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Basic Human Values in the Workplace



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ABSTRACT

This study was carried out in a Finnish steel company. It had two main goals. First, the structure of values postulated by S. H. Schwartz's value theory was examined among the company employees (N=1314). The values of manual workers were of special interest, given that people with little education have seldom been studied in value research. Second, the association of value priorities with attitudes towards organisational change and knowledge sharing were examined both at the individual and at the workplace level.

Value priorities were measured by means of the 40-item Portrait Value Questionnaire (PVQ). Multidimensional scaling and transformation analysis were used to test the universality of the value structures among manual workers and white-collar workers. The validity of the instrument was confirmed by comparing the steel worker sample with Finnish university student samples. The value structures of the white-collar employees and of the manual workers were similar and in line with Schwartz's model with the exception of security, which was located within self-transcendence values in both groups.

The measures for attitudes towards organisational change and knowledge sharing were constructed for the present research by means of a qualitative study. Attitudes towards organisational change were weakly predicted by self-transcendence (+), tradition (-), and hedonism (-). Stronger results were obtained starting from the assumption that positive attitudes were the company norm and that conformity values partly

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determine whether attitude is guided by social norms or by other values. When the associations were examined separately for employees high on conformity on the one hand and those low on conformity on the other, the values largely failed to predict attitudes among the high conformity respondents, but among those low on conformity, universalism and benevolence were positively and power negatively associated with the attitudes. Interestingly, achievement predicted positive change attitudes among employees high on conformity, but negative change attitudes among those low on conformity. For knowledge sharing, self-direction predicted less favourable perceptions of change, while benevolence and conformity predicted more positive perceptions. Achievement was associated with sharing only when conformity was high. When mean scores for workplaces (N=19) were used, workplaces high on self-transcendence and conformity and low on self-enhancement values showed higher levels of sharing.

The sample was divided into three occupational environments: conventional, realistic, and enterprising. Differences between the environments were explained by age, gender, and education. Independently, no differences were found between the first two. An enterprising environment stood out as valuing power, self-direction, and achievement more than a realistic environment. For a realistic environment, tradition and hedonism values were more important than for an enterprising environment.

Keywords: values, value structure, change attitudes, knowledge sharing, occupational environments

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INTRODUCTION

If one asks a question, “Why are there values?” the reply must be: “Because social life would be impossible without them; the functioning of the social system could not continue to achieve group goals; individuals could not get what they want and need from other individuals in personal and emotional terms, nor could they feel within themselves a requisite measure of order and unified purpose.”

(Kluckhohn, 1954, p. 400)

Values represent what is important to human beings. All human groups develop norms and values (Williams, 1979). We bring along our values everywhere we go, including to the workplace. At the same time, the workplace and the people there influence our values and attitudes. We find that different groups in the workplace, such as occupational and age groups have different values. We face situations that demonstrate that every workplace shares knowledge differently, and we see that our co-workers may have attitudes towards organisational changes different from our own.

This study explores how S. H. Schwartz’s theory of values (1992, 1994a) may be used to describe the target organisation, a Finnish steel company. Although value is a frequently-used concept for both academics and practitioners of work and organisational psychology, there has been surprisingly little empirical literature on personal values in connection with organisational behaviour. Value is an important building block in the theories of organisational culture (e.g., Schein 1985, 1999) and in literature on cultural sensitivity in management and organisational

development in the global business environment (e.g., Hofstede, 1980). The present study contributes to building bridges between the value studies in social psychology and those in organisational psychology by exploring the role of personal values in an organisational context.

Schwartz's (1992, 1994a) theory specifies ten universal and motivationally distinct types of values and an integrated, two-dimensional structure that results from the conflicts and congruities among the values. The value structure has previously found support in samples among teachers and university students, but groups from other professions and/or with a low level of education have rarely been studied. I seek to fill in this gap with the present study by employing Schwartz's theory in a case study conducted in a Finnish steel company, where I also tested a new 40-item Portrait Value Questionnaire (PVQ) on various groups.

In addition to testing the applicability of Schwartz's theory to a sample of steelworkers, this study explores the effects of personal values on attitudes towards organisational change. Organisational changes always affect employees and their well-being by creating uncertainty and disruption (Ashford, 1988). Rush, Schoel, and Barnard (1995) found that the pressure to change causes stress and lowers the sense of job satisfaction. Change also arouses feelings of loss of territory and fear of failure, as members of the organisation are faced with new tasks (Coch and French, 1948). There are also individual differences in the way employees perceive and handle change situations (Ashford, 1988; Eby, Adams, Russell, and Gaby, 2000; Judge, Thoresen, Pucik, and Welbourne, 1999; Lau and Woodman, 1995). Most of the research in this area has focused on personality (e.g., Rush et al., 1995), leaving the effect of personal values on attitudes towards change untouched.

Finally, this study uses values to explain the workplace and individual differences in knowledge sharing. Shared knowledge has been shown to enhance team performance (Cannon-Bowers, Salas, and Converse, 1993; Mathieu, Heffner, Goodwin, Salas, and Cannon-

Bowers, 2000). Problems in the flow of information can also lead to inefficiency by giving rise to conflicts (Hofstede, 1998) and even to occupational accidents (Saari, 1984). Previous studies of values and knowledge sharing have addressed only organisation-specific goals, leaving the possible influence of personal values unaddressed.

The structure of the dissertation is as follows: In Chapter 1 the theoretical background to the study is discussed, in particular the value theory formulated by Schwartz (1992, 1994a) and empirical studies based on this theory. Chapter 2 introduces the research hypotheses. Chapter 3 describes the organisation selected for the case study, reports on the value survey and the construction of the new surveys, as well as describing participants and methods. Chapters 4-8 present the results and conclusions. Chapter 9 summarises the main findings and discusses them from theoretical, practical, and methodological points of view.

1 BASIC HUMAN VALUES

1.1. The basics of values

1.1.1. Defining values

In social-psychological value theories (e.g., Rokeach, 1979), the value concept is attached to a person who possesses values, not to an object which has a value. The interest is in the system of values within a culture and within individuals. In value subjectivism the focus is on the relative importance of values, not on the desired outcomes of these values.

Rohan (2000) offered a comprehensive review of value-related theory and research. Table 1 demonstrates that there is relative disagreement over what values are. Scholars have emphasised that values are internal states: principles (Kluckhohn and Strodtbeck, 1961; Schwartz, 1994a); beliefs (Rokeach, 1973; Schwartz and Bilsky, 1987); schemas (Feather, 1975); criteria (Williams, 1979; Schwartz, 1992; Hechter, 1993); standards (Kohn and Schooler, 1983); tendencies (Hofstede, 1980); goals (Schwartz, 1994a); or cognitions (Verplanken and Holland, 2002).

Table 1. *Value Definitions*

Scholars	Definition of value
C. Kluckhohn (1954)	A concept of the desirable, which influences the selection from available modes, means, and ends of action.
F. Kluckhohn & Strodtbeck (1961)	Value orientations are complex but definitely patterned (rank-ordered) principles.
Rokeach (1973)	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.
Feather (1975)	Abstract structures or schemas that can be represented as associative networks, with each central value linked to a set of attitudes and beliefs.
Williams (1979)	The criteria of desirability.
Kohn & Schooler (1983)	The standards of desirability.
Hofstede (1980)	Broad tendencies to prefer certain states of affairs over others.
Schwartz & Bilsky (1987)	Concepts or beliefs pertaining to desirable end-states or behaviours, transcending specific situations, guiding selection or evaluation of behaviours and events, and ordered by relative importance.
Schwartz (1992)	A criterion people use to select and justify actions and to evaluate people (including oneself) and events.
Hechter (1993)	Relatively general and durable internal criteria for evaluation.

Schwartz (1994a)	Desirable trans-situational goal, varying in importance that serves as a guiding principal in the life of a person or other social entity.
Verplanken & Holland (2002)	Cognitions that may define a situation, elicit goals, and guide action.

As evident in Table 1, the most distinctive feature of values is that they are evaluative and indicate the desirable or preferable state of affairs (Kluckhohn, 1954; Rokeach, 1973; Williams, 1979; Kohn and Schooler, 1983; Hofstede, 1980; Schwartz, and Bilsky, 1987; Schwartz, 1994a). Hofstede (1980, p. 20) distinguishes between values as the desired and the desirable: what people actually desire versus what they think ought to be desired.

Several scholars have also pointed out the general nature of values. Values are the most abstract type of social cognition used to store and guide general responses to classes of stimuli (Kahle, 1996). Rokeach (1973) writes about values as enduring beliefs; Hofstede (1980) refers to them as broad tendencies. According to Schwartz and Bilsky (1987), values transcend specific situations. Schwartz (1994a) concludes that values are desirable trans-situational goals. Michod (1993) claims that values increase an individual's adaptive fitness, because behavioural response does not have to be specified for each environment and situation separately.

1.1.2. Values in the cognitive-affective belief system

The importance of values relates to their central location in the total cognitive-affective belief system and in their close links to self-concepts (Feather, 1988). Rokeach (1973, p. 7) describes the several faces of values. First of all, value is cognition about what is desirable. This means that individuals know the correct end-state to strive for. Secondly, values

have a behavioural component (Rokeach, 1973). When activated, values prime attitudes and guide the selection of behaviours and events (Feather, 1996; Schwartz, 1993; Schwartz and Bilsky, 1987; Rokeach, 1973).

Finally, values evoke strong emotions both for and against (Rokeach, 1973) and thus make a significant contribution to emotional experiences (e.g., Mandler, 1993). Kluckhohn (1954) claims that values differ from other beliefs by the feeling attached to them and by the commitment to action in situations involving possible alternatives. According to him, other beliefs refer primarily to the true/false categories, while values refer primarily to the good/bad or right/wrong categories (Kluckhohn, 1954).

Roberts and Robin (2000) describe values as part of the motivational system in the human personality. At the top of this hierarchical system are global aspirations for a certain worldview. At the next level down are values, which in turn are subsumed into important life goals such as career and relationship aspirations. At an even more specific level are contextualised goals such as personal strivings.

1.2. Origin of values

Values have intensity and a certain relevance that can be described as value priority (Hofstede, 1980). Value priorities are both intimate and shared. Values operate at the level of individuals, of institutions, and of entire societies (Hofstede, 1980; Schwartz, 1993).

The personality system by McCrae and Costa (1999) sees values as adaptations to cultural conditions. They are dynamically related to basic tendencies (personality) as well as to the self-concept.

Values are derived from various sources, most of them unrecognised by the individual. For example, Hechter (1993) explains that institutional structures, such as families, have embedded values. Still, Feather (1975) and Hechter (1993) point out that to some extent, values also arises from

individual experience and their relative importance is influenced by unique life experiences. Values summarise previous experience and provide a strategy for dealing with new choices (Kahle, 1996).

1.2.1. Personality

Personality traits are dimensions of individual differences in tendencies to show consistent patterns of thought, feelings, and action (McCrae and Costa, 1990). The main distinction between traits and values is that traits are enduring dispositions describing “what people are like” and values are enduring goals describing “what people consider important” (Roccas, Sagiv, Schwartz, and Knafo, 2002). The findings of Roccas et al. (2002) support the idea that the influence of values on behaviour depends more on cognitive control than does the influence of traits. Another distinction is that traits are prototypically very stable, long-lasting, and internally caused (Chaplin, John, and Goldberg, 1988). Values are more susceptible to change through socialisation to a new social environment or through self-confrontation (Rokeach, 1973).

Bilsky and Schwartz (1994) found both meaningful and systematic associations of value priorities with personality variables. Roccas et al. (2002) point out that several mechanisms may link values and traits:

1. Inborn temperament may give rise to parallel traits and values;
2. People seek to behave in ways consistent with their values (Rokeach, 1973), and thus values may influence traits;
3. Traits may affect values when people justify their trait-produced actions by using value statements.

Dollinger, Leong, and Ulicni (1996) used Rokeach’s Value Survey to study the linkage of the “Big Five” personality traits and values. Their results imply that people value qualities they already possess. Empirical studies generally suggest that the traits of openness, agreeableness, and

conscientiousness relate systematically to values (Luk and Bond, 1993; Yik and Tang, 1996; Dollinger et al., 1996; Roccas et al. 2002; Olver and Mooradian, 2003). Together these studies suggest that the trait of openness to experience is related positively to values of openness to change and negatively to conservation values. Openness to experience is also positively correlated with the value universalism. Agreeableness correlates positively with self-transcendence, and conservation, and accordingly negatively with self-enhancement and openness to change. Conscientiousness correlates positively with conservation values of security and conformity (but not tradition) and self-enhancement value achievement (but not power). This trait correlates negatively with stimulation and universalism.

1.2.2. Socialisation

According to Super (1995), the origin of values is in needs, which are survival-related manifestations of physiological conditions. For example, hunger is a need that requires satisfaction, but to avoid conflicts we must pay attention to social circumstances when we select what and how we eat. Rokeach (1973) also sees values as cognitive representations of needs that have been transformed to take into account social sanctions.

The function of human values is to satisfy needs and at the same time to maintain self-esteem (Rokeach, 1973). Kluckhohn (1954) illustrates the complexity of the relationship between values and needs: a value serves several needs partially, inhibits others partially, half meets and half blocks still others. In addition, he claims that values both rise from and create needs.

Bilsky and Schwartz (1994) elaborated on the conceptual link between values and needs by using Maslow's (1954) analysis of "deficiency" versus "growth" needs. Deficiency needs, such as safety, must be satisfied before the growth needs, such as self-actualisation, can

be sought. Bilsky and Schwartz (1994) explain that values and traits are covariant in growth needs. For example, a person characterised by trait curiosity is likely to value self-direction highly. In contrast, in deficiency needs the values and traits may be compensatory. For example, a person characterised by anxiety is not likely to value stimulation, but to seek security. Thus, the relationship between values and other variables depends on whether the personality trait, attitude or behaviour is aimed at satisfying growth or deficiency needs.

On an individual level, the process of transforming needs to values is called socialisation (Rokeach, 1979). What the adult wants for the child, the child comes to want for itself (Parsons et al., 1954). Adults also watch one another within social networks and acquire mutual value patterns (White, 1993). Once acquired, values are relatively stable motivational characteristics of persons and change little during adulthood (Rokeach, 1973).

1.2.3. Culture

Common values ensure that members of a society understand each other, and without a great deal of negotiation pursue similar goals in a compatible way. At the level of society, values guide the fulfilment of the biological and social needs of individuals (Schwartz, 1992).

Values are abstract rules of desirable conduct and goals developed to fit the conditions in which the society lives. According to Inglehart (1990), culture represents a people's strategy for adaptation. The ecological conditions of the available modes of food production as well as the international political situation establish both the possibilities and the constraints on this adaptation (Hechter, 1993; Hofstede, 1980).

At the societal level, values are stable because each value is surrounded by a cumulative net of meanings and interpretations (White, 1993). Culture changes gradually and reflects changes in the formative

experiences of new generations (Inglehart, 1990). Change occurs because of a shift in ecological conditions (Hofstede, 1980). Although cultures change in response to changes in the socio-economic, political, and technological environment, they also in return shape that environment (Hofstede, 1980; Inglehart, 1990).

Cross-cultural psychology has benefited from the broadly shared framework that conceptualises values as underlying the functioning of cultural units. Values are used to understand cultural differences when comparing nations, ethnic groups, and regions. Above all, the individualism – collectivism dimension has been employed to explain cultural differences.

Although there are significant cultural variations in value priorities, there are also cross-cultural similarities. For example, Sverko and Super (1995) found that in all countries studied the fulfilment of personal potential was clearly an extremely important life goal for the majority of their subjects. At the other extreme, the willingness to take risks as well as the desire for authority and prestige were of little importance everywhere.

The importance ratings and ranks of Schwartz's ten values have also been very similar in all the cultures studied. Benevolence, self-direction, and universalism have been the most important values internationally, while stimulation, achievement, tradition, and power have been the least important (Schwartz and Bardi, 2001).

1.3. Value theories

1.3.1. Rokeach's theory

According to Braithwaite and Law (1985), the major innovation of Rokeach (1973) was to set out a model of the belief system in which

beliefs, attitudes, and values are clearly differentiated. The value construct is restricted to that special class of enduring beliefs concerning modes of conduct and end-states of existence that transcend specific objects and situations and that are personally and socially preferable to an opposite mode of conduct or end-state of existence (Rokeach, 1973).

Rokeach (1973) claimed that the total number of values a person possesses is relatively small; all people everywhere possess the same values to different degrees. Rokeach (1973) saw the value system as a hierarchical organisation, a rank ordering, of ideals or values in terms of importance.

Rokeach (1973) operationalised values as modes of conduct and end-states, namely, instrumental and terminal values. He further divided instrumental values into two categories: Moral values are concerned with interpersonal modes of conduct (e.g., forgiveness, helpfulness), while competence values are concerned with intrapersonal ones (e.g., logical, imaginative). Similarly, Rokeach classified terminal values as personal and social. Personal values include self-centred end-states (e.g., self-respect, inner harmony), and social values involve socially-centred ones (e.g., equality, a world at peace).

Rokeach (1973) found seven factors in values:

1. Immediate gratification (a comfortable life, pleasure, cleanliness, exciting life) vs. delayed gratification (wisdom, inner harmony, logic, self-control)
2. Competence (logic, imagination, intellectuality, independence) vs. religious morality (forgiveness, salvation, being helpful, cleanliness)
3. Self-constriction (obedience, politeness, self-control, honesty) vs. self-expansion (broadmindedness, capability)
4. Social orientation (a world at peace, national security, equality, freedom) vs. personal orientation (true friendship, self-respect)

5. Societal security (a world of beauty, equality, being helpful, imagination) vs. family security (family security, ambition, responsibility, capability)
6. Respect (social recognition, self-respect) vs. love (mature love, being loving)
7. Inner-directed (courage, independence) vs. other-directed (politeness)

Furthermore, Rokeach (1973) found similar clustering with the smallest space analysis. His analysis also revealed that the values form a circular structure.

Bond (1988) applied the Rokeach Value Survey in a nine-culture study and found four factors in values:

1. Competence (intellectuality, independence, capability, logic, imagination) vs. security (family security, world of peace)
2. Personal morality (forgiveness, being helpful, honesty, courage) vs. success (social recognition, power, comfortable life)
3. Social reliability (responsibility, politeness, self-control, obedience) vs. beauty (world of beauty)
4. Political harmony (equality, world of peace, social justice) vs. personal sociability (being cheerful, cleanliness, being loving)

Rokeach's (1973) distinction of values into instrumental and terminal values has had a mixed reception. For example, Schwartz and Bilsky (1990) found distinct regions occupied almost exclusively by terminal or by instrumental values in the multidimensional value space in all seven samples they studied. This finding was not replicated in Schwartz's (1992) study. Quite the contrary: there were only five distinct regions for terminal and instrumental values observed among 400 projections of smallest space analyses. The Rokeach Value Survey instrument has been considered biased towards Western values (Hofstede

and Bond, 1984) and limited in the number of dimensions assessed (Braithwaite and Law, 1985).

1.3.2. Hofstede's cultural dimensions

Hofstede (1980) derived four dimensions of cultural variability empirically from a study of one corporation with branches in 40 countries. These culture-level dimensions were power distance, uncertainty avoidance, individualism, and masculinity/femininity. Hofstede was among the first to compare cultural groups using quantitative measurement of values.

According to Hofstede (1994), power distance is the degree of inequality considered normal. Close supervision, fear of disagreement with a supervisor, and lack of trust among co-workers have all manifested themselves more in high-power distance cultures than in low-power distance cultures (Hofstede, 1980).

The dimension of uncertainty avoidance points to the degree to which people prefer structured situations over unstructured ones (Hofstede, 1994). Hofstede (1980) compared scores on uncertainty avoidance with other large-scale cross-cultural studies. This comparison revealed that in comparison to members of low uncertainty avoidance cultures, members of high uncertainty avoidance cultures resist change more.

Hofstede (1994) describes individualism as the degree to which people prefer to act as individuals rather than as members of groups. In individualistic cultures the ties between individuals are loose and everyone is expected to look after themselves and their immediate family, while in collectivistic cultures, people are members of strong, cohesive ingroups (Hofstede, 1991). This dimension of Hofstede's theory, namely the individualism/collectivism (I/C) construct, received particular attention during the 1980s (summarised in Triandis, 1990).

High masculinity involves placing a high value on things, power, and assertiveness, while systems in which people, quality of life, and nurturance prevail are high in femininity (Hofstede, 1980). Cultural systems high on the masculinity index emphasise differentiated sex roles, performance, ambition, and independence. Conversely, systems high in femininity value emphasise fluid sex roles, quality of life, service, and interdependence. Hofstede (1980) also found that, in comparison to people in feminine cultures, people in masculine cultures have a stronger motivation to achieve and they view work as central to their lives.

Hofstede's cultural dimensions have frequently been used in organisation research. For example, a high level of collectivism has been found to be associated with greater job satisfaction (Kirkman and Shapiro, 2001) and organisational commitment (Dorfman and Howell, 1988; Palich, Hom, Griffeth, 1995; Kirkman and Shapiro, 2001). On the other hand, Hofstede's work (1980) has received strong criticism and the plausibility of this theory has been questioned (McSweeney, 2002; Voronov and Singer, 2002).

1.3.3. Schwartz's and Bilsky's early research

Schwartz and Bilsky (1987) generated a conceptual definition of values that incorporated five recurring features in value literature. Schwartz and Bilsky (1990, p. 878) summarised: "Values a) are concepts or beliefs, b) pertain to desirable end-states or behaviors, c) transcend specific situations, d) guide selection or evaluation of behavior and events, and e) are ordered by relative importance".

Schwartz and Bilsky (1987, 1990) proposed seven distinct motivational types of values, for which they also found empirical evidence. These values were:

1. Pro-social: Active protection or enhancement of the welfare of others.

2. Restrictive conformity: Restraint of actions and impulses likely to harm others and violate sanctioned norms.
3. Enjoyment: pleasure, sensuous, and emotional gratification.
4. Achievement: Personal success through demonstrating competence.
5. Maturity: Appreciation, understanding, and acceptance of oneself, others, and the surrounding world.
6. Self-direction: Independent thought and action – choosing, creating, exploring.
7. Security: Safety, harmony, and stability of society, of groups with whom one identifies, relationships, or of self.

In addition to the seven value types, dynamic relationships among values were identified in this theory. Schwartz and Bilsky (1990) generated their hypothesis using interest facets and found suggested dynamic conflicts in their samples of seven countries. They observed compatibility among values that support smooth social relations, among those concerned with self-enhancement and among those expressing comfort with or reliance on one's uniqueness. They also observed conflicts between an emphasis on self-direction versus restrictive conformity and between pro-social and achievement values.

