semin, & Bok, 1998). For example, children's values are more consistent with their mothers' values than with their fathers' values (Acock & Bengtson, 1978; Thornton & Camburn, 1987), and positive mother-child relations appear to facilitate the intergenerational transmission of values (Taris & Semin, 1997; Taris et al., 1998).

2.5.8 Society and culture. Values are cognitive representations of societal demands as well as individual needs (Ball-Rokeach et al., 1984), because values are learned through a socialisation process starting from early life (Rokeach, 1973). Researchers have suggested that cultures influence people's behaviour by affecting individuals' beliefs and values (McLeod et al., 1998; Smelser, 1992; Weber, 1990). O'Brain (2003, p. 5) pictured the interaction between society and individuals in value formation (Figure, 2.3) and suggested that "values can shift, be contested, be multiple and re-negotiated, reviewed and re-interpreted through discursive processes or revised meanings and understandings."

Research has also revealed abundant evidence of societal and cultural effects on individuals' values. For example, individualism and collectivism are two fundamental values that differentiate cultures and countries around the world (Hofstede, 1991; P. B. Smith & Schwartz, 1997). Values such as autonomy and openness to change are more important to people in more democratic countries (S. H. Schwartz & Sagie, 2000). There are also long-standing differences in value priorities between Eastern European and Western European countries (S. H. Schwartz, Sagiv, & Boehnke, 2000), and between Italian and American parents (Pearlin & Kohn, 1966).

Figure 2.3

Schematic representation of value formation.



Of interest, the role of culture is strongly supported by evidence for value differences across generations of immigrants. For example, the parental values of the first generation of Chinese parents in the United States were more similar to the parental values of Chinese parents than to the parental values of American parents (Jose, Huntsinger, Huntsinger, & Liaw, 2000), but the immigrant children's values were more similar to the values of their peers from the dominant culture than to their parents' values (Phinney, Ong, & Madden, 2000).

2.5.9 Field of study. In research using students as participants, their field of study predicts their values (Garvin, 1976; Hojat et al., 1998; McMillan, Wright, & Beazley, 2004; Myyry & Helkama, 2001) and moderates the relation between gender and values (Verkasalo, Daun, & Niit, 1994). For example, Verkasalo et al. (1994, cited in Myyry & Helkama, 2001) found that achievement and power values were more important to business students than to technology students and social science students; social science students and humanities students perceived universalism and spirituality values as being more important than did technology students and business students; and technology students perceived security values as being more important than did other groups of students. In another study, Garvin (1976) used the Allport-Vernon-Lindzey Study of Values Scale to compare nursing students' value priorities with general college students and some other groups. The results revealed that nursing students rated social and aesthetic values higher than did general college students and teachers. Nursing students' scores on the aesthetic scale were also higher than personnel and guidance workers' scores, but they rated economic and political values lower than did general college students. McMillan, Wright, and Beazley (2004) found that university students who took part in an eight-month environmental studies rated pro-environmental values higher than they did at the beginning of the course.

2.5.10 Religion. Religion has been viewed as among the strong predictors of values (Beit-Hallahmi & Argyle, 1977; Paloutzian, 1981; Rokeach, 1969; S. H. Schwartz & Huisman, 1995). Rokeach (1969) found that highly religious people rank obedience and forgiveness higher and independence and pleasure lower than did non-religious people. Schwartz and Huisman (1995) found that high religiosity was associated with increased possession of values oriented toward tradition and conformity, somewhat less possession of security and benevolence values, and lower endorsement of values promoting hedonism, stimulation, and self-direction.

The mechanism for these relations is uncertain. Not only is it equivocal whether religion cause value differences or vice-versa, the mechanism for any actual effect of religion is ambiguous. Religion may have direct effects on values by emphasizing and reinforcing some specific values, while downplaying the importance of some others (Rokeach, 1969; S. H. Schwartz & Huisman, 1995). Alternatively, religion may exert an indirect impact through personality (Beit Hallahmi & Argyle, 1977). In addition, there is no clear picture of whether the relations between religiosity and values differ across diverse faiths.

2.5.11 Race and ethnicity. Numerous studies have investigated the relations between values and race and ethnicity. The results have revealed differences in value priorities across these variables (Ball-Rokeach & Loges, 1996; Lipset & Schneider, 1978; Myrdal, Sterner, & Rose, 1962; Rokeach, 1973; Sears, 1988; Waters, 1990). For example, Rokeach (1973) found that equality was ranked as more important by Blacks than by Whites; Morgan, Alwin, and Griffin (1979) found that race and social origin are among the main predictors of parental values. Research has also revealed that the values such as achievement, activeness, respect for education, happiness, and self-esteem are more

important for Asian Americans than for Caucasian Americans (Asakawa & Csikszentmihalyi, 2000; Sue & Okazaki, 1990).

2.5.12 Social class and occupation. Copious research has suggested that people's occupation is among the antecedents of their values (Kohn, 1969; Kohn, Naoi, Schoenbach, Schooler, & Slomczynski, 1990; Kohn & Schooler, 1982; W. R. Morgan et al., 1979; Mortimer & Lorence, 1979). In his book entitled "Class and Conformity", Kohn (1969, p. ix) suggests a "remarkable parallel between the occupational conditions characteristic of each social class and the values espoused for their children by parents of that social class." According to Kohn (1969, p. 200), "whether consciously or not, parents tend to impart to their children lessons derived from the conditions of life of their own social class - and thus help prepare their children for a similar class position." Research in some countries (i.e., United States of America, Italy, Japan, and Poland) has revealed that parents' social class is a strong predictor of their preferences regarding the values of their children. That is, people in higher social and occupational positions value self-direction more than do people in lower positions (Kohn, 1969; Kohn et al., 1990; Pearlin & Kohn, 1966). For example, Kohn (1969) found that middle-class parents prefer self-control, responsibility, and curiosity for their children, whereas working-class parents prefer cleanliness, good manners, and obedience for their children.

Research has also found that people in less supervised jobs valued independence, responsibility, and curiosity, whereas people with closely supervised jobs emphasized conformity (Kohn et al., 1990; Kohn & Schooler, 1982; J. Miller, Schooler, Kohn, & Miller, 1979). In addition, people with complex jobs value self-direction (Kohn & Schooler, 1982). Also of interest, Morgan, Alwin, and Griffin, (1979) found that fathers' occupation was the strongest (among variables such as race, sex, education, and family

income) predictor of parental values. According to Kohn (1969), the reason for differences between values across social class and occupation is the influence of jobs and activities held by members of different classes. That is, the more complex and independent jobs for middle-class people cause them to rely on their own judgements, to initiate actions, and to be intellectually flexible. The less complex and highly supervised jobs for working-class people cause them to obey the rules and to structure their behaviour according to dictates of authority.

2.6 Value Consequences

Researchers have proposed that values affect numerous individual and social aspects of life. In this section, I briefly review evidence regarding several potential consequences of values, including well-being, behaviour, attitudes, and politics.

2.6.1 Well-being. The impact of values on well-being has been investigated for decades (Jensen & Bergin, 1988; Oishi, Diener, Suh, & Lucas, 1999; Sagiv & Schwartz, 2000; Strupp, 1980). Research has revealed that some values are negatively correlated with physical and mental health, whereas some others promote mental health (Jensen & Bergin, 1988; Kasser & Ryan, 1996; Mick, 1996; Schroeder & Dugal, 1995; Strupp, 1980). For example, Kasser and Ryan (1996) found positive correlations between values such as social recognition and financial success with physical symptoms, depression and anxiety; Jensen and Bergin (1988) suggested that self-direction, freedom, and responsibility values function as “healthy” ideals that promote mental health. Research has also revealed that material values are negatively correlated with self-esteem (Mick, 1996) and positively correlated with social anxiety (Schroeder & Dugal, 1995) and self-criticism (Wachtel & Blatt, 1990). Hedonic values, self-concept values, and allocentric values are among the predictors of

desiring or refusing medical intervention in serious illness (Hechter, Ranger-Moore, Jasso, & Horne, 1999).

An abundant amount of research investigated relation between values and life satisfaction and found direct influence of possessing some values on life satisfaction (Casas, Gonzalez, Figuer, & Coenders, 2004; Oishi, Diener, Suh et al., 1999; Richins & Dawson, 1992; Richins & Verhage, 1987). For example, research has revealed that material values are negatively correlated with life satisfaction (Richins & Dawson, 1992; Richins & Verhage, 1987); Casas, Gonzalez, Figuer, and Coenders (2004) found that high school students who perceived intelligence, social skills, family relationships, and sympathy as more important showed more satisfaction with their lives than students who perceived values such as power, money, and image as more important to them.

Oishi et al. (1999) conducted a comprehensive study of relations between university students' values and general life satisfaction, satisfaction with different aspects of life, and satisfaction with value relevant activities. They found that the students who perceived achievement as more important showed a higher general satisfaction with their lives as well as with specific life aspects, such as family relationships and social life. They also exhibited a higher satisfaction with activities such as making a long-term plan and studying to get a good grades, while showing less satisfaction with activities such as going out for fun instead of doing homework. The results also revealed that students who perceived universalism values as more important showed higher satisfaction with activities such as participating in fund-raising for people and families with AIDS and recycling bottles and papers, but more dissatisfaction with activities such as buying expensive clothes and making a lot of money.

2.6.2 Behaviour. Generally speaking, researchers have treated values as concepts that form the basis of individuals' behaviour by shaping how people evaluate the potential outcomes of their actions (Feather, 1995; G. Morgan, 1986; Rokeach, 1973; Senge, 1990; Williams, 1979). For example, using 10 double-choice value-related scenarios representing all value types, Feather (1995) investigated and found that value priorities influence behaviour in imaginary situations. For example, he found that people who rated benevolence as more important than achievement would prefer to study with a friend and help him/her the night before an important exam, rather than study alone to get a better grade.

In addition to examining the general relations between values and behaviour, some researchers have focused on relations between values and some specific aspects of behaviour. Evidence indicates that people who more strongly endorse values such as protecting the environment, a world of beauty, and unity with nature are more likely to perform pro-environmental activities, whereas those who more strongly endorse values such as authority, ambitious, influential, and wealth are less likely to perform pro-environmental activities (Schultz & Zelezny, 1998; Stern, Dietz, Kalof, & Guagnano, 1995). In addition, people who consider inner harmony, happiness, and social recognition to be more important exhibit health-relevant behaviours such as exercise, dieting, and limiting fat consumption more than those who consider excitement and independence to be more important (Paine, Pasquali, & Ribeiro, 1998). Also, people who consider conservation values to be more important exhibit more organizational commitment than those who consider self-enhancement to be more important (Arciniega & Gonzalez, 2000). A more detailed explanation of the impacts of values on a wide range of behaviours will be provided in Chapter 5.

2.6.3 Attitudes. Attitudes are important potential mediators of the effects of values on behaviour. People's general value priorities determine their attitudes toward a wide range of issues (Ball-Rokeach et al., 1984; Feldman, 1988; Homer & Kahle, 1988; Rokeach, 1973, 1979; S. H. Schwartz & Inbar Saban, 1988; Tetlock, 1986). Research has revealed an association between values and attitudes toward social welfare (Feldman, 1988; Feldman & Zaller, 1992; Rokeach, 1973), racial minorities, and policy preferences (Feldman, 1988; Hurwitz & Peffley, 1992; Peffley & Hurwitz, 1993; Paul M. Sniderman & Piazza, 1993). For example, people who value egalitarianism tend to have more positive attitudes toward social welfare (Feldman, 1988; Rokeach, 1973) and people who value individualism and conformity more than equality tend to have more anti-black attitudes (Hurwitz & Peffley, 1992; Kinder & Sears, 1981; Lipset & Schneider, 1978). The effects of values on attitudes (and relevant behaviour) are strongest when the attitude's psychological function involves the protection and expression of values, rather than goals that are more utilitarian (Maio & Olson, 1994, 1995).

2.6.4 Politics. Research on the relations between human values and politics has revealed an influence of human values on political ideology and behaviour (Barnea & Schwartz, 1998; Feather & Newton, 1982; Heaven, 1991; Heaven & Connors, 2001; Mayton & Furnham, 1994). Researchers have suggested that specific values predict individuals' political ideology (e.g., equality, freedom; Rokeach, (1973); national strength and order, international harmony and equality; Braithwaite and Law (1985)); and that people refer to values to justify their views on particular political issues (Kristiansen & Zanna, 1988; Lane, 1962).

Researchers have also found that the structure of people's policy preferences and actions can be explained by values (Braithwaite, 1997; Feldman, 1988; Heaven, 1991;

Kinder & Sears, 1985). For example, Kinder and Sears (1985) found egalitarianism, individualism, and post-materialism as the major values that affect public opinion and political action. Heaven (1991) found that Australians who endorsed international harmony and equality more than national strength and order intended to vote for left-of-centre parties, whereas those who endorsed national strength and order more than international harmony and equality intended to vote for right-of-centre parties. Research has also revealed that policies and actions may be judged as right or wrong based on their congruence with deeply held values (Frost, Hahn, & Maio, 2005; Rokeach, 1973).

2.6.5 Other consequences. In addition to the consequences mentioned above, values predict a wide variety of aspects of human life, such as job satisfaction (Hui, Yee, & Eastman, 1995; Kirkman & Shapiro, 2001; Palich, Hom, & Griffeth, 1995), management style and managerial behaviour (Elizur, 1984; England & Lee, 1974; Oliver, 1990; Posner & Munson, 1979), social and intra-group interactions (Garling, 1999; Sagiv & Schwartz, 1995; S. H. Schwartz, Struch, & Bilsky, 1990), cultural ideology (Ghorbani, Bing, Watson, Davison, & Lebreton, 2003; Nelson & Shavitt, 2002; S. H. Schwartz, 1990), family affairs (Goodwin & Tinker, 2002; Knafo & Schwartz, 2003; Wink, Gao, Jones, & Chao, 1997), and romantic relationships (Goodwin et al., 2002; Goodwin & Tinker, 2002; Hofstede, 1996). Nonetheless, most of these potential consequences have not been examined as extensively as the consequences reviewed above.

To summarize, this chapter began with a description of the most common value characteristics, such as belief expression, interest satisfaction, prioritization, prescription, motivation, and stability. The second section of the chapter focused on the concept of value measurement and introduced and compared ranking, rating, and ranking-then-rating measures of values. Using prior speculations in the literature, I categorized and briefly

described potential antecedents and consequences of values, while noting that many of antecedents might also function as consequences and vice-versa.

CHAPTER 3

Structure and Generality of Values

3.1 Overview

The aim of this chapter is to give a more detailed information about value systems by introducing typology approaches to values. The chapter provides a brief history of these approaches, followed by a full description of two of the most widely used theories of value systems: Rokeach's (1973) value theory and Schwartz's (1992) model of values. The last section of this chapter provides a short introduction to the experiments described in this thesis.

3.2 Introduction

The discussion of antecedents and consequences of values reveals how most value-related research has focused on the effects of one or a few values, rather than a set of values as a value structure. Yet, understanding this structure is crucial to understanding how values might affect attitudes and behaviours (Rokeach, 1973; S. H. Schwartz, 1992; S. H. Schwartz & Bilsky, 1987). Without understanding the relations between values, the data on all of the diverse specific value antecedents and consequences remain difficult to interpret.

Indeed, this necessity is reflected in the major social psychological theories of values, which suggest that they are interrelated. In other words, values are assumed to be organized into a structure known as value system, which shapes judgments, attitudes, and behaviour (Inglehart, 1977; M. Kluckhohn, 1951; Rokeach, 1973; S. H. Schwartz, 1990). Researchers have suggested that value systems exist at both individual and collective levels. For example, Parsons and Shils (1951) considered a value system at a collective

level and speak about a value system as the specific way in which a society adapts to the environment. In contrast, Rokeach introduced a value system at the individual level by defining it as “an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance.” (Rokeach, 1973, p. 5). At both levels, the structure of values can be based on ordering of values according to their importance. In other words, in a value system, values are not judged independently, because they are based on interrelated conflicts and compatibilities.

The importance of the collective level is supported by the fact that value systems differ across groups and cultures. For example, certain values (e.g., benevolence, equality, & world of beauty) are more important to women than to men (Feather, 2004; Grendstad & Sundback, 2003), or to Blacks than to Whites (Combs & Welch, 1982; Feather, 2004; Kinder & Sanders, 1996). In other words, although the basic human values are shared across cultures (S. H. Schwartz, 1992), their hierarchical structure (relative importance) is likely to differ across groups, and cultures. In fact, Inglehart (1977; 1990; 1992; 1997) has amassed abundant cross-cultural evidence suggesting that industrialization induces predictable changes toward more “post-materialistic” values, such as freedom, peace, and equality.

Nevertheless, the individual-level value system is equally important, because it has been implicated in most of the research on antecedents and consequences of values. For this reason, numerous theories about individual-level value systems have been proposed. One of these theories (see below) forms the basis for this dissertation because of its unique potential to develop our understanding of patterns among antecedents and consequences of values. This unique attribute is made evident by first considering preceding individual-level models of values.

3.3 Typology Approaches to Values

Most of the early perspectives focused on categorizing a variety of values into different value types. These categorizations were based primarily on hypotheses about the functions served by the values and by empirical evidence in some cases.

In one of the earliest comprehensive examinations of cross-cultural values, Lasswell (1951) presented a framework of eight values: respect, well-being, rectitude, affection, skill, wealth, power, and enlightenment. According to Lasswell, these values permeate everybody's life and have been prevalent at all times across cultures. Respect values recognize people's capacities as human beings, which include concerns for authority, country, peers, adults, and self. Well-being values strive for mental and physical health; rectitude involves having concern for the welfare of others and responsibility about one's behaviour in relation with others; affection represents the need to like others and be liked by others; skill is the value placed in developing and actualizing different potential talents in social and individual areas; wealth refers to the value of satisfying one's needs, increasing productivity, and care for material objects; power is the value that refers to leadership, decision making, and influence on others; and enlightenment refers to the individual's ability of problem-solving and understanding abstractions.

Kluckhohn and Strodtbeck's (1961) Value Orientation Theory is another influential theory about basic human values. This theory is rooted in Clyde Kluckhohn's (1951) definition of values (see the definition in Table 1.1). Kluckhohn and Strodtbeck (1961) suggested that individuals and all human societies must answer five basic questions (or resolve five main issues), and the way that people (societies) answer the questions (resolve the issues) reflects their value orientations. According to Kluckhohn and Strodtbeck (1961), the questions that must be answered are (a) the aspect of time that people should

focus on (i.e., past, present, or future?), (b) kind of relation that should exist between the human and natural environment (i.e., mastery, submission, or harmony?), (c) relationship between individuals in the society (i.e., hierarchical, equal, or individualistic?), (d) main motivation for behaviour (i.e., to express the self, to grow, or to achieve?), and (e) nature of human beings (i.e., good, bad, or mixture?).

