UNIVERSITY OF CAPE TOWN

MEASURING VALUES WITH THE SCHWARTZ VALUES SURVEY AT A UNIVERSITY IN THE WESTERN CAPE, SOUTH AFRICA

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COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

Signature:.... Signed by candidate .. Date:..... 18/05/2008

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Abstract

The aim of this study is to determine whether the Schwartz universal value types are the same for South African students compared to other international studies. A total of 136 students completed the Schwartz Values Survey across three academic study years. The survey reports respondent values and the extent of their religiosity on a Likert-scale. The measure for internal consistency reliability for eight of the ten motivational value types is good, with poor reliability scores for Stimulation and Security. No statistically significant difference presents across the student academic years. The motivational value type Tradition is consistent with a high degree of religiosity. Hedonism is consistent with a low degree of religiosity.

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CHAPTER 1

Introduction

Schwartz and Bilsky (1987) introduced a theory to support a universal set of motivational value types based on the foundational work of Rokeach in 1973. Since 1987 numerous international studies have tested the robustness of the motivational value types across different contexts.

The focus of the present study is to look at how the Schwartz Value Survey instrument is a reliable instrument to assess personal values within a sample in the Western Cape, South Africa. The survey consolidates fifty-seven value items into ten motivational value types defined by Schwartz and Bilsky (1987) and empirical evidence across various countries and continents indicates universal application of the ten motivational value types.

The research from the present paper will add empirical evidence to whether the ten motivational value types are universal in their application applied across a range of contexts, nationalities and cultures. The present study provides data to support a national study undertaken at various higher educational institutions across South Africa.

Aims of the research

The Schwartz Values Survey (SVS) is an instrument to measure values and the universal applicability of ten motivational value types. Application of the survey is across countries, cultures and religious affiliations. Studies already conducted in South Africa (Burgess, Schwartz & Blackwell, 1994; Renner, Peltzer & Phaswana, 2003; Welthagen, 2005) have limited generalisability as the sample selections have focussed on homogenous groups with respect to ethnicity, occupation or geographical location. Consequently, more research studies are required to explore the generalisability and to contribute to the body of knowledge about the nature and generalisability of values within a South African context.

To this end, the first part of the present study is to use a South African sample to investigate the internal consistency reliability of the value items relative

to the motivational value types as defined by Schwartz and Bilsky (1987). The sample in the present study is a homogenous grouping. The findings of the present study, however, will contribute to the broader body of knowledge.

Previous values research (Bond, Leung, Au, Tong & Chemonges-Nielson, 2004; Ryckman & Houston, 2003; Simadi & Kamali, 2004; Zhang, Straub & Kusyk, 2007) is able to distinguish between motivational value types along vocational interests and educational levels at a broad level such as the difference between secondary school students, university students and teachers or other adults. The present paper examines more narrowly whether there is a difference between academic study year and motivational value types, whether there is evidence about differences of one or two academic years of study due to increased student maturity levels and more exposure to university life. A comparison is also made between values and potential vocational orientations.

The present paper investigates how the degree of individual religiosity informs motivational value types and influences the way people live their lives. Theorists (Roccas, 2005; Saroglou et al., 2004; Schwartz & Huismans, 1995; Schwartz, 2004) argue the influence of religiosity on values as well as the distinction between socio-economically more developed and less developed countries. South Africa as a nation is a less developed country. There is an interesting paradox within South Africa: more developed, more urban areas, display characteristics of Western individualistic cultures; less developed, more rural areas, display characteristics of more traditional African collectivistic cultures. The findings of the present paper compare with a large body of national and international research conducted on values and religiosity.

The present study will contribute to insights about values within a particular sample and context. This will support the research about the use of the Schwartz Values Survey as a robust instrument to measure values across different contexts and populations and hence add to the generalisability of the use of the instrument.

Research problem

The Schwartz Value Survey (SVS) is a theory-based assessment instrument designed to support a theory of the universalism of ten motivational types that are present across all cultures and nations. Research studies on the reliability and validity of the SVS instrument covers over 100 countries, on all inhabited continents (Schwartz, 1992). There have been a number of revisions of the design of the Schwartz Values Survey between 1987, the initial design of the instrument, and 1996.

Rokeach (as cited in Saroglou et al., 2004) found the religiosity of individuals influenced values. Schwartz and Huismans (1995) conducted further research to explore the relationship between religiosity and values using the Schwartz Values Survey exploring four western religions.

A number of empirical research studies measure the relationship between religiosity and values in various countries (Roccas, 2005; Saroglou et al, 2004, Schwartz & Huismans, 1995). Studies over time support the robustness of the instrument to measure the impact of values on religiosity levels. The literature supports universalism of motivational value types.

The present research intends to assess whether the Schwartz Values Survey presents similar results with respect to the clustering of the fifty-seven value items into ten motivational value types as defined in the literature. The present research also investigates the link between religiosity of the subjects and value types.

Propositions

The propositions for investigation are as follows:

Proposition 1: The SVS is a reliable instrument to measure motivational value types for South African students.

Proposition 2: No differences exist in motivational value types between students in different academic years of study.

Proposition 3: A relationship exists between motivational value types and religiosity.

CHAPTER 2

Background

A number of definitions of values have emerged over the last century. Seminal work in this area was conducted by researchers such as Spranger; Allport; and Rokeach (as cited in Rohan, 2000); and more recently work by Schwartz and Bilsky (1987) who refined the work on values.

Spranger suggested that there are "six attitudes present in everyone in different proportions with one dominating" (Rohan, 2000, p, 255). Value types later replaced the use of the word attitudes. The Spranger research conducted in 1928 inspired the 1952 Allport study where a value was defined as an "emotional-mental judgment towards some phenomenon" (as cited in Simadi & Kamali, 2004, p. 20) and "value priorities were the dominating forces in life because they directed all of a person's activities towards their realization" (as cited in Rohan, 2000, p. 255). Allport, Vernon and Lindzey designed the initial instrument to measure six value types called the Study of Values instrument (Rohan, 2000, p. 255).