1.3.3. Schwartz's value theory

Schwartz (1992, 1994a) published his famous articles on his value theory a few years after his co-writings with Bilsky (Schwartz and Bilsky, 1987, 1990). The early theory had been developed in several ways. Schwartz's (1992, 1994a) work bravely extended Rokeach's (1973) theory. Schwartz eliminated from his measure 11 of the 36 Rokeach's values that did not meet the criterion of cross-cultural stability of meaning (e.g. courage, salvation). On the other hand, he added several items related to power and tradition. While Rokeach had assumed that his 36 values are not

reducible to any further types, Schwartz made strong assumptions about the types and their structural relationships

1.3.3.1. Value content

Schwartz's (1992, 1994a) theory regarding the content and organisation of the value systems of individuals specifies ten universal and motivationally distinct types of values and an integrated structure that results from the conflicts and congruities among all the values.

Schwartz (1992) views values as goals. He explains that defining values as goals supports the argument that values serve the interest of a social entity, an individual, and/or a group (Schwartz, 1994a). Values represent responses to three universal requirements: individuals' needs as biological organisms, requisites of coordinated social interaction, and requirements for the smooth functioning and survival of groups (Schwartz, 1994a).

The crucial content aspect that distinguishes values from each other is the type of motivational goals they express (Schwartz, 1994a). The ten basic values are security, conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement, and power.

1. Security

According to Schwartz (1992), security derives from basic individual and group requirements to have safe surroundings. Some security values primarily serve individual interests; others primarily serve collective interests (Schwartz, 1992). The motivational goals for security are safety, harmony, and the stability of society, relationships, and the self (Schwartz, 1992). This value serves all of the universal requirements with which all individuals and societies must cope (Schwartz, 1994a).

The set of value items that describes this value are social order, family security, national security, reciprocation of favours, cleanliness, sense of belonging, and good health (Schwartz, 1992).

2. Conformity

Conformity derives from requiring individuals to restrain from behaviours that may distort smooth social interaction and group functioning (Schwartz, 1992). The motivational goal for conformity is restraint from actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms (Schwartz, 1992).

This value was derived from the requisites of coordinated social interaction and smooth functioning of groups (Schwartz, 1994a). Conformity values include obedience, self-discipline, politeness, and honouring parents and elders (Schwartz, 1992).

3. Tradition

The motivational goals for tradition are respect, commitment, and acceptance of the customs and ideas that one's culture or religion imposes (Schwartz, 1992). Tradition is derived from the smooth functioning and survival of groups (Schwartz, 1994a). This value is described as respectful of tradition, humble, devout, accepting one's proportion of life, and moderate (Schwartz, 1992).

4. Benevolence

According to Schwartz (1992), this value is derived from the need for positive interaction in order to promote the flourishing of groups as well as from human need for affiliation. Thus, this value serves all of the universal requirements with which individuals and societies must cope (Schwartz, 1994a). Benevolence satisfies the motivational goal for preservation and enhancement of the welfare of people with whom one is in frequent social contact (Schwartz, 1992).

Benevolence is a more narrowly defined version of the previous pro-social value type (Schwartz and Bilsky, 1990). Whereas pro-social values are concerned with the welfare of all people in all settings, benevolence is related to close others in everyday interactions (Schwartz, 1992). Benevolence includes valuing true friendship, mature love, helpfulness, loyalty, forgiveness, honesty, and responsibility (Schwartz, 1992).

5. Universalism

The motivational goal for universalism is understanding, appreciation, tolerance, and protection for the welfare of all people and nature (Schwartz, 1992). This value is derived from "... those survival needs of groups and individuals that become apparent when people come into contact with those outside the extended primary group and become aware of the scarcity of natural resources" (Schwartz, 1992, p. 12).

Schwartz and Bilsky's (1990) earlier formulation of this value type was maturity. It had not been postulated *a priori*, but emerged empirically in all seven countries studied. Universalism is described as broad-mindedness, social justice, equality, a world at peace, a world of beauty, unity with nature, wisdom, and protection of the environment (Schwartz, 1992).

6. Self-direction

According to Schwartz (1992), the defining goal of this value type is independent thought and action. Self-direction derives from a need for control and mastery and from interactional requirements of autonomy and independence (Kohn and Schooler, 1983).

The source of this value lies in the needs of an organism and the requisites of coordinated social interaction (Schwartz, 1994a). The set of value items that describes this value are freedom, creativity, independence, choosing one's own goals, curiosity, and self-respect (Schwartz, 1992).

7. Stimulation

Stimulation values derive from human need for variety and stimulation in order to maintain an optimal level of activation (Schwartz, 1992, 1994a). The motivational goals of stimulation values are excitement, novelty, and challenge in life. The set of value items that describes this value are an exciting life, a varied life, and daring (Schwartz, 1992).

8. Hedonism

According to Schwartz (1992, 1994a), hedonism derives from the human organism's needs and the pleasures associated with satisfying

them. The motivational goal of this value is pleasure or sensuous self-gratification. In Schwartz's (1992) article, hedonism replaced enjoyment, which had been used in Schwartz and Bilsky's earlier studies (1987, 1990). The set of value items that describes this value are pleasure and enjoyment of life (Schwartz, 1992).

9. Achievement

Competent performance is a requirement if individuals are to obtain resources for survival and if social interaction is to succeed (Schwartz, 1992). This value was derived from the requisites of coordinated social interaction and group survival (Schwartz, 1994a). Rokeach (1973) also identified achievement as a value. Achievement values include being ambitious, successful, capable, and influential (Schwartz, 1992).

10. Power

Schwartz (1992) claimed that power value is grounded in several universal requirements that an individual and a group must meet. Power values may be transformations of the individual's needs for dominance and control. The goals of power values are an attainment of social status and prestige and control or dominance over people and resources (Schwartz, 1992).

Both power and achievement values focus on self-esteem, but achievement emphasises the active demonstration of competence in concrete interaction, whereas power emphasises the attainment or preservation of a dominant position (Schwartz, 1992). The set of value items that describes this value are authority, wealth, social power, preserving one's public image, and social recognition (Schwartz, 1992).

In addition to these ten values, Schwartz (1992) also proposed spirituality as a value. He claimed that the motivational goal of spirituality was meaning and inner harmony through the transcendence of everyday reality. He also identified two problems in the universality of this value concept, because most people satisfy their need for coherence through pursuing tradition, security and conformity values and do not trouble themselves with spirituality. Spirituality also represents different

ideas to different people according to their world views. In Schwartz's (1992) empirical analysis, spirituality failed to form a distinct region.

Although Schwartz's value model is impressively comprehensive, there are indicators that it does not cover all values. For example, Pohjanheimo (1997) criticised Schwartz's model for lacking work-related values. The absence of other life roles such as parenthood could also be questioned.

1.3.3.2. Cultural values

Schwartz (1994b) has also identified culture-level value orientations. Individual value dimensions reflect the psychological dynamics of conflict and compatibility that individuals experience in the course of pursuing different values (Schwartz, 1992). Culture-level dimensions reflect the different solutions that societies develop to address the problems of regulating human activities and the different ways that institutional emphases and investments are patterned and justified (Schwartz, 1994b).

The culture-level value dimensions are conservatism or embeddedness, intellectual autonomy, affective autonomy, hierarchy, egalitarianism, mastery, and harmony. Conservatism emphasises maintaining the status quo, propriety, and restraining of actions or inclinations that might disrupt the solidarity group or the traditional order in which people are embedded. Intellectual autonomy means the desirability of individuals' pursuing their own ideas and intellectual directions independently. Affective autonomy is the desirability of individuals' pursuing emotionally positive experiences. Hierarchy reflects the legitimacy of an unequal distribution of power, roles, and resources. Egalitarianism describes transcendence of selfish interests in favour of voluntary commitment to promoting the welfare of others. Mastery points to getting ahead through active self-assertion, and harmony refers to fitting harmoniously into the environment.

Schwartz (1994b) compared his culture-level value orientations with Hofstede's dimensions. Hofstede's individualism dimension correlated positively with Schwartz's affective and intellectual autonomy and negatively with Schwartz's hierarchy. Uncertainty avoidance also had a negative correlation with hierarchy. Hofstede's power distance correlated negatively with autonomy, but positively with hierarchy and mastery. Schwartz (1994b) points out that it is important to distinguish the two dimensions confounded in the individualism vs. collectivism literature: a dimension opposing conceptions of a person as autonomous rather than embedded, and a dimension opposing pursuit of personal goals versus collective goals.

1.3.3.3. Value structure

Schwartz's theory (1992, 1994a) specified how values are related dynamically to one another. In another words, it specified which values are compatible and mutually supportive and which are opposed and likely to conflict with one another. The behaviour connected to each value type has psychological, practical, and social consequences that may be compatible or may conflict with the pursuit of another value type (Schwartz, 1992). For example, the pursuit of achievement values often conflicts with the pursuit of benevolence values; seeking personal success for oneself is likely to obstruct actions aimed at enhancing the welfare of close others who need help (Ros, Schwartz and Surkiss, 1999).

The circular arrangement of values represents a motivational continuum (Figure 1). The closer the values are on the circle, the more similar are their underlying motivations: the more distant are the values, the more antagonistic their underlying motivations. The dimension of self-enhancement versus self-transcendence contains power and achievement at one end. At the opposite end of the dimension are universalism and benevolence. The other dimension in the two-

dimensional space is openness to change versus conservation. The value types of stimulation and self-direction are at one end, while the value types of security, conformity, and tradition are at the conservation end of the dimension. The value type of hedonism relates both to self-enhancement and openness to change dimensions.

In this theory, seeking individual interests is postulated to be opposed to activities that serve collective interests (Schwartz, 1992). Values primarily serving individual interests are power, achievement, hedonism, stimulation, and self-direction. Values postulated to serve primarily collective interests are benevolence, tradition, and conformity. Universalism and security serve both types of interests.

Schwartz (1992) identified the compatibilities among the ten value types. Both power and achievement emphasise social superiority and esteem. Achievement and hedonism are both concerned with self-indulgence. Affectively pleasant arousal is pursued both by hedonism and stimulation. Stimulation and self-direction both involve intrinsic motivation for mastery and openness to change. Reliance on one's own judgement and comfortableness with the diversity of existence are expressed both through self-direction and universalism. Universalism and benevolence are both concerned with enhancement of others and transcendence of selfish interests. Tradition and conformity both stress self-restraint and submission. Conformity and security both protect order and harmony. Security and power both stress avoiding or overcoming the threat of uncertainties by controlling relationships and resources. (Schwartz, 1992)

Schwartz (1992) also proposed conflicts among the ten value types, i.e., pursuing certain value types will produce strong psychological and/or social conflicts. Self-direction and stimulus conflict with conformity, tradition, and security. Universalism and benevolence are opposite values to achievement and power. In addition, hedonism is at odds with conformity and tradition. (Schwartz, 1992)

Schwartz (1992) expected the value structure to be fairly stable because it is derived from the basic human conditions. Nonetheless, he pointed out the possibility that value structures may change over time as social conditions are transformed, or they may change even rapidly in response to major technological, economic, political, and security upheavals (Schwartz, 1992).

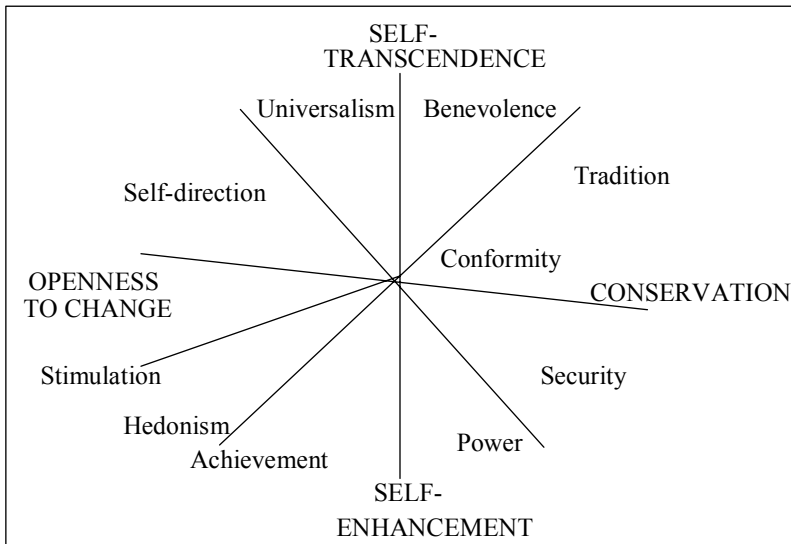


Figure 1. *Theoretical location of the values (adapted from Schwartz 1992, 1994a).*

1.3.3.4. Empirical support

Schwartz used a very large cross-cultural data set to form and validate his value theory. The 40 samples were drawn from 20 countries. The

samples included cultures on every inhabited continent, represented 13 different languages, and included adherents of eight major religions as well as atheists. Most samples were taken from school teachers and university students, but one sample was from factory workers (Shanghai), and four samples were of general populations (Estonia, Holland, Israel, and Japan). (Schwartz, 1992)

In most cases when analysed using the smallest space analysis (SSA), Schwartz's value structure was identified. The ten values were distinct in 67.5% of the samples, and in 92.5% of the samples at least eight or more types were identified. In many samples, the tradition and power regions were located towards the periphery of the two-dimensional space. In addition, benevolence and conformity were joined in seven samples and formed a common region. (Schwartz, 1992)

Schwartz and Sagiv (1995) doubled the database that Schwartz (1992) had used earlier and drew conclusions based on 88 samples from 40 countries. They discovered that the value items have highly consistent meanings across cultures and found support for both the ten distinct values and the two-dimensional structure.

Schwartz's circular value structure has also been empirically validated by other researchers. For example, Aavik and Allik (2002) studied the structure of Estonian personal values using a psycholexical approach and found the two-dimensional structure. Karakitapoglu Aygün and Imamoglu (2002) studied Turkish university students and adults representing upper-middle-class Turkish people in a metropolitan area. Using factor analysis, the authors identified five value domains that resembled the motivational value types of Schwartz's theory. However, their results did not support the dimension of self-transcendence vs. self-enhancement. In Finland, Schwartz's theory has been validated by Pohjanheimo's (1997) study of the working age population of Pyhtää, Puohiniemi's studies of national samples (1995, 2006), and Verkasalo's student samples (1996).

There is also experimental evidence for Schwartz's value theory. Pakizeh, Gabauer, and Maio (2007) found strong associations between values in memory, a finding consistent with the circular model while showing that semantic relations were not sufficient to explain these associations.

1.3.3.5. The validity of the theory in low education groups

Although the theory has been confirmed by a number of studies, Schwartz (1992; 1994a) found extreme deviations from the theoretical pattern in Zimbabwe, Taiwan, Estonia, and China. According to Schwartz, Melech, Lehmann, Burgess, Harris, and Owens (2001), deviations were also found in sub-Saharan Africa, India, Malaysia, and rural areas of less developed nations. These authors argue that the deviations do not deny the universality of the theory, but rather call into question the applicability of the instrument, namely the Schwartz Value Survey (SVS).

The SVS presents 57 single-value items, such as wisdom and an exciting life. Each is followed in parentheses by an explanatory phrase intended to clarify and/or narrow its meaning. The SVS demands a high level of abstract thought and presents value concepts outside any specific context. In 2001 Schwartz et al. developed a new method to measure basic values, the Portrait Value Questionnaire (PVQ), which should be more appropriate to assess the generalisation of the value theory to populations that have yielded negative evidence in the past. The PVQ includes short verbal portraits of different people; the respondents' values are inferred from their self-reported similarity to people described. The logic of this prototype approach is that people understand the world by assessing diverse configurations of characteristics and by comparing this assessment with a prototype (Setterlund and Niedenthal, 1993; Mayer

and Bower, 1986). Empirical evidence shows that judging the behaviour of others activates information about one's own behaviour (Dunning and Hayes, 1996).

Schwartz et al. (2001) and Schwartz (2005) reported data validating the PVQ with representative national, adult, university student, and adolescent samples from seven countries (Chile, Germany, Indonesia, Italy, Peru, Poland, and Ukraine). In the structural analysis in all samples each of the ten values formed separately or in a joint region with an adjacent value according to the theory. Furthermore, the oppositions between openness and conservation values and between self-enhancement and self-transcendence values were present in every sample.

Schwartz et al. (2001) also applied the PVQ to two African populations, a representative sample of black South Africans, of which only 4% had schooling beyond secondary school, and a sample of 13- to 14-year-old Ugandan schoolgirls. They found that although the values were mostly arrayed on the basic dimensions postulated in the Schwartz theory, considerable deviations occurred in both of these African samples. In the black South African sample, benevolence, universalism, and security formed a joint region. In the data on Ugandan schoolgirls, self-transcendence (universalism and benevolence) and conservation (tradition, security, and conformity) almost formed a joint region. These deviations and the lack of research on the value structures among western populations with low education levels indicate that further support for the universality of the value theory is needed. Also the validity of the PVQ in its ability to produce value structures similar to the SVS should be confirmed.

Schwartz (2005) reported only one major deviation from the theoretical structure. The two self-transcendence values changed places in half the samples. Unfortunately, Schwartz (2005) did not specify in which samples this reversal of positions occurred.

1.4. Consequences of values

We must not blind ourselves to the deep ambivalences embraced by people: wanting and yet not wanting, praising and yet not cherishing, valuing and yet not pursuing, and, most enigmatically action on and yet not conceptualising.

(Barth, 1993, p. 34)

As Barth (1993) pointed out, the relationship among values, attitudes, and behaviour is not a straightforward one. Although they are related, these relations are often weak (e.g., Kristiansen and Hotte, 1996). Strong situational forces interact with values in directing behaviour (Feather, 1996). In addition, behaviours and attitudes are guided by trade-offs among competing values (Tetlock, 1986). However small, the consequences of values tell us something important about ourselves as human beings and are thus significant and worthy of investigation.

1.4.1. Values prime attitudes

Values and attitudes influence people's attention, perceptions, and interpretations (Rokeach, 1973), yet unlike values, attitudes focus on specific objects and situations (Rokeach, 1979, p. 72). According to Kluckhohn (1954), the principle differences between values and attitudes are that in contrast to values attitudes refer exclusively to the individual, and have no imputation of the "desirable".

Values and attitudes have been extensively studied in a social context, albeit separately. There are some studies that also link values to attitudes empirically. For example, people who hold conservative values are more likely to display prejudice and negative attitudes towards minority groups (Lambert and Chasteen, 1997).

Feather (1996) pointed out that the activation of a value may have the effect of inducing new attitudes and beliefs when novel situations are encountered and dealt with in a cognitive way. These new attitudes and beliefs would then be absorbed into the associative network that defines the value (Feather, 1996). Rokeach (1973, p. 96) pointed out that a given attitude held by different persons need not be in the service of the same value.

The relationship between values and attitudes has also been studied empirically. Boninger, Krosnick, and Berent (1995) used verbal protocols and surveys to demonstrate that people's theories about the causes of attitude importance pointed, among other factors, to values and that values predicted attitude importance. Values have also been shown to predict environmental attitudes (Schultz and Zelezny, 1999). Values and attitudes within organisations, however, have not been systematically studied.

1.4.2. Values guide behaviour

According to Schwartz and Bilsky (1987), values can guide the selection or evaluation of behaviours and events. Important goals induce a stronger motivation to plan, and planning increases the probability of goal-directed behaviour (Gollwitzer, 1996). Bond, Leung, and Schwartz (1992) point out that values explain behavioural patterns, not specific behaviours.

Empirical studies show that in hypothetical situations people want to act according to their values (Feather, 1995; Sagiv and Schwartz, 1995). Bardi and Schwartz (2003) point out that people find value-consistent actions rewarding, because they get what they prefer. Feather (1995) found that the attractiveness of alternative courses of action was related to values and that choices among alternatives were systematically related to values. For example, a person's choice of educational program has

been shown to reflect the values that the person deems important (Feather, 1988).

Verplanken and Holland (2002) conducted a series of studies and found that values primed behaviour only when both were activated and central to the individual. Activation occurs automatically when values are the primary focus of attention or when they are enhanced by self-focus, which leads to the activation of self-relevant cognitions such as central values (Verplanken and Holland, 2002).

Rokeach (1973) claimed that people act according to their values because there is a need for consistency between one's beliefs and one's actions. Schwartz (1977) argued that the failure to act in accordance with personal values is normally followed by self-blame. Lönnqvist, Leikas, Paunonen, Nissinen, and Verkasalo (2006) found that anticipated regret motivates value-consistent behaviour. Their results suggest that the motivating force of values may be partly understood in terms of the need to protect the self from regret.

People may act in accordance with their values even when they do not consciously think about them. Thus, values may operate outside of awareness but they are available for retrieval from memory (Bardi and Schwartz, 2003). Values are also used to justify or explain past conduct (Williams, 1979). For example, the more values old people expressed as they reflected on past life events, the less they experienced negative emotions related to aging (Pushkar, Basevitz, Conway, Mason and Chaikelson, 2003).

Bardi and Schwartz (2003) examined values together with common behaviours that express them and found substantive correlations between some values and their corresponding behaviours. The results indicated that tradition and simulation values have a high correlation with common behaviours that express them, while hedonism, self-direction, universalism, and power values show reasonable associations with their behaviours. Security, conformity, benevolence, and achievement values tend to relate only weakly to the common behaviours that express them.

Most behaviour can express more than one value (Bardi and Schwartz, 2003). For example, Puohiniemi (1995) found that very different and even conflicting values may lead to pro-environmental actions. Some people behave in a pro-environmental way because they value universalism; others may behave thus because they have adopted a modest way of living and value tradition or because they have a keen interest in new technology with environmentally friendly gadgets and value stimulation. In addition, the behaviour that occurs when values are activated typically expresses the effects of multiple values and other variables as well (Rokeach, 1973; Schwartz, 1992; Tetlock, 1986).

Values also operate through evoking emotions. For example, Waterman, Schwartz, Goldbacher, Green, Miller and Philip (2003) found that self-realisation values contribute to the experience of flow. Values have a connection to how people experience situations.

Perceptual selectivity and value orientation are related in several ways. Schwartz, Sagiv, and Boehnke (2000) argue that people are likely to exhibit greater vigilance towards threats to their more important goals than to less important goals. They also periodically check the match of their current attainments with the desired states of these goals (Schwartz, Sagiv, and Boehnke, 2000). Hence, the more important a value is to a person, the greater the probability that he will notice threatened or current discrepancies between the goals to which the value is directed and the desired states (Schwartz, Sagiv, and Boehnke, 2000).