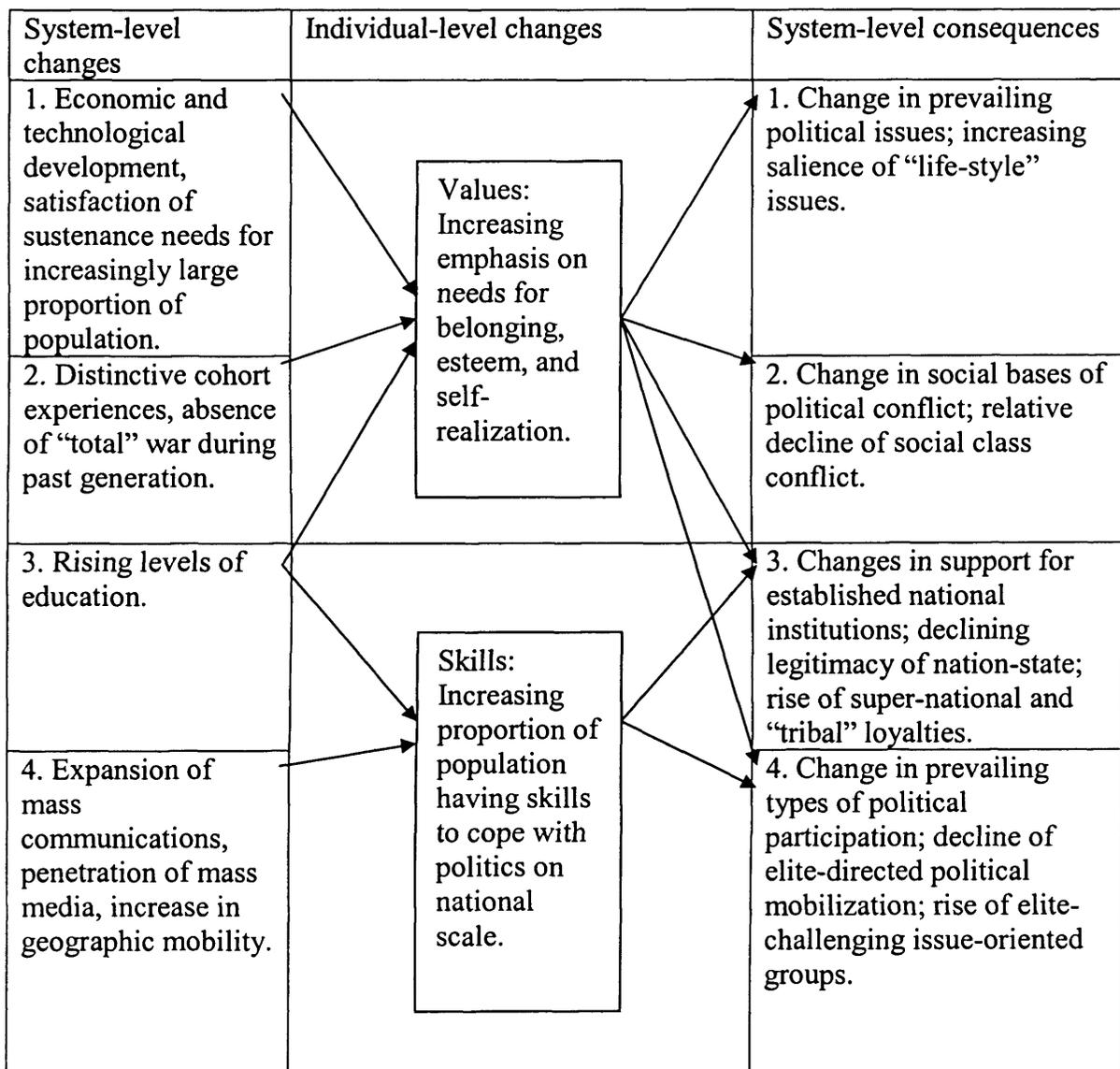
In an explanation of the possible answers (resolutions) for each question, Kluckhohn and Strodtbeck (1961) suggested three possible orientations for each of the first four questions based on the three alternatives for each question. For example, they suggested that people who focus on the past prefer to preserve traditional customs and beliefs, whereas those who focus on the future seek new ways to replace the old ways. For the question that addresses the nature of human being, they suggested eight possible answers: evil/mutable, evil/immutable, mixture/mutable, mixture/immutable, neutral/mutable, neutral/immutable, good/mutable, and good/immutable.

Inglehart (1977; 1990; 1992; 1997) theorized and investigated the role of industrial progress on the historical shift of materialistic values to post-materialistic values. He (1977; 1990; 1992; 1997) conceptualized values as social goals that prioritize individuals' material or post-material needs, and suggested that industrial revolution caused changes in people's worldviews, which in turn caused changes in values. Figure 3.1 summarizes Inglehart's (1977) assumptions about the process of changes in values at the individual level and system level. According to Inglehart (1977), the industrialization age emphasized economic growth, which is related to materialistic values, such as control and economic and physical security. In contrast, industrial progress and economic development in post-industrial societies led to a growing emphasis on post-materialistic values, such as self-expression, sense of community, quality of environment, subjective well-being, and quality of life. Inglehart (1977) introduced a cross-national two-dimensional structure that

distinguishes the worldviews and value preferences of rich and low-income societies. One dimension represents secular versus traditional orientations toward authority, and the other dimension represents survival versus self-expression values.

Figure 3.1

The process of value-change and its consequences (Inglehart, 1977, p. 5)



Another typological theory of human values is Braithwaite's (1997) security-harmony model. This model focuses on the role of value orientations in predicting social and political evaluations. According to Braithwaite (1997), personal, interpersonal, and social values can be organized into a two-dimensional value structure consisting of a harmony dimension and a security dimension. The harmony dimension focuses on humanistic expression of personal integrity, equality, and respect for welfare and freedom of others. The self-reported scale used to measure this dimension includes value subscales, such as international harmony and equality, personal growth and inner harmony, and positive orientations toward others. The security dimension is aimed at the protection and allocation of society's material and social resources. This dimension emphasizes acceptance of the outcomes of one's behaviour and focuses on competition, order, and discipline. The self-reported measure of this dimension includes value subscales, such as national strength and order, traditional religiosity, social standing, propriety in dress and manners, and getting ahead.

Braithwaite (1997) suggested and found support for the independent operation of the two dimensions, and also for their role in predicting people's attitudes and behaviour toward social issues. Further studies by Blamey and Braithwaite (1997) and Braithwaite (1998) also revealed evidence for the predictability of people's political preference and behaviour by this model. For example, they found that people can be categorized into four categories based on their political preferences. That is, security-oriented people prefer right-wing policies; harmony-oriented people prefer left-wing policies; dualists who have strong and balanced security-harmony commitments and relativists who have a weak commitment to both value orientations prefer either left-wing or right-wing policies based on the political issue.

The theories and definitions mentioned above are overwhelmed by two widely used theories that were provided by Rokeach (1973) and Schwartz (1992; 1994). The last section of this chapter is allocated to the introduction of these two theories.

3.4 Rokeach's Value Theory

The conceptualization of values as guiding principles in people's lives was heavily influenced by Rokeach's (1973; 1979) work on the nature of human values. Rokeach's (1973) theory of values was based on some fundamental postulates. First, he proposed that individuals possess a relatively small number of values. He suggested that these values are derived from culture and society, organized in a system, and shared between people, but with the different degrees of importance for each person.

According to Rokeach, a value is either a prescriptive or proscriptive belief. That is, a value is a kind of belief that can be judged based on its desirability or undesirability. He argued that each value is ordered in priority of importance relative to other values and that this priority can be shown through respondents' rankings of values based on their importance. Rokeach (1973) believed that the hierarchical order of values comes to action when values are considered in a competitive situation. In other words, all values are considered to be important when we think about them independently, but activating a value in a behavioural situation requires a competitive evaluation of certain values relevant to the situation. According to Rokeach (1973), people's value system is the result of the process of maturation. In other words, values are learned through a socialisation process starting from early life, in which personal experiences, personality development process, parents, friends, groups, organizations, social context and culture have their effects. He suggested that all people around the world share a small group of main human values, although the relative importance of the shared values are different across people, groups, and cultures.

Rokeach (1973) also distinguished between values that are ideal modes of conduct and values that are end-states of existence. Rokeach (1973) labelled terminal values as long-term, desirable end-states of existence or the long-term goals that a person would like to achieve during his or her lifetime (e.g., freedom, a world at peace, and family security). He labelled instrumental values as preferable, transitional modes of conduct or means of achieving individual's terminal values (e.g., ambitious, obedient, and helpful). Table 3.1 lists the terminal and instrumental values suggested by Rokeach (1973). In a more detailed categorization, Rokeach categorized terminal values into personal and social values and categorized instrumental values into moral and competence values. That is, personal values (e.g., inner harmony) are self-centred and have an intra-person focus, while social values (e.g., a world at peace) are societal-centred and have an inter-personal focus. In distinguishing between moral and competence values, Rokeach suggested that moral values have an inter-personal focus, such that violations of them cause feelings of guilt. In contrast, competence (self-actualization) values have a personal focus, such that violations of them induce feelings of personal inadequacy. Moral values can be considered as the values that determine how people "ought" to behave, whereas competence values underlie people's self-interested behaviours.

Table 3.1

Basic Human Values in Rokeach's Value Survey (Rokeach, 1973, p. 28)

Terminal values	Instrumental values
A comfortable life (a prosperous life)	Ambitious (hard-working, aspiring)
An exciting life (a stimulating, active life)	Broad-minded (open-minded)
A sense of accomplishment (lasting contribution)	Capable (competent, effective)

Table 3.1 continued

A world at peace (free of war and conflict)	Cheerful (light-hearted, joyful)
A world of beauty (beauty of nature and the arts)	Clean (neat, tidy)
Equality (brotherhood, equal opportunity for all)	Courageous (standing up for your beliefs)
Family security (taking care of loved ones)	Forgiving (willing to pardon others)
Freedom (independence, free choice)	Helpful (working for the welfare of others)
Happiness (contentedness)	Honest (sincere, truthful)
Inner harmony (freedom from inner conflict)	Imaginative (daring, creative)
Mature love (sexual and spiritual intimacy)	Independent (self-reliant, self-sufficient)
National security (protection from attack)	Intellectual (intelligent, reflective)
Pleasure (an enjoyable, leisurely life)	Logical (consistent, rational)
Salvation (saved, eternal life)	Loving (affectionate, tender)
Self-respect (self-esteem)	Obedient (dutiful, respectful)
Social recognition (respect, admiration)	Polite (courteous, well-mannered)
True friendship (close companionship)	Responsible (dependable, reliable)
Wisdom (a mature understanding of life)	Self-controlled (restrained, self-disciplined)

Consistent with several theoretical analyses of social science (see Gergen, 1973), Rokeach argued that the effects of values in human life are so impressive and determinant that almost all human related issues in social science can be studied and understood by focussing on values. More important, he emphasised that “differences between cultures, social classes, occupations, religions, or political orientations are all translatable into questions concerning differences in underlying values and value system” (Rokeach, 1973, p. 26). This emphasis on a value system is crucial because Rokeach (1973) assumed that people in each society share the same values and that differences in attitudes arise primarily because people prioritize the values differently. That is, values in this system are hierarchically organised based on their priority with respect to other values and this organization helps people to act when they face conflict between values issues in various situations. Nonetheless, although his research and subsequent research based on his model (Greenstein, 1976; Grube, Mayton, & Ball-Rokeach, 1994; Rokeach, 1985) encompassed 36 values, Rokeach never outlined potential patterns in prioritization that would help to predict systematic differences in value consequences.

3.5 Schwartz’s Value Theory

Schwartz’s (1992) theory of basic human values potentially addresses the need to understand and predict patterns in value prioritization. According to Schwartz (1994, p. 21), values are “desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity”, and people acquire values both through socialization process and through unique learning from personal experiences. The starting point for this theory was Schwartz and Bilsky’s (1987; 1990) theory of universal psychological structure of human values. Schwartz and Bilsky (1987; 1990) identified five main features of values in value research: (1) values are concepts or beliefs

that are (2) desirable end-states, (3) ordered in relative importance, (4) transcend specific situations, and (5) guide the evaluation of people, behaviour and events. More important, these researchers suggested that values are representations of three universal requirements of human beings: individual's biological needs, coordinated social interaction, and group efficiency and survival. They derived a universal typology of eight different value types from these three universal requirements of human beings, and found empirical support for a dynamic relations among values based on motivational compatibilities and conflicts between them. These results were later extended to the full model of 10 motivational value types proposed by Schwartz (1992).

Table 3.2 lists the value types, their definitions, and the specific values that represent each value type. According to Schwartz's (1992) model, "Stimulation" values are rooted in organismic needs for variety and excitement, and high scores in this value type would describe a risk taking and adventurous person with a high desire for an exiting and challenging life. "Power" is derived from both individual and social needs, and a power-oriented person is interested in taking control over people and resources and with the attainment of social status. A person who values "benevolence", which is rooted in social interaction needs, has concern for the preservation and enhancement of the welfare of close others. "Self-direction" values are derived from organismic and interactional requirements, and involve a preference for autonomy, creativity, and freedom. "Security" values are derived from basic individual and group requirements, and a high score in this value type indicates a cautious, safety-conscious person who prefers a predictable and routine life, a safe, harmonious, and stable society, in addition to safety, harmony, and stability in relationships with others. "Universalism" values are rooted in needs for group and individual survival, and help to protect the welfare of all people around the world and nature. A person who endorses these values emphasizes tolerance, social justice, and

concern for welfare of all human beings. “Tradition” values are derived from group survival needs and indicate having respect for traditions, customs, and religious activities. “Achievement” values are rooted in individual survival and social interaction, and achievement-oriented people want to excel in everything they attempt; they prefer competitive situations to reach their personal success and receive admiration, and they want to be the best in their chosen field. High scores in “hedonism”, a value type rooted in organismic needs, describe a person with the preference for pleasure and self-gratification. “Conformity” is derived from needs for group survival and interaction, and a person who values conformity is most likely to be an obedient person who avoids any actions that may upset others or violate social standards.

Table 3.2

Motivational Type of Values, Adapted from Schwartz (1992)

Value Domain	Definition	Motivational Values
Achievement	Personal success through demonstrating competence according to social standards.	Successful, Capable, Ambitious, Influential Intelligent.
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.	Helpful, Honest, Forgiving, True friendship, Meaning in life, Loyal, A Mature love, Spiritual life, Responsible.
Conformity	Restrain of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.	Politeness, Obedient, Honouring parents, Self-discipline
Hedonism	Pleasure or sensuous gratification for oneself.	Pleasure, Enjoying life.
Power	Social status and prestige, control or dominance over people and resources.	Social power, Authority, Social recognition, Wealth, Preserving my public image.
Security	Safety, harmony and stability of society, relationships, and self.	Healthy, National security, Social order, Reciprocation of favours, Family security, Clean, Sense of belonging.

Table 3.2 continued

Self- Direction	Independent thought and action-choosing, creating, exploring.	Freedom, Self-respect, Independent, Choosing own goals, Creativity, Curious.
Stimulation	Excitement, novelty, and challenge in life.	An exciting life, A varied life, Daring.
Tradition	Respect and commitment for cultural or religious customs and ideas.	Devout, Humble, Moderate, Detachment, Respect for tradition, Accepting portion in life.
Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all People and nature.	Social justice, Wisdom, Protecting the environment, A world of beauty, Equality, Unity with nature, World at peace, Broad-minded, Inner harmony.

Most important, the link between each value and underlying motives leads to the prediction that there are basic conflicts and compatibilities between values. For example, the pursuit of achievement values conflicts with the pursuit of benevolence values, whereas the pursuit of security values is compatible with the pursuit of power values. Schwartz's (1992) circumplex model of values shows motivational conflicts and compatibilities between values (see Figure 3.2). That is, value distances in this circumplex represents motivational interrelations between values such that the less distant values in the circumplex are motivationally more similar than the more distant values. Specifically, value domains that serve compatible motivational goals are adjacent, whereas value domains that serve incompatible motivational goals are opposite. For example, values in the benevolence value domain (e.g., honest, loyal, & mature love) are adjacent to the values in the universalism domain (e.g., social justice & unity with nature) because both sets of values promote coordinated social interaction and group survival. These values are plotted opposite to values in the achievement (e.g., successful & ambitious) and power (e.g.,

authority & social power) domains. In contrast, values that are at right angles to universalism and benevolence in this circumplex are held to serve conceptually orthogonal needs for either innovation and progress (stimulation & self-direction) or respect for group standards (tradition, conformity, & security). Thus, as shown in Figure 3.2, people who consider benevolence values to be highly important should be less likely to consider achievement values as highly important, but not more or less likely to consider stimulation or tradition values to be highly important (see compatible and conflicting values and their shared and opposite motivations in Table 3.3).

Table 3.3

Compatible and Conflicting Value Domains

A) Compatible Value Domains	
Compatible Value Domains	Shared Motivations
power & achievement	Social superiority and esteem
achievement & hedonism	Self-centred satisfaction
hedonism & stimulation	Pleasant arousal
stimulation & self-direction	Mastery and openness to change
self-direction & universalism	Reliance upon one's own judgment and comfort with the diversity of existence
universalism & benevolence	Enhancement of other and transcendence of selfish interests
benevolence, tradition, & conformity	Devotion to one's in-group
tradition, conformity, & security	Conservation of order and harmony in relations
security & power	Avoiding or overcoming the threat of uncertainties by controlling relationships and resources.

Table 3.3 continued

B) Conflicting Value Domains	
Conflicting value domains	Conflicting motivations
self-direction & stimulation versus conformity, tradition, & security	Novelty and personal autonomy against preservation of traditions and customs, and protection of stability
universalism & benevolence versus achievement & power	Concern for others' welfare against pursuit of one's own interests and dominance over others.
hedonism Versus conformity & tradition	Gratification of individual's desires against self-restraint and the acceptance of external limits

Schwartz (1992) also suggested a super-ordinate structure of two basic orthogonal bipolar dimensions. One of the bipolar dimensions pits openness to change values (e.g., self-direction and stimulation) against conservation values (e.g., conformity, tradition, and security), and the other bipolar dimension pits self-transcendence values (e.g., universalism and benevolence) against self-enhancement values (e.g., achievement and power). In other words, this super-ordinate structure shows a higher order of motivational compatibilities and conflicts between values. For example, on the openness to change versus conservation dimension, individuals may prefer the values that emphasize autonomy, novelty, and change (e.g., independence, variety, excitement and challenge) or prioritize the values that emphasize preservation of status quo (e.g., self-control, safety, and stability in social and personal relationships). In the circumplex, both the openness to change values and conservation values would be largely unrelated to values falling within the self-transcendence versus self-enhancement dimension. According to Schwartz (1992), the 10th

value type “hedonism” is located in the space between openness to change and self-enhancement axes and can be considered as related to the both.

Schwartz suggests that the circumplex can be examined from both the lower order and super-ordinate levels; the specific domains confer increased precision of analyses, whereas the higher-order dimensions can be more reliable and more easily amenable to analysis. Nonetheless, support for both approaches is evident in results of smallest space analyses of ratings of the importance of values in over 200 samples from 60 countries (e.g., Sagiv & Schwartz, 2000). To assess people’s values, participants are given a list of 56 values representing 10 motives. The respondents rate the importance of each value as a guiding principles in their lives (see values and their definitions in Table 3.4), using a 9-point scale labelled at the following numbers: -1 (opposed to my values), 0 (not important), to 3 (important), 6 (very important), 7 (of supreme importance). In the research using this approach, the correlations between the value ratings are then used to plot a figure showing the relations among them (see Figure 3.2). As I will show in the next chapter, this approach is a good first step, but possesses important limitations.