The next phase in the values research was work conducted in 1973 by Rokeach. Rokeach defined values as "modes of conduct and end states – namely instrumental and terminal values" and "as being permanent beliefs about nature, behaviors and goals of life" (as cited in Simadi & Kamali, 2004, p. 20). Rokeach developed a further instrument to measure values, namely the Rokeach Value Survey (RVS). The survey comprised two separate lists based on the instrumental and terminal distinctions to measure thirty-six defined values.

There was much debate between theorists about the separation of values into instrumental and terminal goals. The survey instrument defined terminal goals as end states, phrased as nouns. Modes of behaviour defined instrumental goals, expressed as adjectives (Schwartz & Bilsky, 1987). One school of theorists (Gorsuch, 1970; Heath and Fogel, 1978; and Jones, Sensenig and Ashmore, 1978) did not concur with the terminal-instrumental separation and argued that it lacked conceptual justification. Other theorists (Feather, 1975;

Braithwaite and Law, 1985; Levy and Guttman, 1985; Schwartz and Bilsky, 1987) agreed with the distinction and could provide empirical evidence in support thereof (Burgess, Schwartz & Blackwell, 1994).

Schwartz (1994, p.21) defined values as "desirable transsituational goals that serve as guiding principles in the life of a person or other social entity". Schwartz further elaborated on this definition and recognized values as goals that consist of four primary constructs: "(1) they serve the interests of some social entity; (2) they can motivate action; (3) they function as standards for judging and justifying action; and (4) they are acquired both through socialization to dominant group values and through the unique learning experiences of individuals" (Schwartz, 1994, p. 21).

Schwartz and Bilsky (1987, p. 551) argue that there are five common features that shape all of the value definitions and these are:

> (a) concepts or beliefs, (b) pertaining to desirable end-states or behaviors, (c) transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) ordered by relative importance.

Schwartz and Bilsky (1987) further defined values as having meaning in terms of "three universal requirements of human existence" (as cited in Schwartz, 1992, p.7) at an individual and social level. These universal social requirements are: "needs of individuals as biological organisms; requisites of coordinated social interaction; survival and welfare needs of groups" (Schwartz, 1992, p. 7). Since values are goals that represent the interests of an individual or a group, they display either individualistic or collectivistic interests. They also represent motivations for particular courses of action and behaviour and hence represented as motivational domains.

Schwartz argued that Rokeach devised more of a list of values rather than systematically building a structure of values and value types. Schwartz built a theory and model of values and value types. He worked in association with

others around a theory of structure and content of value types in order to systematically build a value survey based on the relationship mapping of values to value types (Rohan, 2000; Schwartz, 1994).

Construction of the Schwartz values model

Schwartz and Bilsky initially derived "seven universal and distinctive motivational domains of values" (1987, p. 551) based on the preceding research by Rokeach. The initial seven motivational domains are: enjoyment, achievement, restrictive conformity, security, prosocial, maturity and self-direction. In dividing the seven motivational domains between the interest facets Schwartz and Bilsky postulated that enjoyment, achievement and self-direction served individualistic interests; restrictive conformity and prosocial values served collectivistic interests; and maturity and security values served mixed interests. The wedges in a circle represent the motivational domains within the three interests. The motivational domains were later renamed "motivational types" (Schwartz, 1992, p.78).

An eighth motivational type *social power* was defined during the initial research but, based on value importance ratings, insufficient data were found to correlate with social power as a motivational type (Schwartz & Bilsky, 1987).

In a subsequent study (Schwartz, 1992) instead of the seven motivational types, Schwartz hypothesized the possibility of eleven motivational types. Ten of these motivational types emerged as significant during the study, namely: Conformity, Tradition, Security, Power, Achievement, Hedonism, Stimulation, Self-direction, Universalism, and Benevolence. The eleventh motivational type, Spirituality, appeared less significant and did not stand up to scrutiny against the three universal requirements for values. Schwartz continued to use the circular concept to represent the ten motivational value types.

Initially forty-four values were synthesized from the thirty-six value types that Rokeach derived. Schwartz and Bilsky (1987) collected data from seven countries and derived fifty-six values for ten motivational types. In 1992 Schwartz refined the instrument with data gathered from 40 samples across 20 countries. By 1994 Schwartz had removed one item and added a further two

items to measure a total of fifty-seven values. By 2003, Saroglou et al. (2003, p.22) recorded that that SVS had been tested in over 50 countries and they argued that by this stage the SVS instrument "probably does not exclude any significant types of basic values and disposes a near-universal structure of relations among the ten value types". Table 2.1 details the motivational value types with their corresponding value items.

Table 2.1

Motivational value types and corresponding values

Value type	Definition	Value items
Power	Social status and prestige, control or dominance over people and resources.	Social power, Authority, Wealth, Preserving my public image, Social recognition
Achievement	Personal success through demonstrating competence according to social standards.	Successful, Capable, Ambitious, Influential, Intelligent, Self-respect
Hedonism	Pleasure and sensuous gratification for oneself.	Pleasure, Enjoyment in life, Self-indulgent
Stimulation	Excitement, novelty, and challenge in life	Daring, A varied life, An exciting life
Self-direction	Independent thought and action – choosing, creating, exploring.	Creativity, Curious, Freedom, Independent, Choose own goals, Private life
Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.	Broad-minded, Wisdom, Social justice, Equality, A world at peace, A world of beauty, Unity with nature, Protecting the environment, Inner harmony
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.	Helpful, Honest, Forgiving, Loyal, Responsible, True friendship, A spiritual life, Mature love, Meaning in life
Tradition	Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide.	Humble, Accepting portion in life, Devout, Moderate, Respect for tradition
Conformity	Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms.	Politeness, Obedient, Self-discipline, Honour parents and elders
Security	Safety, harmony, and stability or society, of relationships, and of self.	Family security, National security, Social order, Clean, Reciprocation of favours, Healthy, Sense of belonging