1.4.2.1. Empirical studies of values and organisational behaviour

People taking up different occupations and careers may have different value systems guiding their choices. Feather (1982) found that medical students cited benevolent- and achievement-related reasons for their decisions to undergo medical training, and the reasons given were consistent with their value priorities.

Values also affect the outcomes of organisations. Weeks and Kahle (1990) found that salespeople who most valued excitement more were likely to spend time in entrepreneurial selling than those who valued excitement less. For both salespeople and their managers, placing a high value on the sense of accomplishment related to an increased likelihood of pursuing entrepreneurial selling. The values of the sales manager directly influenced how the salespersons shared their time between entrepreneurial selling and other, less challenging tasks.

The area of business ethics also reflects interest in values. Empirical evidence shows that people who are concerned with their own personal gain, valuing power and hedonism, are more likely to make unethical decisions (Feather, 1995; Mumford, Helton, Decker, Shane Connelly and Van Doorn, 2003). The value that people placed on friends and companionships was positively related to the tendency to make ethical decisions in managerial roles (Mumford et al., 2003). Personal values have also been found to affect people's perceptions of the morality of particular behaviours in organisations (Finegan, 1994).

Smith, Peterson, and Schwartz (2002) studied the connections among cultural values, sources of guidance, and their relevance to managerial behaviour. They found that values were strongly predictive of reliance on those sources of guidance that are relevant to vertical relationships within organisations. However, values were less successful in predicting reliance on peers and other, more tacit sources of guidance.

Nauta, De Dreu and van der Vaart (2002) studied 120 manufacturing, planning, and sales employees in eleven organisations, and found that the pro-social values increased the likelihood that individuals in organisations were concerned about the goals of other departments; this in turn was reflected in co-operational negotiation style during interdepartmental negotiations. Pro-social behaviours consist of social acts carried out to produce and maintain the well-being and integrity of others (Brief and Motowidlo, 1986). These activities typically include helping, caring, donating, cooperating, and

volunteering. Organ (1988) called these extra-role acts “organisational citizenship behaviour”. The actions are characteristically voluntary, so their performance is not usually rewarded nor is their omission punished (Organ, 1988).

McNeely and Meglino (1994) found that the value of concerns for others was positively correlated with pro-social behaviour intended to benefit individuals, but not with role-described pro-social behaviour or pro-social organisational behaviour. Similar findings have also emerged in laboratory studies. Schwartz (1996) paired participants in a game that included a money allocation task. Sharing a resource (in this case money) with an unidentified partner correlated positively with self-transcendence values and negatively with self-enhancement values.

Many organisations seek to establish and maintain good cooperation among members. Schwartz (2005) found that to elicit a high level of cooperation required both high priority for values that promote cooperation (benevolence) and low priority for values that oppose it (power).

Value orientation causes perceptual sensitisation to valued stimuli and leads to perceptual defence against unvalued stimuli (Postman, Bruner, and McGinnies, 1948). A practical example is the empirical study conducted by Senger (1971). He found that when managers rank their subordinates in competence, those rated highest tended to have personal value orientations similar to their managers'. This pattern was particularly marked in situations in which the manager had general management responsibility. Extended to other areas of decision-making, this result indicates that where data upon which to base a decision are missing or imprecise, a manager may more frequently tend to make choices based on his or her personal values.

Finally, employees' perceptions about the climate of their workplace partially reflect their personal values (James, James and Ashe, 1990). According to James and James (1989), values serve as latent indicators of what it is about environments that determines one's welfare at work.

1.4.3. Values, social norms, and behaviour

Schwartz (1977) studied altruistic behaviour and claimed that values are personal norms experienced as moral obligations. When one behaves according to personal norms, it enhances or preserves one's sense of self-worth (Schwartz, 1977). Yet, social expectations, i.e., norms, also affect behaviour. A norm is a behavioural standard and an expectancy created by a group. Williams (1979) explained that norms are specific obligatory demands, claims, expectations, and rules, while values are the criteria of desirability. Usually, norms exert social pressure to behave in certain way.

According to Schwartz (1977), people comply with social norms when they recognise that the group expects and sanctions particular acts. So both social and personal norms influence behaviour. As Fishbein and Ajzen's (1975) theory of reasoned action states, people evaluate any action according to how personally rewarding and socially desirable it is.

Social and personal norms are not independent. According to Schwartz's value theory (1992), one of the ten values, conformity, guides people to act according to social norms. The motivational goal for conformity is restraint from actions, inclinations, and impulses likely to upset or harm others or to violate social expectations (Schwartz, 1992). People who value conformity are more likely to pay attention to the social norms relevant in a situation and less likely to let their personal motives affect their intentions.

Bardi and Schwartz (2003) argued that the more behaviour in a domain is subject to normative pressure, the weaker the expected relationship is between values and behaviour in that domain. Individuals experience little external pressure to engage in behaviours that are unimportant to the group. In the absence of external pressure, the personal importance of values may influence behaviour more, leading to stronger correlations of values with their corresponding behaviours. Fischer (2006) also reported findings that suggest that individual values

are more consistently related to behaviours that have no clear or strong social norms attached.

Lönnqvist et al. (2006) point out that observing people who highly value conformity might lead to the conclusion that values do not predict behaviour, yet in fact, the opposite pattern emerges among people low in conformity. In their study of the connections between values and altruistic behaviour and regret, Lönnqvist et al. found that the relationship between self-transcendence and power values on the one hand and dependent variables on the other was moderated by conformity (Lönnqvist et al., 2006).

There is no doubt that norms are a relevant concept in the context of organisations and work. As an example, Ehrhart and Naumann (2004) argued that organisational citizenship behaviour depends on norms developed and maintained in workgroups. Still, the possible moderating effects of conformity on the relationship between values and organisational behaviour have not been studied empirically before.

2 AIMS OF THE STUDY

The following text presents the research questions of this study. The first hypotheses (1-9) are based on existing research, and their purpose is to see whether Schwartz's (1992, 1994a) value theory is applicable to the Finnish working population. The remaining hypotheses (10-14) are intended to bring new knowledge to the relationship between basic values and the attitudes towards processes that determine the success of an organisation, namely, its ability to change and to provide a favourable environment for knowledge sharing.

2.1. Schwartz's value structure among western manual workers

The current study explores the cross-cultural reach of Schwartz's value theory among western manual workers and the validity of the new value instrument, the Portrait Value Questionnaire (PVQ).

The employees of the Finnish steel company studied here offered a valuable opportunity to explore the value structures outside the academic world of teachers and university students. In 1996 in a study of Finnish university students Verkasalo determined the students' value structure using the SVS and found it to coincide with Schwartz's model. The current study compares this value structure to a new sample of students tested with the PVQ in order to test the questionnaire's validity. If the

Schwartz value theory is universal and the PVQ is a valid instrument for measuring the theory, regardless of the education level of the respondent, a similar value structure should emerge among students and steelworkers alike.

H1: University students, white-collar workers, and manual workers studied with the PVQ demonstrate the same two-dimensional value model postulated by Schwartz as university students previously studied with SVS.

2.2. Value priorities in the study organisation

Values operate at the level of individuals, institutions, and entire societies (Hofstede, 1980, p. 19; Schwartz, 1993). Values are also important on the level of organisations (Rokeach, 1973). At the organisational level, value priorities guide goal setting, allocation of resources, and formulation of new policies (Rokeach, 1979). According to Argandoña (2003), values are part of companies' distinctive competencies and therefore shape their long-term success.

The most celebrated source for the idea of shared values in management literature is T. Peter and R. Waterman's *In Search of Excellence* (1982). They and other contributors to the field of values in a management context have presumed that an organisation with shared values is one in which the workforce as a whole or as a majority simply hold the same values (Griseri, 1998). Usually, the source of the values is the senior management, and the rest of the company is expected to conform. These frameworks lead to the expectation that employee values are or should be identical to the values the organisation claims to have.

I explored the value priorities in one organisation as a whole, not only in the top management. My expectation was that the value priorities

of the employees in this organisation would be similar to those of the Finnish population as a whole at the time of the data collection in the year 2001 and reported by Puohiniemi (2006). During that time the rank order of values for Finns was the following: 1) benevolence, 2) security, 3) universalism, 4) conformity, 5) self-direction, 6) hedonism, 7) achievement, 8) stimulation, 9) tradition, and 10) power (Puohiniemi, 2006). The importance ratings and the ranking of the ten values have been very similar in all cultures studied. Usually, benevolence, self-direction, and universalism have emerged as the most important values (Schwartz and Bardi, 2001).

H2: The employees in the study organisation have a similar value ranking to the general Finnish population in the year 2001.

2.2.1. Values and age

The differences in values among different age groups reflect the uniqueness of the psycho-social environment in each generation. For example, in a study conducted in Israel by Knafo and Schwartz (2001), adolescents valued openness to change and self-enhancement more than their parents did. Different cohorts recall different events or changes, and these memories come especially from adolescence and early adulthood (Schuman and Scott, 1989). The values in industrial countries have shifted from an emphasis on material well-being and security towards a greater emphasis on quality of life (Inglehart, 1990). According to Inglehart (1977), economic and technological development, the rising level of education, and distinctive cohort experiences (e.g., absence of war during the past generation) have led to an increasing emphasis on the values of belonging, self-esteem and self-realisation.

There are three systematic causes of value change in adulthood: a historical event that has an impact on specific age cohorts (e.g., war,

depression); physical aging (e.g., loss of strength); and life stage (e.g., child bearing age, widowhood) (Schwartz, 2005). Values are influenced not only by cohort or age as such, but also by the new social roles inherent in each life and career stage (Super, 1980). For example, the association between instrumental work values such as security and age may be due to the increase in economic pressures in supporting a family with teenage children (Hall and Mansfield, 1975).

Cross-sectional studies in representative national samples show that older age-cohorts value the conservation values of tradition, security, and conformity more than the younger people (Karakitapoglu Aygün, and Imamoglu, 2002; Prince-Gibson and Schwartz, 1998; Schwartz, 2005; Schwartz et al., 2001). The same phenomenon is evident in personality studies: older people have been found to be less open to experience than younger people (e.g., Costa, McCrae, Zonderman, Barbano, Lebowitz, and Larson, 1986). The relationship between openness-to-changes values and age is not as strong. Younger people have been found to value stimulation and hedonism, but not self-direction (Prince-Gibson and Schwartz, 1998; Schwartz et al. 2001). Pohjanheimo (1997) also found that in Finland older people value conformity, tradition, and security more than younger people do, but the openness-to-changes values had no relationship to age.

In large representative samples from Italy and South Africa, Schwartz et al. (2001) reported a positive correlation between age and both of the self-transcendence values, while negative correlations emerged between age and both of the self-enhancement values. Schwartz (2005) also reported a negative correlation between age and self-enhancement values, but a positive relationship only between age and universalism, though not between age and benevolence in a variety of representative samples. The results of Karakitapoglu Aygün and Imamoglu (2002) comparing Turkish adults and university students and those of Prince-Gibson and Schwartz (1998) from an Israeli Jewish population show that age and benevolence, but not universalism, were

connected. In the Turkish sample, self-enhancement was not predicted by age (Karakitapoglu Aygün and Imamoglu, 2002) but Prince-Gibson and Schwartz (1998) found a negative connection between achievement and age. In Pohjanheimo's (1997) data, universalism increased and achievement decreased as a function of age, but he found no connection between age and benevolence or power.

The previous research is more or less unanimous on the relationship between the main dimensions and age. The focus here is to explore whether people of different ages but working in the same industrial environment have the same value differences found in national samples, and especially in Pohjanheimo's (1997) sample from Finland. This would validate the current data.

H3: The conservation values (security, conformity, and tradition) increase in importance as a function of age.

H4: Universalism increases in importance and achievement decreases in importance as a function of age.

2.2.2. Values and education

In empirical studies education has positively predicted openness-to-change values and negatively predicted conservation values (Feather, 1984; Hofstede, 1980; Kohn and Schooler, 1983; Prince-Gibson and Schwartz, 1998; Pohjanheimo, 1997; Rokeach, 1973; Schwartz, 2005). Because the present study is a cross-section of an industrial organisation, the effects of education cannot be separated from those of the work tasks and positions of employees. Thus, one purpose of studying this topic is to validate the other results in this dissertation where the connections are similar to the previous studies.

The process of education itself encourages certain values (Inglehart, 1990). According to Schwartz et al. (2001), educational experiences

undermine values of conformity and tradition by challenging unquestioning acceptance of prevailing norms, expectations, and traditions. Education also promotes intellectual openness and flexibility (Kohn and Schooler, 1983). It provides knowledge and skills that enhance people's coping with uncertainties. It helps them find secure jobs and offers opportunities for independent thought and novelty seeking (Schwartz, 2005). On the other hand, adolescents high in self-direction values have higher educational aspirations (Knafo and Schwartz, 2001).

H5: The conservation values (security, conformity, and tradition) decrease in importance and the openness-to-change values (self-direction and stimulation) increase in importance as a function of education level.

2.2.3. Values and gender

Rokeach (1973) noted that it is reasonable to expect to find differences in value priorities associated with gender, since society socialises men and women to play different roles. Bond (1988) in turn concluded that any gender effect that is generalised across so many different cultures probably reflects universal differences in socialisation of the sexes.

Schwartz and Rubel (2005) studied gender differences in value priorities in an impressive 127 samples from 70 countries. They found that men consistently valued self-enhancement (power and achievement) and openness-to-change (stimulation, hedonism, and self-direction) values slightly more than women. Women consistently valued self-transcendence (benevolence and universalism) values moderately more than men. These results are compatible with previous studies, in which the body of evidence suggests that men and women have differences in value priorities, especially in the self-transcendence vs. self-enhancement

dimension (Rokeach, 1973; Kahle, 1996; Pohjanheimo, 1997; Ryckman and Houston, 2003).

Schwartz and Rubel (2005) also found that in countries with greater gender equality (e.g., Finland), the gender differences in values are greater than other countries, and men value power substantially more and benevolence less than women do. The larger gender differences in values in American and European cultures are the result of the social comparison process more available in these countries (Guimond et al., 2007). Indeed, Pohjanheimo (1997) and Puohiniemi (2006) have revealed gender differences in Finland in self-transcendence and self-enhancement values. In Pohjanheimo's (1997) study of Finns, women valued benevolence and conformity more, while men valued power and hedonism more. Puohiniemi (2006) found that Finnish women rank universalism as their second most important value, while Finnish men rank it fourth. The gender differences found in previous studies in Finland were also expected to emerge from the data taken from Finnish steelworkers.

H6: Women value the self-transcendence values (benevolence and universalism) more; men value power and hedonism more.

2.2.4. Values and geographical location in Finland

The differences in values among populations living in different geographical areas in the same nation and same ethnicity have not been studied before. The present study seeks to determine whether there are differences in employee values in different parts of Finland. No hypotheses can be given.

2.3 Values in occupational environments

According to social adaptation theory, individuals adapt to various life roles partly through value development and value fulfilment (Kahle, 1996). Social institutions such as work offer people roles that encourage behaviour displaying certain values, while fostering conditions for the further expression of those values (Schwartz, 1993). Some life circumstances provide opportunities to pursue or express some values more easily than others (Schwartz, 2005). Schwartz and Bardi (1997) argued that people upgrade the importance of values they can attain easily and downgrade the importance of values whose pursuit is blocked.

People in independent jobs tend to value self-direction at the expense of conformity (Kohn and Schooler, 1983). For example, Rokeach (1973) found that American college professors placed more value on intellectual competence and self-actualisation than did other adult Americans. Agyris (1957) pointed out that rational formal organisations with task specialisation, a chain of command, and a span of control create conditions that conflict with the growth needs of individual employees and result in socialisation that places a higher priority on security and material rewards than on self-direction.

Individuals working in different occupations are exposed to formal and informal socialisation to occupational values. For example, different occupational groups are given different training even after entering an organisation. Holland (1997) described six types of occupational environments: conventional, enterprising, social, artistic, investigative, and realistic. These environments are characterised by different activities and structures, and they allow individuals to pursue different goals. Holland argues that people search for environments that will allow them to exercise their skills and abilities and express their attitudes and values.

Knafo and Sagiv (2004) studied the values of Israeli workers in 32 occupations classified according to Holland's typology (1997). Their findings supported Holland's argument that different occupations have

different value priorities. Most of the directions of the correlations were those predicted by the theory.

With Holland's (1997) list of occupations belonging to different environments, the organisation used here as a case study can be divided into three occupational environment groups: enterprising, conventional, and realistic.

According to Holland (1997), the enterprising occupational environment is characterised by activities such as selling or leading people. Enterprising occupations include such things as management and sales. This environment rewards people for having goals related to achievements, money, power, and status. Knafo and Sagiv (2004) found that this environment correlated positively with achievement and power and negatively with universalism. Rokeach (1973) reported data on service station dealers and salesmen in an American oil company. The dealers and salesmen placed a higher value on hedonism and achievement than did an American national sample matched for gender, race, age, and type of employment (Rokeach, 1973).

The conventional occupational environment stimulates people to engage in such systematic activities as keeping records, filing, and organising data. These occupations are highly structured and allow display of such conventional goals as earning money, being dependable, and conforming (Holland, 1997). Knafo and Sagiv (2004) found that the conventional environment correlated positively with security and negatively with power.

The realistic occupational environment includes explicit and systematic manipulation of objects, tools, and machines (Holland, 1997). In Knafo's and Sagiv's study (2004) the realistic occupations, such as production and maintenance, correlated positively with hedonism and tradition and negatively with benevolence, universalism, and self-direction. This finding is in line with Holland's proposition (1997) that this environment rewards traditional values and concern with goods, money, power and possessions.

Holland's theoretical framework (1997) and the previous results obtained by Knafo and Sagiv (2004) suggest that all three occupational environments identified in the case study (enterprising, conventional, and realistic) lean towards conservative and self-enhancement values, but for selected values there might be volume differences. This study seeks to determine whether there are differences in the occupational groups and whether the possible differences are a direct result of the occupational environment or can be explained in terms of differences in age, gender, and education level.

H7: Employees working in enterprising occupational environments value self-enhancement values (achievement and power) more and universalism less than do the other two groups.

H8: Employees working in conventional occupational environments value security more than do the other two groups.

H9: Employees working in realistic occupational environments value tradition and hedonism more, and benevolence and self-direction less than do the other two groups.

2.4. Values and attitudes towards organisational change

Both values and attitudes influence people's attention, perceptions, and interpretations (Rokeach, 1973). In relatively familiar situations, as in most cases of organisational change, behaviour is usually guided by attitudes, which in turn, rely on values (Betsch, Plessner, Schwierien, and Gütig, 2001; Kahle, 1996; Rokeach, 1979). Change attitudes are a cognitive precursor to resistance to, or support for, a change effort (Armenakis, Harris, and Mossholder, 1993; Lau and Woodman, 1995).

Individuals with lower levels of change acceptance report more irritation at work and increased intentions of leaving their job (Wanberg

and Banas, 2000). Better coping with organisational change is related both to extrinsic (e.g., salary) and intrinsic (e.g., job satisfaction) career outcomes (Judge et al., 1999; Wanberg and Banas, 2000). Furthermore, both the organisation and the change process will benefit if employees have positive attitudes towards change (Armenakis et al., 1993; Reger, Mullane, Gustafson, and DeMarie, 1994).

There are no previous studies about the value/change attitudes relationships. The circular structure of Schwartz's theory (1992, 1994a) has been employed here to formulate hypotheses about the connections. The conservation values of tradition, conformity, and security should predict negative attitudes to changes in social systems. Correspondingly, the openness-to-change values, namely self-direction and stimulation, should predict positive attitudes towards change. There is no reason to expect that these connections would be different in attitudes towards organisational changes.

It is likely that organisational change situations require a person at least to sacrifice temporarily his/her own interests and resources for the benefit of the whole organisation. Therefore, universalism, benevolence, and hedonism should be important in the formation of change attitudes in an organisational context. Hedonism is sometimes included in openness to change values and it usually correlates to other variables in the same way as stimulation does (e.g., Myyry and Helkama, 2001). Also Pohjanheimo (1997) found that hedonism and stimulation did not form separate areas. Indeed, change at the individual level is likely to lead to pleasure and sensuous self-gratification, which are the motivational goals of hedonism (Schwartz, 1992, 1994a). In an organisational context, however, it is unlikely that these goals are well served in change situations. On the contrary, organisational changes usually cause unpleasantness, such as uncertainty, stress, feelings of loss of territory and fear of failure (Ashford, 1988; Rush et al., 1995; Coch and French, 1948).

The favourability with which individuals who value power and achievement are likely to view organisational change should depend on whether they see this change as possibly opening or threatening self-enhancing opportunities of status, prestige, and finance. As this study did not address any specific organisational change, no hypothesis can be offered regarding these values.

H10: The conservation values (security, conformity, and tradition) are connected to negative attitudes towards organisational change, while the openness-to-change values (self-direction and stimulation) are connected to positive attitudes.

H11: The self-transcendence values (benevolence and universalism) are connected to positive attitudes towards organisational change, while hedonism is connected to negative attitudes.

Organisational change is an alternation in the social system. It is likely that attitudes towards such changes are affected not only by values (personal norms) of the employees, but also by the expectations and behavioural standards (social norms) of the workplace (Salancik and Pfeffer, 1978). According to Schwartz (1992), people who value conformity are more likely to pay attention to the social norms relevant in the situation and less likely to let their personal motives affect their intentions.

The results of Lönnqvist et al. (2006) showed that the relationship between self-transcendence and self-enhancement values and behaviour was moderated by conformity. Also the preliminary findings reported by Myyry et al. (in preparation) show that conformity moderates only the relations between values on the self-transcendence - self-enhancement dimension.

H12: The self-transcendence values (benevolence and universalism) and the self-enhancement values (power and achievement) have a

stronger connection to the attitudes towards organisational change among employees who are low in conformity than to those who are high in conformity.