Table 3.4

Values and Their Definitions (S. H. Schwartz, 1992, p. 61)

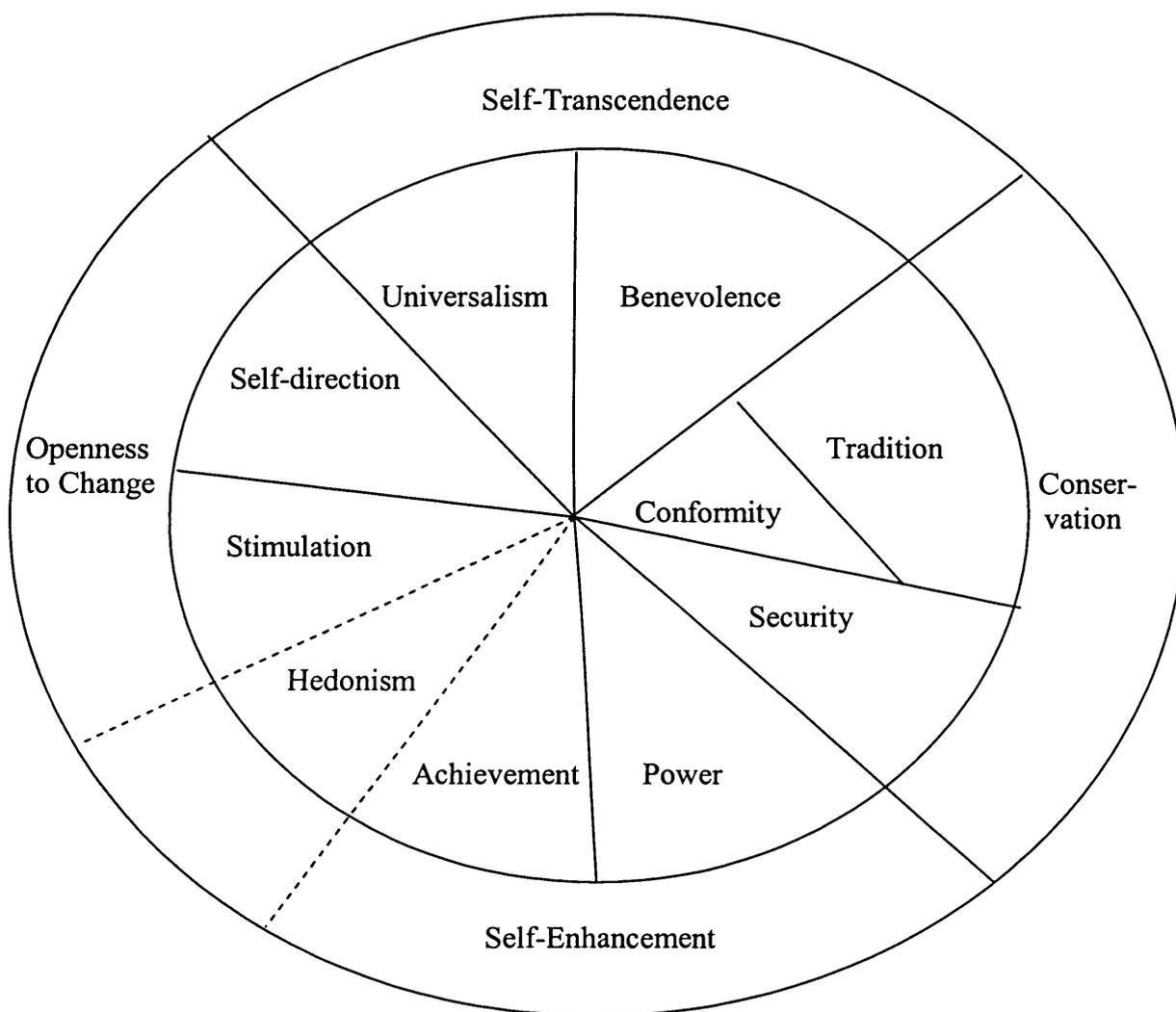
Values	Definitions
Equality	equal opportunity for all
Inner Harmony	at peace with myself
Social Power	control over others, dominance
Pleasure	gratification of desires
Freedom	freedom of action and thought
A spiritual Life	emphasis on spiritual not material matters
Sense of Belonging	feeling that others care about me
Social Order	stability of society
An Exciting Life	stimulating experiences
Meaning in Life	a purpose of life
Politeness	courtesy, good manners
Wealth	material possessions, money

Table 3.4 continued

National Security	protection of my nation from enemies
Self-respect	belief in one's own worth
Reciprocation of Favours	avoidance of indebtedness
Creativity	uniqueness, imagination
A World at Peace	free of war and conflict
Respect for Tradition	preservation of time-honoured customs
Mature Love	deep emotional and spiritual intimacy
Self-discipline	self-restraint, resistance to temptation
Detachment	from worldly concerns
Family Security	safety for love ones
Social Recognition	respect, approval by others
Unity With Nature	fitting into nature
A Varied Life	filled with challenge, novelty, and change
Wisdom	a mature understanding of life
Authority	the right to lead or command
True Friendship	close, supportive friends
A World of Beauty	beauty of nature and the arts
Social Justice	correcting injustice, care for the weak
Independent	self-reliant, self-sufficient
Moderate	avoiding extremes of feeling and action
Loyal	faithful to my friends, group
Ambitious	hardworking, aspiring
Broad-minded	tolerant of different ideas and beliefs
Humble	modest, self-effecting
Daring	seeking adventure, risk
Protecting the Environment	preserving nature
Influential	having an impact on people and events
Honouring of Parents and Elders	showing respect
Choosing Own Goals	selecting own purposes
Healthy	not being sick physically or mentally
Capable	component, effective, efficient
Accepting My Portion in Life	submitting to life's circumstances
Honest	genuine, sincere
Preserving My Public Image	protecting my "face"
Obedient	dutiful, meeting obligations
Intelligent	logical, thinking
Helpful	working for the welfare of others
Enjoying Life	enjoying food, sex, leisure, etc.
Devout	holding to religious faith and belief
Responsible	dependable, reliable
Curious	interested in everything, exploring
Forgiving	willing to pardon others
Successful	achieving goals
Clean	neat, tidy

Figure 3.2

Theoretical model of relation among motivational types of values (S. H. Schwartz, 1994, p. 45)



3.6 Recapitulation and Précis

As mentioned in previous chapters, values can explain people's past action and predict their future behaviour, and are key constructs in the process of socialization. Values are related to how people reason about social issues (Kristiansen & Matheson, 1990; Tetlock, 1986). They are important bridging constructs between personality traits and attitudes (Olson & Maio, 2003; Yik & Tang, 1996); and they have fundamental roles in formation of self-concept, personal identity, and personal well-being (Hitlin, 2003; Mayton et al., 1994; Oishi, Diener, Suh et al., 1999; Sagiv & Schwartz, 2000). These roles can be discerned in political domains and in issues of everyday importance (e.g., choice of relationship partner, career goals) (Barnea & Schwartz, 1998; Feather & Newton, 1982). Rokeach (1973, p. 3) goes as far as stating that "the consequences of human values will be manifested in virtually all phenomena that social scientists might consider worth investigating and understanding."

Research has described several basic features of values. They are representations of different motivational goals, which are organized in a competitive system based on their relative importance. More specifically, this system may be regarded a dynamic circumplex that is structured based on compatibilities and conflicts among values. This latter proposal forms the basis for the research presented in this dissertation. If these basic and important constructs are organized in a structure according to their compatibilities and conflicts, then this structure should be evident in numerous aspects of people's behaviour, attitudes, and self-regulation. Yet, as described in the following chapters, most, but not all of the extant evidence for this structure uses correlational analyses of simple self-report data. Therefore, a full examination of this structure is crucial to a better understanding of relations between values, behaviour, and attitudes. To gain a better understanding of value structure, this

thesis will investigate (a) implicit inter-value relations in the value system, (b) changeability of values in the system, (c) the effects of opposing values on different behaviours, and (d) the effects of priming opposing values on felt attitudinal ambivalence toward relevant issues. The following chapters describe how these investigations provide interesting and important tests of value structure.

CHAPTER 4

Inter-Value Structure in Memory

4.1 Overview

The aim of this chapter is to examine the latent structure of basic human values in Schwartz's (1992) model by examining the relations among values in memory. Three experiments examined the latent structure of basic human values. Participants were shown 20 pairs of values and asked to indicate their importance as guiding principles in their lives (Experiment 1, 2, & 3) or determine whether or not the values in each pair were conceptually related (Experiment 3). Based on Schwartz's circumplex (1992) model, I predicted that the time to make these judgements would be shorter for the trials that included motivationally congruent or opposing values than for the trials that included unrelated values (Experiments 1 & 3), except when participants were asked to compare value importance within a pair (Experiment 2). Results supported this prediction and showed that facilitation in the importance judgments was independent of the values' semantic relatedness.

4.2 Introduction

The topic of the present research is at the core of many debates over social issues and policy. In these debates, people often disagree about the compatibility of different social and policy aims. Can you promote achievement by being more generous to the needy (e.g., by increasing social welfare benefits)? Can you protect personal freedoms at the same time as attempting to protect national security (e.g., through anti-terrorism legislation)? Can you protect the freedom of choice at the same time as the sanctity of life (e.g., in issues of euthanasia, abortion, animal rights). The answers to these questions

depend on access to an underlying mental representation of how different motives and values are interrelated. It seems that, for the most part, people possess a common representation of these compatibilities and conflicts, and the frequent debates arise primarily because of differences in the relative importance of values and the methods of pursuing them. The present research identifies important limitations of past efforts to uncover such a latent mental representation of values and attempts to identify this representation more powerfully.

4.3 Values and Inter-Value Structure

As described in prior chapters, personal and social aspects of human beings' lives are influenced by basic values (e.g., freedom, equality). There is abundant evidence that values are the important bridging constructs between personality traits and attitudes (Olson & Maio, 2003; Yik & Tang, 1996), and are among the most important predictors of behaviour and attitudes (Bardi & Schwartz, 2003; Maio & Olson, 1994, 1995; Rokeach, 1973). Research has also suggested that values are somewhat stable and resistant to change (Maio & Olson, 1998; Rokeach, 1975, 1985; Rokeach & Ball-Rokeach, 1989), inter-generationally transmitted (Schonpflug, 2001; Whitbeck & Gecas, 1988), and cherished across cultures (Bardi & Schwartz, 2003; S. H. Schwartz, 1994). There are also associations between basic human values and the self-concept (M. B. Brewer & Roccas, 2001; M. Kluckhohn, 1951; Rokeach, 1973), well-being (Jensen & Bergin, 1988; Oishi, Diener, Suh et al., 1999; Sagiv & Schwartz, 2000), politics (Barnea & Schwartz, 1998; Heaven & Connors, 2001), social and intra-group interactions (Garling, 1999; Sagiv & Schwartz, 1995), cultural ideology (Ghorbani et al., 2003; Nelson & Shavitt, 2002), family affairs (Knafo & Schwartz, 2003; Wink et al., 1997), demographic variables (Hellevik,

2002; Struch, Schwartz, & van der Kloot, 2002), and even single specific behaviours (Allen, 2001; Balabanis, Mueller, & Melewar, 2002).

Although this enormous set of findings leaves no doubt about the influence of basic values on almost all aspects of human life, it may seem impossible to interpret the findings within a single nomological net. Interpretation requires a theory about the mental representation of values and value conflicts. For this reason, it could be argued that the most important recent development in the study of basic human values is Schwartz's (1992) model of value structure. As described in Chapter 3, this model is built on the assumption that values are representations of three universal requirements of human beings: individual's biological needs, coordinated social interaction, and group efficiency and survival (S. H. Schwartz & Bilsky, 1987, 1990). Using the results of a series of studies in 20 countries, Schwartz's (1992) extended the original theory and formed a model of 10 motivational value types including 56 cross-cultural basic human values (see the list of values in Table 3.4). Suggesting a dynamic circumplex structure of compatible and conflicting values, this model enables predictions about the pattern of inter-relations between values and relations between diverse values and value-related variables (e.g., behaviour and attitudes) across cultures (see a full description of the model in Chapter 3). More relevant to the aims of the present research, in the circumplex structure, value types that serve compatible motivational goals (e.g., universalism & benevolence) are adjacent, whereas value domains that serve conflicting motivational goals (e.g., tradition & stimulation) are opposite. Orthogonal value types (e.g., security & achievement) contains values that serve motivationally unrelated goals (see figure 3.2).

Schwartz (1992) suggests that the circumplex can be examined from both the lower order and super-ordinate levels; the specific domains confer increased precision of analyses, whereas the higher-order dimensions can be more reliable and more easily

amenable to analysis. Nonetheless, support for both approaches is evident in the results of smallest space analyses of ratings of the importance of values in over 200 samples from 60 countries (Sagiv & Schwartz, 2000). Results indicated a pattern of correlations among the values that fit the circumplex model, supporting Schwartz's predictions about motivational conflicts and compatibilities between values.

4.4 Unresolved Issues in Extant Tests of Inter-Value Structure

An important issue is whether the real structure of values in people's minds is as simple and clear as is described in the Schwartz model. Despite the abundant evidence supporting the circumplex model, there are important limitations to the extent that the data actually reveal motivational conflicts and compatibilities between values. In other words, it is difficult to use the available evidence to extrapolate the real structure of values in people's minds. One obstacle is presented by the smallest space analyses themselves, which are limited in their utility for detecting circumplex representations (Fabrigar, Visser, & Browne, 1997). Nonetheless, a more basic limitation is that the data rely exclusively on explicit value judgements. By themselves, explicit value judgements provide an important measure of identifying value importance, but their utility is attenuated by the fact that people may consciously adjust these ratings to be compatible with salient motives. For example, just as self-report measures of attitudes and personality can be affected by socially desirable response biases (Fisher, 1993; Mick, 1996), so too can reports of values (Feather, 1973, 1975; Fisher & Katz, 2000; Goldsmith, Stith, & White, 1987; S. H. Schwartz, Verkasalo, Antonovsky, & Sagiv, 1997).

These value judgements can also be affected by the desire to appear consistent to the researcher and to the self. To maximize consistency, people may adjust their value ratings to be compatible with their theories about how each value conflicts with or supports

the other values that they have just rated or are about to rate. This problem may be further exacerbated in research that asks people to rank, rather than rate, the importance of diverse values, because this common measurement technique directly induces comparisons between values (Krosnick & Alwin, 1988; Maio, Roese et al., 1996). Across both methods, people may be guided by their conscious theories of compatibility, similar to the way in which people use their implicit theories in autobiographical recall more generally (Ross & McFarland, 1988). Value measurements may partly reflect conscious theories about conflicts and compatibilities between values, and these theories may or may not reflect the actual conflicts and compatibilities within their mental organization of values. This potential split between conscious theories of mental constructs and the actual organization of them is now a virtual law of human social cognition (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 2002; Nisbett & Wilson, 1977; Rose, 1988; Wilson, Lisle, Kraft, & Wetzell, 1989) and memory (Carroll, Nelson, & Kirwan, 1997; Leonesio & Nelson, 1990) and provides a powerful argument for examining the mental organisation of values in a different way.

An additional argument for a novel approach is that the elicited patterns of relations between values may be driven more by access to shared semantic associations than by a parallel access to underlying goals. Quillian (1969) proposed that knowledge about the meaning of words and concepts is stored in a hierarchical network structure, wherein the meaning of a concept is defined partly by its relations to other concepts. That is, concepts are categorized in nodes in a hierarchical network and their meanings are defined not only by concepts stored in each node (e.g., canary & yellow), but also by concepts in a higher level of structure (e.g., bird). As a result, activation of a concept in memory spreads to connected nodes (Collins & Loftus, 1975; Meyer, 1970), which enable people to judge more quickly the closeness of concepts when there are fewer nodes

between them than when there are more nodes between them (Chang, 1986; Gold & Robbins, 1979; Kounios, Montgomery, & Smith, 1994; Kounios, Osman, & Meyer, 1987). Also, retrieval of semantically related concepts is quicker than retrieval of concepts that are semantically unrelated (Collins & Quillian, 1969; Gold & Russ, 1977; Thomsen, Lavine, & Kounios, 1996).

The implications of this semantic network for the use of explicit value inter-relations are straightforward. People may begin a value survey by accessing (a) the meaning of the first value and (b) their motivation to achieve it. The activation of this value's meaning should then spread to values that have highly relevant semantic representations, including highly compatible and conflicting values. Ratings of these subsequent values could be adjusted up or down based on their semantic relations to the original value. That is, conceptual synonyms could be judged as being of similar importance, while conceptual antonyms could be judged as being of dissimilar importance. This process would not require access to the motivation or drive activated by each value; motivation could be accessed only during responses to the first value (or even the first few values). In other words, it could be argued that participants access their motivation regarding each value only at the outset of the survey and then use differences between their concept meanings to generate ratings of importance for subsequent values. So, the circumplex structure could represent differences between the meanings of values, rather than differences in the actual importance of values as guiding principles in the individuals' lives.

The same logic applies to evidence of sinusoidal relations between values and relevant attitudes or behaviours, which provide additional support for the circumplex model (S. H. Schwartz, 1992). The critical feature of a sinusoidal pattern of relations is that, when a value is related to a criterion attitude or behaviour, other values' relations to the attitude

or behaviour are more positive or negative, depending on their position (i.e., theoretical conflict or compatibility) relative to the first value in the model. In this case, the measures of attitude and behaviour occur in different contexts from values, but the values themselves are still explicitly rated in one setting, allowing participants to adjust value ratings based on their semantic relations. Thus, it is important to show that semantic relatedness by itself does not explain the structure of values in memory.

The present research addressed these issues by examining the associations between values in memory. Three experiments set out to test whether values that express compatible or conflicting motives are more strongly associated in memory than are values that express orthogonal motives, according to the circumplex model. This research also tested whether these compatible and conflicting values are more semantically related than the orthogonal values and whether patterns of associations in memory are obtained even when this semantic relation is controlled. As it will be discussed later, such evidence would provide important information for conceptualising the potential effects of values on judgments and behaviour. Moreover, from a practical perspective, it would be a significant step toward the modelling of attitude and personality dimensions via implicit assessment techniques.

4.5 Experiment 1

Experiment 1 tested the circumplex structure of values by examining whether the speed of judging the importance of a value is affected by its motivational relation to a previously presented value, in a manner consistent with Schwartz's (1992) circumplex model. Abundant evidence indicates that the speed of judgement after a prior judgment reflects the degree of association between the two judgments in memory (Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Meyer & Schvaneveldt, 1971; Ratcliff & McKoon,

1981). Thus, if the circumplex model reflects the actual organisation of values in memory (and not just conscious theories), rating the importance of a value should facilitate quicker ratings of a second value more strongly in pairs of values that the model holds to be highly compatible or conflicting than in pairs of values that are held to be unrelated.

4.5.1 Method

Participants

Forty-four undergraduate psychology students (30 women and 14 men) at Cardiff University participated for course credit.

Procedure

Participants took part individually. They were told that the session included two parts. First, they were asked to read a list of 48 values from the Schwartz (1992) Value Survey with the adjacent definitions of the values. After 5 minutes studying the text, participants were shown 24 trials on the computer screen, with 4 trials as practice. Each trial included two values, and each value appeared only once across the trials. Table 4.1 shows each value pair. The same pairs were presented across participants, but in different orders across trials. The order of presentation of values within the pairs was also counterbalanced across participants, such that participants received either “domain 1” or “domain 2” values first, as shown in Table 4.1. Participants were asked to rate the importance of each value as a guiding principle in their lives, using keys labelled from 0 (not important to me) to 3 (extremely important to me). The presentation of the second value occurred immediately after rating the first value. To prevent interference across trials, participants were asked to count downward from a specific number (e.g., 87) in set decrements (e.g., 3) for 10 seconds after responding to each value pair. The starting numbers and decrements were different for different pairs, but the same for all participants.

Sentences were presented using Media lab (2002), and reaction times were recorded using Direct Reaction Time Software (2002), which is able to record accurately to one millisecond. After completing the experiment, participants were probed for suspicion and debriefed.

Table 4.1

Value Pairs That Were Used in the Experiments

Value1	Domain 1	Value 2	Domain 2	Domains' Distance
Authority	Power	Wealth	Power	0
Creativity	Self-direction	Daring	Stimulation	1
Obedient	Conformity	Helpful	Benevolence	2
Having Fun	Hedonism	Clean	Security	3
Social-Recognition	Power	Curious	Self-direction	4
Honest	Benevolence	Intelligent	Achievement	5
Family security	Security	Politeness	Conformity	1
An exciting life	Stimulation	Wisdom	Universalism	2
Healthy	Security	Happiness	Hedonism	3
Successful	Achievement	Moderate	Tradition	4
Broad-minded	Universalism	Social justice	Universalism	0
Detachment	Tradition	Honouring parents	Conformity	1
Stimulating Life	Stimulation	Capable	Achievement	2
Humble	Tradition	Independent	Self-direction	3
Equality	Universalism	National security	Security	4
Ambitious	Achievement	Loyal	Benevolence	5

Table 4.1 continued

Enjoying life	Hedonism	A varied life	Stimulation	1
Self-discipline	Conformity	Social power	Power	2
Freedom	Self-direction	Devout	Tradition	3
Forgiving	Benevolence	Pleasure	Hedonism	4

4.5.2 Results and Discussion

Curvilinear regression was used to examine the effect of the distance between value pairs on the time needed to rate the second value in the pair. Because the design involved many trials within-subjects, I could employ within-subjects analyses and compare results across participants, between-subjects analyses and compare results across trials, or an analysis that utilized the variance within and between subjects (Michela, 1990). As recommended by Michela (1990), I chose to perform a curvilinear regression analysis that examined each trial across participants, while entering value distance, squared value distance, and 43 dummy variables representing participant number as predictors of the time needed to rate the importance of the second value in each pair. This analysis helped control for variability due to participants in the analysis, while utilizing all of the participants' response trials as data.

As hypothesised, the results revealed a significant negative effect of squared value distance, $\beta = -.26$, $t(753) = 2.49$, $p < .02$. The linear effect of value distance was not significant, $\beta = -.02$, $t(754) = -0.63$, ns. As shown in Figure 4.1 and Table 4.2, participants took less time to rate the importance of the second value in pairs of values from the same and opposed domains than from unrelated domains. In other words, judgements of value importance are facilitated by prior judgement of a motivationally related value, whether its

aim was similar to the target value or opposed to it. These findings support the circumplex model.