(as cited in Spini, 2003, p. 5)

Values were classified further into two types: terminal goals, representing end-states (phrased as nouns); and instrumental goals, representing modes of behaviour (phrased as adjectives). A number of theorists (e.g. Braithwaite & Law, 1985; Feather, 1975; Rescher, 1969; Rokeach, 1973; Schwartz & Bilsky, 1987) adopted the classification distinction and others rejected it (e.g. Dewey, 1957). In the empirical research conducted by Schwartz and Bilsky the meaningfulness of the classification was supported (Schwartz, 1992). Schwartz (1992) in a revised theory reported insufficient empirical evidence to support the usefulness of the distinction between terminal and instrumental goals. Schwartz then suggested "two motivational dimensions that structure the value system" (as cited in Rohan, 2000, p. 260). Schwartz (1992) phrases the motivational dimensions as either compatibilities or as conflicts.

Schwartz and Bilsky (1987) devised a model where values present in a circular model. The values adjacent to each other are most compatible; those in opposing directions are in conflict with each other. *Openness to change – conservatism* and *self-enhancement – self-transcendence* are motivational dimensions phrased as opposing dimensions (as cited in Rohan, 2000). The basis for the universal structure of values is the discovery of "common experiences people have because of their shared locations in the social structure" (Schwartz, 1992). The SVS model is in Figure 2.1.

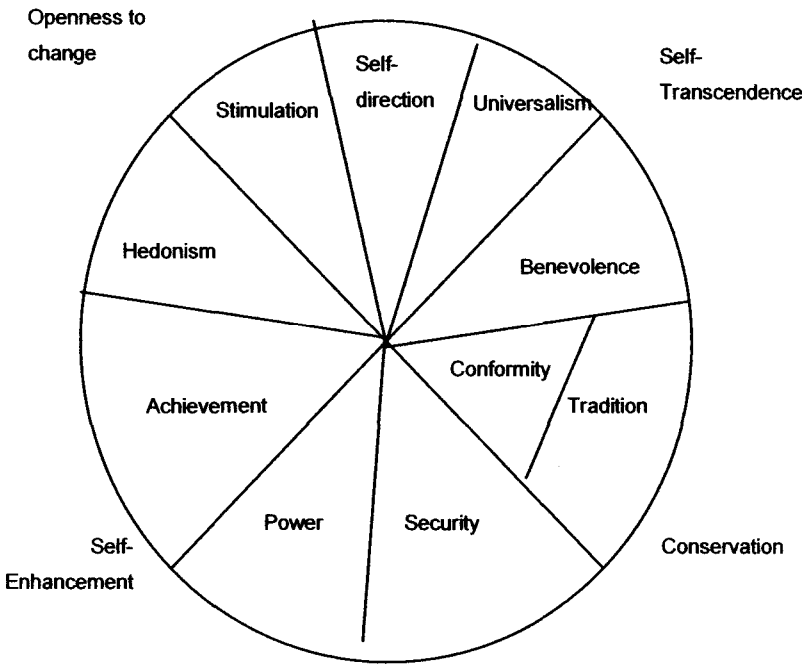

Figure 2.1. Theoretical model of the structure of value types (Schwartz et al., 2001, p. 522)

Schwartz (1994, p. 24) argued that although the theory discriminates among value types, it also forms a continuum of related motivations, represented here by a circle of relationships, as explained hereunder:

> The shared emphases are as follows: (a) power and achievement – both emphasize social superiority and esteem; (b) achievement and hedonism – both focus on self-centered satisfaction; (c) hedonism and stimulation – both entail a desire for affectively pleasant arousal; (d) stimulation and self-direction – both involve intrinsic interest in novelty and mastery; (e) self-direction and universalism – both express reliance upon one's own judgment and comfort with the diversity of existence; (f) universalism and benevolence – both are concerned with the enhancement of others and transcendence of selfish interests; (g) benevolence and conformity – both call for normative behavior

> that promotes close relationships; (h) benevolence and tradition – both promote devotion to one's ingroup; (i) conformity and tradition – both entail subordination of self in favor of socially imposed expectations; (j) tradition and security – both stress preserving existing social arrangements that give certainty to life; (k) conformity and security – both emphasize protection of order and harmony in relations; (l) security and power – both stress avoiding or overcoming the threat of uncertainties by controlling relationships and resources.

Schwartz (1994, p.24) argued that the location of Tradition within the Conformity segment implies "the two types share a single motivational goal – subordination of self in favor of socially imposed expectations". There may be overlap in meaning at the boundaries, rather than the motivational value types viewed as discrete wedges.

As mentioned earlier the values presented as individualistic or collectivistic. Within individualistic cultures the emphasis is mainly on the attainment of self-centred goals (expressed by values such as achievement) whereas in collectivistic cultures the emphasis is on the attainment of group goals (expressed by values such as tradition, conformity) (Ryckman & Houston, 2003; as cited in Welthagen, 2005).

Religiosity and values

Various studies (for example: Roccas, 2005; Saroglou et al., 2003; Schwartz & Huismans, 1995) focus on religiosity and the development of values. Schwartz and Huismans (1995) is the seminal study in this area. Schwartz (1992) initially included spirituality as an eleventh motivational value but empirical studies showed little support for the inclusion of spirituality. The label religiosity later replaced spirituality: "a view that spiritual forces influences the human world and that religious institutions exert a positive effect on social outcomes" (as cited in Bond, Leung, Au, Tong & Chemonges-Nielson, 2004, p. 179).