2.5. Values and knowledge sharing

2.5.1. Values and knowledge sharing in the workplace

Knowledge sharing is a daily social activity involving two or more people giving and receiving knowledge (Nonaka, 1994). In other words, knowledge sharing is the act of disseminating one's knowledge with others (Ryu, Ho, and Han, 2003). The way in which knowledge is shared is part of a larger organisational culture phenomenon (Brown and Starkey, 1994; Filius, de Jong, and Roelofs, 2000). The quality of the shared knowledge depends on the normative expectations a community holds about what and how much information is needed in each role or task (Bushe, 1988). Communication, which is a pre-requisite of knowledge sharing, is strongly connected to cultural conditions (Gudykunst and Ting-Toomey, 1988). Organisations are filled with various sophisticated information systems. Still, the most important media of knowledge sharing are the existing networks that people use in their daily work (McDermott and O'Dell, 2001).

Earlier studies have identified several features of efficient knowledge sharing. For example, in their case study of three workplaces, Filius et al. (2000) found that individuals are sometimes rewarded more for keeping their knowledge to themselves than for sharing it. This can lead to a situation where a more experienced employee hides vital pieces of information from a newcomer to ensure his/her own position. Cooperation between different work units or departments also puts knowledge sharing to the test. Hofstede (1998) found that competition

with other companies, but not between departments within the same company, creates a good communication climate.

One of the most crucial cultural elements of knowledge sharing in an organisation is the ability to learn efficiently from and communicate about mistakes (Filius et al., 2000; Nonaka and Takeuchi, 1995). Work groups share tacit beliefs about how to respond to mistakes, problems, and interpersonal conflicts, and these beliefs affect an organisation's ability to learn from failures (Cannon and Edmondson, 2001). The inability to discuss errors constructively across functions can lead to even more severe failures. Negative feedback should not be regarded as interfering in the work of others, but as welcome advice about how things could be done. The ability to ask for help and advice, or to challenge others' decisions or actions, is an important characteristic of a learning organisation (Edmondson, 1996).

According to Edmondson (1999), the shared belief that one's work unit is safe for interpersonal risk-taking contributes to seeking feedback, sharing information, experimenting, asking for help, and talking about errors. These learning behaviours in turn facilitate effective performance by allowing one to shift direction as situations change and to discover unexpected implications of actions (see Peltokorpi, 2004). When people are afraid to admit their own mistakes, or differences are left unresolved for fear of disputes, knowledge sharing is seriously impaired.

This study examines how knowledge sharing in the workplace is influenced by employees' values. Since there is no previous organisation-specific literature on how values and knowledge sharing are connected, the circular structure of Schwartz's theory (1992, 1994a) is employed along with other studies of the links of value and behaviour to formulate hypotheses about the likely connections.

The circular arrangement of values (Fig. 1) predicts that since certain values are opposite one another, they should have opposing relationships to behaviour. There is no reason why the underlying motives in sharing knowledge should be dissimilar to sharing other types of resources. Thus,

self-transcendence versus self-enhancement seems to be the important dimension in detecting the possible relationships between values and knowledge sharing.

According to Schwartz (2005), the self-transcendence value of benevolence provides an internalised motivational base for positive, cooperative, and sharing relationships in a small social circuit such as a family or close co-workers. Universalism, which contributes to positive social relations with those whom one does not readily identify, including persons in other teams or departments, is next to benevolence on the value circle. On the other hand, pursuing the values of power and achievement often leads to exploitation of others and hardly encourages the sharing of resources. Such values might interfere with group goal attainment, which is crucial to knowledge sharing; instead they promote self-seeking goals and perhaps even the hiding of knowledge rather than sharing it. This theoretical suggestion also has empirical support (Sagiv and Schwartz, 1995; Schwartz, 1996; Nauta et al. 2002).

H13: The self-transcendence values (benevolence and universalism) are positively connected with knowledge sharing in the workplace, while the self-enhancement values (achievement and power) are negatively connected with the knowledge sharing in the workplace.

Values in the dimension of openness to change versus conservation should contribute to the readiness of employees to alter their practises irrespective of the current mode of knowledge sharing. In one Israeli study, the conservation values of conformity, tradition, and security correlated negatively with readiness for out-group social contacts, while one openness to change value (self-direction) correlated positively (Sagiv and Schwartz, 1995). At the time of the study, Jewish teachers were encouraged to avoid social contacts with Arabs. Similarly, it is likely that this dimension of values reflects the current state of knowledge sharing. If knowledge sharing has been widely practised in an organisation,

conservation values should correlate positively with knowledge sharing and vice versa. No hypothesis can be offered.

2.5.2. Values and employees' perception of knowledge sharing in the workplace

There might be differences in how people with different values perceive knowledge sharing in the workplace. Schwartz, Sagiv, and Boehnke (2000) argue that high priority values are chronic goals that guide people to seek out and attend to value-relevant aspects of a situation. Previous studies have indicated links between perceptual selectivity in an organisational context and value orientation (e.g., Senger, 1971; Finegan, 1994). James, James, and Ashe (1990) argued that personal values serve as latent indicators of what is significant to individuals in the environment.

The current study investigates which values promote positive or negative interpretations about the way knowledge is shared by comparing individual employee evaluations to the average workplace score in knowledge sharing. There is no previous research to enable formulation of a hypothesis about how values should affect the perception of knowledge sharing. It is possible that people high in self-transcendence expect more knowledge sharing and thus perceive it positively, but they may also be more often disappointed by the lack of sharing.

Just as the moderating effect of conformity on the relationship between values and attitudes towards organisational change will be studied, so too similar exploration is applied also to this topic. The influences of social norms on the perception of knowledge sharing in the workplace are studied by comparing the results of people high and low in conformity.

H14: The self-transcendence values (benevolence and universalism) and the self-enhancement values (power and achievement) have a stronger connection to the perception of knowledge sharing in the workplace among employees low in conformity compared to those high in conformity.

3 METHODS

3.1 The case study: a Finnish steel company

The case study in this research was a steel company founded by the Finnish government in 1960. Its main task was to make the steel needed by the Finnish metal industry. In the late 1980s the company was transformed into a privately owned organisation and listed on the Helsinki Stock Exchange. During the time of the study, the company supplied metal products and services to the construction and mechanical engineering industries, not only in Finland, but also in other Nordic countries, Europe, and Russia. The company had operations in over 20 countries and employed over 10, 000 persons worldwide.

This study targeted only the Finnish units of the two largest divisions here called A and B. Division A had four factories and a head office in Finland; Division B had three separate factories and one large industrial area with several units and a head office in Finland. Division A had ca. 600 employees (13% women) and Division B, ca. 4,500 employees (17% women) in Finland. The attitudes towards organisational change were studied only in Division B. All other analyses were conducted on data derived from both divisions.

The organisation has a reputation of being a reliable and secure employer, although there were some hints of deterioration in the sense of

job security because of the increase in temporary work contracts along with recent experiences and rumours about out-sourcing. The company workforce was loyal, however; there was low turnover and workers often stayed with the company for years (sometimes for 30 years or more). It was not uncommon to find individuals employed by the company for their entire working careers.

The greatest change the organisation had faced by the time of the study, in the year 2001, was the transformation from a state -owned to a privately-owned company, a change that took place in the late 1980s. This change demanded an increase in production and a decrease in costs, with only a small decrease in the number of jobs. Still, the external pressure to become a profit-making organisation fundamentally changed the work culture: the separation between white-collar workers and manual workers became less distinct, even though the divide was still strong. Over the next twenty years, several changes, mostly minor, in technology and local organisational structure took place.

During the five years preceding the study the biggest challenge had been the implementation of teamwork at all levels of the organisation. A few years before the study was carried out, the company was reorganised into divisions; this changed the way in which top management worked, although it had little or no effect on lower-level employees.

3.2 Surveys

3.2.1 The Portrait Value Questionnaire

The 40-item Portrait Value Questionnaire (PVQ) (Schwartz et al., 2001) was translated by a back-translation process and piloting into Finnish. The items are brief descriptions of people; for example, “It is important to him/her always to behave properly. He/she wants to avoid doing

anything people would say is wrong". The respondents were asked to evaluate how much each person in the description was or was not like them on a 6-point scale ranging from 6 (very much like me) to 1 (not at all like me).

The scores for each of the ten values were the averages of the mean ratings of the single value items postulated *a priori* to measure each value (see Appendix 1). The current version of PVQ has more items (40), but is otherwise similar to the shorter version (29 items) used in a previous study (Schwartz et al., 2001). Cronbach's alphas for the measures were as follows: achievement, .84; hedonism, .82; universalism, .82; stimulation, .72; benevolence, .71; security, .69; conformity, .67; power, .67; self-direction, .62; and tradition, .39.

The weak reliability of tradition is striking. However, it seems to be a Finnish peculiarity. According to Helkama (2008, personal communication) in an unpublished study of university students of three nations, the alpha for tradition in the PVQ in Finland was only .35. This was in strong contrast with the reliabilities for the other values, which were all higher than .65, with the exception of self-direction (.58).

3.2.2 Construction of a survey of attitudes towards organisational change

To construct the survey to measure attitudes towards organisational change, thematic interviews were conducted in Division B at the beginning of the year 2001. No dramatic organisational changes were going on or planned during that time.

Although the informants were selected by using a convenience sampling, care was taken that the participants came from all units of the division, different professional groups and represented hierarchical levels, both genders, and different age groups. A total of 22 informants was interviewed. The themes guiding the half hour to one hour

interviews were: (1) the organisational changes that had taken place and those changes expected to take place; (2) how changes usually took place in the organisation; (3) what consequences the changes had had; and (4) how members of the organisation generally perceived these changes. All the interviews were tape recorded and transcribed.

An inductive analysis of the data was conducted according to the principles of grounded theory (Glaser and Strauss 1967; Strauss and Corbin, 1990). The software, called Atlas-ti, designed to assist qualitative analysis, was employed. The interview data were reviewed, and all quotations representing a relevant issue were compared with similar quotations and given a common code. These codes were then organised by themes, which became the basis for a set of categories. The properties of each possible category were identified and compared with other properties. The categories that were too similar were merged; any category that did not answer the research questions was deleted.

The analysis of the interview data brought out three categories of attitudes towards organisational change: 1) the need for organisational change, 2) the consequences of organisational changes, and 3) the evaluated competence of an organisation to implement changes. The categories, abstract codes, and codes in open coding with the numbers of quoted interviews are presented in Table 3.

All expressions of the first category, namely the need for organisational change, supported organisational change, stating a need, or even the necessity, for change. Some of the suggestions were attached to specific changes, such as hiring better salesmen or building better staff rooms, while others were of a more general nature, for example, increasing productivity. These needs were justified either explicitly or implicitly with the argument that without change the organisation would eventually cease to exist.

The second category, that is, the consequences of organisational change, emerged when employees recalled past or anticipated future changes. The negative consequences of changes that had already taken

place included deterioration of the work climate and information flow, confusion, lower efficiency, greater workloads, individual disadvantages and worries, and loss of jobs. On the other hand, the employees interviewed also recalled positive consequences of organisational change, for example, the decreased workload that came with automation. The anticipated consequences of organisational changes were loss of jobs and increase in workloads, even though the changes in many cases were seen to affect only top management and not “on the ground” employees.

The third category was the ability to implement organisational change. Although there were indications of well-implemented changes, most of the expressions in this category implied disappointment in the way change had been handled. The problems were attributed to a lack of involvement on the part of middle management, the speed of the change process, and poor communication, participation, ability, or persistence. The collective readiness for change was also seen to effect the implementation of organisational change. The organisational culture adhered to old habits, and the employees were generally believed to oppose any changes, although it was agreed that the attitudes had recently taken a more positive direction.

These categories were used to build up a survey consisting of six items, two representing each of the three change attitude categories found in the qualitative analysis (Table 2). The respondents were asked how much they agreed or disagreed with the statements presented, using a five-point scale ranging from 5 (agree very much) to 1 (disagree very much). Cronbach's alpha for the measure was .69. The survey of attitudes towards organisational change was employed only in Division B where it was developed.

Table 2. *Organisational Change Attitude Categories, Codes and Survey Items*

Category	Codes (number of quoted informants)	Item
Need for organisational change	Change is needed (a)	3. In my opinion, changes are not needed. (re)
	<ul style="list-style-type: none"> • The past change was necessary (2) • Must improve technology (2) 	
	<ul style="list-style-type: none"> • Must improve productivity and efficiency (3) • Must improve working conditions (2) • Must develop open leadership style (2) 	5. Changes are necessary for our future.
	<hr/>	
	Consequences of organisational change	Past consequences (a)
<ul style="list-style-type: none"> • Problems in the flow of information (4) • Job losses, more work, and smaller budget (5) • Worries, confusion, and poorer work climate (4) • Work was facilitated (3) 		6. Changes are never for the better (re)
Expected consequences		
<ul style="list-style-type: none"> • Job losses and increased workload (5) • Changes do not affect regular workers (3) 		
<hr/>		

Implementation of organisational change	Successful past change (a)	1. Changes are usually successful here
	<ul style="list-style-type: none"> • Participation and communication (2) 	
	Unsuccessful past change (a)	4. There is no point in trying to change something, because it will fail anyway (re)
	<ul style="list-style-type: none"> • Middle management not involved (2) • Lack of communication and participation (9) • Lack of persistence and ability (7) • Change too slow or too fast (3) 	
	Collective readiness (a)	
	<ul style="list-style-type: none"> • Organisational culture accentuates old habits (2) • Employees resist change (5) • Readiness to change has improved lately (4) 	

Note. re = reversed item; a = abstract code.

3.2.3 The knowledge-sharing survey

A knowledge-sharing survey (Table 3) was based on the results of a qualitative study I had earlier conducted in the organisation of the current case study (Koivula, 2000). In the previous study, I interviewed 48 organisation members from different functions, professional groups, and organisational levels about learning, feedback practises, and communication in the workplace. The data were analysed qualitatively following the data-oriented principles of the grounded theory (Glaser and Strauss, 1967). This analysis was validated using three 1 to 2 hour group

feedback interviews (Allport, 1951) with employee groups from all levels of the organisation.

In the current study, the respondents were asked to estimate the frequency of the knowledge sharing situations/features that the items described on the questionnaire in their workplace, using a 5-point scale ranging from 5 (very common) to 1 (not at all common). Cronbach's alpha for the measure was .78. The scoring for knowledge sharing was done using factor scores. The knowledge-sharing survey was employed in both Divisions A and B.

Table 3. *Knowledge-Sharing Survey Items*

1	Co-workers share knowledge willingly
2	Co-operation between different departments functions well
3	Positive feedback is often given
4	Knowledge is hidden to ensure one's own power (re)
5	When someone succeeds, others are glad
6	People are afraid to admit their mistakes (re)
7	Negative feedback is perceived as interfering with others' work (re)
8	Differences are not resolved, because of the fear of conflict (re)
9	Experienced persons have more authority than others (re)

Note. re = reversed item.

3.3. Participants

Two divisions from the study organisation took part in this research. Although these divisions also had units in other countries, the data were collected only from the units located in Finland. Altogether the number of respondents was 1,322 (1,092 men and 216 women).

The data collection was conducted first in Division A at the beginning of the year 2001. This division had four factories and a sales office in Finland. One of the factories and the sales office were located in

the same industrial area in the southern part of Finland as one of the production units of Division B. The other three factories were located in different parts of Finland. Some of the employees were absent from the meeting where the questionnaires were distributed (12%) because of holidays, sick leave, etc.; others left the questionnaire unfinished (5%). The data drawn from this division consisted of 499 responses (12% women), approximately 83% of the total number of employees in the division.

The Division B sample was collected during the summer of 2001. This division had a large industrial area in Northern Finland consisting of three factories, a maintenance unit, a sales office, and a personnel office. This division also had three other factories and an engineering team, all of them located in different parts of Finland. The random sample included 823 employees (19% women), which was 18% of the total. The response rate was 79%. Employees filled out the questionnaires anonymously, and the time used to fill out the questionnaire was paid working time.

Altogether there were 849 manual employees (10% women) and 471 white-collar employees (28% women). The ages ranged from 18 to 65 with the medium age being 40 to 44. The sample was divided into three age groups: 18-34 years, N = 343 (284 men, 59 women); 35-49 years, N = 549 (445 men, 104 women); 50-64 years, N = 373 (323 men, 50 women). Of the respondents, 187 had completed only a basic education, 836 had from four months to three years of vocational education, 260 had a technical/business college or university degree, and 39 participants did not indicate their educational backgrounds. Twenty percent of the manual workers had no vocational education, 16% had taken a vocational course (min. four months) and 63% had vocational training (2-3 years). Eight percent of the white-collar workers had only a secondary school graduation diploma, 68% had a technical/business college degree and 24% had a university degree.

The data from Division A consisted of 335 manual workers (4% women) and 164 white-collar employees (29% women). In this division 72 (14%) of the respondents had completed only a basic education, 301 (62%) had from four months to three years of vocational education, 111 (22%) had a technical/business college or university degree, and 15 (3%) did not indicate their educational backgrounds. The mean age of the employees was 40.

The sample from Division B was gathered from 514 manual employees (14% women) and 307 white-collar employees (27% women). In this division, 115 (14%) of the respondents had completed only a basic education, 535 (65%) had from four months to three years of vocational education, 149 (18%) had a technical/business college or university degree, and 24 (3%) did not indicate their educational backgrounds. The mean age of the employees was 44.

3.4. Analysis

3.4.1. Structure of values

One of the purposes of this study is to validate Schwartz's circular model of values and the new value instrument, the Portrait Value Questionnaire (PVQ). Previously the values obtained for Finnish university students using the Schwartz Value Survey (SVS) followed Schwartz's theoretical model (Verkasalo, 1996). The current sample of employees in a Finnish steel company is compared to this previous data and also to a new sample of students studied with the PVQ. Students did not participate in the other parts of this study.

The students completed the questionnaires during a class period and received personal feedback afterwards. Both the SVS sample and PVQ sample had response rates of 85. The SVS and PVQ samples do not

overlap. The students took part in only one test. The SVS sample consisted of 651 university students (55% women), and the mean age was 23.1 (SD=4.7). In the PVQ sample, the number of university students was 309 (80% women) and the mean age was 23.3 (SD=5.8). All the university students had at least a secondary school graduation diploma.

To study the similarity of value structures in samples of (1) university students completing the Schwartz Value Survey (SVS), (2) university students completing the Portrait Value Questionnaire (PVQ), (3) white-collar workers completing the PVQ, and (4) manual workers completing the PVQ, the correlation matrices were independently subjected to multidimensional scaling (MSD) analyses. The resulting figures were then compared to the theoretical model proposed by Schwartz (1992, 1994a) (Figure 1).

The similarity of the value structures was further evaluated using transformation analysis, which can be considered a form of confirmatory factor analysis. The factor loadings of the structures obtained in the multidimensional scaling analyses were compared using transformation analysis according to the symmetric model of Mustonen (1995). This model measures the invariance of the factor structure more accurately than the Procrustes analysis (Hurley and Cattell, 1962). The similarity of the value structures in sample 1 of the university students gathered with SVS and sample 2 of the university students studied with the PVQ were compared and the theoretically corresponding items of the two instruments were identified.

The transformation matrix L and the residual matrix $E=A1*L-A2$ are computed from matrices $A1$ and $A2$, which represent orthogonal factor structures. The analysis produces a transformation matrix in which all scores are between 0 and 1. Scores for diagonal items that are close to 1.00 and scores for non-diagonal items that are close to 0.00 describe the similarity of the factor structure between the two factors, although there are no statistical tests to set the confidence limits. For example, if

diagonal items receive a value of 1.00 in transformation matrix, this would indicate perfect similarity among the diagonal structures under study. On the other hand, if the non-diagonal items receive a value of 1.00, the non-diagonal structures would be evaluated as very different.

3.4.2. Value priorities

The score for the importance of each basic value was the mean rating of the single value items postulated *a priori* to measure the value. In order to correct individual differences in scale use, in this study proportional sum variables were used. The values scores were divided by the respondent's personal mean of all values (see Verkasalo, Tuomivaara, and Lindeman, 1996). The value scores represent the relative importance to the person of each value compared to other values, with the average score for all ten value scales being 1.00.

To study the value priorities of the case organisation, the rank order of values was compared to the results obtained by Puohiniemi (2006) using Spearman's correlation analysis.

To explore how background variables are related to values, a 3 (age: 18-34, 35-49, 50-64) x 2 (gender: women, men) x 3 (education: low, medium, high) x 2 (geographical location: Southern Finland, Northern Finland) analysis of variance was conducted. The Bonferroni *post hoc* tests ($\alpha^* = \alpha/k$, where k is the number of tests performed) were used to assess the p-values of the univariate tests of each of the ten values.

3.4.3. Occupational environments

Using Holland's (1997) list of occupations belonging to different environments, the study organisation was divided into three occupational environment groups: enterprising, conventional, and realistic. The conventional occupational environment consisted of non-manager

employees (N=133) working in administration (50), finance (46), data-administration (12) or production planning (25). The enterprising occupational environment (N=207) consisted of managers working in any area (150) plus the sales personnel (57). The realistic occupational environment (N=912) consisted of non-managerial employees working in the areas of production (614), maintenance (201), or quality and product development (97).

Occupational environments (conventional, enterprising, and realistic) had an uneven distribution of women (Pearson Chi-Square [2,1250df] = 141.08, $p < .001$), age (Pearson Chi-Square [4,1210df] = 46.11, $p < .001$) and educational level (Pearson Chi-Square [4,1227df] = 219.04, $p < .001$).

The proportion of women in the conventional environment was 52%, but only 13% in the enterprising and 12% in the realistic environments. All the occupational environments had about the same proportion of employees aged 35-49 years (43-44%), but the realistic environment had proportionally more 18 to 34-year-old employees (32%) and fewer 50 to 64-year-old employees (25%) than the conventional environment (19% and 36%, respectively) or the enterprising environment (14% and 44%, respectively).

The level of education was lowest in the realistic environment (low, 30%; medium, 59%; and high, 10%) compared to the conventional environment (low, 21%; medium, 32%; and high, 47%) or to the enterprising environment (low, 6%; medium, 49%; and high, 46%).

To explore the independent relationship of occupational environments to values, a 3 (occupational environments: conventional, enterprising, realistic) x 3 (age: 18-34, 35-49, 50-64) x 2 (gender: women, men) x 3 (education: low, medium, high) analysis of variance (MANOVA) was conducted. To study the non-independent relationship between occupational environments and values a one-way ANOVA was conducted.

3.4.4. Values and attitudes towards organisational change

The independent effect of the ten personal values together with age, gender, and education on attitudes towards change was studied using correlation analysis. The partial influences of the values were then investigated using linear regression analysis.

According to Schwartz's value theory, all the values are dynamically related following a sinusoid curve. Also in this study there was noteworthy, though not statistically significant, co-linearity among all the value variables, which affected the interpretation of the regression analysis. Because of the strong co-linearity, the achievement value was excluded from all the regression analyses. Achievement was selected because it was not part of the hypotheses and did not have a correlation with attitudes towards organisational change.