Figure 4.1

The curvilinear effect of value distance on the speed of value importance judgments

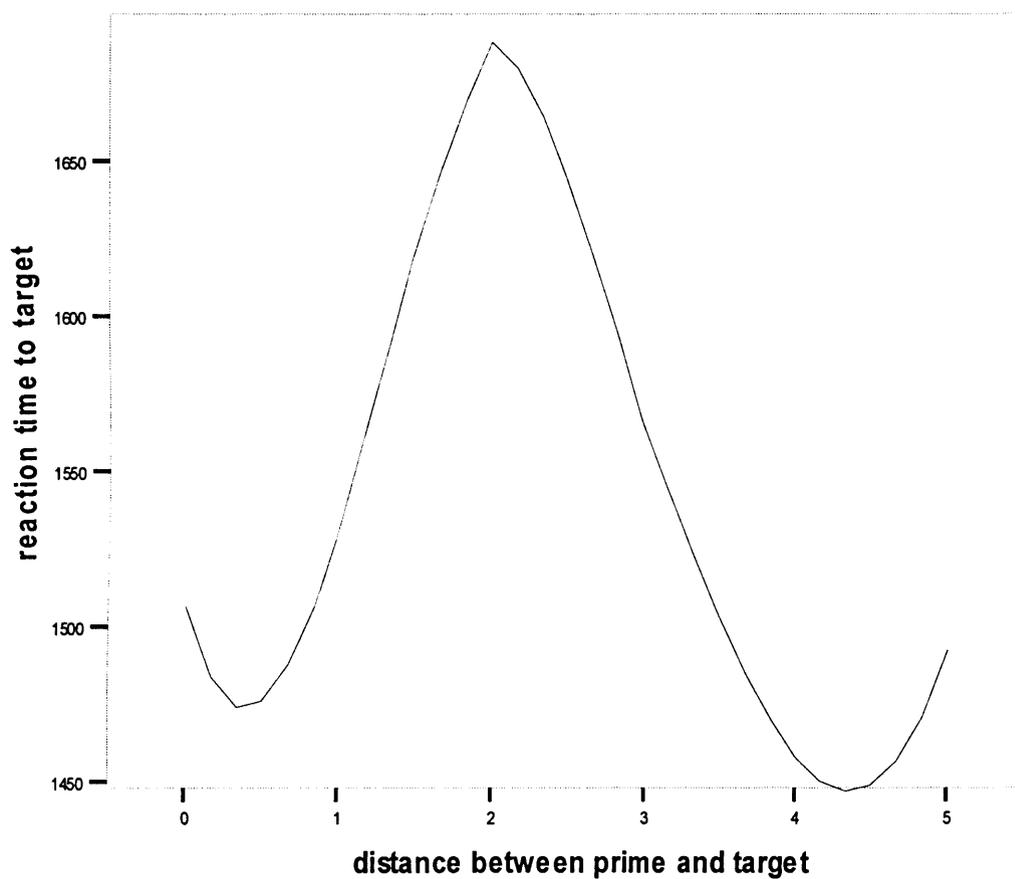


Table 4.2

The Effects of Value Distance on the Speed (ms) of Value Importance Judgements

Value Distance	<u>M</u>	SD
0	1506	568
1	1530	611
2	1688	697
3	1566	669
4	1457	573
5	1472	642

4.6 Experiment 2

In Experiment 1, the examination of value structure utilized an identical prediction for values from adjacent and opposed value domains. An important exception should occur when people are asked to choose which of two values is more important. People should take longer to decide between two values that serve similar motives than values that serve opposing motives. In both cases, it would be easy to access simultaneously the importance of each value in the pair, but the relative importance should be clearer when the values conflict. Values that serve compatible motives are often similar in importance, whereas values that serve opposing motives tend to be dissimilar in importance (S. H. Schwartz, 1992), making it easier to identify one as more important. Again, as in Experiment 1, the key variable is not the actual importance of the value; it is the speed of the judgment. This time, however, a negative linear correlation between value distance and reaction time should occur. In other words, it was predicted that participants would take more time to

choose between the less distant values in a pair than between the more distant values in a pair, with reaction times for moderately distant value pairs in between.

4.6.1 Method

Participants

Fifty-two students (33 female and 19 male) at Cardiff University participated for £3 payment.

Procedure

Participants were tested individually. They were told that the study includes two parts. First, they were asked to read a list of 48 values from the Schwartz (1992) Value Survey with the adjacent definitions of the values. After five minutes on this task, participants were shown 24 trials on the computer screen, with four trials as practice. Each trial presented one value on the left side of the screen and another one on the right side. The 20 pairs of values were constructed in the same manner as in Experiment 1. Participants used two keys on the computer keyboard to indicate which value in each pair was more important to them as a guiding principle in their lives, and their time to make each choice was recorded using Direct RT. After completing this task, participants were probed for suspicion and debriefed.

4.6.2 Results and Discussion

Linear regression was used to examine the effect of value distance on reaction times. In this analysis, the predictors were value distance, squared value distance, and 51 dummy variables representing participant number. As shown in Figure 4.2 and Table 4.3, there was a significant negative effect of value distance, $\beta = -.28$, $t(987) = -11.00$, $p < .001$. The effect of squared value distance was not significant, $\beta = .02$, $t(986) = .17$, ns. That is, participants took more time to react to trials including highly related values than to trials

including opposing values, with reaction times to unrelated values falling in between.

These results are consistent with the circumplex model, because it should take more time to choose a value from a pair of values that serve the same motive than between values that serve opposing, distinct goals of different importance to the individual.

Figure 4.2

The linear effect of value distance on the speed of value preference judgments.

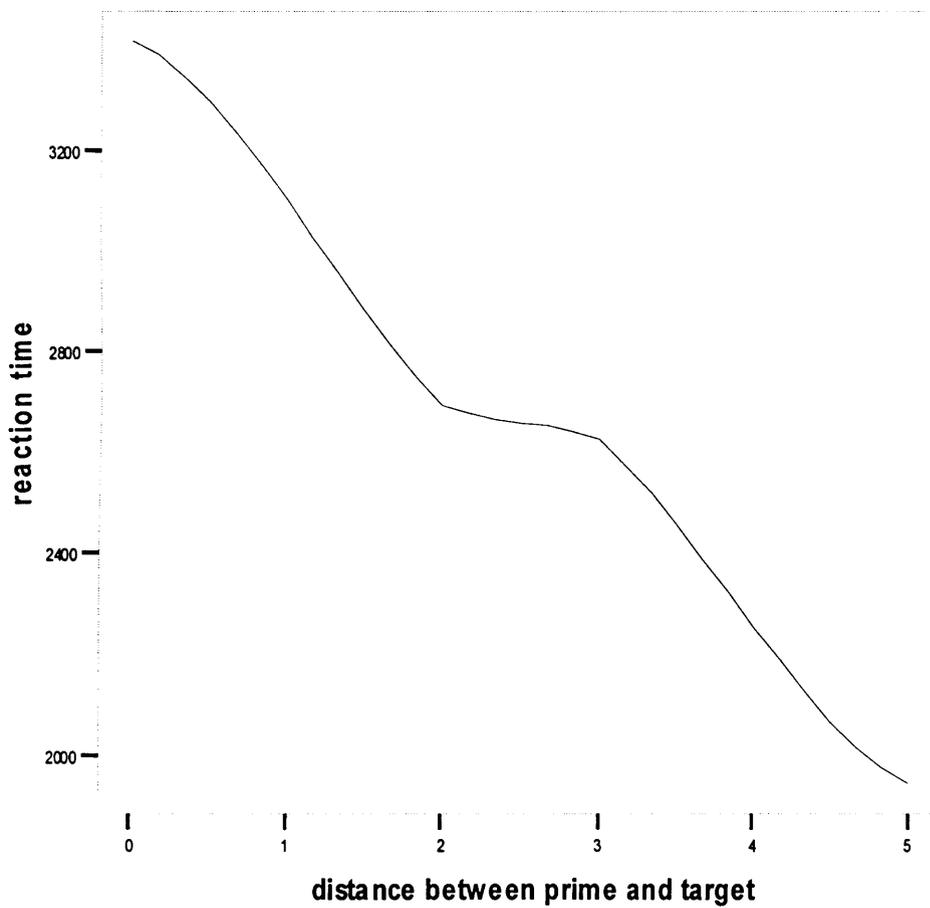


Table 4.3

The Effects of Value Distance on the Speed (ms) of Value Preference Judgements

Value Distance	<u>M</u>	SD
0	3417	1688
1	3099	1703
2	2695	1665
3	2628	1265
4	2253	1136
5	1942	951

4.7 Experiment 3

Thus far, the results of these experiments are consistent with Schwartz's (1992) predictions about the motivational compatibility and conflict between values. Nonetheless, the results do not rule out an effect of shared semantic representations. As indicated in the Introduction, it is expected that the circumplex is a joint function of latent motivational compatibility and conflict and of the semantic associations between values. To provide clearer support for a role of motivational relations, it is important to show that predicted value compatibilities and conflicts predict the speed of value judgement independently of participants' perceptions of semantic relatedness. Thus, the main purpose of the third experiment was to investigate this issue.

Experiment 3 addressed this aim using a paradigm that modified the first experiment to include a new measure, which asked participants to indicate semantic relatedness of pairs of values. In this experiment, participants first completed the value importance trials from Experiment 1, and then they judged the semantic relatedness of pairs

of values. I expected to find the same curvilinear effect of value distance on speed of value judgement as in Experiment 1 and that this effect would remain significant after controlling for participants' judgements of semantic relatedness.

4.7.1 Method

Participants

Forty-eight undergraduate psychology (31 female and 17 male) students at Cardiff University participated for course credit.

Procedure

Participants took part individually. They were told that the study included three parts. First, they were asked to read a list of 46 values from the Schwartz (1992) Value Survey, with the adjacent definitions of the values (The deleted values for Experiment 3 were "detachment" and "honouring parents"). After five minutes studying the text, participants completed 23 value importance trials from Experiment 1. As in Experiment 1, reaction times for the second value in each pair were recorded for the principal analysis. In a third task, participants completed judgements of the values' semantic relatedness. That is, for each value pair, participants were asked to rate the extent to which the values were related in meaning, using a 4-point scale on the computer keyboard from 0 (not related) to 3 (extremely related). The speed of this rating was recorded. After completing this task, participants were probed for suspicion and debriefed. The instruments for presenting the trials and recording data were the same as in Experiment 1.

4.7.2 Results and Discussion

To test whether the present experiment replicated the facilitation effects found in Experiment 1, I used a regression analysis in which value distance, squared value distance, and 47 dummy variables representing participants were entered as predictors of the speed

of rating the second value in each pair. As was expected, the results revealed a significant negative curvilinear effect on the speed of rating the second value in each pair, $\beta = -.57$, $t(814) = 5.43$, $p < .001$, and the linear effect of value distance was not significant $\beta = 0.04$, $t(815) = 1.30$, ns. These results replicated the findings of Experiment 1.

As the next step, the effect of perceived semantic relatedness on the speed of rating the second value in each pair was examined. This analysis entered perceived semantic relatedness, squared perceived semantic relatedness, and 47 dummy variables representing participant as predictors of the speed of rating of the second value in each pair. The results revealed a significant negative linear relation between perceived semantic relatedness and the speed of rating the second values, $\beta = -.17$, $t(810) = 5.58$, $p < .001$; there was no significant curvilinear effect of semantic relatedness on reaction times, $\beta = -.06$, $t(809) = 0.61$, ns. This result supports the hypothesis that semantic relatedness can contribute to the speed of facilitation for value judgments.

The main hypothesis was that the effect of value distance on the speed of judgement of the second values would be at least partly independent of the effect of perceived semantic relatedness. A regression analysis tested this prediction by entering value distance, squared value distance, perceived semantic relatedness, squared perceived semantic relatedness, and 47 dummy variables representing participant as predictors of the speed of rating of the second value in each pair. Results of this regression indicated significant and independent linear effects of value distance, $\beta = -.08$, $t(809) = 2.24$, $p < .03$, and perceived relatedness, $\beta = -.22$, $t(809) = 5.88$, $p < .001$, while also showing an additional independent curvilinear effect of value distance, $\beta = -.43$, $t(807) = 3.89$, $p < .001$. The curvilinear effect of perceived relatedness was not significant, $\beta = -.05$, $t(807) = 0.44$, ns. Thus, perceived relatedness exhibited an independent linear effect, but not an

independent curvilinear effect. More important, perceived relatedness failed to account for the linear and curvilinear effects of value distance on the speed of value judgements.

4.8 General Discussion

The main purpose of the experiments reported in this chapter was to investigate the latent structure of social values in memory. It was expected that motivational relations between values would be an important component of the circumplex pattern of relations between values that has been predicted and found by Schwartz (1992). Experiments 1 and 2 obtained results consistent with this potential role of motivational associations. That is, they found that the speed of value ratings (Experiment 1) and value preference judgments (Experiment 2) in pairs of values could be predicted from the compatibilities and conflicts between values in the circumplex model. Experiment 3 found that the hypothetical compatibilities and conflicts predicted the speed of value importance judgments over and above the effect of the perceived semantic relations among values.

As noted earlier, this evidence is important partly because the circumplex model has the potential to help integrate a large amount of evidence about antecedents and consequences of values. Past support for the circumplex model relied mostly on theoretically consistent correlations between self-reports of value importance, and these correlations could have been driven by participants' conscious theories about value conflicts and by their perceptions of semantic relations between values. The present data do not possess these limitations and provide a novel source of support for the circumplex model. At the same time, the study obtained evidence regarding two different sources of the obtained value relations: motivational relatedness and semantic relatedness. The results provide stronger evidence for a dynamic conceptual structure of values based on their relation to motives that vary in compatibility. To some extent, the experiments also

indicate that the structure is affected by semantic relatedness among the values, but this role of semantic relatedness did not account for the effects of motivational compatibility.

This potential for activation of opposing values is also consistent with diverse research on value-based ambivalence, which has been highlighted as a fundamental issue in many research domains (Alvarez & Brehm, 1995; P. R. Brewer, 2003; Eagly & Chaiken, 1993; I. Katz & Hass, 1988). For example, research has revealed conflicts between values as a source of ambivalence toward political issues (Feldman, 1988; Feldman & Zaller, 1992), racial groups (I. Katz & Hass, 1988), abortion (Alvarez & Brehm, 1995; Schnell, 1993), homosexuality (P. R. Brewer, 2003; Lewis & Rogers, 1999), and work-family trade-offs (Carlson & Kacmar, 2000; Perrewe, Hochwarter, & Kiewitz, 1999). When people perceive a social issue as possessing opposing relations to two or more values, they tend to feel ambivalent toward the issue. For example, a tension between universalism and achievement values appears to underlie White people's ambivalence toward Blacks in the United States (I. Katz & Hass, 1988). We may be more used to conflicts between values that serve opposing motives, partly because of the values frequent coactivation (and consequent competition for response). Conflicts between compatible and unrelated values may therefore be experienced as more disturbing than conflicts that purportedly involve opposing values. For example, a choice between studying for the next day's exam or going to a party places hedonism and achievement values in conflict. As a result, this choice may be more difficult than choosing whether to study for the exams or donate time to a charity, which places achievement and self-transcendence values in conflict. I begin to explore this issue in Chapter 6.

Other potential effects of activating values are noteworthy. In particular, priming a value may activate closely related values, which can affect behaviours different from those examined. For example, the effects of priming "national security" value may be observed

on behaviours that are related to similar conservation motives (e.g., devotion to a custom or tradition), but are not directly related to the value itself. Again, this potential impact can be predicted only by understanding the associations between values in memory.

To summarise, the research presented in this chapter revealed strong associations between values in memory that are consistent with the motivational compatibilities and conflicts posited in the circumplex model of values, while showing that perceived semantic relations are not sufficient to explain the associations between values in memory. These results indicate that it may be problematic to focus on single values in isolation. Through their existence within a larger motivational network, the impact of basic human values on behaviours may be intricate and far-reaching. The next chapters begin to examine some of these implications.

CHAPTER 5

Dynamic Properties of Values

5.1 Overview

The aim of this chapter is to examine the flexibility of the circumplex structure of human values and the influence of changes in some specific values on the other related, unrelated, and opposing values and value-relevant behaviour. Two experiments provided the first demonstrations of dynamic relations among basic human values (i.e., patterns of reciprocal change among values). Experiment 4 used a value self-confrontation paradigm to alter the perceived importance of specific values and then measured the subsequent importance of related and unrelated values. I predicted and found that value self-confrontation would affect the structure of values, increasing the importance of the prioritised values and decreasing the importance of opposed values. Experiment 5 made salient the importance of one of two motivationally opposed value domains or both simultaneously, after which behaviours relevant to the values were measured. I predicted and found that priming each value domain would cause participants to exhibit more behaviour consistent with the domain and less behaviour consistent with the opposed domain, except when both domains were primed. Implications of these results for understanding the effects of values on life satisfaction and prejudice are highlighted.

5.2 Introduction

The results of Experiments 1 to 3 revealed evidence for inter-value structure in memory. That is, they provided support for the circumplex model of values, which suggests a dynamic structure of human values based on motivational conflicts and

compatibilities among values. These findings, in turn, raised some other issues about the flexibility of values in the circumplex structure, and about the impact of value changes on value-related behaviour.

First, if values in this structure are dynamically related, then changes to a value should ricochet through the whole system of values. Values that serve the same motives as the altered value should increase in importance, while values that serve conflicting motives should decrease in importance. For example, any experimental intervention or real life event that causes an individual to increase the importance of equality as a guiding principle in his/her life should cause him or her to increase the importance of similar values, such as social justice, while decreasing the importance of opposed values, such as social power and authority. The first experiment reported in this chapter addressed this issue.

Another issue to be investigated is the impact of priming values on value-relevant behaviour and on behaviour relevant to the opposed values. That is, given conflicts and compatibilities among values in the circumplex structure, and given that values are among the most important predictors of behaviour and attitudes (Bardi & Schwartz, 2003; Maio & Olson, 1994), the flexibility of values should affect behaviours that support a primed value and a value that motivationally conflicts with the prime. Specifically, if priming a value increases the likelihood behaviour supporting the value, then priming a value should decrease the possibility of behaviour supporting the opposite value. This hypothesis is tested in the second experiment described within this chapter.

5.3 Values and Value Systems

Although there are many extant theories of values and their psychological nature (Allport, 1961; Campbell, 1963; M. Kluckhohn, 1951; see Rohan, 2000), the value-behaviour problem in particular has been addressed largely by Rokeach's (1973) theory of

human values and Schwartz's (1992) circumplex model of values. As described in Chapter 3, Rokeach (1973) states that values are learned through a socialisation process starting from early life and that values are hierarchically organised based on their priority with respect to other values (Rokeach, 1973). Schwartz's (1992) circumplex model of values expands on this idea by outlining potential conflicts between ten types of values, which serve different human needs. Schwartz (1992) suggested that these ten value types possess various conflicts and compatibilities, which can be modelled in a dynamic circumplex structure. In this circumplex, the compatible values are positively related and are adjacent to each other, whereas the conflicting values are negatively related and are located opposite each other. Studies in over 200 samples from 60 countries (e.g., Sagiv & Schwartz, 2000) yielded correlations between values or between values and relevant attitudes and behaviour that are consistent with this circumplex structure. Moreover, the experiments described in Chapter 4 provided importance evidence that this structure reflects the organization of values within memory.

Nonetheless, an important limitation of the evidence described thus far is that it presents a rather static picture of values. Although the extant evidence shows that values at a particular point in time are interrelated, both Rokeach's (1973) theory and Schwartz's (1992) model stress the notion that a model of values should help to understand the effects of interventions on (a) changes in a value and changes in other values and (b) behaviour relevant to the value and to other values. Put simply, if values reflect a dynamic motivational system, then altering or activating some of the values should promote some motives and thwart others, causing predictable changes in other values and behaviour relevant to those values. The present research explores these predictions in more detail, after first considering predictors of value change and value relevant behaviour.

5.4 Value Change

Many studies have examined predictors of value change. For example, Maio and Olson (1998) found that introspection about reasons for values causes the values to change, at least when the values do not have previous cognitive support (Bernard, Maio, & Olson, 2003a, 2003b). Personal situations can also alter individuals' values. In particular, Keany and Glueckauf (1993) showed that physically disabled people increased the importance of values unrelated to physical ability and decreased the importance of values related to physical ability. Research has also revealed evidence for the role of personal experiences and feelings, field of study, and situational changes in value-change. For example, in an experimental study, Hirose (2004) asked participants to complete a pre-test value survey and then rate their feeling toward an assumed situation in which the values are actualized (e.g., "become a millionaire" as actualization of wealth) before they complete a post-test value survey. The results revealed significantly more value change in the experimental condition than in the control condition. In other studies, Montiel (1984-5) showed that changes in role expectations due to changes in marriage status and work situations caused changes in values, and McMillan, Wright, and Beazley (2004) found that an eight-month course on environmental studies caused university students to rate pro-environmental values higher than they did at the beginning of the course.

In addition, social, cultural, and economical changes and events can cause changes in personal values. For example, Inglehart (1977; 1990; 1992; 1997) hypothesized and found that industrialization and economical development in western countries caused people and societies to shift their values from materialistic to post materialistic values. Cileli (2000) found that societal changes in Turkey caused changes in the value orientations of young people, and Murphy, Snow, Carson, and Zigarmi (1997) found a significant

decrease in the importance of “A World at Peace” after resolving the threat of the cold war. Cultural assimilation has also been viewed as among important predictors of value change (Feather, 1979; Murphy & Anderson, 2003; Rokeach, 1979). For example, Murphy and Anderson (2003) found significant and long-term value change in Japanese pilots during and after their two-year training in the USA.