In large research studies from five countries Schwartz and Huismans (1995) found that religion was positively related to Tradition and Conformity, less with Security and Benevolence, and negatively related to Hedonism, Stimulation, and Self-direction and less or not at all with Achievement, Power and Universalism.

Schwartz's (2004, p. 13) later refinement found that "religiosity is motivationally grounded in valuing the submission of self to others and relates positively to Tradition, Conformity and Benevolence, and negatively to Hedonism, Power, Self-direction and Stimulation". The Saroglou et al. (2004) study differed from Schwartz and Huismans (1995) when they found that religiosity related most positively with Benevolence. It however concurred with the findings for Hedonism, Stimulation, Achievement, Power and Universalism.

Later studies (Saroglou et al., 2004, Schwartz & Huismans, 2004) clustered the findings into the value dimensions: self-transcendence; conservation; self-enhancement; and openness to change. Religiosity related positively to the value dimensions of conservation and self-transcendence, and negatively to the value dimensions of self-enhancement and openness to change. Such studies focused largely on samples within a Western context within the context of monotheistic religions of Judaism, Christianity and Islam where the definition of religiosity supports "a motivational orientation to self-abnegation, concern for others, and self-restraint" (Bond et al., 2004, p. 187).

Roccas (2005) reported that in studies on religiosity within an Asian context the Eastern religions do not rely on the existence of one truth, suggesting that values and motivational value types associated with religiosity in an Asian context may be less positive for the conservation value dimension and less negative for the openness to change value dimension.

Renner et al. (2003) conducted research within an African context and found that the Northern Sotho speakers associated religious issues highly with social concerns. This was associated with the collectivistic dimensions of conservation and self-transcendence.

Saroglou et al. (2004) found the impact of religiosity on values linked to the socio-economic development of a country: the more developed the society, the

less of a tendency towards conservation values and less discomfort with Self-direction and Achievement, with more of a shift towards self-transcendence and openness to change.

Vocations and values

Zhang, Straub and Kusyk (2007) argue that the use of business students as a sample to examine values in relation to future work prospects does carry some external validity due to the numbers of studies that have made use of this convenient population.

Zhang et al. (2007) argued that values are individual but influenced by peers and family and the use of a homogenous sample excludes the possibility of potential corporate cultural bias.

Bond et al. (2004) found that those who express a higher level of religiosity display a vocational preference for jobs with a social orientation. "People high in religiosity should welcome the opportunity to provide service to others" (Bond et al, 2004, p. 179).

In an orientation to vocational choices, Bond et al. (2004, p. 181) found that respondents preferred "conventional occupations (e.g. accountant, banker)" when they held stronger self-enhancement values; "enterprising occupations (e.g. sales representative, manager of a department store)" when they held stronger self-enhancement values; "artistic occupations (e.g. architect, writer)" when they held stronger self-transcendence values, but disliked them when they held stronger conservation values; and "social occupations (e.g. social worker, counsellor)" when they held stronger self-transcendence values, but disliked them when they held stronger self-enhancement values.

Ryckman and Houston (2003) found that career success is dependant on the pursuit of individualistic values with motivational value types Self-direction and Achievement featuring strongly. These authors argued that the use of a university sample may also have influenced the findings as students are more likely to have an Achievement orientation.

Spini (2003, p. 18) conducted a study using a student sample of psychology and law students across countries and socio-economic levels of development to compare their value orientations. For the motivational value types: Benevolence, Conformity. Self-direction and Universalism these authors found:

> no difference in factor variance across the samples that there should be major and explainable differences in factor variances across the samples included in this study as they surely are not equivalent in democratization and socioeconomic status.

Spini (2003) argues that this finding could be as a result of the homogeneity of the study sample.

In a further study Saroglou et al. (2004) found a factor variance between value types as previously discussed when exploring the aspect of religiosity and socio-economic status.

Menezes and Campos (1997, p. 68) noted some differences in results in their cross-sectional study across the "three features of the Schwartz model: values structure, motivational types content and value meanings" with a study of secondary school teachers and adolescents.

Menezes and Campos (1997) revealed in a study with adolescents a mixing of responses for Universalism and Self-direction with Benevolence and Stimulation respectively. These authors argue that this could be the result of the transition in the way that adolescents think as they move into adulthood. In the Schwartz and Sagiv (1995) study a similar mixing of responses was apparent.

In the secondary school teacher sample Menezes and Campos (1997) found no clear distinction between Security and Conformity and between Hedonism and Stimulation.

Conclusion

The Schwartz Value Survey is the first instrument found in the literature to develop a model of the structure and content of values. Theorists do not appear

to challenge the existence and content of the ten motivational value types but rather focus on the relationships between the individualistic and collectivistic value domains and the corresponding pairs of value dimensions.

The research supports the strong theoretical link between religiosity and values. There is evidence of the impact of religiosity on values depending on the socio-economic development from where the sample is drawn. The samples in developed countries show less inclination towards collectivistic value domains whereas those from less developed countries show more collectivistic values.

Theorists found that student sample and value types can plot vocational choice. The value type Achievement, from the individualistic value domain is also strong across the student samples and this could be due to the nature of the sample.

CHAPTER 3

Method

Participants

The sample (N = 125) consisted of one hundred and thirty six individuals. Eleven of the cases contained more than thirty percent of missing data and these cases were excluded from the study. A convenience sample was used through student participation from the second-, third- and fourth-year Organisational Psychology classes. The study was limited to the students with South African citizenship. The gender distribution of the sample was 68% women (N = 85) and 21.6% men (N = 27) with 10.4% (N = 13) missing data. English language speakers were the most meaningfully represented sample, 72% (N = 90). Afrikaans, 6.4% (N = 8) and isiXhosa, 9.6% (N = 12) represented the other independent language groups. The other South African language groups were too small to make meaningful comparisons and were consolidated into a composite South African other language group, 7.2% (N = 9). Two participants, 1.6% (N = 2) represented other languages and missing data was 3.2% (N = 4). Consequently, the comparison between language groups was excluded from analysis due to the small size of different language representation.