The moderating effect of conformity was studied using hierarchical multiple regression analysis. Simple slope analysis was conducted to illustrate the nature of the interactions.

3.4.5. Values and knowledge sharing

The organisation selected for a case study consisted of 10 factories, a maintenance unit, an engineering team, two sales offices and a personnel office (as described in Section 3.3. Participants). The construction phase of the questionnaires indicated that the people in the office and the manual workers on the shop floor each have their own subcultures. To respect this difference, the three largest factories and the maintenance unit were divided into white-collar and manual worker groups and these groups were then treated as separate workplaces. In smaller factories (fewer than 30 persons in a white-collar workers' group) this separation was not made because the sample size would have been too small for the statistical analysis.

Each of the 19 workplaces was assigned a score for the ten basic values and a factor score for knowledge sharing. These scores were the mean of the individual responses from each workplace. Pearson correlations between the scores of the ten values and knowledge sharing in the workplaces were calculated.

The connection between perceptions of knowledge sharing and the ten values was studied by calculating the difference between the individual employee's perception of knowledge sharing in the workplace and the mean workplace score and then applying correlation and linear regression analyses. Because of the strong co-linearity, the achievement value was excluded from the regression analysis.

The moderating effect of conformity was studied using hierarchical multiple regression analysis. Simple slope analysis was conducted to illustrate the nature of the interactions.

4 SCHWARTZ'S VALUE STRUCTURE AMONG WESTERN MANUAL WORKERS

4.1. Results

It was hypothesised that Schwartz's two-dimensional value model would be similar in both the SVS sample and the PVQ sample of university students as well as in white-collar workers and manual workers studied with the PVQ. Indeed, the fit between the value structures of the university students evaluated with the SVS and the PVQ was almost perfect. The transformation matrix scores for the diagonal items were a maximum of 1.00, and, for the non-diagonal items, 0.02, which is very close to the minimum zero. Also the results of the multidimensional scaling analysis in Figure 2 show ten separate value sectors in the proposed order with minor deviations: two self-direction items (11, freedom, and 34, independence) loaded to the neighbouring area of the value type of hedonism. One tradition item (25, personal stability) was also located in the security area, and one security item (35, social order), in the conformity area.

Transformation analysis indicated a good fit between the value structures of the university students evaluated with the PVQ and white-

collar workers. The matrix score for the diagonal items was 1.00 and for the non-diagonal items, 0.06. However, the results of multidimensional scaling analysis in Figure 3 show an important deviation from the theoretical pattern: all items of security value type were located between the self-transcendence values and conformity. More minor deviations also occurred: the adjacent value types of benevolence and universalism on the one hand and hedonism and stimulation on the other had exchanged places and one stimulation item (6, new experiences) was located among the self-direction items.

When the value structure of the manual workers was compared with the university students evaluated with the PVQ and the white-collar workers, the transformation analysis showed a modest fit. The transformation matrix score between the value structures of the manual workers and the university students was 0.96 for the diagonal items and as high as 0.29 and for the non-diagonal items. The transformation matrix score between the manual workers and the white-collar workers was 0.97 for the diagonal items and 0.23 for the non-diagonal items. The results of the multidimensional scaling analysis in Figure 4 demonstrate that the value type security was located beside the universalism and benevolence sectors, similar to the value structure of white-collar workers. In addition, adjacent values of hedonism (items 10, amusement, and 37, enjoyable life) had changed places with the achievement and power value sectors. Another minor deviation was the shift of one item from the value type stimulation (6, new experiences) into the self-direction sector.

Appendix 1 presents the means, standard deviations, and rank order of each of the 40 value items in university students, white-collar workers and manual workers studied with the PVQ.

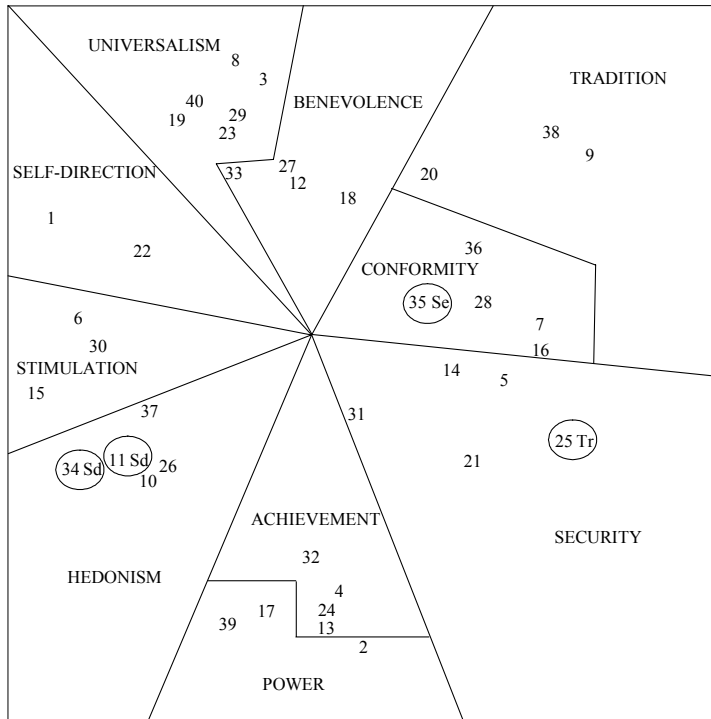


Figure 2. Value structure of Finnish university students ($N = 309$). The explanations for the item numbers are presented in Appendix 1.

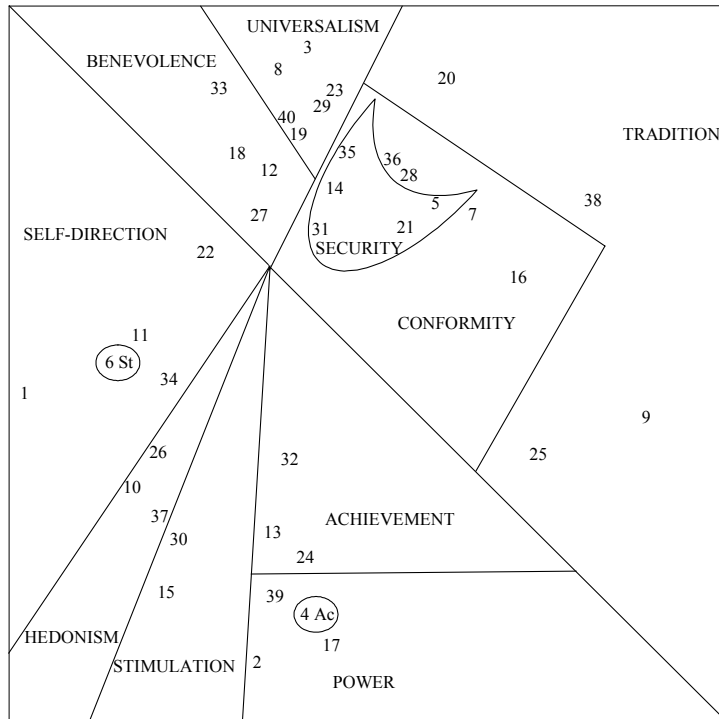


Figure 3. Value structure of Finnish white-collar workers ($N = 459$). The explanations for the item numbers are presented in Appendix 1.

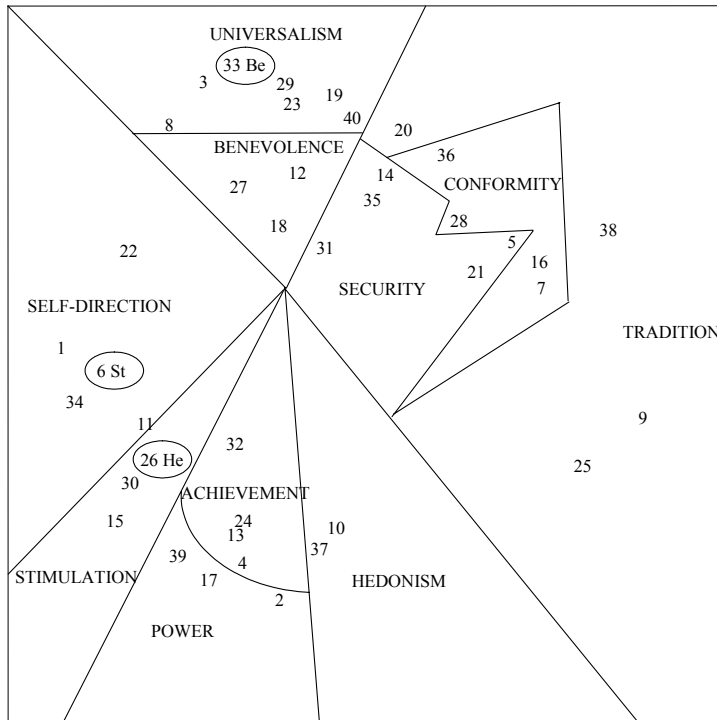


Figure 4. Value structure of Finnish manual workers ($N = 815$). The explanations for the item numbers are presented in Appendix 1.

The correlations between value items were further examined to scrutinize the unexpected shift of the security close to the self-transcendence values among the employees of the study organisation. Table 4 shows the correlations between security and self-transcendence value items. The correlations were all statistically significant ($p < .01$) and positive. The security items, national security (14) and social order (35), had an especially high correlation. Both of these items were also correlated highly ($r > 0.30$) with the universalism items: care for nature (19), unity

with nature (40), social justice (29), and world peace (23). In addition these security items had a high correlation with the benevolence items: helping (12) and loyalty (18).

Table 4. *The Correlations between Security and Self-transcendence Items*

	5	14	21	31	35
Security					
5 Safe environment	1				
14 National security	.28	1			
21 Tidiness	.28	.28	1		
31 Health	.27	.28	.32	1	
35 Social order	.25	.59	.25	.35	1
Benevolence					
12 Helping	.25	.32	.21	.23	.25
18 Loyalty	.19	.31	.22	.26	.28
27 Support others	.20	.29	.21	.30	.27
33 Forgiveness	.10	.19	.12	.25	.25
Universalism					
03 Equality	.28	.23	.18	.25	.24
08 Tolerance	.13	.24	.16	.20	.23
19 Care for nature	.26	.38	.31	.33	.36
23 World peace	.28	.32	.27	.31	.40
29 Social justice	.25	.36	.28	.34	.38
40 Unity with nature	.28	.35	.30	.34	.37

4.2. Discussion

Hypothesis 1 was confirmed. Schwartz's two-dimensional value model (1992, 1994a) was similarly found in both student groups and in white-collar and manual worker groups. The two dimensions, namely, self-enhancement versus self-transcendence and openness to change versus conservation, were present. An important anomaly also emerged: the value type security was located adjacent to benevolence and universalism.

In addition to the shift in security, there were other, minor deviations from Schwartz's value theory in the value structure of the steelworkers. Some adjacent values formed joint regions or changed places. This is a common variant in the prototypical value structure already evident in Schwartz's original study (1992). There was also variation in the placement of single items, which can be due to random measurement errors.

The unexpected location of security cannot be explained by questioning the validity of the new value instrument, the Portrait Value Questionnaire (PVQ), since the value structure of Finnish university students measured with the PVQ was almost exactly the same as the previous structure determined by the Schwartz Value Survey (SVS) (Verkasalo, 1996). These findings are in line with the similarity of the value structures of a sample of Italian teachers studied with the SVS (Schwartz, 1992) and a representative national sample from Italy (Schwartz et al., 2001) studied with the PVQ. Nor is the shift in security value explained by the level of education or the ability to deal with abstract concepts such as values, since a similar structure emerged not only among manual workers with a low education level, but also among quite highly educated white-collar workers.

National security and social order had a closer connection than the other security items. National security was the most important value item to manual and white-collar workers; social order was also among the ten

most important value items (Appendix 1). These items correlated especially high with the universalism items of social justice and world peace. The placement of the security items closer to the self-transcendence values rather than to the self-enhancement values may reflect the adult population's beliefs about factors affecting national security and social order. Due to its short independent history, small population, geographical location and political position, the Republic of Finland has not been able to exercise power or demonstrate achievement under the flag of national security. Due to such events as the civil war, the Winter War and Continuation War, and a difficult period with the powerful Soviet Union, Finns still view national security as easily threatened by international conflicts or lack of coherence within their society. Thus, Finnish workers might see the social order, social justice and world peace as means to achieve national security. And vice versa: national security and world peace may be seen as guaranteeing the (democratic) social order and social justice in Finland.

The security items of national security and social order also had high correlations with the universalism items dealing with the relationship of humankind and the natural environment (care for nature, unity with nature). This is rather surprising, as the sample was collected in the beginning of the year 2001 and problems related to climate change were not then a common topic of discussion.

Nevertheless, the blend of security and self-transcendence values is not a unique finding. These values were also mixed in the value structure of a national sample of South African blacks (Schwartz et al., 2001). In a national sample in Finland (Puohiniemi, 1995), some of the security items were similarly located among the self-transcendence values. Also in a probability sample representative of the Israeli Jewish population over 19 years of age, the men displayed a value structure in which security was situated between the value types of benevolence and tradition/conformity (Prince-Gibson and Schwartz, 1998).

5 VALUE PRIORITIES

5.1. The study organisation

There was a Spearman's correlation of 0.89 ($p < .01$) between the rank order members' values in the study organisation and the general Finnish population during the year 2001 (reported by Puohiniemi, 2006). The most important values for the steel factory workers were security, universalism, and self-direction. The least important were power, tradition, and achievement. Table 5 presents the means, standard deviations, and rank order for the values.

5.2. Age, gender, education, and geographical location

There were no fourth-order interactions (Wilks lambda [10,4,1188df] = 0.96; Rao's f-appr. [40,4336df] = 1.12, $p > .05$) or third-order interactions between age, gender, education and geographical location. The main effects and second order interactions are presented next.

Table 5. *Means, Standard Deviations and Rank Order for Values*

The Study Organisation				Finnish Population
Rank	Value	M	SD	Rank
1.	Security	1.16	0.14	2.
2.	Universalism	1.15	0.15	3.
3.	Self-direction	1.11	0.15	5.
4.	Benevolence	1.09	0.14	1.
5.	Conformity	1.03	0.16	4.
6.	Hedonism	1.00	0.23	6.
7.	Stimulation	0.92	0.21	8.
8.	Achievement	0.82	0.21	7.
9.	Tradition	0.79	0.17	9.
10.	Power	0.71	0.22	10.

The main effect for the age differences in the ten basic values was statistically significant (Wilks lambda [10,2,1188 df] = 0.95; Rao's f-appr. [20,2286df] = 2.85, $p < .001$). Table 6 gives the means, standard deviations, and F ratio of the three age groups. In addition, the effect sizes (Cohen's d-values) are presented to compare the youngest and oldest age groups. Security and universalism increased as a function of age, and hedonism and achievement decreased.

Age did not have second-order interactions with gender (Wilks lambda [10,2,1188df] = 0.98; Rao's f-appr. [20,2286df] = 1.25, $p > .05$), education (Wilks lambda [10,4,1188df] = 0.97; Rao's f-appr. [40,4336df] = 0.88, $p > .05$) or geographical location (Wilks lambda [10,2,1188df] = 0.98; Rao's f-appr. [20,2286df] = 1.24, $p > .05$).

Table 6. *Mean Importance Ratings of Values by Age*

Value	18-34 y		35-49 y		50-64 y		F(2, 1188df)	d 18-34/ 50-64
	(N = 333)		(N = 529)		(N = 352)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
SE	1.12	0.14	1.16	0.16	1.19	0.13	5.01*	0.52
CO	1.00	0.17	1.04	0.16	1.05	0.15	1.68	0.31
TR	0.77	0.17	0.79	0.17	0.81	0.16	0.83	0.24
BE	1.08	0.13	1.09	0.14	1.10	0.14	1.53	0.15
UN	1.09	0.15	1.18	0.15	1.19	0.15	11.07**	0.67
SD	1.12	0.15	1.10	0.15	1.10	0.14	0.30	0.14
ST	0.98	0.19	0.91	0.21	0.88	0.21	2.55	0.50
HE	1.09	0.20	1.01	0.23	0.93	0.23	9.23***	0.74
AC	0.89	0.21	0.80	0.20	0.79	0.20	10.10***	0.49
PO	0.75	0.22	0.70	0.22	0.69	0.21	1.36	0.28

Note. SE = Security; CO = Conformity; TR = Tradition; BE = Benevolence; UN = Universalism; SD = Self-direction; ST = Stimulation; HE = Hedonism; AC = Achievement; PO = Power.

* $p < .05$; ** $p < 0.01$; *** $p < 0.001$.

The main effect of education (Wilks lambda [10,2,1188df] = 0.94; Rao's f -appr. [20,2286df] = 2.85, $p < .001$) was statistically significant. Table 7 presents the means, standard deviations, and F ratio for groups with different educational levels. In addition, Cohen's d -values are presented in order to compare the least educated and most educated groups.

Security and tradition showed a decrease, and self-direction, achievement, and power an increase as a function of educational level.

Table 7. *Mean Importance Ratings of Values by Education Level*

Value	Low (N = 305)		Medium (N = 670)		High (N = 253)		F(2, 1188df)	d Low/ High
	M	SD	M	SD	M	SD		
	SE	1.18	0.15	1.16	0.13	1.11		
CO	1.05	0.16	1.04	0.16	0.99	0.16	3.04*	0.38
TR	0.83	0.17	0.80	0.17	0.72	0.17	7.06**	0.53
BE	1.09	0.15	1.09	0.14	1.09	0.14	1.29	0.00
UN	1.18	0.15	1.15	0.15	1.13	0.16	2.45	0.19
SD	1.08	0.13	1.10	0.15	1.16	0.14	6.68**	0.59
ST	0.88	0.21	0.92	0.20	0.96	0.21	1.17	0.38
HE	1.01	0.23	1.02	0.23	0.96	0.23	5.95**	0.22
AC	0.79	0.15	0.82	0.20	0.91	0.20	12.62***	0.69
PO	0.66	0.23	0.70	0.21	0.80	0.21	14.69***	0.64

Note. SE = Security; CO = Conformity; TR = Tradition; BE = Benevolence; UN = Universalism; SD = Self-direction; ST = Stimulation; HE = Hedonism; AC = Achievement; PO = Power.

* $p < .05$; ** $p < 0.01$; *** $p < 0.001$.

Education had no second-order interactions with age (Wilks lambda [10,4,1188df] = 0.97; Rao's f-appr. [40,4336df] = 0.88, $p > .05$), gender (Wilks lambda [10,2,1188df] = 0.99; Rao's f-appr. [20,42286df] = 0.85, p

> .05) or geographical location (Wilks lambda [10,2,1188df] = 0.99; Rao's f-appr. [20,2282df] = 0.89, $p > .05$).

There was a statistically significant main effect for gender (Wilks lambda [10,1,1188df] = 0.97; Rao's f-appr. [10,1143df] = 4.03, $p < .001$). Women valued benevolence (univariate $F[2,1188df] = 20.17$; Bonferroni, $p < 0.001$) and universalism ($F[2,1188df] = 9.68$; Bonferroni, $p < 0.01$) more; men valued achievement ($F[2,1188df] = 6.53$; Bonferroni, $p < 0.05$) and power ($F[2,1188df] = 17.79$; Bonferroni, $p < 0.001$) more. The effect sizes (Cohen's d-values) were small (0.09-0.37).

Gender did not have second-order interactions with age (Wilks lambda [10,2,1188df] = 0.98; Rao's f-appr. [20,2286df] = 1.25, $p > .05$) or education (Wilks lambda [10,2,1188df] = 0.99; Rao's f-appr. [20,42286df] = 0.85, $p > .05$).

Gender had a second-order interaction with geographical location (Wilks lambda [10,1,1188df] = 0.99; Rao's f-appr. [10,1143df] = 2.12, $p < .05$) in tradition ($F[1,1188df] = 5.31$; Bonferroni, $p < 0.05$). Tradition was equally important to men in northern ($M=0.81$, $SD=0.17$) and southern ($M=0.79$, $SD=0.16$) Finland, but it was more important to women in northern Finland ($M=0.81$, $SD=0.19$) than in southern Finland ($M=0.72$, $SD=0.17$) (effect size 0.5). There was also a statistically significant second-order interaction in self-direction ($F[1,1188df] = 3.90$; Bonferroni, $p < 0.05$), but the effect size was only 0.15.

The main effect of geographical location (Wilks lambda [10,1,1188df] = 0.99; Rao's f-appr. [10,1143df] = 1.61, $p > .05$) was not statistically significant.

5.3. Discussion

As stated in Hypothesis 2, the employees of the study organisation were expected to have a similar value ranking as the general Finnish population during the year 2001 as reported by Puohiniemi (2006).

Although there was a statistically significant correlation between the rank order of values in the current data and the general Finnish population, there were also distinct differences. Highest in the value priorities of the steel company employees were security, universalism, and self-direction. Although benevolence has been found to be among the most important values in both Finland (Puohiniemi, 2006) and internationally (Schwartz and Bardi, 2001), it was only fourth in the rank of the employees values in the study organisation. As expected, the least important values in the steel factory were tradition and power, although stimulation and achievement had changed places compared to the Finnish value hierarchy found by Puohiniemi (2006).

It is possible that the values of the occupational environments (Holland, 1997) prevalent in the study organisation (realistic, enterprising, and conventional) attract individuals orientated towards security, universalism, and self-direction, and support the behaviours associated with these values. As implied in Holland's theory (1997), the value of benevolence is associated with social occupational environments that are not present in the study organisation.

Another explanation for this unexpected result arises from the circumstances that the questionnaire was presented to the respondents in a work-related context. Most of the employees filled in the questionnaires as an employee of the case organisation and in the presence of their co-workers. Although privacy was guaranteed, this environment no doubt primes values that are relevant in an industrial context. In contrast, most of the respondents in the general Finnish population were supposedly asked the same questions in their homes, where their principal role is to be a member of a family. This difference in the social environment in which the measurements were done would no doubt create differences, especially in benevolence which, by definition, is a family value. Future studies should be targeted to reveal how the social environment primes values.

The data from the study organisation and Puohiniemi's (2006) data of the general Finnish population were gathered in the same year, 2001, applying compatible methods. It is thus likely that any differences between the samples reflect the unique value profile of the study organisation. I recommend that further studies of organisational value profiles be designed to gather a representative referent population. In this study the fresh value priorities of the referent population were obtained purely by good luck.