Rokeach (1973, p. 37) suggested that “a person’s total value system may undergo changes as a result of socialization, therapy, cultural upheaval, or as a result of experimental procedures designed to change values.” According to Rokeach (1973), an important antecedent of value change in such research is self-dissatisfaction, which causes people to reorder their values in order to make again their value system congruent and to cope with the new situation. Rokeach (1973) tested this prediction using his value self-confrontation procedure. In this procedure, participants receive feedback about their values and the values of their peers. Specifically, their values and the values of their peers are made to seem selfishly biased. In theory, this feedback causes participants to be dissatisfied with their values, and participants experience a motivation to reduce this negative affective state by changing their personal values. Consistent with this reasoning, numerous experiments have found that value self-confrontation can be used to modify values, attitudes, and behaviour (Chernoff & Davison, 1999; Grube, Chen, Madden, & Morgan, 1995; Sawa & Sawa, 1988; S. H. Schwartz & Inbar Saban, 1988; Seyfarth, 1982).

An important unresolved issue is whether people also change values other than those targeted in the value self-confrontation procedure. In the typical use of this paradigm, the experimenter gives feedback that the person attaches insufficient importance to a specific value and participants respond by increasing the importance of the “deficient” value. Rokeach (1973) also suggested that there should be patterns of change in non-targeted values, but his model did not enable clear, a priori predictions of patterns of

change. Schwartz's (1992) circumplex model raises the possibility that changing the importance of a targeted value should increase the importance of different unmentioned values that serve the same underlying motive and decrease the importance of unmentioned values that serve the opposing motive. This focus on unmentioned compatible and conflicting values is important, because any systematic effects on these values would provide a clear indication of a latent value structure. Yet, to my knowledge, this implication of a dynamic system of values has never been tested.

5.5 Values and Behaviour

As mentioned earlier, values have been suggested as among the most important predictors of behaviour (Bardi & Schwartz, 2003; Feather, 1995; Maio & Olson, 1994, 1995). Researchers have long been interested in the moderating role of situational and personal factors on value-behaviour relation and tried to conceptualize this relation based on the moderator factors. For example, according to Kluckhohn (1951), the influence of values on behaviour depends on factors such as privacy or popularity of behaviour, the individual's internalized values, and congruency between the individual's values and the societal (cultural) values. That is, the threat of social sanction causes people to behave based on cultural dominant values in public, whereas they might violate cultural dominant values in their private behaviours, if their personal values and the societal values are incongruent. He also suggested that, as the personal standards, individuals' internalized values motivate people to behave based on their values, even in private, otherwise they face negative feelings such as guilt, shame, and self-depreciation. Argyris and Schon (1978) also categorized values into "espoused" and "in use" based on their influence on behaviour. According to them, values are "in use" when an individual behaves based on societal values, whether or not these values are internalized by the person. Therefore, social

pressure may force an individual to endorse societal values publicly, but these values might not necessarily predict the individual's private behaviour.

A large portion of value-related literature focuses on the value-behaviour relation, but most studies have focused on detecting correlations between specific values. For example, research has revealed relations between specific values and pro-environmental activities (Axelrod, 1994; Garling, Fujii, Garling, & Jakobsson, 2003; Joireman, Lasane, Bennett, Richards, & Solaimani, 2001; Schultz & Zelezny, 1998; Stern et al., 1995), behaviour in work situations (Elizur & Sagie, 1999; Furnham, 1987; Judge & Bretz, 1992; Roe & Ester, 1999; Ros, Schwartz, & Surkiss, 1999), producing and purchasing behaviour (Allen, 2001; Allen & Ng, 1999; Balabanis et al., 2002; Grunert & Juhl, 1995), and success-oriented behaviour (Berndt & Miller, 1990; Feather, 1992a, 1998; George & Zhou, 2001; Platow & Shave, 1995).

Other research has investigated the correlations between values and a variety of assumed or real behaviours (Bardi & Schwartz, 2003; Feather, 1995). For example, Feather (1995) investigated relations between value importance and people's preferences of value-related-alternatives in double-choice imaginary scenarios. He found that people who consider hedonism and stimulation to be more important than tradition, conformity, and security tend to prefer "going to a party" than "studying for the exam"; people who rated universalism values as being more important than power values preferred to join an organization that "promoted protection of the environment" than to join an organization that "promoted economic development, national health, and power"; and people who considered conformity and security values as being more important than self-direction and stimulation values tend to prefer a "more secure job, with less independency and freedom" than a "less secure job with opportunities for a lot of independence and creativity." In another study, Bardi and Schwartz (2003) examined the relations between values from all

motivational domains and self-reports of a wide range of behaviours relevant to the values. They found that the value-behaviour correlations varied in a manner consistent with the circumplex model, such that each type of value tended to be most strongly positively related to the behaviours that served motives related to the value.

Because of the correlational nature of their designs, the above studies can not attest to a causal effect of values on behaviour. This issue is addressed partly in some experiments that manipulated the activation in memory of value concepts. For example, Bargh, Gollwitzer, Lee-Chai, Barndollar, and Trotschel (2001) found that priming concepts such as “compete”, “succeed”, and “achieve” caused participants to better succeed at a subsequent word search task than participants who had been primed with neutral terms. Similarly, Macrae and Johnston (1998) found that participants who were primed with the concept of “helpfulness” were more likely to offer aid, as long as the aid was easy to perform. Together, these experiments reveal that priming a social value can increase the likelihood of behaviour that affirms the value, at least when the behaviour is not in competition with other motives (Karremans, 2005; Maio et al., 2001).

But do people also change behaviours that do not directly support the primed values? The circumplex model raises the possibility that conflicts and compatibilities between values should cause value priming to affect behaviours that are not directly supportive of the primed value. Specifically, in addition to increasing the likelihood of performing a behaviour that supports the value, priming a value should decrease the likelihood of performing a behaviour that supports an opposing value. For example, priming participants with achievement values should cause people to not only exhibit more achievement behaviour (e.g., word search task) than participants in a control group, but also to exhibit less benevolent behaviour (e.g., volunteering for research) than participants in a control group. Again, to my knowledge, this implication of a dynamic system of values has

never been tested, and it would provide a significant extension to our knowledge about value priming effects in general.

5.6 The Present Research

The present research tested whether values have the dynamic properties predicted by the circumplex structure, using both a manipulation of value change (Experiment 4) and a manipulation of value priming (Experiment 5). Schwartz's theory about dynamic compatibilities and conflicts between values facilitates predictions about effects of value change and value priming that are more complex than those revealed in the past. I predicted that (1) changing some specific values increases the importance of values that serve the same or similar motives and decreases the importance of values that serve opposing motives, and (2) priming some specific values should cause participants to exhibit more behaviour consistent with the primed values and to exhibit less behaviour consistent with the opposed values.

5.7 Experiment 4

The purpose of this experiment was to test whether changes in some specific values cause changes in the whole value system. Based on Rokeach's (1973) theory about values, I predicted that a manipulation that induces dissatisfaction with rankings of a set of values would cause changes in the targeted values, and these effects should be predicted by the effect of the manipulation on participants' satisfaction with their initial values. More important, based on Schwartz's (1992) theory about the structure of values, I predicted that any changes in particular values in the value system would reverberate through the whole value system, causing related values to increase in importance and opposing values to decrease in importance.

To test these hypotheses, I needed a large-scale design with many participants (at least 100), because the complex pattern of predictions (i.e., five conditions and four value types) required good statistical power. For example, I expected that prioritizing self-transcendence values would increase the importance of self-transcendence values in post-test, while decreasing the importance of self-enhancement values. In contrast, prioritizing self-enhancement values would increase the importance of self-enhancement values, while decreasing the importance of self-transcendence values. I expected no changes in openness to change and conservation values in self-transcendence prioritizing and self-enhancement prioritizing conditions. Similar highly specific patterns were expected for the other prioritizing conditions.

I also chose to utilize a unique variant of Rokeach's value self-confrontation method. His original technique gave participants feedback that their own values and the values of their peers were selfishly biased. In this experiment, I was interested in examining the effect of feedback that participants' values were different from the values of their peers. This effect was of interest because prior theory suggests that social norms are among the important sources of values (e.g., Maio & Olson, 1998; Rokeach, 1973), but the impact of norms on values has not been examined. Examining this impact helped to address two important issues. One important issue is whether values are susceptible to abstract false feedback about them, despite their central role for the self. In other words, does false information about a different value-preference of peer groups cause people to change their values toward the peer group's values?

Another interesting issue is whether the magnitude of the discrepancy between personal values and feedback about others' values affects the amount of value change. Consistent with research on assimilation and contrast processes in judgment (e.g., Fazio, Zanna, & Cooper, 1978; Mussweiler, 2001), I expected that only moderate discrepancies

would engage participants' desire to change their personal values. In contrast, small discrepancies would cause participants to see no need for value changes, and large discrepancies would signal too much cultural estrangement to induce change.

5.7.1 Method

Participants

One-hundred and seventy-five students (139 female and 36 male) at Cardiff University participated in this study for course credit. Data from nine participants were removed from the analyses because of suspicion (see below).

Procedure

Participants were randomly assigned to either a control group or one of four experimental groups. Participants were tested individually and told that the session included several tasks. The first task involved ranking a set of values. Second, participants received value self-confrontation feedback. Third, participants rated their satisfaction with their ranking from the pre-test. Finally, participants ranked another set of values, were probed for suspicion, and debriefed.

Pre-test Value Importance

In the first task, participants were given a list of 16 values from the Schwartz (1992) Value Survey, with four values from each higher order domain. The self-transcendence values were forgiving, honest, social justice, and broad-minded; the openness to change values were creativity, daring, a stimulating life, and choosing own goals; the self-enhancement values were authority, capable, influential, and wealth; and the conservation values were devout, honouring parents, social order, and obedient. Participants were asked to rank the values based on their importance as guiding principles in their lives.

Experimental Manipulation

Value-prioritizing conditions. In each value prioritizing condition, participants were shown a (fictitious) average of the value rankings of Cardiff University students for each of the 16 values that were in the pre-test measure of value importance. Participants were asked to read these rankings and their own rankings. Values from either the self-transcendence, openness to change, self-enhancement, and conservation dimensions were clearly prioritised in the average rankings for each experimental group. The values in the prioritised dimension were ranked from 1 to 4 (mean 2.5). The mean ranking for values from unrelated dimensions was randomly either 10 or 11, and the mean ranking for values from the opposed dimension was 10.5.

Second, participants were asked to identify the four most highly ranked values in the reference group's ranking and to write the names of the values in a predetermined column. Participants completed the same task for their own value ranking and they were asked to recognise the conceptual similarities and differences between their value rankings and the reference group's values ranking.

Third, participants were asked to read an explanation about the first four preferred values of the reference group, and about the characteristics of people who rank those values as their most preferred values. The explanation was based on Schwartz's (1992) descriptions of the value types and adapted to convince the participants that the values are the typical values for the reference group. For example, in the self-transcendence values condition, the explanation stated that "the average of the students' value ranking shows that the most important values to students at Cardiff University are Loyalty, Equality, Helpfulness, and A World at Peace. Past research demonstrated that people who believe in these values always emphasize universal human requirements, and are very interested in understanding, appreciating, tolerating, and protecting the welfare of all close others and

people in other settings. Therefore, based on the average of students' rankings, we can conclude that they have shown their concern for the welfare of all human beings, even those whose way of life differs from theirs." To reinforce this aspect of the manipulation, participants were asked to write their own explanation of why students emphasised the four values (Most participants simply paraphrased the explanation that had been given to them).

Control condition. Participants in the control group were asked to do an unrelated task as their second task. That is, they were asked to read a short passage about memory and to memorise 16 underlined terms (e.g., frontal lobe, verbal, short term, and phonological). After doing this task for ten minutes, they were asked to complete the same passage by inserting the 16 terms in spaces where they had been deleted.

Value Rating Satisfaction

After completing the manipulation, all participants were asked to rate their satisfaction with their ranking of the values in the first task (pre-test value importance), using a 9-point scale from -4 (extremely dissatisfied) to +4 (extremely satisfied).

Post-test Value Importance

As the last task in this experiment, participants were given another set of 16 values from the Schwartz's (1992) value survey. Of importance, these values were different from the values used to represent each domain in the pre-test measure. Four values were presented from each higher-order domain. The self-transcendence values were loyal, helpful, equality, and a world at peace; the openness to change values were an exciting life, a varied life, curious, and independent; the self-enhancement values were ambitious, social power, social recognition, and successful; and conservation values were detachment, moderate, politeness, and respect for tradition. Participants were told that this set of values had not yet been studied in students and were asked to rank the importance of these values as guiding principles in their lives, using the same scale as in the pre-test measure of values.

Funnel Debriefing

Finally, participants completed a funnelled debriefing interview similar to the debriefing approach used in past research (Bargh & Chartrand, 2000; 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 suspicion (e.g., “Did you think about whether the information about values might change your own values?”). Only nine participants (out of 175) indicated any level of suspicion of my hypothesis during this debriefing.

5.7.2 Results and Discussion

Effects of Condition and Value Type

To examine the effects of the manipulation on changes in value rankings from pre-test to post-test, I submitted the algebraic difference between the pre-test and post-test rankings (pre-test minus post-test) to a 5 (condition: self-transcendence vs. openness to change vs. self-enhancement vs. conservation vs. control) x 4 (value type: self-transcendence vs. openness to change vs. self-enhancement vs. conservation) mixed-model analysis of variance (ANOVA), with repeated measures on the second factor (see Rokeach (1973) for details on this type of dependent measure). The results indicated a main effect of value type, $F(3, 483) = 4.83, p < .003$, such that the conservation values ($M = .22, SD = 1.84$) changed more than the self-enhancement values ($M = -.33, SD = 2.03$), $t(165) = -2.35, p < .02$, with the self-transcendence values ($M = -.04, SD = 1.94$) and openness to change values ($M = .08, SD = 1.85$) in between. As expected, the main effect of condition was not significant, $F(4, 161) = 0.79, ns$, suggesting that there was no net increase or decrease in value importance across the value types.

More importantly, the results indicated a significant interaction between condition and value type, $F(12, 483) = 69.09, p < .001$. Examination of this interaction supported our predictions. I first conducted planned comparisons that tested whether the focal value changed more positively in the condition that prioritized the value than in the conditions that prioritized irrelevant values or no values (control). In the analysis of each value type, these planned comparisons were significant in the expected direction. For example, participants in the self-transcendence prioritized condition changed their self-transcendence values more positively than did participants in the openness, conservation, and control groups, $t(161) = 9.31, p < .001$. I also conducted planned comparisons that tested changes in opposing values. These planned comparisons were also significant in the expected direction. For example, participants in the self-enhancement prioritized condition changed their self-transcendence values more negatively than did participants in the openness, conservation, and control groups, $t(161) = 9.17, p < .001$.

To provide more precise detail about the mean differences, Table 5.1 shows the results of supplementary paired contrasts. Most important among the contrasts, participants in the four experimental conditions changed the prioritised values toward the reference group's values more than did participants in the control group. For example, participants in the self-transcendence condition changed their self-transcendence values ($M = 2.33$) more positively than did participants in the control condition ($M = -.06$), $t(65) = 8.01, p < .001$. Moreover, the results supported my hypothesis that value self-confrontation would cause participants to change opposing values negatively. For example, participants in the self-transcendence condition changed their self-enhancement values more negatively ($M = -2.59$) than did participants in the control condition ($M = -.25$), $t(65) = -7.39, p < .001$.

Furthermore, aside from my expectation (see Table 5.2), the results revealed almost no significant changes in values that were unrelated to the targeted values. For example,

participants in the openness to change condition did not change either their self-transcendence values from pre-test ($M = 5.46$, $SD = 1.99$) to post-test ($M = 5.75$, $SD = 1.54$), $t(483) = .88$, *ns*, or their self-enhancement values from pre-test ($M = 9.42$, $SD = 2.17$) to post-test ($M = 9.75$, $SD = 1.94$), $t(483) = 1.01$, *ns*.

Table 5.1

Experiment 4: Changes in Value Rankings from Pre-test to Post-test Across Conditions

	<u>Value Type</u>			
	ST	OP	SE	CO
<u>Value Condition</u>				
ST	2.33 (1.54) a a	-.13 (1.18) b a	-2.59 (1.50) c a	.37 (1.02) b a
OP	-.29 (1.27) a b	2.40 (1.13) b b	-.33 (1.29) a b	-1.75 (.96) c b
SE	-2.48 (1.34) a c	.12 (1.07) b a	2.32 (1.50) c c	-.31 (1.02) b c
CO	.21 (.82) a b	-2.17 (1.43) b c	-.59 (1.05) c b	2.73 (1.33) d d
CON	-.06 (.76) a b	.18 (.98) a a	-.25 (1.05) a b	.05 (1.36) a c-a

Note. ST = self-transcendence values, OP = openness to change values, SE = self-enhancement values, CO = conservation values, CON = control condition. Higher values indicate more positive change in participants' value rankings from pre-test to post-test.

Numbers in parentheses represent standard deviations.

The leftmost subscripts indicate within-row differences and the rightmost subscripts indicate within-column differences.

N = 34 (for ST condition) and N = 33 (for the other conditions).

Table 5.2

Experiment 4: Differences Between Participants' Value Rankings from Pre-test to Post-test Across Conditions

	<u>Value Type</u>			
	ST	OP	SE	CO
<u>Value Condition</u>				
ST	2.33 (1.54) **	-.13 (1.18)	-2.59 (1.50)**	.37 (1.02)
OP	-.29 (1.27)	2.40 (1.13)**	-.33 (1.29)	-1.75 (.96)**
SE	-2.48 (1.34)**	.12 (1.07)	2.32 (1.50)**	-.31 (1.02)
CO	.21 (.82)	-2.17 (1.43)**	-.59 (1.05)*	2.73 (1.33)**
CON	-.06 (.76)	.18 (.98)	-.25 (1.05)	.05 (1.36)

Note. ST = self-transcendence values, OP = openness to change values, SE = self-enhancement values, CO = conservation values, CON = control condition. Higher values indicate more positive differences between participants' value rankings from pre-test to post-test. The asterisks indicate the results for within-column comparisons between value change in the focal condition and value change in the control condition.

N = 34 (for ST condition) and N = 33 (for the other conditions).