An addendum to the questionnaire included fields to confirm South African citizenship and to indicate the student's study year.

The frequency of participation is in Table 3.1. There is a total participation percentage of 33.9% across all three academic years. The separate academic study year participation rate increased as students move into higher academic years. The participation rate ranged from 18.7% of second year students, 56.6% of third year students, and a respondent rate of 66.7% at Honours year level.

The second year group should represent the highest response rate and highest percentage of participation per academic year given that they represent the largest number of the total registrations (N = 229).

Table 3.1

Frequency of students completing the survey compared to total number of registered students across the three years

Academic year	Frequency	Total registrations	Percentage of participation	Percentage of total registrations over the three years
Second Year	43	229	18.7	62.2
Third year	60	106	56.6	28.8
Honours year	22	33	66.7	9
Total	125	368	33.9	100

(F. Felton, personal communication, October 10, 2007)

Religiosity

The survey made provision for determining the religiosity of the sample. The options ranged on a six-point scale from "not at all" religious, though to "very religious". The information is illustrated in Figure 3.1. The response distribution was spread across the religiosity scale. The descriptive statistical data is reflected in Table 3.2. The data was be used to make a meaningful comparison between levels of religiousness.

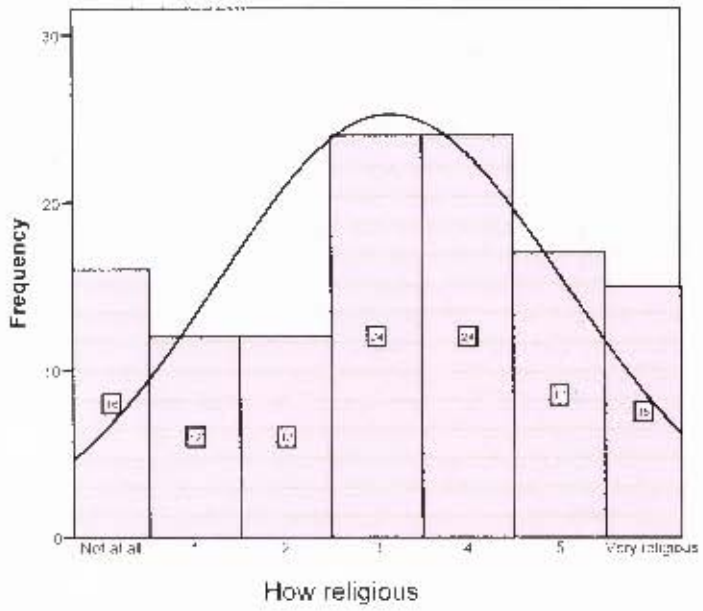

Figure 3.1. Frequency distribution of religiosity

Table 3.2

Descriptive statistics for percentage distribution of religiosity

N	120
Missing data	5
Mean	3.16
Median	3.00
Std. Deviation	1.896
Skewness	-.224
Std. Error of Skewness	.221
Kurtosis	-.987
Std. Error of Kurtosis	.438

The addendum to the questionnaire made provision for collecting data about the religious affiliation of the respondents. The information is illustrated in Figure 3.2. The figure illustrates that Christianity was represented as the highest frequency (N = 83) of the sample with the other religions not well represented. Consequently, this information was not used to make meaningful comparisons in the analysis.

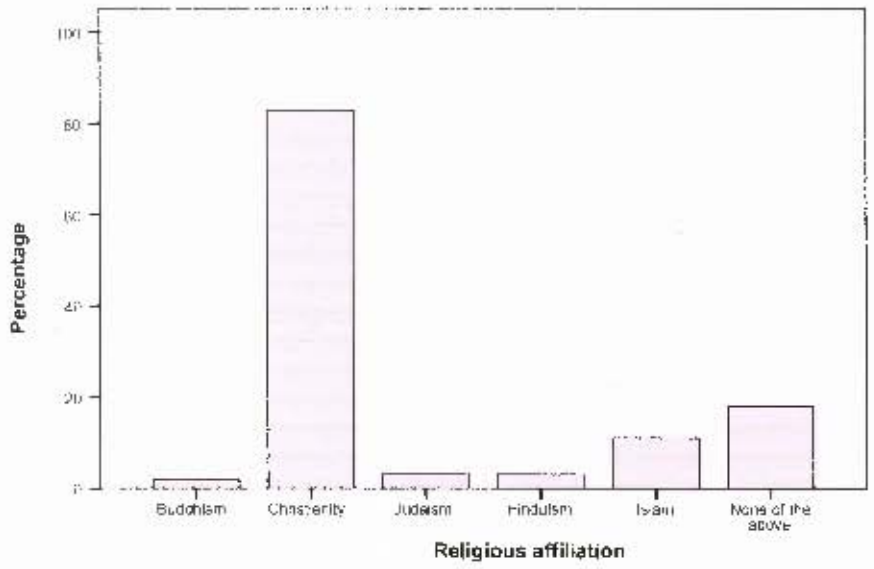

Figure 3.2. Percentage distribution of religious affiliation

Instrument

The research method was a cross-sectional descriptive study utilising a self-completion survey questionnaire, the adapted Schwarz Value Survey (SVS). The SVS consisted of three parts. The first two parts contained the value lists and part three contained demographic and biographic information. The adaptation referred to part three of the survey with demographic questions adapted for a South African sample by researchers at the North-West University.