Hypothesis 3 was partially confirmed. Older employees valued security more. Conformity and tradition also increased as a function of age, but F-ratios and effect sizes were too small to permit conclusions to be drawn. Although the idea was not in the hypothesis, younger employees valued hedonism more. Prince-Gibson and Schwartz (1998) and Schwartz et al. (2001) also found a negative connection between age and hedonism. Hypothesis 4 was fully confirmed. In line with Pohjanheimo's (1997) results, older employees valued universalism more, and achievement less.

The multivariate methodology of this study shows the actual differences in age better than the mere correlation analyses used by Schwartz (2005) and Schwartz et al. (2001). Like other cross-sectional studies of values and age, this study does not reveal whether the observed differences in value priorities of the different age groups of workers are due to age, period, or cohort effects (Riley, 1973). Since it is possible that early retirement and values are connected, there may be selectivity in the oldest age group. Furthermore, older workers who are able to implement their choices to continue working have a higher level of commitment to their work than do their younger counterparts (Lorence and Mortimer, 1985), and this can be related to value priorities.

Hypothesis 5 was mostly confirmed. The conservation values decreased and the openness-to-change value of self-direction, but not stimulation, increased in importance as a function of education level. Surprisingly, the self-enhancement values, achievement and power, also

increased as a function of educational level. Perhaps the values of occupational environments (Holland, 1997) explain this result, since many of the highly educated individuals in this study were employed as managers or salespersons in the enterprising occupational environment, which emphasises self-enhancement values.

Hypothesis 6 was mostly confirmed. Women valued the self-transcendence values of benevolence and universalism more, while men valued self-enhancement, achievement and power more. Surprisingly, there were no gender differences in the value placed on hedonism.

Geographical location did not have an independent main effect for values, but there was an interaction with location and gender. Women and men in northern Finland value tradition similarly, but women in southern Finland value it less than men in the same region. Finland is a large country and there are real differences in culture, climate, and economic settings in different regions of the country. The topic of geographical locations and values deserves a further, systematic investigation.

6 VALUES AND OCCUPATIONAL ENVIRONMENTS

6.1. Results

Occupational environments did not show statistically significant main effects on values in analysis of variance (MANOVA) with age, gender, and education (Wilks lambda [10,2,1138df] = 0.98; Rao's f-appr. [20,2072df] = 1.24, $p > .05$).

One-way ANOVA showed statistically significant differences between groups in tradition (F[2,1196df] = 11.68, $p < 0.001$), self-direction (F[2,1196df] = 9.59, $p < 0.001$), hedonism (F[2,1196df] = 20.17, $p < 0.001$), achievement (F[2,1196df] = 6.29, $p < 0.01$), and power (F[2,1196df] = 29.54, $p < 0.001$).

Table 8 shows *post hoc* tests (Bonferroni) and means. The enterprising occupational environment valued self-direction, achievement, and power more, and tradition and hedonism less than the realistic occupational environment. The conventional occupational environment was not different from the realistic, but did differ from the enterprising in valuing power less.

Table 8. *Mean Importance Ratings of Values by Occupational Environments*

Value	Conventional (N = 130)		Enterprising (N = 202)		Realistic (N = 912)		F (2,1196df)	Post Hoc- test
	M	SD	M	SD	M	SD		
SE	1.16	0.13	1.14	0.14	1.16	0.14	1.46	-
CO	1.03	0.17	1.02	0.17	1.15	0.15	1.63	-
TR	0.76	0.19	0.75	0.16	0.81	0.17	11.68***	R > E
BE	1.12	0.14	1.08	0.14	1.09	0.14	2.69	-
UN	1.18	0.14	1.14	0.13	1.16	0.16	2.07	-
SD	1.13	0.15	1.14	0.14	1.10	0.14	9.59***	E > R
ST	0.92	0.23	0.93	0.20	0.91	0.20	0.33	-
HE	0.98	0.20	0.92	0.23	1.03	0.23	20.17***	R > E
AC	0.81	0.23	0.87	0.21	0.81	0.20	6.29**	E > R
PO	0.69	0.23	0.81	0.20	0.69	0.22	29.54***	E > C E > R

Note. SE = Security; CO = Conformity; TR = Tradition; BE = Benevolence; UN = Universalism; SD = Self-direction; ST = Stimulation; HE = Hedonism; AC = Achievement; PO = Power; C = Conventional; R = Realistic; E = Enterprising.

p < 0.01; *p < 0.001.

6.2. Discussion

Occupational environments did not have an independent effect on values. Thus, the occupational environments do not have different value priorities because of the environment itself but because people are selected for these environments on the basis of age, gender, and education, which are stronger predictors of values. Indeed, people search for environments that will allow them to take on appropriate problems and roles (Holland, 1997).

As Hypothesis 7 predicted, employees in the enterprising occupational environment (e.g., sales, management) valued achievement more than employees in the realistic occupational environment, and valued power more than employees in either of the other environments. The value placed on universalism, however, did not differ among the environments.

Contrary to Hypothesis 8, employees working in the conventional occupational environment (e.g., accounting) did not value security more than employees in the other environments.

Following Hypothesis 9, the employees working in the realistic occupational environment (e.g., production) valued tradition and hedonism more, and self-direction less than the enterprising occupational environment group. The importance of benevolence was the same in the occupational environments.

Meglino and Ravlin (1998) have pointed out that when persons share values, they tend to perceive external stimuli in similar ways and behave in similar ways. Thus, when people work together in a common occupational environment, their shared values enable them to predict the behaviour of others, to understand each other, and to coordinate their actions. Since the people in both the enterprising and in the conventional environments work in overlapping surroundings, the only value that distinguishes them is power. It is likely that managers and sales personnel are using power, perceiving power relations, communicating

about power, and attaching meanings to power in ways that seem irrelevant or even incomprehensible to employees in conventional environments.

The enterprising and realistic environments have more differences in values than the enterprising and conventional environments. Thus, it is likely that the lack of understanding between the enterprising and realistic environments might be more prominent.

7 VALUES AND ATTITUDES TOWARDS ORGANISATIONAL CHANGE

7.1. Results

A linear regression analysis of attitude towards organisational change using the ten values along with age, gender, and level of education as predictors produced an overall significant solution, $F(12, 690) = 6.52$, $p < .001$, and explained 10.2% of the variance of the dependent variable.

The regression analysis revealed that the best predictors for attitudes towards organisational change were tradition, hedonism, and power (Table 9). The correlations presented in Table 9 also indicate that tradition and hedonism are connected to negative attitudes towards organisational change. Achievement was excluded from the regression analysis because of the strong co-linearity with other values, but its contribution would have probably been small as no correlation appeared here either.

Although there were no significant beta weights for benevolence and universalism in the regression analysis, these values were correlated with positive attitudes towards organisational change as shown in Table 9.

Age and education also showed small correlations with positive attitudes towards organisational change.

Table 9. *Summary of Regression Analyses and Correlations for Values, Age, Education, and Gender Predicting Positive Attitudes towards Organisational Change (N=702)*

Variable	Positive attitudes towards organisational change			
	B	SE B	Beta	r
Security	-0.33	0.36	-.05	.05
Conformity	0.13	0.30	.02	.05
Tradition	-1.24	0.27	-.24***	-.17**
Benevolence	0.45	0.30	.07	.17**
Universalism	-0.28	0.35	-.05	.13**
Self-direction	0.09	0.30	.01	.07
Stimulation	-0.07	0.24	-.02	-.02
Hedonism	-0.73	0.21	-.19**	-.17**
Achievement	-	-	-	-.03
Power	-0.58	0.29	-.15*	-.07
Age	0.06	0.05	.00	.07*
Gender	-0.02	0.08	-.03	.00
Education	-0.09	0.06	-.03	.07*

* $p < .05$; ** $p < 0.01$; *** $p < 0.001$.

The variable of attitudes towards organisational change includes three aspects: 1) the need for organisational change, 2) the consequences of organisational changes, and 3) the perceived competence of an organisation to implement changes (see Section 3.2.2.). Next, the patterns of correlations of these aspects and values will be explored.

As Figure 5 demonstrates, the pattern of correlations for the first aspect, the need for organisational change, differs from the pattern shown by the other two aspects. The need aspect correlates more negatively than the other aspects with tradition ($r = -0.20$, $p < 0.01$), and positively with

self-direction ($r = 0.14$, $p < 0.01$). This aspect also did not correlate positively with conformity, unlike the aspect of the consequences of organisational change ($r = -0.10$, $p < 0.01$) and the aspect of the evaluated competence of an organisation to implement the changes ($r = -0.09$, $p < 0.05$).

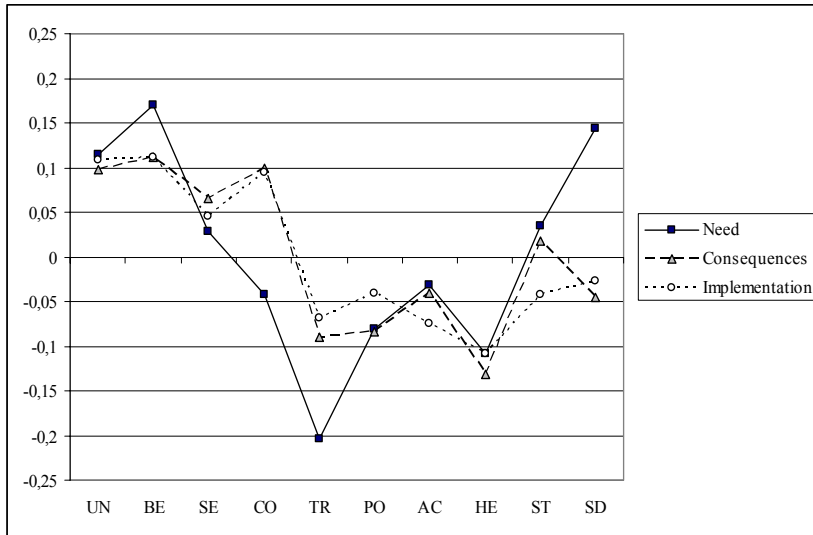


Figure 5. *The correlations between values and the three aspects of attitudes towards organisational change.*

There were also similarities. The patterns of the correlations between values and the three aspects of the attitudes towards organisational change were all positive for the self-transcendence values of universalism (need: $r = 0.11$, $p < 0.01$; consequences: $r = 0.10$, $p < 0.01$; implementation: $r = 0.11$, $p < 0.01$) and benevolence (need: $r = 0.17$, $p < 0.01$; consequences: $r = 0.11$, $p < 0.01$; implementation: $r = 0.11$, $p < 0.01$). They had a negative correlation with the self-enhancement values

of hedonism (need: $r = -0.11$, $p < 0.01$; consequences: $r = -0.13$, $p < 0.01$; implementation: $r = -0.11$, $p < 0.01$), power (need: $r = -0.08$, $p < 0.05$; consequences: $r = -0.08$, $p < 0.05$; implementation: not significant), and achievement (need and consequences: not significant; implementation: $r = -0.08$, $p < 0.05$).

Hierarchical multiple regression analyses were performed to examine the moderating effect of conformity. Table 10 shows that conformity significantly interacted with benevolence ($p < .05$), universalism ($p < .05$), power ($p < .05$), and achievement ($p < .05$) as a predictor of attitudes towards organisational change.

Table 10. *Hierarchical Regression Predicting Attitudes towards Organisational Change as a Function of Benevolence, Universalism, Power, Achievement, and Conformity and their Interaction*

	Predictor Value			
	BE	UN	PO	AC
Step 1				
Predictor (P)	.15***	.11**	-.05	-.02
Conformity	.03	.03	.03	.04
R2	.03	.02	.00	.00
Step 2				
P x Conformity	-.06*	-.06*	.06*	.06*
R2	.04	.02	.01	.01
TriangleR2	.01*	.00	.01*	.01*

Note. Table entries are the predictors' beta coefficients at Step 2 except R2, which is the adjusted squared multiple correlation of the predictors with the criterion at each step, and TriangleR2, which is the increase in R2 from Step 1 to Step 2. BE = Benevolence; UN = Universalism; PO = Power; AC = Achievement.

* $p < .05$; ** $p < 0.01$; *** $p < 0.001$.

Simple slope analysis was conducted to illustrate the nature of the interactions reported in Table 10. Figures 6 and 7 demonstrate the regression slopes predicting attitudes towards organisational change for benevolence and universalism plotted at low and high ends of conformity. The plots show that positive attitudes towards organisational change slightly increase as a function of benevolence and universalism, and far more in a low conformity group.

Figure 8 illustrates the regression slope predicting attitudes towards organisational change for power plotted at low and high ends of conformity. The plot shows that positive attitudes towards organisational change slightly increase as a function of power in high conformity groups, but decrease as a function of power in low conformity groups.

Figure 9 illustrates the regression slope predicting attitudes towards organisational change for achievement plotted at low and high ends of conformity. The plot shows that achievement-valuing conformists had positive attitudes towards organisational change, while achievement-valuing non-conformists had negative attitudes towards organisational change. The same plot demonstrates that those who do not appreciate achievement do not have strong attitudes towards organisational change regardless of the value of conformity.

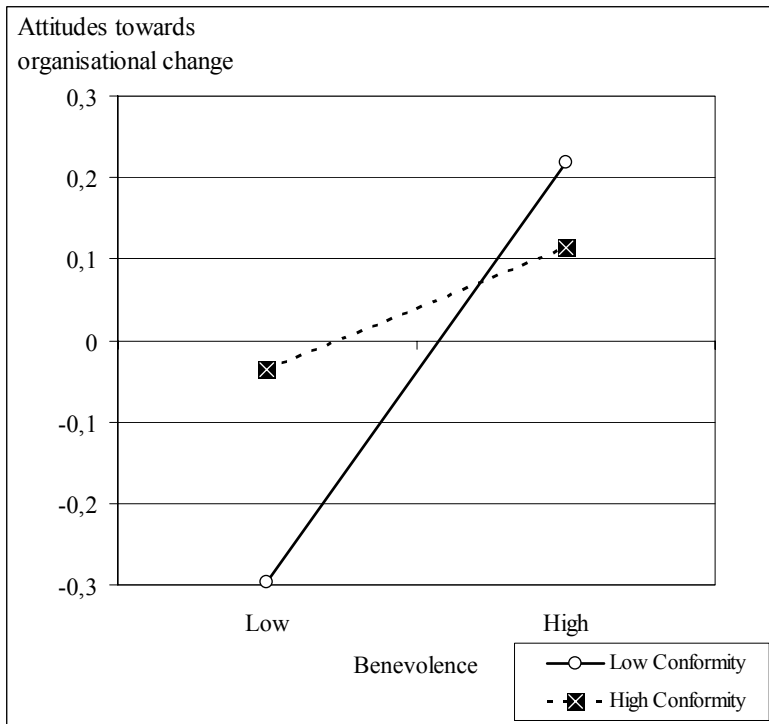


Figure 6. *Attitudes towards organisational change regressed on low and high benevolence scores for low and high conformity groups*

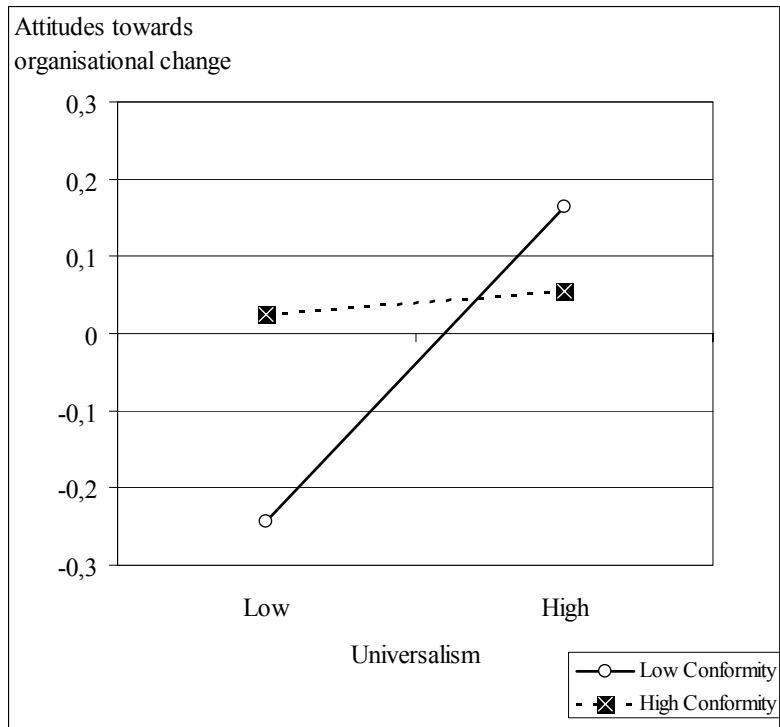


Figure 7. *Attitudes towards organisational change regressed on low and high universalism scores for low and high conformity groups*

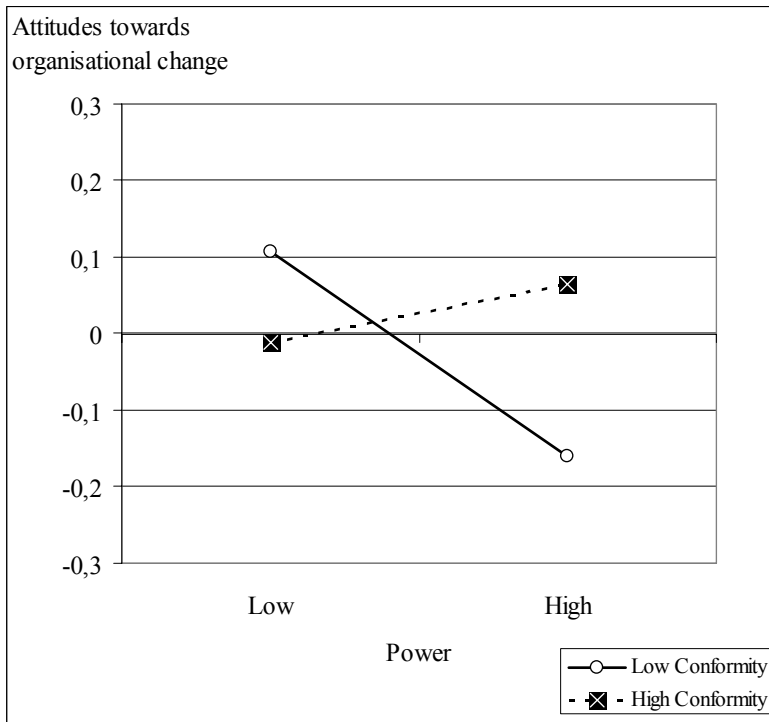


Figure 8. *Attitudes towards organisational change regressed on low and high power scores for low and high conformity groups*

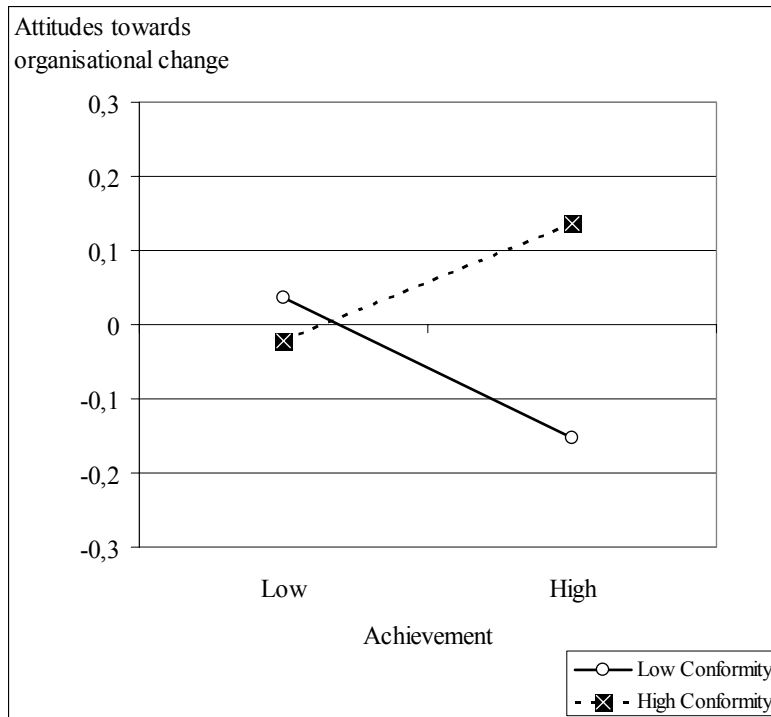


Figure 9. *Attitudes towards Organisational Change Regressed on Low and High Achievement Scores for Low and High Conformity Groups*

7.2. Discussion

Hypothesis 10 was supported in one conservation value and one openness to change value. As expected, tradition predicted negative attitudes towards organisational change. Schwartz (1994a) defines tradition as respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provides. Since organisational change usually requires the changing of customary ways, it is not

surprising that tradition brings out change-antagonistic attitudes in the organisational context. For example, implementation of teamwork models challenges the traditional hierarchy.

Self-direction was related to attitudes towards organisational change, but only to the aspect of the need for change, which can be considered as a basic attitude, while the other two aspects - the consequences of organisational changes and the perceived competence of an organisation to implement changes - may be more specific to the organisation. The results suggest that the past organisational changes in this particular organisation have not enhanced creativity, curiosity, or self-respect, but people valuing self-direction still think that organisational changes are needed. This finding supports the idea that values are general and enduring dispositions (Rokeach, 1973; Hecter, 1993) and not easily discouraged.

Hypothesis 10 failed in that the other conservation values - conformity and security - were not negatively related and the other openness to change value stimulation was not positively related to attitudes towards organisational change. In fact, conformity had a positive correlation with attitudes towards organisational change in two aspects, the consequences of organisational changes and the evaluated competence of an organisation to implement changes. Conformity seemed to have similar influence on attitudes as the self-transcendence values in these aspects. Although the negative correlation between conformity and the need aspect of organisational changes was not statistically significant, it nevertheless shows that this aspect is a basic change attitude and thus inhibited by the conservation value conformity. The effects of conformity were further examined in Hypothesis 12.

In line with Hypothesis 11, benevolence and universalism predicted positive attitudes towards organisational change and hedonism predicted negative attitudes. These results are examined more closely in the general discussion.

Although no hypothesis could be offered, power was found to show a negative connection with the aspects of the need for organisational change and the consequences of organisational changes.

The present results demonstrated that the three aspects of attitudes towards organisational change had in fact slightly different correlations with values. Further studies should seek to determine whether these aspects also have different connections with behaviour, since their motivational basis is different.