* = $p < .05$

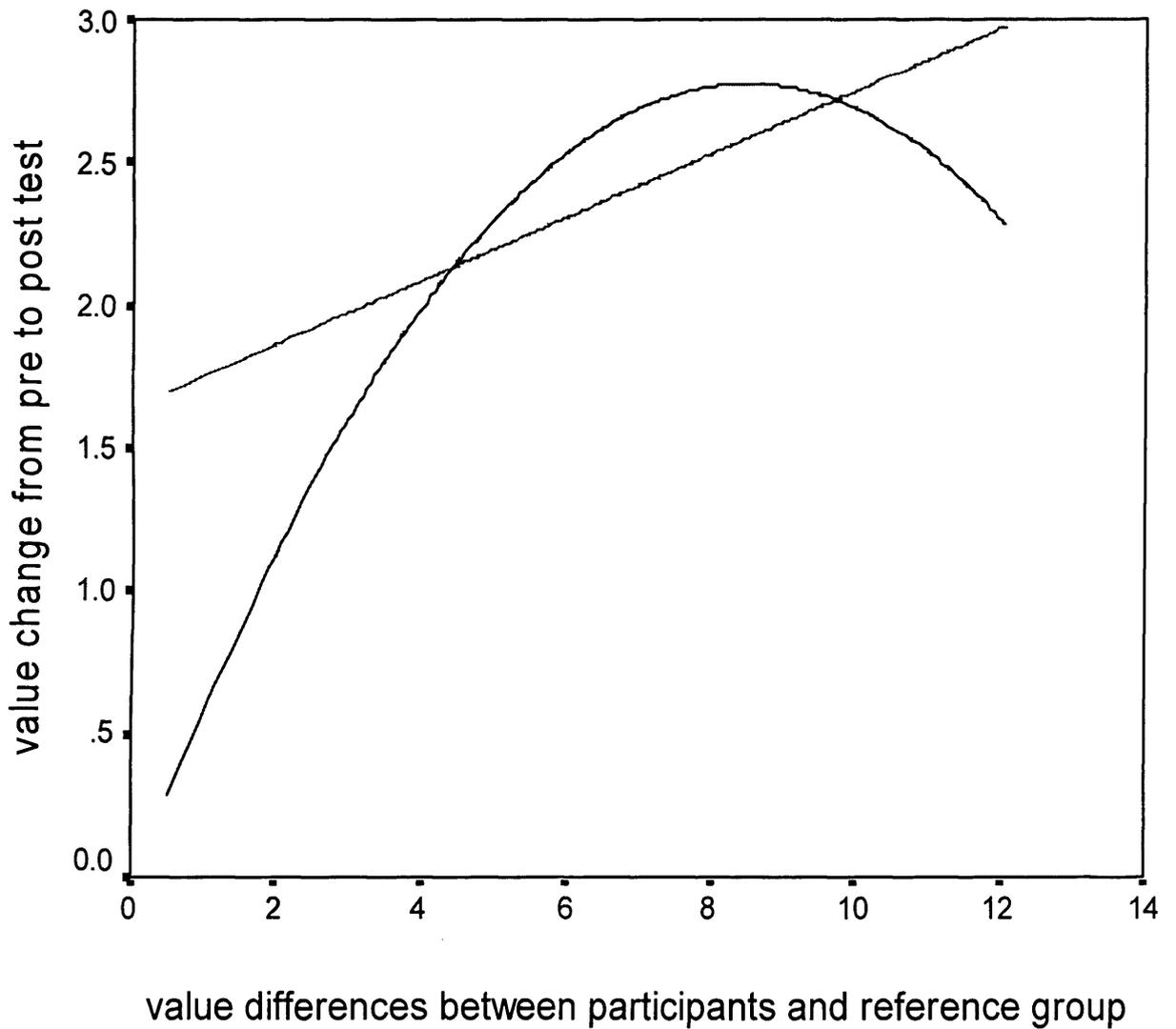
** = $p < .01$

Effect of Discrepancy Magnitude

A curvilinear regression analysis was used to test whether differences between participants' and reference groups' rankings of the prioritised values in the pre-test predicted changes in participants' rankings of the values in the post-test. The predictors in this analysis were the differences between participants' and reference groups' rankings of the prioritised values in the pre-test (i.e., deduction of reference groups' rankings of the prioritised values from participants' rankings of the prioritised values) and the squared differences between participants' and reference groups' ranking of the prioritised values in the pre-test. The dependent variable was the change in participants' rankings of the values in the post-test (pre-test minus post-test). Results indicated a significant positive linear effect, $\beta = .21$, $t(130) = 2.5$, $p < .01$, and a negative curvilinear effect, $\beta = -1.1$, $t(129) = 2.61$, $p < .01$. In other words, as shown in Figure 5.1, participants changed their priorities toward the reference groups when they felt a large difference between their preferred values and their reference group's preferred values, although this effect began to reverse direction at very high level of difference between participants' values and the reference group's values.

Figure 5.1

Curvilinear (black) and linear (grey) effects of differences between participants' and reference groups' values on value change

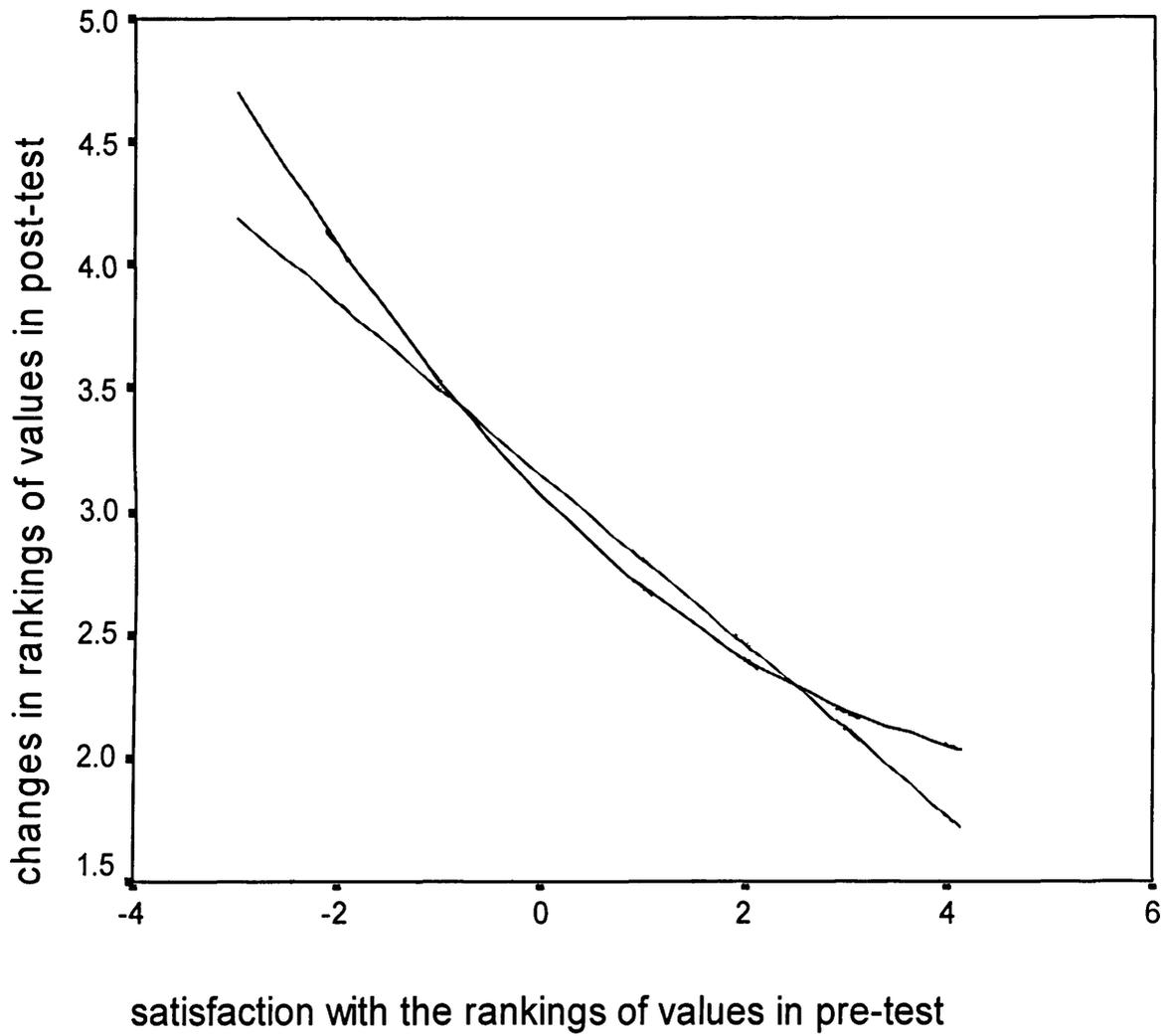


Effects of Value Dissatisfaction

To examine the relation between participants' satisfaction with their rankings in the pre-test and changes in their rankings from the pre-test to the post-test, a curvilinear regression analysis was used. The predictors in this analysis were participants' satisfaction with their rankings in the pre-test and squared participants' satisfaction with their rankings in the pre-test. The dependent variable was changes in participants' rankings of the values in the post-test. As expected, results indicated a significant negative linear effect of satisfaction with pre-test rankings on changes in participants' rankings, $\beta = -.31$, $t(130) = 3.74$, $p < .001$. The curvilinear effect was not significant. In other words, as shown in Figure 5.2, participants were more resistant against the reference group's social pressure to change their values when they were more satisfied with their own rankings of values.

Figure 5.2

Curvilinear (black) and linear (grey) effects of participants' satisfaction with their values in the pre-test on value change



Summary

Overall, the results of Experiment 4 provided strong evidence for the dynamic flexibility of values within Schwartz's (1992) circumplex by revealing that changes in some specific values cause changes in different values that serve similar and opposing motives. In addition, the evidence supported Rokeach's speculation about the mechanism. Specifically, value change was predicted by induced dissatisfaction with initial values. An additional novel finding was the evidence that moderate value discrepancies from the norm elicited the most value change.

These findings, however, raise the second issue to be investigated: Are value dynamics evident only in conceptual rankings of values or can they be detected in value-relevant behaviour as well? Experiment 5 addressed this issue.

5.8 Experiment 5

In this study, I examined the effect of priming achievement and benevolence values on behaviours that promoted the values. I expected that priming each type of value would cause participants to exhibit more value-consistent behaviours than participants in a control condition. More important, I expected that priming each value would decrease performance of behaviours affirming the other value type, relative to the control group. In Schwartz's (1992) model of value structure, the achievement and benevolence value domains are opposing: benevolence values preserve and enhance the welfare of others, whereas achievement values emphasise personal success. Although these motives can be compatible on occasion (e.g., when winning money for self and others in a game), they tend to be implicitly regarded in opposition (Chapter 4). Thus, priming one value may inhibit behaviour affirming the other value, even when the selected behaviours do not actually threaten the primed values themselves. For example, one of the achievement behaviours in

the experiment involved success at completing word puzzles. Success at this task would affirm achievement, but not directly threaten helpfulness (because success at the task was not placed in competition with a task involving assisting others). The conflict occurs indirectly through the latent, conflicting motivations. Decreases in the behaviours affirming the opposing values would reveal the dynamic motivational structure.

5.8.1 Method

Participants and Procedure

One hundred and twelve undergraduate psychology (67 female and 45 male) students at Cardiff University participated in this experiment for £4. The data from five participants were removed from the analysis because of suspicion.

Participants were tested individually and were told that the session included several tasks. First, they completed the experimental manipulation, and then they completed a measure of achievement behaviour. This measure was followed by a measure of responses to a hypothetical scenario involving achievement and a scenario involving benevolence. Finally, participants completed a measure of benevolence behaviour, were probed for suspicion, and debriefed.

Experimental Manipulation

Value-priming conditions. In each priming condition, participants were asked to complete a sequence of five tasks. First, they were given a table including values from the primed domain. These values were printed adjacent to positive adjectives (e.g., happy, excellent, ideal, perfect, pretty), and the names of some items of furniture were printed adjacent to neutral adverbs (e.g., normal, usual, typical, ordinary, common). 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. Values were



always adjacent to positive adjectives, and items of furniture were always adjacent to neutral 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. The experimenter asked participants whether or not they noticed any meaningful categories of main terms and their adjectives while trying to memorize them. The experimenter explained that the main terms could be divided into furniture and social concept categories and that the adjectives could be divided into positive and neutral categories. Participants were then given another set of furniture items, values, and adjectives to memorise 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 achievement condition always received achievement values across the two memorization tasks, whereas participants in the benevolence condition always received benevolence values across the tasks.

Control condition. Participants in the control group went through almost the same process as for the priming conditions, except that they received names of colours as the “meaningful social categories” instead of values.

Achievement Behaviour

Similar to past research (Bargh et al., 2001), the measure of achievement gave participants five minutes to complete a word search task within a table of letters that included the names of 24 British cities. The total number of detected cities was recorded as the measure of achievement.

Achievement and Benevolence Scenarios

Participants were given two scenarios describing a person in a situation related to benevolence or to achievement. The achievement scenario described a third year student

who did very well in some classes in the second year and had applied for medical school, despite having not really decided if that was what he/she wanted to do. Participants used an 8-point scale from 0 (not motivated) to 7 (extremely motivated) to rate the student's motivation to complete the final year of the course successfully, and a scale from 0 (not important) to 7 (extremely important) to rate the importance of the course to the student. The benevolence scenario described a member of staff at a UK university who had carelessly broken a unique machine belonging to the university, despite repeated warning about the proper use of it. Participants were asked to choose one of eight fines from A (no fine) to G (more than £800) as punishment for the person. In theory, higher fines would reflect lower benevolence motivation, because forgiveness is an important benevolence value.

Benevolence Behaviour Task

For the last dependent measure, the researcher asked participants whether they would be willing to take part voluntarily (without payment) in some future research. He explained that he needed to complete some more experiments, but he had no more money in his departmental account. They could choose one of the six following alternatives if they agreed to take part in the research: 10, 20, 40, 60, 90, or 120 minutes.

Funnel Debriefing

Finally, participants completed a funnelled debriefing interview similar to the method described in Experiment 4.

5.8.2 Results and Discussion

Achievement and Benevolence Behaviours

To examine the effects of the manipulation on the value-consistent behaviours, a 3 (value prime condition: achievement vs. benevolence vs. control) x 2 (behaviour:

achievement vs. benevolent) mixed model ANOVA was conducted, with repeated measures on the second factor. Prior to conducting this analysis, the achievement and benevolence behaviour scores were standardised in order to make their scale range compatible. The results revealed a main effect of condition, $F(2, 104) = 3.66, p < .03$, such that the benevolence condition ($M = .28, SD = 1.26$) elicited more achievement and benevolence behaviour (combined) than the control condition ($M = -.41, SD = .97$), $t(69) = 2.57, p < .01$, with the achievement condition in between ($M = .12, SD = 1.12$). The main effect of behaviour was non-significant, $F(1, 104) = 0.00, ns$.

More important, the results indicated a significant condition x behaviour interaction, $F(2, 104) = 71.73, p < .001$. Examination of this interaction supported my predictions. As shown in Table 5.3, participants in the achievement and benevolence conditions exhibited value-consistent behaviour more than did participants in the control condition and the condition that primed the opposing value. Participants in the achievement condition exhibited more achievement behaviour ($M = .85$) than did participants in the control condition ($M = -.28$), $t(69) = 5.61, p < .001$, and the benevolence condition ($M = -.57$), $t(70) = 7.25, p < .001$, whereas participants in the benevolence condition exhibited more benevolent behaviour ($M = .85$) than did participants in the control condition ($M = -.13$), $t(69) = 5.14, p < .001$, and the achievement condition ($M = -.72$), $t(70) = 8.39, p < .001$.

Table 5.3

Experiment 5: Achievement and Benevolence Behaviour Across Conditions.

<u>Value Condition</u>	<u>Value-relevant Behaviour</u>	
	ACH	BEN
ACH	.85 (.96) a a	-.72 (.66) b a
BEN	-.57 (.67) a b	.85 (.91) b b
CON	-.28 (.70) a b	-.13 (.67) a c

Note. ACH = Achievement, BEN = Benevolence (behaviour type and condition), CON= control condition. Higher values indicate more value consistent behaviour.

Numbers in parentheses represent standard deviations.

The leftmost subscripts indicate within-row differences and the rightmost subscripts indicate within-column differences.

N = 36 for the two experimental conditions and N = 35 for the control condition.

Of particular interest, the results supported my hypothesis that priming values would cause participants to exhibit less behaviour consistent with the opposed values. That is, participants in both achievement and benevolence conditions exhibited less behaviour consistent with the opposed values than did participants in the control and opposed value prime conditions. For example, participants in the achievement condition exhibited less

benevolence behaviour ($M = -.72$) than did participants in the control condition ($M = -.13$), $t(69) = -3.72$, $p < .001$, and the benevolence condition, ($M = .85$), $t(70) = -8.39$, $p < .001$. Participants in the benevolence condition exhibited marginally less achievement behaviour ($M = -.57$) than did participants in the control condition ($M = -.28$), $t(69) = 1.78$, $p < .07$, and significantly less achievement behaviour than participants in the achievement condition ($M = .85$), $t(70) = 7.25$, $p < .001$.

Achievement and Benevolence Scenarios

To examine the effects of the manipulation (value priming) on the value-consistent scenarios, a 3 (value prime condition: achievement vs. benevolence vs. control) x 2 (scenario: achievement vs. benevolent) mixed model ANOVA was conducted, with repeated measures on the second factor. Prior to conducting this analysis, participants' ratings for the achievement and benevolence scenarios were standardised in order to make their scale range compatible. The results indicated a significant condition x scenario interaction, $F(2, 104) = 25.10$, $p < .001$, and no main effects of condition, $F(2, 104) = .14$, *ns*, or scenarios, $F(1, 104) = 0.00$, *ns*. Examination of the interaction supported my predictions. As shown in Table 5.4, participants in the achievement and benevolence conditions chose more value consistent alternatives than did participants in the control condition and the opposed value prime condition. For example, participants in the achievement condition exhibited more achievement-consistent responses ($M = .57$) than did participants in the control condition ($M = .01$), $t(69) = 2.78$, $p < .01$, and the benevolence condition ($M = -.58$), $t(70) = 5.62$, $p < .001$, whereas participants in the benevolence condition exhibited more benevolence-consistent responses ($M = .48$) than did participants in the control condition ($M = .04$), $t(69) = 1.99$, $p = .05$, and the achievement condition ($M = -.52$), $t(70) = 5.32$, $p < .001$.

Table 5.4

Experiment 5: Participants' Performance in the Achievement and Benevolence Scenarios Across Conditions.

	<u>Value-Relevant Scenario</u>	
	ACH	BEN
<u>Value Condition</u>		
ACH	.57 (.78) a a	-.52 (.86) b b
BEN	-.58 (.94) a b	.48 (.73) b b
CON	.01 (.93) a c	.04 (1.11) a c

Note. ACH = Achievement, BEN = Benevolence (scenario type and condition), CON= control condition. Higher values indicate more value consistent behaviour.

Numbers in parentheses represent standard deviations.

The leftmost subscripts indicate within-row differences and the rightmost subscripts indicate within-column differences.

N = 36 for the two experimental conditions and N = 35 for the control condition.

Moreover, the results supported my hypothesis that priming values would cause participants to make decisions less consistent with the opposed values. That is, participants' responses in the achievement and benevolence conditions were less consistent with the opposed values than were responses in the control and value prime conditions.

Participants in the achievement condition exhibited fewer benevolence-consistent responses ($M = -.52$) than did participants in the control condition ($M = .04$), $t(69) = -2.37$, $p < .02$, and the benevolence condition, ($M = .48$), $t(70) = -5.32$, $p < .001$. Participants in the benevolence condition exhibited fewer achievement-consistent responses ($M = -.58$) than did participants in the control condition ($M = .01$), $t(69) = -2.61$, $p < .01$, and the achievement condition, ($M = .57$), $t(70) = -5.62$, $p < .001$.

5.9 General Discussion

The main purpose of the two experiments described in this chapter was to seek dynamic patterns of inter-value relations by showing (a) effects of changes in some specific values on the whole structure of values and (b) effects of value primes on behaviours affirming both the primed values and opposing values. Experiment 4 revealed that the induction of changes in a set of target values caused increases in the importance of different values promoting the same motives, while decreasing the importance of different values opposing the target values. This pattern provides an important extension to the findings obtained by Rokeach (1973), who focused on changes in the targeted values. This pattern also supports Schwartz's (1992) prediction of a dynamic, circumplex structure of value relations, based on their motivational conflicts and compatibilities. Experiment 5 revealed that priming values increases behaviour that affirms the primed values, while decreasing behaviour that affirms the opposing values. These results replicate prior evidence of value priming effects on congruent behaviour (e.g., Bargh et al., 2001; Macrae & Johnston, 1998), while showing novel effects of value priming on behaviour relevant to other values. In other words, they reveal a wider potential impact of value primes on behaviour than has been revealed previously, and they show how these diverse effects can be predicted from the circumplex model of values.

Together, the experiments show a systematic pattern of influence among diverse values. In addition to providing strong support for the circumplex model of values (S. H. Schwartz, 1992), the results are consistent with abundant research across psychology showing value-behaviour relations (Bardi & Schwartz, 2003; Garling, 1999; Judge & Bretz, 1992), changeability of values (Bernard et al., 2003a, 2003b), and moderating effects of values (Garling et al., 2003). Most of this research has focused on one value or a couple of values, despite warnings that we need to also consider the effects of values in the context of other values. By revealing diverse effects of prioritized values on value importance, value-relevant behaviours, and on behaviours relevant to the opposed values, the present research provides a glimpse of the more complex and dynamic effects of values. The findings make clear that, when priming values with the purpose of changing value-relevant behaviour or value-relevant attitudes, researchers must be aware of indirect effects of prioritized values on non-targeted value-relevant behaviours and value-relevant attitudes. The importance of such indirect effects has 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 and detecting of the indirect effects. The present evidence indicates that the circumplex model of values may be an appropriate place to start examining this issue.

These findings are directly relevant to several other issues that are connected to values. First, they could be used to predict the effects of basic human values on life satisfaction. For example, Oishi, Diener, Suh, and Lucas (1999) found that values moderate the effects of value-consistent experiences on life satisfaction. That is, they found that satisfaction with friends was a stronger predictor of life satisfaction among participants who valued benevolence, while satisfaction with course scores was a stronger predictor of life satisfaction among participants who valued achievement. In another study, Oishi, Diener, Lucas, and Suh (1999) showed that self-esteem needs (freedom and self)

were stronger predictors of global life satisfaction in individualistic nations than in collectivistic nations. Because these studies examined simple correlations between value endorsement and bases of life satisfaction, it is impossible to rule out causal expectations that involve little impact of values. It would therefore be useful to test whether value changes or value priming affect the bases of life satisfaction. For example, based on the results, priming achievement may increase the use of test scores as a basis for judgements of life satisfaction, while also decreasing the use of satisfaction with friends as a basis for these judgements. Such evidence would indicate that values play a more significant role than has been detected previously.