Parts one and two comprised fifty-seven value items that measure ten motivational value types. The values items required a response on a nine-point

Likert-scale. Respondents evaluated each item according to its importance as "a guiding principle in my life". The scale ranged from -1 (*opposed to my values*), through 0 (*not important)* to 7 (*of supreme importance)*. The response format of the survey was paper and pencil.

Part three of the questionnaire included a scale for how religious the respondent is. The scale ranged from 0 (*not at all)*, through to 6 (*very religious*).

Part three listed four religious groups: Protestant, African Independent church, Roman Catholic, and other. The present study found limitations with the religious group categorisation within the South African context as it did not include a range of other appropriate religious affiliations. To overcome the limitation a list of religious affiliations was included in the addendum to the Schwartz Values Survey used in the present study.

The religious affiliations included in the addendum were: 1 (*Buddhism*); 2 (*Christianity*); 3 (*Judaism*); 4 (*Hinduism*); 5 (*Islam*); 6 (*None of the above*). This categorisation aligns to literature on major world religions (The Futurist, 2006).

Procedure

The administered survey was the adapted Schwartz Value Survey and an addendum. The instructions for the survey were read to all the respondents at the beginning of the session using standardised test administration procedures. The respondents completed the survey during the session and the questionnaires collected on completion.

Human participation was involved in the study and therefore ethical clearance obtained from the University of Cape Town Commerce Faculty Ethics in Research Committee. Acknowledgement of informed participant consent is through the completion and submission of the questionnaire.

The present study reported the data in an aggregated form protecting the confidentiality of individual responses. Any future use of the data as a secondary source will require the researcher to submit to a confidentiality agreement.

Conclusion

This chapter dealt with the process and procedure for the study. English is the predominant language and Christianity is the predominant religious affiliation of participants. Statistical comparisons were possible using the present data on the degree of religiousness but not on language and specific religious affiliation.

The questionnaire and addendum were administered in the classroom. The total response rate was 34.4% with the lowest response rate from students at second year level (18.7%). The highest response rate came from the Honours year level (66.7%), the smallest group representing 9% of the total sample.

CHAPTER 4

Results

The results from the statistical analyses of the data, as they pertain to the three stated propositions, are detailed in this chapter. The analysis used the Statistical Package for the Social Sciences (SPSS) Version 15. A statistical significance level of $p < .05$ was used in the calculations.

The original Likert scale for the fifty-seven value items ranged from -1 (*opposed to my values*) to 7 (*of supreme importance*). Linearly transformation of the negative scale values avoided unnecessarily complicating the calculation. The Likert scale range -1 to 7 transformed to a range of 1 to 9. The Draft Users Manual (Littrell, 2007) provided for summating the scores related to each motivational value type.

A number of statistical techniques were employed to test the propositions and compare the results of the South African student sample to other samples. Factor analysis was conducted on various sets of the data.

In the first instance a factor analysis was performed to determine the correlation of the ten motivational value types. Components are extracted through principal component analysis to illustrate the inter-relationships between the ten motivational value types.

An analysis of variance (ANOVA) was used to determine whether there are statistically significant differences between the three academic years. The independent variable is the academic year. A measure of significance from the ANOVA results is the *F*-ratio. The *F*-ratio measures differences between the group means. The larger *F*-ratio indicates a significant difference between groups and hence the possibility that the hypothesis will be rejected (Hair et al., 2003).

A further factor analysis was used to explore the relationship between the dependent variables (ten motivational value types) and the independent variable (how religious).

The results of the statistical analysis are discussed hereunder dealing separately with each proposition.

Proposition 1: The SVS is a reliable instrument to measure motivational value types for South African students.

The survey comprises fifty-seven value items that Schwartz clustered into ten motivational value types, defined in Table 2.1. The Cronbach's alpha (α= .919) of the fifty-seven value items illustrates a strong relationship for internal consistency reliability. The descriptive statistical results for the value items of each of the ten motivational value types are summarised in Table 4.1. The measure of skewness is the highest for the value items Honest (-1.136) and Family Security (-1.151) for the motivational value types of Benevolence and Security respectively. Both of these measures skew to the left. No other value items represent a substantially skewed distribution.

Table 4.1

Summary of descriptive statistics of the fifty-seven value items consolidated into the ten motivational value types

Motivational value type	Value items	*N*	Mean	*SD*	Variance	Skewness		Kurtosis	
						Statistic	*SE*	Statistic	SE
Conformity	Politeness	123	6.83	1.32	1.75	-.371	.21	-.742	.43
	Self-Discipline	125	6.34	1.56	2.42	-.344	.21	.001	.43
	Honouring of Parents and Elders	124	7.23	1.40	1.97	-.699	.21	-.367	.43
	Obedient	124	5.90	1.55	2.40	-.528	.21	.823	.43
Tradition	Respect for Tradition	125	5.37	1.95	3.82	-.300	.21	-.401	.43
	Moderate	122	4.76	1.69	2.86	-.140	.21	.099	.43
	Humble	124	6.61	1.52	2.30	-.410	.21	-.599	.43
	Accepting my Portion in Life	125	5.07	2.09	4.34	-.355	.21	-.699	.43
	Devout	123	5.74	2.57	6.69	-.297	.21	-1.079	.43