As predicted by Hypothesis 12, conformity had a moderating effect on self-transcendence and self-enhancement values. The positive attitudes towards organisational change increased more as a function of benevolence and universalism and decreased more as a function of power when employees did not value conformity, i.e., they did not care so much about social norms.

Achievement affected attitudes towards organisational change only by means of the moderating effect of conformity. Employees valuing achievement had positive attitudes towards organisational change when they also valued conformity and negative attitudes towards organisational change when they did not value conformity. When both the level of achievement and conformity were low, the attitudes towards change were not strong in either direction. Achievement combined with high conformity was the only self-enhancement value that also predicted positive attitudes towards organisational change.

In the current research, the study organisation was relatively stable, and past changes had been few and slow. It is possible that the connection between values and the attitudes towards organisational change would be different in a different organisational context: the personal values would probably be accentuated under heavier pressure. Future research should focus on organisations that are undergoing more dramatic and rapid changes. Also different types of change, such as alternations in products or job loss, may well challenge basic human values in different ways.

8 VALUES AND KNOWLEDGE SHARING

This study also examined the relationship between values and knowledge sharing in the workplace in two ways. The first was to examine the connection between employees' values and the level of knowledge sharing at the same workplace. It was hypothesised that the self-transcendence values are positively connected with knowledge sharing at the workplace level and self-enhancement values are negatively connected with knowledge sharing.

Second, the individual employee's perceptions of knowledge sharing and the mean score of knowledge sharing in their workplace were compared. The purpose was to find out to what degree values explain the gap between individual perception and the actual level of knowledge sharing. The possible moderating effect of conformity was also explored. Knowledge sharing is probably heavily regulated by social norms in the workplace, and thus conformity may inhibit other values from affecting perceptual selectivity.

8.1. Values and knowledge sharing in the workplace

Workplaces high in universalism ($r = 0.44$, $p < .05$) and conformity ($r = 0.49$, $p < .05$) but low in achievement ($r = -0.46$, $p < .05$) and power ($r = -0.40$, $p < .05$) had higher scores in knowledge sharing. Table 11 presents the correlations between the ten values and knowledge sharing. Appendix 2 gives the means and standard deviations for 19 workplaces in the study organisation in universalism, benevolence, power achievement, conformity, and knowledge sharing. It shows that there were substantial differences in knowledge sharing among the workplaces.

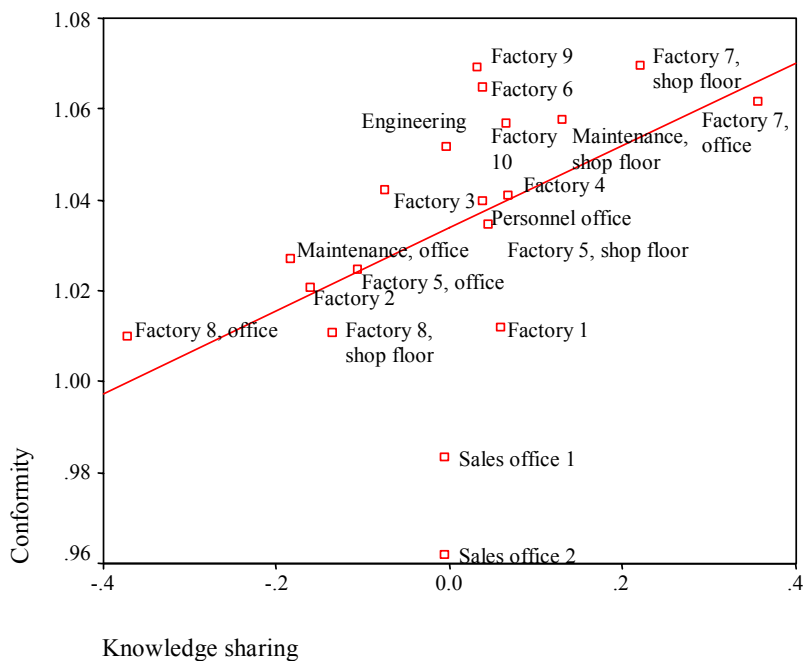
Table 11. *The Correlations between Knowledge sharing and Values in 19 Workplaces*

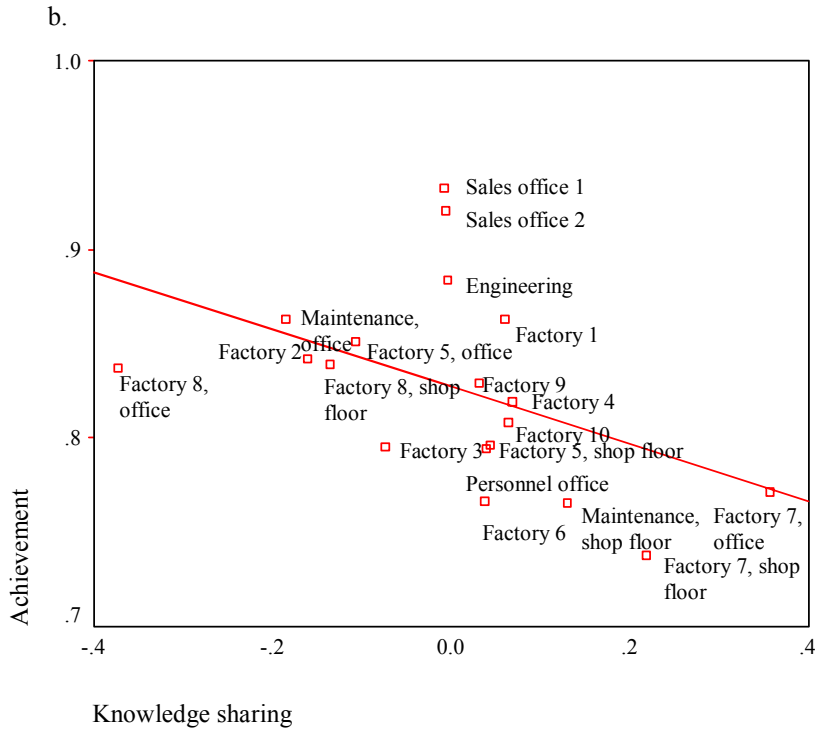
Variable	1	2	3	4	5	6	7	8	9	10
1 KS	-									
2 SD	-.13	-								
3 ST	-.35	.41	-							
4 HE	.06	-.40	.15	-						
5 AC	-.46	.49	.74	-.21	-					
6 PO	-.40	.51	.54	-.35	.86	-				
7 SE	.25	-.67	-.66	.06	-.78	-.68	-			
8 CO	.49	-.44	-.71	.11	-.80	-.79	.54	-		
9 TR	.23	-.72	-.60	.14	-.72	-.69	.68	.68	-	
10 BE	.02	.19	-.51	-.60	-.25	-.05	.13	.12	-.01	-
11 UN	.44	-.15	-.68	-.35	-.62	-.60	.49	.56	.30	.47

Note. KS = Knowledge sharing; SE = Security; CO = Conformity; TR = Tradition; BE = Benevolence; UN = Universalism; SD = Self-direction; ST = Stimulation; HE = Hedonism; AC = Achievement; PO = Power. N=19. If $|r| > .39$, $p < .05$; if $|r| > .53$, $p < 0.01$.

Figure 10 shows the regression line between knowledge sharing and conformity, achievement, and power in all 19 workplaces. As Figure 10 shows, the workplaces that focused on sales (SA1 and SA2) fit the regression line poorly. When the sales offices were taken out of the correlation analysis, higher correlations emerged among knowledge sharing and conformity ($p < .01$), achievement ($p < .01$), power ($p < .01$), and universalism ($p < .05$) (Table 12). In addition the negative correlation between knowledge sharing and stimulation ($p < .01$), which did not reach significance in 19 workplaces including the sales offices, was now higher.

a.





c.

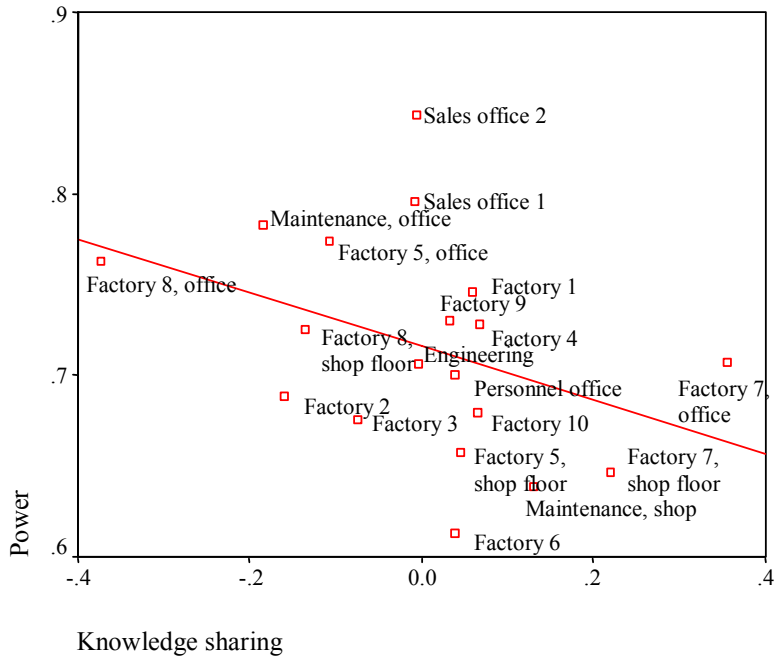


Figure 10. Regression line between knowledge sharing and a) conformity, b) achievement, and c) power in 19 workplaces.

Table 12. *The Correlations in Knowledge Sharing and Values in 17 Workplaces (Sales Offices Excluded)*

Variable	1	2	3	4	5	6	7	8	9	10
1 KS	-									
2 SD	-.15	-								
3 ST	-.50	.05	-							
4 HE	.06	-.37	.40	-						
5 AC	-.61	.25	.60	-.07	-					
6 PO	-.50	.41	.32	-.27	.76	-				
7 SE	.27	-.59	-.54	.05	-.72	-.60	-			
8 CO	.72	-.23	-.56	.11	-.64	-.61	.39	-		
9 TR	.31	-.56	-.25	.02	-.50	-.54	.57	.45	-	
10 BE	.02	.36	-.56	-.65	-.23	-.15	.08	.06	-.15	-
11 UN	.47	-.06	-.65	-.46	-.57	-.55	.40	.52	.09	.46

Note. KS = Knowledge sharing; SE = Security; CO = Conformity; TR= Tradition; BE = Benevolence; UN = Universalism; SD = Self-direction; ST = Stimulation; HE = Hedonism; AC = Achievement; PO = Power.

N=17. If $|r| > .41$, $p < .05$; if $|r| > .56$, $p < 0.01$.

8.2. Values and perceptions of knowledge sharing

Self-direction $-.09$ ($p < 0.01$), benevolence $.09$ ($p < 0.01$), and conformity $.07$ ($p < 0.05$) correlated statistically significantly with individual employees' perceptions of knowledge sharing in the workplace. A linear regression analysis of this variable entering the ten values along with age, gender, and the level of education predictors produced a statistically significant solution, $F(12,1148df) = 3.44$, $p < 0.001$, and explained 3.5% of the variance. Self-direction had a statistically significant negative

relationship with individual employees' perceptions of knowledge sharing in the workplace. Table 13 shows the summary of the results.

Table 13. *Summary of Regression Analysis and Correlations for Values, Age, Education, and Gender Predicting Perception of Knowledge Sharing (N = 1311)*

Variable	Perception of knowledge sharing			
	B	SE B	Beta	r
Security	-0.43	0.28	-.07	-.03
Conformity	0.42	0.24	.08	.08**
Tradition	-0.31	0.22	-.06	.00
Benevolence	0.41	0.24	.06	.09**
Universalism	-0.21	0.28	-.04	-.01
Self-direction	-0.58	0.24	-.10*	-.09**
Stimulation	0.15	0.19	.04	.02
Hedonism	-0.04	0.17	-.01	.02
Achievement	-	-	-	-.02
Power	-0.22	0.23	-.05	-.05
Age	-0.09	0.04	-.08*	-.07*
Gender	0.07	0.07	.03	.01
Education	-0.03	0.04	-.03	-.03

* $p < .05$; ** $p < 0.01$.

Hierarchical multiple regression analysis was performed to examine the moderating effect of conformity. Table 14 shows that conformity significantly interacted only with achievement ($p < .01$) as a predictor of an individual employee's perception of knowledge sharing in the workplace. This result remained statistically significant also after the Bonferroni correction.

Simple slope analysis was conducted to illustrate the nature of the interactions reported in Table 14. Figure 11 shows the regression slope

predicting an individual employee's perception of knowledge sharing in the workplace for achievement plotted at low and high ends of conformity. The plot shows that employees who value achievement highly have a different perception of knowledge sharing, depending on whether they think conformity is important or not. Achievement-valuing conformists had more positive perceptions than average about knowledge sharing in the workplace, while achievement-valuing non-conformists had more negative perceptions than average. The same plot demonstrates that those who do not appreciate achievement regardless of the value of conformity perceive knowledge sharing in the workplace in an average manner.

Table 14. *Hierarchical Regression Predicting Perception of Knowledge Sharing as a Function of Achievement, Conformity, and their Interaction*

Step	AC	CO	AC x CO	R2	Triangle R2
	B	B	B		
1	.02	.08*	-	.00	-
2	.03	.09**	.09**	.01	.01**

Note. R2 is the adjusted squared multiple correlation of achievement with the criterion at each step, and Triangle R2 is the increase in R2 from Step 1 to Step 2.

AC = Achievement; CO = Conformity.

*p < .05; **p < 0.01.

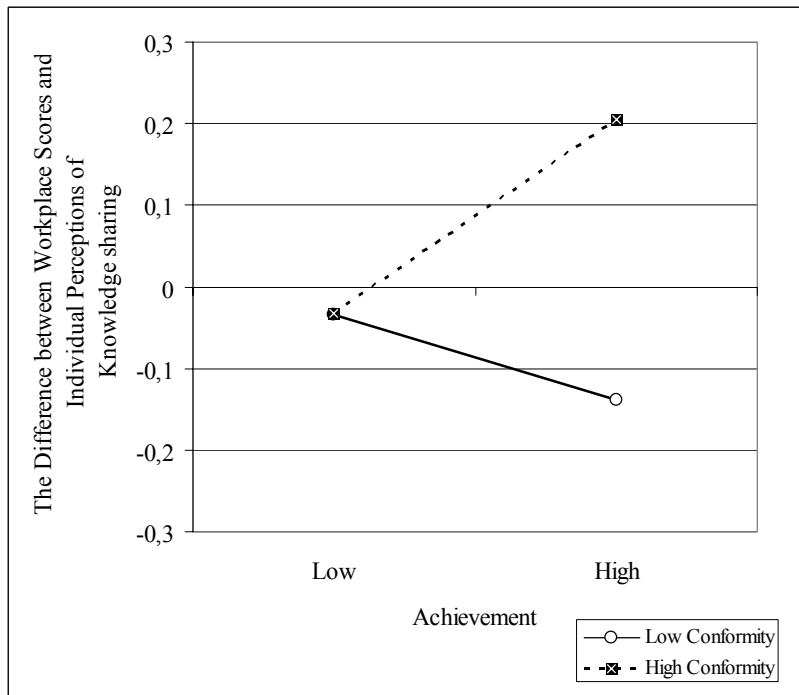


Figure 11. *The difference between workplace scores and individual perceptions of knowledge sharing regressed on low and high achievement scores for low and high conformity groups.*

8.3. Discussion

Hypothesis 13 was mostly confirmed: workplaces high in universalism but low in achievement and power had better scores in knowledge sharing. Thus, the dimension of self-transcendence versus self-enhancement with the exception of benevolence was important in predicting knowledge sharing in the 19 workplaces. Although not

hypothesised, conformity also predicted a higher level of knowledge sharing.

The results showed that employees who valued self-direction had less favourable perceptions of knowledge sharing in their workplaces. Benevolence and conformity predicted more positive perceptions of knowledge sharing. Younger employees perceived knowledge sharing in their workplaces more positively than older employees. This finding contradicts previous results obtained by Sveiby and Simons (2002), who found that older employees regarded a collaborative climate, a construct rather similar to the one used in this study, more favourably than other groups. On the other hand, this finding might be due to the specific history of the studied organisation. Older employees worked in the organisation before it was privatised, a change which probably led to more competitiveness and thus reduced knowledge sharing. Hence, older employees might have compared current knowledge sharing to the past, resulting in disappointment and lower ratings.

When the sales offices were eliminated from the analysis, the correlations between values and knowledge sharing at the workplace level were enhanced. A surprising finding was that the correlation between knowledge sharing and stimulation was significant only when sales offices were excluded. As stated previously, it is likely that the dimension of openness to change versus conservation reflects the current state of knowledge sharing. The fact that knowledge sharing had a negative correlation with stimulation and a positive correlation with conformity showed that the knowledge sharing was a socially accepted and well recognised practise in the workplaces. These results indicate that there are fundamental differences in culture between selling and production functions, even in the same company. These differences have also been noted previously (Nauta et al., 2002). To study the pattern of relationships between values and knowledge sharing in sales would require a larger sample of sales offices.

While benevolence predicted more positive perceptions of knowledge sharing at the individual level, it had no connection with the actual level of knowledge sharing in the workplace. These results imply that effective knowledge sharing has less to do with smooth relations between the closest co-workers, which would be influenced by the benevolence value. Instead it is connected to the willingness to share knowledge across team and departmental boundaries, which is guided by universalism and lack of competition motivated by self-enhancement values. This finding supports Argandoña's argument (2003) that we should identify the personal values of an organisation's members and the values that the organisation needs in order to achieve its purpose.

Hypothesis 14 was supported only for achievement. The moderating effect of conformity was not found in self-transcendence values or in power. Employees who valued achievement highly had a different perception of knowledge sharing, depending on whether they thought social norms were important. Achievement-valuing conformists had a more positive perception of knowledge sharing in the workplace than others in the same workplace on average, while achievement-valuing non-conformists had more negative perceptions than the average.

9 GENERAL DISCUSSION

9.1. Schwartz's value model among western manual workers studied with the PVQ

In 1975 Connor and Becker observed that personal values in an organisational context had received very little scholarly attention. Unfortunately, the situation has continued apace. Basic human values and their relationship to various organisational attitudes and behaviours have been largely ignored by researchers.

This study demonstrated that Schwartz's theory of values (1992, 1994a) can be successfully applied to an organisation, in this case, a Finnish steel company. Schwartz's theory specifies ten universal and motivationally distinct values and a two-dimensional structure that results from the conflicts and congruities among all the values. In addition, the present study validated the 40-item Portrait Value Questionnaire (PVQ) with manual and white-collar employee groups. This finding should encourage researchers to use this approachable method with groups having a low education.

The only notable deviation from Schwartz's value theory was that the security value was located adjacent to benevolence and universalism and in some cases blended with the self-transcendence and conformity values. This structure was evident both among the manual workers with a

low level of education and among the highly educated white-collar workers, but not among university students.

Although Schwartz (1992, 1994a) claimed that the value structure was universal, it is possible that the structure and the relative importance of values are connected. This research demonstrated again that security is an important value for Finns. Security has been consistently found to be among the most important values in Finland (Pohjanheimo, 1997; Puohiniemi, 2006), but not internationally (Schwartz and Bardi, 2001). Schwartz (1992) argues that this value derives from a basic individual and group requirement to have safe surroundings. Security's motivational goals are safety, harmony, and the stability of society, relationships and the self (Schwartz, 1992). Further studies with qualitative methods should explore what kinds of meanings and behaviours are attached to this value in the minds of Finns and why these issues are so important to them.

It is important to understand which values are conflicting and what is compromised when acting directly or indirectly according to specific values. Various samples should be investigated in order to find out if there is a systematic relationship between value priorities and structures. The results obtained here and in previous studies imply that the location of security among the self-transcendence values might be an important feature of a cultural group or a temporal product of powerful changes in society. Feather (1975) proposed that values can be conceived as abstract structures or schemas that can be represented as associative networks, with each central value linked to a set of attitudes and beliefs. The network for a particular value may vary from person to person and from group to group in content and structural organisation. These differences would reflect differences in the meaning of the value, despite a common core of meaning (Feather, 1975, p. 16).

The application of Schwartz's theory to working populations and organisational contexts has several benefits. Instead of studying single values and their relationships to organisational attitudes and behaviour,

this theory offers a comprehensive set of values. A study using only single values risks omitting values equally or even more strongly related to the phenomenon in question (Schwartz, 1996). In addition, attitudes and behaviour are rarely guided by only one value, but are tradeoffs among competing values (Rokeach, 1973; Schwartz, 1992).

Kluckhohn (1954) criticised anthropologists for using the concept of value vaguely and often confusing values with culture. Still, values are not the same as culture, which includes a vast number of non-normative and substantive factors such as shared language, folklore, and modes of dress. The strong influences of anthropology on research into organisational culture are evident in this area. The universal structure of values in Schwartz's theory offers a valuable opportunity to compare the value profiles of workplaces and organisational groups in a meaningful way.

9.2. Demographics predict values better than occupations

This study shows that the different occupational groups, or in Holland's (1997) terms, occupational environments, had different values, but these differences were fully explained by the age, gender and level of education rather than the occupation itself. Nevertheless, the value priorities of the three occupational environments identified in this study were in line with Holland's theory (1997) and the results obtained by Knafo and Sagiv (2004).

The present study elaborated on Holland's theoretical framework (1997) by showing detailed differences among enterprising, realistic, and conventional environments. Enterprising and realistic environments were characterised by self-enhancement (achievement and power) values and some of the openness-to-change vs. conservation dimension values (self-direction, hedonism, and tradition). The conventional environment was

not different from the realistic environment, but was differentiated from the enterprising environment in one self-enhancement value, namely, power.

These results could be used to design new research questions on how people in different occupational environments see themselves and other occupations. Are the “occupational values” acknowledged or even expected in a workplace? Are values means of communicating the social identity of an occupational group? Do the differences in values have an impact on co-operation and knowledge sharing across the occupational boundaries?

9.3. Self-transcendence and self-enhancement predicted attitudes towards organisational change and knowledge sharing

The results of this study show that a combination of high self-transcendence and low self-enhancement values lead to desirable outcomes for the organisation. Workplaces high in universalism and conformity and low in achievement and power rated better in knowledge sharing. Employees high in self-transcendence had more positive attitudes towards organisational changes.