The results of this study may also inform the use of interventions to reduce prejudice. Many theories suggest that prejudice is the result of conflict between values. For example, Soder (1990) suggested that negative attitudes toward disabled people are the result of conflict between the devaluation of disability and benevolent sympathy toward disabled people. Also, according to Herek (2000), conflicts between people's value system and the values that gay people and gay communities represent is one source of prejudice against gay people. Similarly, the attribution-value model of prejudice (Crandall et al., 2001; Crandall & Martinez, 1996), the aversive racism model (Gaertner & Dovidio, 1986), and the ambivalence model of prejudice (I. Katz & Hass, 1988) all stress conflict between benevolent-oriented and achievement-oriented cultural values as sources of prejudice toward people or groups. Given the present results, prejudice may be reduced by increasing benevolence or decreasing achievement, because changes in either value has reciprocal effects on the other. Future research should test whether such reciprocal effects do indeed reduce prejudice and discrimination.

It is also important to consider the possible long term effects of value changes. In Rokeach's (1973; 1975) research, the value self-confrontation procedure elicited attitude

change that persisted over six months. If long term value change does occur, there should be repercussions for the individual's personality more generally. Several studies have found that there are reliable associations between the endorsement of different values and the possession of various personality traits (Aluja & Garcia, 2004; Olver & Mooradian, 2003; Roccas et al., 2002). For example, people who value achievement and stimulation tend to exhibit more extroversion (Roccas et al., 2002). Such results are consistent with long-standing assertions that traits help to express basic motives (McCrae & Costa, 1988). In theory, then, any manipulation that causes longer term changes in values should have a predictable impact on personality because the value change would increase or decrease the motive underlying the trait dimension. Such evidence would provide important clues about the broader issue of personality change.

To summarise, the research presented in this chapter provided important evidence that values have dynamic causal effects on other values and value-relevant behaviour. Moreover, these effects can be predicted using the circumplex model of values. It is clear from this evidence that this structure can predict dynamic value change well beyond the similar effects observed in the past. On balance, the results support the idea of inherent compatibilities and conflicts between values and help to provide more causal evidence about the effects of these motivational dynamics. As I have outlined, demonstrating these dynamics may be an important step in addressing diverse issues such as life satisfaction, prejudice, and personality change.

CHAPTER 6

Attitudinal Consequences of Values

6.1 Overview

Prior research has assumed that feelings of ambivalence arise only when an object is associated with both positive and negative attributes. In contrast, I propose that feelings of ambivalence can also arise when an object is associated only with positive attributes, but only if the attributes reflect competing motives. An experiment tested whether ambivalence increases as it becomes increasingly difficult to integrate equally valued attributes of an individual. Participants were shown descriptions of 20 individuals and each individual was identified as possessing a pair of positive attributes (basic human values) that varied in their degree of motivational compatibility. After reading each description, participants rated their feelings of ambivalence or conflict toward each individual. Results indicated that participants felt higher ambivalence toward people who possessed motivationally incongruent values than toward people who possessed motivationally congruent values. These results support the broader conclusion that conflicting attribute dimensions other than valence can elicit feelings of ambivalence.

6.2 Introduction

Have you ever met someone who just seems too perfect? The person might arouse a bit of awe and some jealousy; but more than anything, the person may elicit a sense of unease, as though something is not quite right about him or her. Such experiences of unease and internal conflict may contribute to feelings of ambivalence toward the

individual, even though the person has shown no specific negative attribute. For traditional perspectives on attitudinal ambivalence (S. B. Katz, 1972; Priester & Petty, 1996), the sense of internal conflict without any clear existence of positivity and negativity is a puzzle because it suggests that evaluative conflict is not necessary for feelings of ambivalence to arise. In this chapter, I show how Schwartz's (1992) model and the evidence in the prior chapters can be used to predict the emergence of this kind of ambivalence.

6.3 Concept of Ambivalence

The concept of “ambivalence” is defined in the lexicon as “the coexistence in one person of contradictory emotions or attitudes (as love and hatred) towards a person or thing” (e.g., Online Oxford English Dictionary). Similarly, in psychology, people are described as being ambivalent when their evaluations or beliefs about an attitudinal object are in conflict (Alvarez & Brehm, 1995; Eagly & Chaiken, 1993; Zaller & Feldman, 1992). Some researchers have argued that feelings of ambivalence are a frequent and important characteristic of people's social experiences because “most people possess opposing considerations on most issues, that is, considerations that might lead them to decide the issue either way” (Zaller & Feldman, 1992, p. 585). Consistent with this view, the concept of ambivalence has a long history in psychological, sociological, and cultural theories (Kaplan, 1972; Otnes, Lowrey, & Shrum, 1997; Scott, 1969). In clinical psychology, for example, the term ambivalence has been used in descriptions of neurotic (Freud, 1994) and schizophrenic people (Bleuler, 1950; Meehl, 1962) and to describe conflict between the coexistence of hate and love (Freud, 1952; Kris, 1984). In sociology, ambivalence has become an important construct in research on multiple social roles (Banton, 1965; Znaniecki, 1954, 1965) and family relationships (Connidis & McMullin, 2002a, 2002b;

Luscher, 2002; Pillemer & Sutor, 2002). In cultural studies, the concept of ambivalence has been highlighted in investigations of conflicts between cultural values (Hajda, 1968). The concept of ambivalence has also received a great deal of attention from political, public opinion, and social psychological research on diverse issues, such as capital punishment (McGraw & Glather, 1994), abortion (Alvarez & Brehm, 1995; Schnell, 1993), homosexuality (P. R. Brewer, 2003; Lewis & Rogers, 1999), racial groups (I. Katz & Hass, 1988), affirmative action (I. Katz & Hass, 1988), social welfare policies (McClosky & Zaller, 1984), and work-family trade-offs (Carlson & Kacmar, 2000; Perrewe et al., 1999).

Across these diverse contents, research has treated ambivalence as being the presence of both favourable and unfavourable components of an attitude. This consensus is also present in social psychology, where ambivalence has been regarded as an approach-avoidance conflict about a goal object (Emmons, 1996) or a mixed positive and negative reaction to an attitude object (Olson & Maio, 2003; Wegener, Downing, Krosnick, & Petty, 1995). That is, the main shared characteristic for almost all definitions is the presence of conflicting positive and negative elements of attitudes toward an attitudinal object (Cacioppo, Gardner, & Berntson, 1997; Priester & Petty, 1996; Sparks, Conner, James, Shepherd, & Povey, 2001). This conflict might be either between positive and negative beliefs (cognitive ambivalence), between positive and negative feelings (affective ambivalence), or between positive and negative behaviours; it may also occur between beliefs, feelings, and behaviours that evaluatively conflict (e.g., cognitive-affective ambivalence) (Maio, Esses, & Bell, 2000; Thompson, Zanna, & Griffin, 1995).

Building on this conceptualization, most research has utilized measures that directly measure positive and negative elements of respondents' attitudes (Priester & Petty, 1996). Using this approach, social psychological research has revealed that people can feel ambivalence toward minority groups (Jost & Burgess, 2000; I. Katz & Hass, 1988; Maio,

Bell, & Esses, 1996), social relationships (Fincham & Linfield, 1997; Fingerman, Hay, & Birditt, 2004; Maio, Fincham, & Lycett, 2000; Willson, Shuey, & Elder, 2003), gender (Feather, 2004; Glick & Fiske, 1996, 2001), consumer behaviour (Jonas, Diehl, & Bromer, 1997; Otnes et al., 1997), and various specific individual and social aspects of life (Conner, Sherlock, & Orbell, 1998; Craig, Kane, & Martinez, 2002; Feldman & Zaller, 1992). In addition, research using this approach has found that ambivalence in these contexts is an important property of attitudes. Ambivalent attitudes tend to be less stable (Armitage & Conner, 2000; Bassili, 1996), weaker predictors of behaviour (Armitage & Conner, 2000; Conner, Povey, Sparks, James, & Shepherd, 2003; Moore, 1973, 1980; Sparks, Hedderley, & Shepherd, 1992), and less accessible from memory (Bargh, Chaiken, Govender, & Pratto, 1992; Tourangeau, Rasinski, Bradburn, & D'Andrade, 1989). In addition, ambivalence causes people to closely scrutinize attitude-relevant information (Jonas et al., 1997; Maio, Bell et al., 1996). Researchers have suggested that these findings imply a negative relation between ambivalence and attitude strength (Armitage & Conner, 2000; Bromer, 1998; Thompson & Zanna, 1995), and this potential effect makes it important to uncover predictors of ambivalence.

Nevertheless, researchers examining the predictors of ambivalence have also recognized the importance of distinguishing between the presence of conflicting evaluative associations with an attitude object and actual feelings of ambivalence (McGregor, Newby-Clark, & Zanna, 1999; Newby-Clark, McGregor, & Zanna, 2002; Priester & Petty, 1996). Some measures of ambivalence assess the former, potential ambivalence, by combining the people's separately rated positive and negative reactions to the attitude object. In contrast, other measures assess the latter, felt ambivalence, by asking people to rate the extent to which their feelings are conflicted (affective component), mixed (cognitive component), and indecisive (conative component) (Kaplan, 1972; Pillemer & Sutor, 2002; Priester &

Petty, 1996, 2001; Tourangeau et al., 1989). In theory, potential ambivalence is an important source of the feelings of ambivalence. Yet, potential ambivalence is only moderately correlated with felt ambivalence (Priester & Petty, 1996).

It is now clear that there are diverse sources of high felt ambivalence. For example, high perceived discrepancy between an individual's attitudes and the attitudes of people who are important to the individual is a general source of felt ambivalence (Priester & Petty, 1996, 2001). Researchers have also found that some personality characteristics predict the tendency to possess ambivalence across diverse issues. That is, ambivalence is more likely among people who are low in need for cognition, high in personal fear of invalidity (Thompson & Zanna, 1995), and high in the hesitation component of state orientation (Kuhl, 1994). Other potential sources of ambivalence have been revealed specifically in the domain of social relationships (Kaufman & Uhlenberg, 1998; Luescher & Pillemer, 1998; Luscher, 2002). For example, Pillemer and Sutor (2002) showed that mothers felt more ambivalence toward children who frequently required assistance.

In all of these instances, however, it is likely that the source of the felt ambivalence involves evaluative conflict of some sort. For example, feelings of ambivalence occur when a person likes someone whom others dislike, a high need for cognition causes people to detect both positive and negative attributes, or specific social needs cause positive and negative attributions to the needy. As noted at the beginning of this chapter, I expect that there are instances when feelings of ambivalence are not easily attributed to such evaluative conflict.

6.4 Values and Ambivalence

The potential for an alternative basis of felt ambivalence is made evident by considering a variable that researchers have long cited as being a vital origin of

ambivalence: value conflict (P. R. Brewer, 2003; Eagly & Chaiken, 1993; I. Katz & Hass, 1988). Conflicts between values have been highlighted as a source of ambivalence toward abortion (Alvarez & Brehm, 1995; Craig et al., 2002), homosexuality and gay rights (P. R. Brewer, 2003; Cotten-Huston & Waite, 2000; Lewis & Rogers, 1999), political candidates (Feldman, 1988), racial minorities (I. Katz & Hass, 1988), and obesity (Crandall, 1994). Moreover, some researchers have suggested that value conflict is an enduring and cultural source of political ambivalence. Specifically, some researchers have argued that, because of “value pluralism” in America, people tend to embrace conflicted values (P. M. Sniderman & Tetlock, 1986; Tetlock, 1986), including achievement and equality (Lipset, 1979), capitalism and democracy (McClosky & Zaller, 1984), or freedom and equality (Rokeach, 1973). Value conflict has even been reported as the source of ambivalence toward issues that are not strongly controversial. For example, researchers have found that recent health concerns about meat have caused people to feel ambivalence toward meat because of conflicts between health and pleasure (Berndsen & van der Pligt, 2004; Povey, Wellens, & Conner, 2001).

Nonetheless, this research has not directly examined (a) causal effects of values on feelings of ambivalence (i.e., simple correlational designs have been used), (b) the effects of conflicts between diverse sets of values, or (c) feelings of ambivalence when an issue or object promotes two values, rather than promoting one value while threatening the other. Katz and Hass (1988) provide studies that were closest to fulfilling all of these goals, though not completely. Katz and Hass (1988) suggested that racial ambivalence in American culture is rooted in conflicting values. In their first study, participants completed a questionnaire assessing pro-black attitudes and one assessing anti-black attitudes and a questionnaire assessing a humanitarianism-egalitarianism ethic and a protestant work ethic. Analysis of participants’ responses indicated that humanitarianism-egalitarianism values

were positively correlated with the pro-black attitudes and negatively correlated with the anti-black attitudes, whereas protestant ethic values positively correlated with anti-black attitudes and negatively correlated with pro-black attitudes. In their second study, they predicted and found that priming humanitarianism-egalitarianism values increased pro-black attitudes and priming protestant ethic values increased anti-black attitudes. These findings are consistent with the notion that conflicting values elicit feelings of ambivalence, but these feelings of ambivalence were not examined in their studies. Moreover, positive attitudes toward Blacks were conceptualized as promoting human-egalitarianism, while threatening the work ethic (because of a stereotype of Blacks as being lazy). Thus, ambivalence was not a product of the promotion of both sets of values.*

Another important limitation is that Katz and Hass (1988) focused on a specific pair of values. Research on basic human values has made clear that numerous concepts can be identified as values, with Schwartz's (1992) model describing 56 values. Moreover, Schwartz's (1992) model reveals a systematic pattern of relations between these values that suggests variation in the extent to which they can conflict, and the prior chapters provide important novel demonstrations of these relations. The large number of values, the diverging motives that they serve, and the variation in the latent motivational conflicts between them make it vital that the effects of value conflict be examined across a wide range of values that vary in the motives they fulfil. In particular, the circumplex structure

* A study by Feather (2004) examined correlations between diverse values and subscales (components) of measures purposing to examine ambivalence toward men and women, but did not examine causal effects or actual ambivalence scores.

should help to reveal when priming an object with a pair of values will elicit feelings of ambivalence and when it will not. When an object is seen as promoting two compatible values (e.g., equality and social justice), felt ambivalence should be low. In contrast, when an object is seen as promoting two conflicting values (e.g., world at peace and influential), felt ambivalence should be high. Such results would provide an important caveat to previous assertions about value conflict and ambivalence, because they would show that some values are more easily regarded as being sources of conflict than are others. That is, they would show how feelings of ambivalence can arise even when an object is associated only with positive attributes (e.g., by promoting two values), provided that the motivational fit between the attributes is weak.

6.5 Experiment 6

Experiment 6 tested the hypothesis that the latent motivational conflict between a pair of values determines whether their common association to an attitude object elicits feelings of ambivalence. This experiment tested whether people feel more ambivalence toward a person who possesses values that serve conflicted motives than to a person whose values serve congruent motives. Based on Schwartz's (1992) theory about the structure of universal values, I predicted a positive linear correlation between value conflict and felt ambivalence toward an individual. In other words, participants should possess more ambivalence toward a person who possesses two motivationally distant (conflicting) values as guiding principles in his or her life than toward a person who possesses two motivationally congruent (compatible) values as guiding principles in his or her life. I also predicted participants' ambivalence toward the persons who possess two moderately distant values (unrelated values) in Schwartz's model, somewhere between ambivalence toward the persons who possess highly compatible or highly opposite values.

6.5.1 Method

Participants

Forty-two undergraduate students (29 female and 13 male) at Cardiff University participated for course credit.

Procedure

Participants were tested individually. They were told that the study included two different parts. First, they were asked to read a list of 48 values from the Schwartz (1992) Value Survey with the adjacent definitions of the values. As recommended by Schwartz (1992), participants rated the importance of each value to them using a scale from -1 (opposed to my values) to 7 (extremely important).

In the second portion of the study, participants were shown 24 trials on the computer screen. Each trial included the sentence “The values below are the most important guiding principles in the life of a person you know. How ambivalent or conflicted do you feel toward him/her?” After five seconds, a pair of values was presented on the computer screen, side-by-side. I manipulated the motivational distances between the values in each pair. As shown in Table 6.1, the values in some trials served the same or similar motives (distances 0 and 1); the values in other trials served orthogonal motives (distances 2 and 3) and opposed motives (distances 4 and 5). Participants then rated their ambivalence toward each target individual using one of five keys on the computer keyboard from 0 (not at all ambivalent) to 4 (extremely ambivalent). Prior to completing these ratings, participants were told that ambivalence referred to coexistence of both positive and negative emotions or attitudes (love and hatred) towards a person or thing. After completing this task, participants were probed for suspicion and debriefed.

Table 6.1

Value Pairs that were Presented in Each Trial

Value 1	Domain 1	Value 2	Domain 2	Domain distance
Authority	Power	Wealth	Power	0
Creativity	Self-direction	Daring	Stimulation	1
Obedient	Conformity	Helpful	Benevolence	2
Having fun	Hedonism	Clean	Security	3
Successful	Achievement	Moderate	Tradition	4
Detachment	Tradition	Self-discipline	Conformity	1
Exciting life	Stimulation	Wisdom	Universalism	2
Healthy	Security	Happiness	Hedonism	3
Social recognition	Power	Curious	Self-direction	4
Ambitious	Achievement	Loyal	Benevolence	5
Broad-minded	Universalism	Social justice	Universalism	0
Family security	Security	Politeness	Conformity	1
Stimulating life	Stimulation	Capable	Achievement	2
Humble	Tradition	Independent	Self-direction	3
Forgiving	Benevolence	Pleasure	Hedonism	4
Enjoying life	Hedonism	Varied life	Stimulation	1
Honour parents	Conformity	Social power	Power	2
Freedom	Self-direction	Devout	Tradition	3
Equality	Universalism	National security	Security	4
Honest	Benevolence	Influential	Achievement	5

6.5.2 Results

In a regression analysis, I entered (a) a dummy code to represent participant ID, (b) the average importance of both values, and (c) distances between value domains as predictors of participants' ratings of ambivalence toward each target person. As expected, the results indicated a significant negative linear effect of value importance on feelings of ambivalence, $\beta = -.35$, $t(797) = 10.22$, $p < .001$. More important, felt ambivalence was higher when the value distance was high than when the value distance was low, $\beta = .11$, $t(796) = 3.47$, $p < .001$. That is, participants felt more ambivalent toward individuals who possessed motivationally incongruent values than toward individuals who possessed motivationally congruent values.

In a further analysis, I entered (a) a dummy code to represent participant ID, (b) the importance of the first values (values presented in left-side of the screen), and (c) the importance of the second values (values presented in right-side of the screen) as predictors of participants' ratings of ambivalence toward each target person. The results indicated significant negative linear effects of the importance of the first value, $\beta = -.23$, $t(797) = 6.65$, $p < .001$, and the second value, $\beta = -.26$, $t(796) = 7.63$, $p < .001$, on the felt ambivalence toward the target person. That is, ambivalence was lower when the participant considered each of the target's values to be important than when the participant considered each value to be unimportant.

I also entered a dummy code to represent participant ID and the absolute value of the difference between participants' ratings of the importance of the values in each pair as predictors of participants' felt ambivalence toward the target person. As expected, participants felt more ambivalence toward the target person when the values were of different levels of importance to them than when both values were of similar importance, β

= .20, $t(797) = 5.95$, $p < .001$. Thus, ambivalence was higher when the target individual endorsed one value that was highly important to the participant and another that was much less important than when the target individual endorsed two values that were equally important or unimportant.

Finally, I entered (a) a dummy code to represent participant ID, (b) the importance of the first values, (c) the importance of the second values, (d) the absolute value of the difference between ratings of the importance of the values in each pair, and (e) distances between value domains as predictors of participants' ratings of ambivalence toward each target person. Consistent with the results reported in the prior paragraphs of this section, the results indicated significant negative linear effects of the importance of the first value, $\beta = -.23$, $t(797) = 6.65$, $p < .001$, and the second value, $\beta = -.25$, $t(796) = 7.63$, $p < .001$, on the felt ambivalence toward the target person. The results also revealed significant positive linear effects of the absolute value of the difference between ratings of the importance of the values on the felt ambivalence toward the target person, $\beta = .09$, $t(795) = 2.76$, $p < .006$. More important, as expected, the results revealed an independent significant linear effect of value distance on feelings of ambivalence after controlling all other predictors, $\beta = .09$, $t(794) = 3.02$, $p < .003$.