Motivational value type	Value items	*N*	Mean	*SD*	Variance	Skewness		Kurtosis	
						Statistic	*SE*	Statistic	SE
Benevolence	Loyal	124	7.23	1.26	1.60	-.870	.21	.350	.43
	Honest	125	7.30	1.33	1.79	-1.136	.21	1.533	.43
	Helpful	124	6.31	1.66	2.77	-.543	.21	-.022	.43
	Responsible	124	7.02	1.29	1.67	-.830	.21	.644	.43
Self-direction	Freedom	124	7.15	1.397	1.952	-.660	.21	-.398	.43
	Creativity	125	6.18	1.476	2.178	.104	.21	-1.121	.43
	Independent	123	7.04	1.456	2.121	-.719	.21	.942	.43
	Choosing own Goals	125	7.19	1.384	1.914	-.853	.21	.596	.43
	Curious	125	5.98	1.673	2.798	-.434	.21	-.247	.43
Universalism	Equality	125	6.93	1.63	2.65	-.578	.21	-.636	.43
	A World at Peace	124	6.62	1.72	2.95	-.497	.21	-.656	.43
	Unity with Nature	124	4.80	1.93	3.74	-.052	.21	-.318	.43
	Wisdom	123	7.05	1.58	2.51	-.737	.21	.559	.43
	A World of Beauty	125	5.85	1.77	3.13	-.325	.21	-.171	.43
	Social Justice	125	6.49	1.55	2.41	-.174	.21	-.874	.43
	Broadminded	124	6.95	1.37	1.87	-.727	.21	-.100	.43
	Protecting the Environment	125	5.57	1.88	3.54	-.063	.21	-.527	.43
Stimulation	An Exciting Life	124	6.71	1.524	2.322	-.309	.21	-.798	.43
	A Varied Life	125	6.32	1.574	2.477	-.683	.21	.145	.43
	Daring	122	5.25	1.883	3.546	-.224	.21	-.527	.43
Hedonism	Pleasure	123	6.07	1.441	2.078	-.166	.21	-.468	.43
	Enjoying Life	125	7.02	1.629	2.653	-.904	.21	.782	.43
	Self-Indulgent	125	5.99	1.767	3.121	-.425	.21	-.149	.43

Motivational value type	Value items	*N*	Mean	*SD*	Variance	Skewness		Kurtosis	
						Statistic	*SE*	Statistic	SE
Achievement	Ambitious	124	7.35	1.282	1.643	-.700	.21	.015	.43
	Influential	124	6.08	1.570	2.465	-.187	.21	-.568	.43
	Capable	121	7.21	1.260	1.587	-.542	.22	-.651	.43
	Successful	125	7.54	1.215	1.476	-.817	.21	.039	.43
Power	Social Power	123	3.69	1.917	3.674	.586	.21	-.053	.43
	Wealth	125	5.59	1.867	3.485	-.264	.21	-.156	.43
	Authority	124	4.87	1.839	3.382	-.038	.21	-.431	.43
	Preserving my Public Image	123	5.38	2.022	4.090	-.107	.21	-.649	.43
Security	Social Order	125	5.95	1.689	2.853	-.230	.21	-.391	.43
	National Security	125	5.62	1.726	2.978	.055	.21	-.541	.43
	Reciprocation of Favours	125	5.54	1.739	3.024	-.327	.21	-.219	.43
	Family Security	125	7.79	1.193	1.424	-1.151	.21	.871	.43
	Clean	125	6.37	1.780	3.170	-.372	.21	-.812	.43

The purpose of the survey is, however, to measure the inter-relationship between the value items consolidated into ten motivational value types. Consequently, the results of the statistics are consolidated into the ten motivational value types. The descriptive statistical data of the ten motivational value types is summarised in Table 4.2.

Table 4.2

Descriptive statistics of the ten motivational value types

Motivational value type	*N*	Mean	*SD*	Variance	Skewness		Kurtosis	
					Statistic	*SE*	Statistic	*SE*
Conformity	125	18.08	4.30	18.49	-.229	.217	-.139	.43
Tradition	125	17.29	6.54	42.71	-.035	.217	-.610	.43
Benevolence	125	24.38	4.64	21.56	-.311	.217	-.584	.43
Universalism	125	33.99	8.25	68.14	-.140	.217	-.152	.43
Self-Direction	125	23.37	4.85	23.49	-.431	.217	-.144	.43
Stimulation	125	12.14	3.68	13.53	-.201	.217	-.622	.43
Hedonism	125	12.98	3.92	15.39	-.449	.217	-.307	.43
Achievement	125	19.85	4.23	17.89	-.429	.217	-.548	.43
Power	125	11.35	5.40	29.18	.080	.217	-.087	.43
Security	125	21.28	4.74	22.45	.129	.217	-.368	.43

The principal component analysis extraction method showed two factors represent 61.96% of the total variance with factor one accounting for 45.16%. The scree plot with the ten motivational value types loading on two principal factors is in Figure 4.1. Eigenvalues higher than one were extracted for two factors.