Korsgaard, Meglino, and Lester (1997) showed that self-transcendence values are connected to the processing of social information. Simon’s theory (1993) of altruism states that persons who endorse values such as concern for others should be less disposed to evaluate a broad range of social information in terms of its personal costs and benefits. Both organisational change and knowledge sharing are potentially expensive to individuals, and the rewards at the individual level are speculative. Thus, it is likely that self-enhancement valuing employees are more careful not to endanger themselves, while those who

value benevolence and universalism may be less attentive to the costs to the individual.

In addition, employees low on self-transcendence and high on self-enhancement may not identify themselves with their organisation. Schultz and Zelezny (1999) found that people who score high on self-enhancement have a narrow definition of self that does not include other people or nature. Self-transcendence values may also dispose employees to believe that their co-workers and management are trustworthy and provide social support. Both beliefs are important antecedents to positive attitudes towards organisational change (e.g., Ashford, 1988; Aspinwall and Taylor, 1992; Eby et al., 2000) and successful knowledge sharing (e.g., Edmondson, 1999). Future studies on values and organisational behaviour would benefit from taking into account the variables of social identification and trust.

There also may be other reasons why the self-transcendence vs. self-enhancement dimensions proved to be an important predictor both for attitudes towards organisational change and for perceptions of knowledge sharing in the workplace. These values may affect or result from the way people perceive past events. According to Milfont and Gouveia's (2006) results, self-enhancement values are slightly positively connected and altruistic values are negatively connected with a pessimistic, negative, or even aversive attitude towards the past. In addition, employees who value conformity are contributing to the knowledge sharing in their workplace and more willing to report their experiences in a more positive way. This result is in line with previous studies of altruistic behaviour. For example, Smith, Organ, and Near (1983) found that altruistic behaviour at work is influenced by the need for social approval.

9.4. Conformity moderated the relations between values and attitudes towards organisational change and perceptions of knowledge sharing

In line with the findings of Lönnqvist et al. (2006) and Fischer (2006), the results here also indicate that employees high on conformity were less guided by their personal values than those who valued conformity less. The interaction was found both in self-transcendence and in self-enhancement values and conformity. The positive attitudes towards organisational change increased more as a function of benevolence, universalism, and achievement and decreased more as a function of power when employees did not value conformity.

If we focus only on the group of employees who do not value conformity, that is, those who do not care so much about social norms, the effect of values on attitudes towards organisational change is highly pronounced. In this group, low scores in benevolence and universalism and high scores in power and achievement are clearly related to negative attitudes.

The way conformity moderated the effect of values to attitudes towards organisational change tells us about the social norms prevalent in the study organisation. It appears that in this organisation, it is socially acceptable or even expected to have rather neutral or moderately positive attitudes towards change. High conformists clearly have a positive attitude towards organisational change only if they place a high value either on benevolence (they want to maintain warm relationships with their immediate social surroundings by avoiding conflicts) or achievement (they want to progress in their careers by conforming to the ideas of management). The latter combination of values is discussed more below.

Compared to other results in this study and previous findings (Lönnqvist et al., 2006; Fischer, 2006), conformity and achievement had

a unique interaction both with attitudes towards organisational change and with perceptions of knowledge sharing. These results indicate that conformity may enhance or even change the effect of the achievement value on attitudes and perceptions.

Employees with high achievement aspirations and a need for social approval had positive attitudes towards organisational change and more positive perceptions of knowledge sharing than the average worker in the same workplace. On the other hand, employees with the same high level of achievement value and no interest in following social norms had negative attitudes towards organisational change and a more negative perception of knowledge sharing. The low conformity/low achievement-employees had a rather neutral attitude/perception.

This result is understandable, considering the definition of achievement value as personal success through demonstrating competence according to social standards (Schwartz, 1994a). Thibaut and Kelley (1986, p. 252) point out, "If the rewards for conformity are sufficiently important to the individual, he will not avail himself of his opportunities for counteracting the norm. This would be the case when the individual strongly desires status within the group and conformity is a condition (though perhaps only a minimal one) for attaining status."

These results illustrate two different achievement strategies. Employees with values of high achievement and high conformity may seek success by being the "good guy". They work hard, approve any ideas the management presents, and are happy with whatever organisational arrangements or level of knowledge sharing there is in the workplace. The other strategy, combining high achievement with low conformity, leads to questioning attitudes towards managers and co-workers. These value combinations and their effect on organisational attitudes and perceptions should be studied further.

9.5. Personal values in organisations: practical implications

The purpose of this study was not to promote a certain set of values that all organisations should foster, even though such an approach is rather commonplace in managerial literature these days. It is unlikely that values are something that can be “managed”. Still, it is obvious that values have consequences. According to Argandoña (2003), any manager who does not take values into account will not be successful. The more important a value is to members of the organisation, the more important it is for management to acknowledge it.

The three most important values for the study organisation were security, universalism, and self-direction. This fact has several practical implications. For example, when these findings are compared to Puohiniemi’s findings (2006) about the relationship between values and opinions of an ideal employer, it could be concluded that employees in the study organisation generally preferred their company to have “humane operating principles” and to be “inspiring” rather than to offer extensive economic benefits.

According to Verplanken and Holland (2002), values have a priming effect only when they are activated and important to the individual. It is possible that different arguments in implementing an organisational change, for example, elicit different reactions among the personnel partly because different values are activated. Thus, in the study organisation, advisable messages would contain support for the values important to the employees, namely, security, universalism, and self-direction.

The discrepancies between desirable and current situations are more likely to be noticed by a person who values highly a specific end state (Schwartz, Sagiv, and Boehnke, 2000). Since security is highly valued by members of the study organisation, it is likely that they monitor how their work environment reflects social order, reciprocation of favours, and a sense of belonging. If an environment provides opportunities to

meet the goals embodied in employees' values and provides reinforcement for the importance of such values, then holding environmentally-congruent values is positively associated with well-being (Sagiv and Schwartz, 2000). Value congruence with the organisation predicts satisfaction, commitment, performance, and loyalty (Lee and Mowday, 1987; Cable and Jung, 1996).

The results of this study indicate that the members of a quite ordinary Finnish work organisation formed subgroups with different value priorities. Gregory (1983) suggested that many organisations are most accurately viewed as multicultural. In addition to its dominant profile of value orientations, every human community has numerous variant or substitute profiles (Kluckhohn and Strodtbeck, 1961). Subgroups with different occupational, divisional, or other cultures approach organisational interactions with their own meanings and sense of priorities. Ethnocentrism, the tendency to take one's own cultural view for granted and to evaluate others' behaviour in terms of that view, increases the tendency for misunderstandings and conflicts to occur (Gregory, 1983; Robbins, 2005).

For group tasks requiring decision-making, judgement, and creativity, the type of homogeneity created by value similarity among members may actually inhibit performance (Meglino and Ravlin, 1998). Robbins (2005) argues that the most important personal variable creating potential for conflicts in organisations are differences in value priorities. These conflicts are constructive when they improve the quality of decisions, simulate creativity and innovation, encourage interest and curiosity among group members, provide the medium through which problems can be aired and tensions released, and foster an environment of self-evaluation and change (Robbins, 2005).

The results of the present study indicate that high universalism and conformity and low achievement and power predicted better knowledge sharing. These results suggest several practical applications. For example, the fact that achievement was negatively correlated with

knowledge sharing has obvious implications: achievement is one of the self-enhancement values and promotes the search for individual goals. If the guiding value is achievement, there is no reason to be concerned with such group functions as knowledge sharing. Still, the benefit to the organisation would require sharing individual bits and pieces of information. How can the likelihood of knowledge sharing behaviour be increased in an achievement-orientated social environment? One way is to create a team-incentive system that motivates individuals to find common goals and still pursue achievement. Also organisational forms that link or overlap work tasks increase the transfer of knowledge (Osterloh and Frey, 2000). When the goals are mutual, achievement motivation should in fact support rather than suppress knowledge sharing (e.g., Haslam, 2004).

Another example concerns the conformity values, which were positively connected to knowledge sharing. Conformity is, of course, a desirable element in group communication and supports harmonious social relations. The problem lies in the quality of the knowledge available to be shared: the members of an organisation may be eager to please others, but innovation and development of new products and practises may be neglected. How can the quality of knowledge sharing in a conformity-orientated social environment be increased? One promising option would be to introduce a non-threatening collective development program, where groups rather than individuals produce new ideas.

Value is a multilevel concept, and it allows a simultaneous focus on the individual employee, work groups, organisations, and societies. The results of this study show that personal values have an impact on knowledge sharing in the workplace and that personal values play a role in forming attitudes towards organisational change. It would be tempting to propose changing the values of employees to support the goals of the organisation better.

According to Inglehart (1990, p. 3), a culture changes gradually and reflects changes in the formative experiences of new generations. Values

are stable because each is surrounded by a cumulative net of meanings and interpretations (White, 1993). Change in company values occurs because of a shift in technological and economic conditions faced by an organisation (Hofstede, 1980), not because an executive team decides that it is time to change. Any value change program would be a waste of time and energy (Hofstede, 1998). Rokeach (1979) demonstrated that although individuals can be supported in changing their values with the help of a self-confrontation technique, the direction of the change is determined by any given individual's own self-concept and cannot be manipulated by an outsider.

Ryder (1965) claimed that every fresh cohort is a possible vehicle for change at the societal level. Similarly, a new cohort entering an organisation prepares the way for change and offers a chance to take a new stance vis-à-vis goals and practises. Older cohorts tend to protect the status quo. To ensure the ability to innovate, an organisation should thus require an influential presence of the newest cohorts. Unfortunately, when companies encounter economic hardships, they usually cut the recruiting, or at least engage new, young employees only on temporary work contracts.

Instead of trying to change the values of an organisation's employees, it would be advisable to manage the organisation better to reflect the values of its members. Consideration of values in a workplace happens automatically in most cases; managers and co-workers do not even realise they are taking each others' values into account when choosing the best ways of co-operating. Forty years ago Drucker (1969, p. 52) stated that "...we will, within another ten years, become far less concerned with management development (that is, adapting the individual to the demands of the organisation), and far more with organisation development (that is, adapting the company to the needs, aspirations, and potentials of individuals)". Unfortunately, Drucker's exhortation to adapt the organisation to its members is still an unrecognised challenge in many companies.

9.6. Methodological considerations

Although the role of basic human values in an organisational context has been generally acknowledged (e.g., Rokeach, 1973; Schein, 1985), thus far the relationship of values to organisational attitudes, perceptions, and behaviours has not been studied empirically. The present study of employees in a Finnish steel company is among the first to investigate the personal values of western industrial workers using Schwartz's value theory. In addition to testing Schwartz's theory, this study applied the theory to several organisational phenomena: occupational environments, attitudes towards organisational change, and knowledge sharing. Although the effect sizes in the two later variables were small, the results allow preliminary conclusions about the intriguing relationship between personal values and organisational behaviour.

The advantages of using the internationally-tested Schwartz theory and the Portrait Value Questionnaire are that they are not organisation-specific and thus enable comparative research. The application of Schwartz's theory to organisational behaviour offers an opportunity to use a comprehensive set of values. A drawback is that many of the survey items are not relevant to the work context. Meglino and Ravlin (1998) warned that general value instruments predict general modes of behaviour and may include some values that are less relevant to behaviours in a particular organisation. According to their experience, when such instruments are used, smaller, albeit theoretically important, effect sizes for value relevant behaviour might be expected.

Unfortunately, the present study was limited to only one company in one industry in one society. The current results about the relationship between values and background variables were in line with previous research on values and age (Karakitapoglu Aygün, and Imamoglu, 2002; Prince-Gibson and Schwartz, 1998; Schwartz, 2005; Schwartz et al., 2001; Pohjanheimo, 1997), education (Feather, 1984; Hofstede, 1980; Kohn and Schooler, 1983; Pohjanheimo, 1997; Prince-Gibson and

Schwartz, 1998; Rokeach, 1973; Schwartz, 2005), and gender (Schwartz and Rubel, 2005; Rokeach, 1973; Kahle, 1996; Pohjanheimo, 1997; Ryckman and Houston, 2003; Puohiniemi, 2006). This suggests that the research results may be generalised to a larger population, not only to the study organisation. Still, a more systematic investigation with a number of different occupations and educational levels should be carried out.

According to Pohjanheimo (1997), Schwartz's theory is very flexible and allows different values to blend. There is a problem only when the two basic dimensions fail to emerge or the values do not form a circle of opposite and compatible values. The multidimensional scaling analysis reflects the similarity of value items in the form of distance in two-dimensional space. Pohjanheimo (1997) pointed out a methodological problem using multidimensional scaling in building value structures, which is also present in the current study. Although the analysis gives the distances, the actual separation of single items into values was done by the researcher and required expert judgement.

Another point to be considered is whether the basic human values of a company's employees reflect the values of that organisation. Hofstede, Neuijen, Ohayv, and Sanders (1990) found that employee values differed more according to the demographic criteria of nationality, age, and education than according to membership in the organisation per se. They concluded that the shared perceptions of daily practises are the core of the organisational culture and that the values of founders and key leaders are translated into shared practises. Perhaps the investigation concentrating on the organisation's most influential members' value would prove fruitful.

The most obvious source of errors in this study is the use of self-report scales only, increasing the possibility of response bias. The challenge for future research is to find objective measures for knowledge sharing. Future studies should also try to overcome an obvious defect: they should take into account possible interacting variables, such as other characteristics of organisations.

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APPENDIX 1

Means, Standard Deviations, and Rank Order for 40 Value Items

Value: No. Item Core	Students (N = 301)			White-collar workers (N = 459)			Manual workers (N = 815)		
	<i>M</i>	<i>SD</i>	<i>Rank</i>	<i>M</i>	<i>SD</i>	<i>Rank</i>	<i>M</i>	<i>SD</i>	<i>Rank</i>
Security									
5 Safe environment	3.82	1.19	22.	3.92	1.17	26.	4.39	1.18	17.
14 National security	3.58	1.27	28.	5.06	0.99	1.	5.04	1.07	1.
21 Tidiness	3.37	1.45	30.	4.18	1.28	20.	4.47	1.17	14.
31 Health	4.35	1.18	11.	4.81	1.00	5.	4.93	1.02	2.
35 Social order	3.90	1.19	20.	4.79	1.11	7.	4.69	1.17	6.
Conformity									
7 Obedience	2.91	1.31	34.	3.98	1.21	23.	4.09	1.30	21.
16 Good behaviour	3.31	1.26	31.	3.82	1.13	27.	3.68	1.15	28.
28 Respect for parents	3.48	1.18	29.	4.22	1.03	19.	4.53	1.09	10.
36 Politeness	4.03	1.21	15.	4.39	0.98	16.	4.42	1.08	16.
Tradition									
9 Satisfied with fate	2.17	1.04	40.	2.51	1.17	40.	3.01	1.31	34.
20 Religion	2.39	1.50	39.	3.06	1.40	37.	2.89	1.48	37.
25 Prefer traditional ways	2.69	1.08	36.	2.72	1.08	39.	3.35	1.19	31.
38 Humbleness	3.13	1.30	32.	3.64	1.19	30.	3.88	1.17	27.

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Value: No. Item Core	Students (N = 301)			White-collar workers (N = 459)			Manual workers (N = 815)		
	<i>M</i>	<i>SD</i>	<i>Rank</i>	<i>M</i>	<i>SD</i>	<i>Rank</i>	<i>M</i>	<i>SD</i>	<i>Rank</i>
Benevolence									
12 Helping	4.50	1.08	8.	4.41	0.95	15.	4.31	1.00	19.
18 Loyalty	4.89	0.99	5.	4.90	0.92	2.	4.74	1.02	4.
27 Supporting others	4.77	0.95	6.	4.54	0.86	12.	4.35	0.95	18.
33 Forgiveness	3.89	1.10	21.	3.93	1.11	25.	3.96	1.15	25.
Universalism									
3 Equality	5.02	0.99	2.	4.66	1.07	9.	4.71	1.15	5.
8 Tolerance	4.98	0.93	3.	4.81	0.89	4.	4.47	1.04	13.
19 Care for nature	4.21	1.32	13.	4.74	0.96	8.	4.77	1.05	3.
23 World peace	4.46	1.15	9.	4.50	1.16	13.	4.63	1.17	9.
29 Social justice	4.56	1.12	7.	4.63	0.92	11.	4.64	1.04	8.
40 Unity with nature	3.92	1.30	19.	4.48	1.02	14.	4.66	1.11	7.
Self-direction									
1 Creativity	4.13	1.29	14.	4.30	1.03	18.	3.88	1.06	26.
11 Freedom	5.02	0.92	1.	4.80	0.88	6.	4.50	1.09	11.
22 Curiosity	4.97	0.93	4.	4.83	0.85	3.	4.47	0.99	12.
34 Independence	4.44	1.10	10.	4.64	0.97	10.	4.42	1.04	15.
Stimulation									
6 New experiences	4.03	1.16	16.	4.34	1.04	17.	3.99	1.12	24.
15 Adventures	2.94	1.18	33.	3.49	1.14	32.	3.14	1.14	33.
30 Exciting life	3.60	1.18	27.	3.71	1.15	29.	3.62	1.20	30.

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Value: No. Item Core	Students (N = 301)			White-collar workers (N = 459)			Manual workers (N = 815)		
	<i>M</i>	<i>SD</i>	<i>Rank</i>	<i>M</i>	<i>SD</i>	<i>Rank</i>	<i>M</i>	<i>SD</i>	<i>Rank</i>
Hedonism									
10 Fun	3.96	1.15	18.	3.95	1.20	24.	4.12	1.25	20.
26 Pleasure	4.31	1.12	12.	4.09	1.10	22.	4.08	1.19	22.
37 Enjoyable life	3.76	1.19	23.	3.76	1.17	28.	4.04	1.26	23.
Achievement									
4 Ability admired	3.64	1.21	25.	3.30	1.19	35.	2.95	1.23	35.
13 Success	3.66	1.23	24.	3.53	1.18	31.	3.17	1.19	32.
24 Ambition	3.62	1.23	26.	3.39	1.22	34.	2.93	1.22	36.
32 Outdoing others	3.99	1.20	17.	4.12	1.07	21.	3.64	1.13	29.
Power									
2 Wealth	2.54	1.20	38.	2.83	1.19	38.	2.84	1.30	38.
17 Authority over others	2.58	1.26	37.	3.25	1.21	36.	2.55	1.21	40.
39 Leadership	2.81	1.27	35.	3.44	1.16	33.	2.64	1.14	39.

APPENDIX 2

Means and Standard Deviations for 19 Workplaces Measuring Universalism, Benevolence, Achievement, Power, Conformity, and Knowledge sharing

Workplace	N	Universalism		Benevolence		Achievement		Power		Conformity		Knowledge sharing	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Factory 1	113	1.13	0.14	1.06	0.13	0.86	0.19	0.75	0.20	1.01	0.17	0.06	0.91
Factory 2	85	1.15	0.18	1.06	0.16	0.84	0.18	0.69	0.21	1.02	0.15	-0.16	0.82
Factory 3	96	1.17	0.16	1.09	0.14	0.80	0.21	0.68	0.23	1.04	0.15	-0.07	0.76
Factory 4	135	1.12	0.13	1.08	0.13	0.82	0.20	0.73	0.21	1.04	0.17	0.07	0.75
Factory 5, office	36	1.18	0.13	1.11	0.15	0.85	0.22	0.77	0.18	1.02	0.17	-0.11	0.79

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Workplace	N	Universalism		Benevolence		Achievement		Power		Conformity		Knowledge sharing	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Factory 5, shop floor	122	1.18	0.16	1.10	0.15	0.80	0.21	0.66	0.21	1.03	0.16	0.04	0.82
Factory 6	79	1.19	0.16	1.09	0.14	0.77	0.20	0.61	0.19	1.07	0.14	0.04	0.84
Factory 7, office	37	1.21	0.11	1.12	0.18	0.77	0.20	0.71	0.19	1.06	0.13	0.36	1.07
Factory 7, shop floor	57	1.18	0.13	1.10	0.12	0.74	0.17	0.65	0.21	1.07	0.14	1.16	0.13
Factory 8, office	57	1.15	0.17	1.10	0.15	0.84	0.22	0.76	0.22	1.01	0.15	-0.37	0.92
Factory 8, shop floor	90	1.13	0.18	1.10	0.15	0.84	0.21	0.73	0.27	1.01	0.17	-0.14	1.00
Factory 9	31	1.13	0.10	1.09	0.12	0.83	0.18	0.73	0.19	1.07	0.12	-0.03	0.12
Factory 10	34	1.17	0.15	1.07	0.12	0.81	0.20	0.68	0.21	1.06	0.14	0.06	0.84
Maintenance, office	38	1.14	0.16	1.13	0.12	0.86	0.19	0.78	0.23	1.03	0.15	-0.19	1.00
Maintenance, shop floor	74	1.20	0.15	1.11	0.15	0.77	0.20	0.64	0.22	1.06	0.15	0.13	1.00
Engineering	28	1.18	0.13	1.09	0.13	0.88	0.19	0.71	0.20	1.05	0.18	-0.00	1.00
Personnel	37	1.18	0.14	1.13	0.14	0.79	0.24	0.70	0.25	1.04	0.22	0.04	0.91
Sales office 1	65	1.13	0.12	1.08	0.14	0.93	0.20	0.80	0.20	0.98	0.16	-0.01	1.01
Sales office 2	39	1.14	0.16	1.09	0.10	0.92	0.22	0.84	0.23	0.96	0.17	-0.01	0.94

APPENDIX 3

Correlation Matrix of the Main Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	
1 Perceptions of knowledge sharing	1											
2 Attitudes towards organisational change	.18**	1										
3 Security	-.03	.05	1									
4 Conformity	.08**	.05	.28**	1								
5 Tradition	.00	-.17**	.12**	.31**	1							
6 Benevolence	.09**	.17**	.02	.10**	-.06*	1						
7 Universalism	-.01	.13**	.24**	.11**	-.07*	.34**	1					
8 Self-direction	-.09**	.07	-.27**	-.40**	-.35**	-.09**	-.06*	1				
9 Stimulation	.02	-.02	-.45**	-.48**	-.31**	-.18**	-.32**	.17**	1			
10 Hedonism	.02	-.17**	-.31**	-.31**	-.18**	-.22**	-.31**	.01	.33**	1		
11 Achievement	-.02	-.03	-.35**	-.30**	-.23**	-.40**	-.58**	.02	.18**	.04	1	
12 Power	-.05	-.07	-.39**	-.31**	-.23**	-.40**	-.56**	.13**	.21**	.03	.56**	1

*p < .05; **p < 0.01.