6.6 Discussion

The main purpose of this research was to reveal how feelings of ambivalence can arise when an object possesses attributes that are positively evaluated, but serve conflicting motives. To reveal this effect, I manipulated whether individuals were described as possessing values that conflicted or are congruent, based on Schwartz's (1992) model of values. The results revealed that participants felt more ambivalence toward persons whose values served conflicting motives than toward persons whose values served congruent

motives. Not only does this result provide the first direct test of causal effects of values on felt ambivalence toward the value-relevant issues, it extends past research on value priming by showing that a range of values can elicit feelings of ambivalence. Crucially, however, this impact is more likely when the values that are paired with an object serve conflicting motivations, as denoted in Schwartz's (1992) circumplex model. Thus, it is important to model the effects of values on feelings of ambivalence while considering the latent motivational relations between the values.

The pattern of results provide further support for Schwartz's (1992) assumption that the circumplex structure reflects motivational compatibilities and conflicts among values. In other words, if value conflict is a main source of felt ambivalence and if the most distant values in the circumplex structure are the most conflicting values, then attribution of the most motivationally incongruent values to a known person should cause respondents to feel the most ambivalence, whereas attribution of the most compatible values to a known person should cause them to feel the least ambivalence. The results supported Schwartz's model by revealing evidence for this prediction.

The results also support prior speculation that conflict between values is one of the main sources of the felt ambivalence (Basow & Johnson, 2000; P. R. Brewer, 2003; I. Katz & Hass, 1988). Although past research has revealed the impact of value conflict on felt ambivalence toward a wide range of individual and social aspects of human life (e.g., abortion, homosexuality, minority groups, politics, and food), the results have been derived from studies on relations between one or a couple of values and ambivalence toward the value-relevant object. The inclusion of a broader set of values made possible the detection of more complete pattern of effects on ambivalence. In essence, the present experiment return research on ambivalence to its origins, but while incorporating contemporary insights about the diverse nature of values and their interrelations.

Several other issues might be addressed through this approach. One issue is how value conflict and compatibility affects the resultant strength of attitudes. For example, the belief that an object or person promotes of congruent values may cause people's attitudes toward the object to be more stable and resistant to change. In fact, value congruence might import special kind of strength, because of the extent to which people perform extreme actions to promote values because of their centrality to the self (Murray, Haddock, & Zanna, 1996). That is, value congruence might increase commitment to behaviour that is consistent with the resultant attitude, over and above the effect of value congruence on feelings of ambivalence or other indices of attitude strength (e.g., attitude certainty). Future research could address this issue.

These results also possess implications for understanding attitudes toward political issues. As mentioned earlier in this chapter, many political issues that are raised in electoral campaigns are rooted in conflicting values (e.g., abortion, social welfare, and euthanasia). If some important political attitudes are rooted in opposing values, what could candidates or parties do to get as much support from voters as possible? If they focus on one set of values, they risk losing support from people who support alternative values. Furthermore, the research in this chapter indicate that politicians would also make people ambivalent if they focus on opposing values. My results indicate that more support would be gained if campaigns focus on a broader set of congruent values, even if they are less relevant to the issues.

The results could also have implications for romantic relationships. As value congruence shapes attitudes toward a person, it may shape feelings in a romantic relationship. Value congruence between partners could promote more relationship satisfaction than incongruence, because the congruence would cause partners to pursue activities that have common aims. Alternatively, value congruence could increase feelings

of compatibility and entitativity within the relationship over and above the effects on common goal pursuit. Direct evidence is needed to test whether values exert an effect independently of such common pursuits.

Overshadowing all of these issues, there is the more general problem of how conflicts between values affect the interests of people and society more generally. These conflicts and the necessity of resolving them is well-described by Schumacher (1977). He stated that “In the life of societies there is the need for justice and also the need for mercy.... Only a higher force -wisdom- can reconcile these opposites. ... Societies need stability and change, tradition and innovation, public interest and private interest, planning and laissez-faire, order and freedom, growth and decay: everywhere society’s health depends on the simultaneous pursuit of mutually opposed activities or aims.” (1977, p. 142). Yet, as the experiment reported in this chapter has found, opposed values elicit feelings of ambivalence when a person seems to pursue them simultaneously. Can we learn to use this ambivalence as a way to trigger better thought about how to pursue the values? Perhaps ambivalence already primes people to scrutinize such methods, similar to the way in which ambivalence causes people to scrutinize new information relevant to their attitudes (Jonas et al., 1997; Maio, Bell et al., 1996).

To summarize, this study revealed a clearer picture of the effects of values on felt ambivalence by providing important evidence for the effects of motivational compatibility and conflict on feelings of ambivalence. The results also provided strong support for Schwartz’s (1992) theory of values. Overall, the findings make clear that there is at least one social psychological reason for expecting to feel ambivalence toward the perfect person, as noted at the beginning of this chapter. When a person appears to have motivationally incongruent aspirations, a sense of unease may be inevitable.

Chapter 7

General Discussion and Conclusions

7.1 Overview

This chapter provides a brief review of the findings from all six experiments, and then discusses the implications of the findings for a variety of real-life issues, such as life satisfaction, educational systems, psychotherapy, and political conflicts. The chapter also provides suggestions for future research. These suggestions focus on the complex influence of competitive inter-value relations, effects of value reasoning, spirituality, and implicit and explicit relations between values.

7.2 Recapitulation

Human beings' lives are inextricably interweaved with basic human values because values, on the one hand, are rooted in the human beings' basic needs (Rokeach, 1973; S. H. Schwartz, 1992, 1994; S. H. Schwartz & Bilsky, 1990) and, on the other hand, serve as standards to guide individuals' lives (Pitts & Woodside, 1983; Rohan, 2000; Rokeach, 1973; S. H. Schwartz, 1992). The dominant role of values in people's lives influences almost all sciences related to human beings and has encouraged scientists to try their best to build up the best possible knowledge of human values. Despite the long history of value related research, however, the subjective nature of values is the main obstacle to reaching a fully accepted theory of values.

As mentioned in Chapter 3, Schwartz's (1992) model of values is one of the contemporary and the most widely used theory of values. Like other theories, Schwartz's theory admits the positive nature of values. Unlike other theories, Schwartz's theory emphasises conflicts and compatibilities among values in a dynamic circumplex structure.

In other words, based on Schwartz's theory, a pair of values, despite their positive nature, can serve similar, unrelated, or even opposing motives. That is, they can be motivationally highly related, unrelated, or opposed. The notion that values, despite their positive nature, could hold opposing positions in the individuals' value system, yields a new perspective in which values can be seen not only as the source of resolving problems, but also as the possible sources of problems.

The far-reaching implications of the model make it important to test it as fully as possible. The research in this thesis provided completely new and more difficult tests of the model by (a) examining motivational conflicts and compatibilities among values in memory, and (b) examining the behavioural and attitudinal consequences of this motivational structure. The results of six experiments provided strong support for the motivational compatibilities and conflicts in a dynamic circumplex structure (S. H. Schwartz, 1992). The experiments described in Chapter 4 provided evidence for the latent structure of values in memory. That is, these experiments revealed that the storage of values in memory reflects the motivational conflicts and compatibilities postulated by Schwartz. Put simply, if (a) distances between values in the circumplex structure represent their motivational relations (i.e., the more distant values are, the more motivationally conflicted they are), (b) concepts are stored in memory based on their semantic relations (Collins & Loftus, 1975; Meyer, 1970; Quillian, 1969), and (c) priming a concept facilitates retrieval of related but not unrelated concepts (Collins & Quillian, 1969; Gold & Russ, 1977; Thomsen et al., 1996), then people should judge the conceptual relations between pairs of the least distant values (serving similar motives) and the most distant values (serving opposite motives) quicker than pairs of the moderately distant values (serving unrelated motives) (found in Experiment 1). This is precisely what I reported in Chapter 4.

Moreover, this chapter described how motivational conflicts and compatibilities affected response times over and above semantic relations.

The experiments described in Chapter 5 supported the circumplex structure of values from a different perspective. Given that values are interrelated in the circumplex structure and that experimental interventions (i.e., value self-confrontation) can induce changes in a value (Rokeach, 1973), then experimentally induced change in a specific value or values should cause changes throughout the whole value system. In other words, if an individual who has gone through the process of value self-confrontation, increases the priority of one or some specific values (e.g., increasing the priority of self-enhancement values), the person should also reduce the priority of those of his or her values that serve opposite motives (e.g., decreasing the priority of self-transcendence values), but should not change the priority of unrelated values (e.g., openness to change values). This was exactly the pattern obtained in Experiment 4. Experiment 5 extended the findings of Experiment 4 by examining the influences of value priming on behaviours that affirm the primed value and opposed values. If values are interrelated as strong predictors of behaviour, and priming a concept (value) increases the effect of the value on behaviour, than priming a value should increase the likelihood of behaviour supporting the value and decrease the likelihood of behaviours that affirm the opposite values. Experiment 5 obtained support for this prediction. Together, Experiments 4 and 5 showed that value change and value priming have dynamic effects on the whole value system.

Chapter 6 provided a more practical and general demonstration of the importance of the value system by examining the influence of value conflicts on feelings of ambivalence. Value conflicts play an important role in feelings of ambivalence toward a variety of social issues (e.g., abortion, racial minorities, and homosexuality). Given Schwartz's proposal that the most distant values in the circumplex structure are the most conflicting values,

Experiment 6 examined the influence of attributing conflicting values to a known person on feelings of ambivalence toward the person. As expected, the results supported the circumplex model of values by revealing that people feel more ambivalence toward a person who endorses more distant values in the structure (values that serve conflicting motives) than toward a person who possesses less distant values in the structure (values that serve similar motives).

7.3 Implications and Future Research

The experiments on the latent structure of values in memory reinforce the importance of examining many values simultaneously in value-behaviour and value-attitude relations. Focusing on a single value as the predictor of a specific behaviour or attitude may misguide researchers, because priming a value should activate other related and opposed values rather than the value alone. When a person is primed with a specific value, a collection of opposing values are in competition to conquer his or her cognition and motivation for a certain period of time. Therefore, social psychological researchers should be aware that priming people with a single value also activate or inhibit the expression of other values. The net effects of this network of activation may be complex and dependent on other factors, such as salient social norms, personal cognitive style, and culture. Further study is necessary to uncover the complex effects of interrelated values on value-related behaviour and attitudes.

The experiments on inter-value relation in memory are also useful for helping to establish an implicit measures of values. Despite their widespread use for other concepts, the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998) and other similar implicit measures (De Houwer, Crombez, Baeyens, & Hermans, 2001; De Houwer & Eelen, 1998) are not yet sufficient tools for measuring human values implicitly. These

kinds of implicit measures require both positive and negative concepts as attitude objects, whereas human values are all positive for most individuals. The implicit structure of values in memory that was revealed in the present study could be used to structure “opposing poles” in the structure of existing implicit measures. For example, one version of the IAT could present conservation values and openness values as competing categories, which must be mapped in to the labels “important” versus “unimportant”. The data helps to bolster the notion that opposing values in the Schwartz model do indeed activate opposing motives, which could be useful for an implicit measure of values. Further research should examine this issue.

As mentioned earlier, an abundant amount of research has revealed the influence of values on feelings of satisfaction with life (Casas et al., 2004; Oishi, Diener, Lucas et al., 1999; Richins & Dawson, 1992; Richins & Verhage, 1987). The effects of value conflict on feelings of ambivalence may be relevant to predicting feelings of satisfaction with life. That is, if the attribution of opposing values to a person causes people to feel ambivalence toward the individual, then this effect could be applicable to the people themselves: people who possess motivationally conflicting values, even values that are highly positively evaluated, might feel ambivalence toward themselves and their goals in their lives. This ambivalence might have a negative influence on their feelings of life satisfaction, or might cause them to have at least a feeling of ambiguity and uncertainty about satisfaction with their lives. Further research is necessary to address this issue.

The present research also introduced a new technique of value self-confrontation in which the role of peer group is clearly highlighted. That is, the value self-confrontation techniques that have been used previously gave participants feedback that their values and their peers’ values are selfishly biased (Rokeach, 1973). It could be argued that the past value self-confrontation technique does not help to understand whether participants

perceive their values as being selfish, their peer values as being selfish, or a combination of both. In the new technique instead, the feedback makes clear that participants' values are different from their peers (or an important reference group). Therefore, the perception of being different from peer group elicits the feelings of dissatisfaction with their values, which in turn causes participants to change their values. These findings could have important implications for education systems. If peer groups' (reference groups') standards are so important that people change their own values to reach the group's standards, educational experts and planners could use this opportunity to highlight and demonstrate peer's values that are culturally wanted. For example, to promote the pursuit of "health", health advocates could highlight widespread increases healthy behaviour, rather than make salient an unhealthy epidemic (see also Cialdini, 2003).

It is interesting to consider implications for personality studies. Several studies have revealed relations between personality traits and personal values (Aluja & Garcia, 2004; Bilsky & Schwartz, 1994; Heaven, 1993; Olver & Mooradian, 2003; Roccas et al., 2002). Research also suggested that values are assimilated within the personal self-concept (M. B. Brewer & Roccas, 2001), have an essential role in the formation of personal identity (Hitlin, 2003), and can protect individuals' self-esteem (Mayton et al., 1994). The degree of incongruency between personal values may be a moderator of personality traits consistency. That is, individuals who possess more congruent values more likely have higher self-esteem and stronger personality and, as a result, would be more consistent and trait-like in their behaviour. Such evidence would help to address a long-standing issue about individual differences in traitedness within personality psychology.

Also of interest, the results of studies on value changes and attitudinal consequences could have implications for clinical psychology and psychotherapy. That is, as emphasized by Rokeach (1973, p. 333):

“the aim of psychotherapy can be conceptualized, at least in part, as an attempt to bring about value change or value reduction in a client or patient. Human conflicts, anxieties, addictive or compulsive behaviour, and difficulties in interpersonal relations (Szasz, 1961) can all be assumed to leave traces in the client’s or patient’s value system (and also in the value systems of others with whom he interacts). If therapy is to be successful, it must surely be manifested as changes or rearrangements of value priorities and as changes in the degree of integration of the client’s or patient’s value system.”

So, if feelings of ambivalence can explain neuroticism (Freud, 1994) and schizophrenia (Bleuler, 1950; Meehl, 1962), and if conflicting values are an important antecedent of feelings of ambivalence (P. R. Brewer, 2003; Eagly & Chaiken, 1993; I. Katz & Hass, 1988), then a useful way of treating psychological disorders rooted in ambivalence would involve helping patients to reduce the motivational conflicts between their important values or to change the priority of their values to re-establish a more congruent value system, which in turn helps them to regain their mental health.

As a more general (and more speculative) level, the findings could be a warning for the people and organizations that try to make the world more peaceful. The reason for this warning is that the political-related values that serve opposite motives seem vulnerable to misuse by politicians in order to justify their selfish political aims in a national and international base. For example, many developing countries suffer from a long-standing political debate on conflicts between national security and freedom of speech and free elections. On one hand, reformist parties that are trying to establish and extend democracy emphasise freedom of speech and individuals’ rights. On the other hand, the dominant conservative parties emphasise national security as the main political priority of the

countries even if, in some cases, it violates individuals' rights. They also accuse reformist parties of encouraging uprising and putting the countries in danger of disturbance, separation and occupation by foreign forces. Both groups of parties have their extremist supporters who are ready to sacrifice themselves for the policies that, according to them, affirm the most wanted and holy values. Now, it is apparent that the debate has taken root in many wealthy nations since the terror attacks on the USA.

The important and relevant feature of these debates, is that they revolve around values that are held up as opposing each other in the circumplex model. It may be the case that the debate is prevalent and intransigent partly because of the perceived incompatibility between security and freedom. Here, it is important to recognize that Schwartz's (1992) model deals with psychological compatibilities and conflicts, which may or may not be real. For instance, proponents of increased trade ties would argue that these links promote greater diversification and interconnection, which decreases the motivation and ability to engage in conflict, while promoting greater choice for people. In other words, these individuals argue that there is no real zero-sum tradeoffs between security and freedom—they are perfectly compatible.

An interesting issue is whether attempts to present such points of view can reshape the psychological structure of values for people. In addition, would such attempts decrease the vigour with which people strive to defend some values, ignoring all others? That is, despite the abundant support for the explicit circumplex structure of values (Sagiv & Schwartz, 2000) and the evidence that support latent inter-relations between values in memory (the present research), people might be induced to organize values in a different structure and, as a result, show a different pattern of value inter-relations. For example, this restructuring may occur if people are asked to reason about the similarities between values that hold opposite positions in Schwartz's model, or if they are asked to read a passage that

highlights the similarities between these values. To address this issue, in a follow study, participants could be asked to read a passage or write their reasons about the similarities between the values that hold opposite positions in Schwartz's model (the most distant values) and then go through one of the experiments described in Chapter 4.

A related issue is that, according to Schwartz (1992), the circumplex model of values is a universal model that covers all cultures and individuals of both genders and all ages. Nonetheless, almost all of the studies on Schwartz's model have been conducted in western countries and especially in university samples, so it may not cover eastern cultures (especially Muslim countries) and samples among middle aged and elderly people. To address this argument, it is necessary to conduct a follow study in samples of eastern cultures and people of different ages and different educational levels.

Research has revealed high correlations between spirituality and religiosity (MacDonald, 2000), personality (MacDonald, 2000; MacDonald & Holland, 2003; Piedmont, 1999), well-being and mental health (Comstock & Partridge, 1972; Harris, Thoresen, McCullough, & Larson, 1999; McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000), and values (Fraser, 2004; Richards, Rector, & Tjeltveit, 1999; Sharp, 2005). The results of an unpublished study (by the author) has also revealed that the people with stronger spiritual beliefs and more spiritual experiences feel more happiness in their lives than non-spiritual people. The results also revealed that people with stronger spiritual beliefs do not perceive values such as excitement, pleasure, and happiness as being opposed to values such as devout, politeness, and humble. So, spirituality might be a moderator of motivational conflicts and compatibilities between values in the circumplex structure, and it is worthwhile to compare explicit and implicit structure of values of people with spiritual beliefs and spiritual experiences with the people who do not believe in spirituality.

Finally, most people hold values without strong cognitive support (Maio & Olson, 1998). Thus, it would be interesting to test whether encouraging the development of cognitive support for values cause people to see opposing values in the circumplex structure as more conflicted or compatible. The former effect would increase the strength of the circumplex structure, while the latter effect would weaken the structure. Because some evidence indicated that people tend to justify values by appealing to other values (Frost, 2005), I expect that both hypotheses are plausible.

7.4 Limitations

The main limitation of the experiments reported in this thesis is the general limitation of experimental designs: external validity. Across all of the experiments, there was a limited range in participants' age, education, and culture. There was also a possibility of respondents' participation in other studies on values. In addition, some participants may have felt low motivation because of payment by mere course credit. All of these factors hinder the generalization of findings.

Other limitations to external validity vary across experiments. For example, the results of Experiment 4 could have been affected by pre-test sensitization. That is, participants' rankings of values in the pre-test might have sensitized them to the structure of values. Therefore, their performance in the post-test could have been moderated by their awareness about the structure of values, whereas people's judgments of values and value relevant behavior in ordinary, daily situations is unconscious and sudden.

In addition, the effects of priming values on value-relevant and opposing behaviors in Experiment 5 were obtained in a controlled situation, whereas human behavior in normal social situations is affected by numerous uncontrolled variables. In other words, although the effects of primed values on opposing behaviors in Experiment 5 strongly support the circumplex structure of values, the effects may not be as clear and straightforward in real

world settings, where numerous factors affect behavior (e.g., social norms, behavioral control).

Also, the effects of attributing conflicting values to a fictitious person on feelings of ambivalence toward the person (Experiment 6) was found in a hypothetical, imagined situation. In contrast, feelings of ambivalence toward a real person who possesses conflicting values may be moderated by pre-existing emotions and attitudes toward the person, as well as by the person's salient values.

7.5 Conclusion

Across the experiments reported in this dissertation, the circumplex structure of values was investigated and explained by studying the relations between values in memory and by investigating behavioural and attitudinal consequences of these motivational conflicts and compatibilities. The evidence across both approaches provided consistent support for the hypothesis that there is a systematic pattern of motivational conflicts and compatibilities between values, consistent with Schwartz's (1992) circumplex structure. I have described how the methods used were novel and important and how the results have broad implications for social psychological theory and application. This thesis reveals the vital role of competitive inter-value relations in understanding the effects of values on value-related attitudes and behaviour, and also illustrates the varied attitudinal and behavioural consequences of value conflict on individual, societal, and worldwide issues.

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