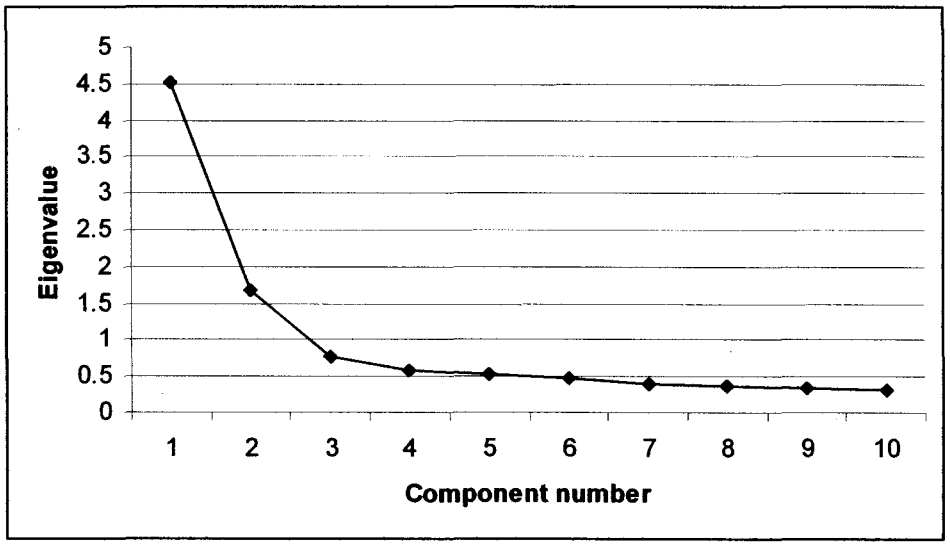

Figure 4.1. Scree plot of the ten motivational value types

A principal component analysis with a varimax rotation was carried out on the whole sample. The first factor contained Conformity, Tradition, Benevolence, and Universalism. Factor one is a combination of values that represent the interests of others and subordinating oneself for the benefit of others, a collectivistic value orientation. The second factor contained Self-direction, Stimulation, Hedonism and Power and is a combination of individualistic value orientations, concerned with self-interest and self-mastery. Achievement and Security load on both factors. The reasons for these two motivational value types loading on both of the factors could be due to the nature of the sample. The factor loading is shown in Table 4.3.

Table 4.3

Rotated component matrix of the SVS for the total sample

Motivational value type	Factor	
	1	2
Conformity	.816	.140
Tradition	.836	.016
Benevolence	.794	.084
Universalism	.639	.302
Self-Direction	.347	.703
Stimulation	.295	.691
Hedonism	-.001	.805
Achievement	.517	.588
Power	-.042	.783
Security	.566	.546

A Pearson's product-moment correlation analysis tests for the item-total correlation between each of the motivational value types. According to Fink (2003, p. 58), a correlation of (> .25) or (<-.25) is "considered quite high". The

item-total correlations are in Table 4.4 for each of the ten motivational value types. Three of the five value items in Security indicate a poor item-total correlation ($r < .25$). The item-total correlation in the other nine motivational value types indicates high item-total correlation.

Table 4.4

Motivational *value type item-total correlation by value item cluster*

Motivational value type	Value item	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
Conformity	Politeness	19.52	10.168	.506	.311	.515
	Self-Discipline	20.03	9.732	.401	.217	.585
	Honouring of Parents and Elders	19.14	10.138	.450	.247	.549
	Obedient	20.45	10.599	.336	.134	.630
Tradition	Respect for Tradition	22.26	28.126	.463	.243	.556
	Moderate	22.87	32.897	.300	.150	.629
	Humble	21.03	30.855	.494	.272	.560
	Accepting my Portion in Life	22.50	28.913	.382	.192	.595
	Devout	21.87	24.399	.399	.204	.603
Benevolence	Loyal	27.25	15.691	.411	.250	.629
	Honest	27.17	14.309	.522	.332	.580
	Helpful	28.18	14.562	.323	.125	.680
	Responsible	27.43	15.271	.445	.220	.615
	Forgiving	27.81	14.220	.464	.221	.604
Universalism	Equality	43.39	56.560	.349	.190	.743
	A World at Peace	43.72	52.440	.481	.252	.720
	Unity with Nature	45.54	50.637	.467	.324	.724
	Wisdom	43.29	55.452	.401	.240	.735
	A World of Beauty	44.47	53.159	.437	.296	.728
	Social Justice	43.83	55.821	.398	.224	.735
	Broadminded	43.38	55.986	.470	.270	.725
	Protecting the Environment	44.77	48.264	.588	.405	.697
Self-direction	Freedom	26.41	16.541	.315	.175	.599
	Creativity	27.39	16.602	.273	.095	.620
	Independent	26.53	14.664	.471	.236	.522
	Choosing own Goals	26.39	15.032	.470	.231	.525
	Curious	27.61	14.404	.374	.165	.575
Stimulation	An Exciting Life	11.55	7.299	.433	.194	.337
	A Varied Life	11.94	7.705	.345	.146	.466
	Daring	13.02	6.683	.311	.106	.540

Motivational value type	Value item	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
Hedonism	Pleasure	13.07	8.110	.498	.249	.582
	Enjoying Life	12.08	7.256	.498	.250	.573
	Self-Indulgent	13.11	6.741	.486	.236	.596
Achievement	Ambitious	20.88	9.562	.525	.371	.623
	Influential	22.14	8.768	.437	.207	.690
	Capable	21.03	9.948	.475	.237	.652
	Successful	20.67	9.663	.556	.394	.608
Power	Social Power	15.83	16.919	.525	.299	.527
	Wealth	13.93	19.515	.339	.135	.653
	Authority	14.65	18.381	.444	.256	.584
	Preserving my Public Image	14.08	17.129	.446	.199	.583
Security	Social Order	25.33	14.867	.363	.192	.383
	National Security	25.66	13.857	.437	.227	.326
	Reciprocation of Favours	25.74	16.728	.189	.047	.502
	Family Security	23.49	19.171	.177	.048	.497
	Clean	24.91	16.162	.218	.053	.485

The Cronbach's alpha of each of the scales measures the internal consistency reliability of the instrument. The Cronbach's alpha for Security (α= .496) and for Stimulation (α = .557) does not demonstrate good internal consistency reliability. The Cronbach's alpha for each of the ten motivational value types is shown in Table 4.5.

Table 4.5

Cronbach's alpha for each motivational value type

Motivational value type	Cronbach's alpha
Achievement	.706
Benevolence	.673
Self-direction	.624
Conformity	.639
Hedonism	.677
Security	.501
Universalism	.752
Stimulation	.546
Tradition	.642
Power	.656

The rank order of the motivational value types based on the mean for each motivational value type is in Table 4.6. Achievement values rank most important on average, Benevolence second, and Self-direction third followed by Conformity, Hedonism, Security, Universalism, Stimulation, Tradition and Power.

Table 4.6

Rank order of the motivational value types

Motivational value type	Mean rating	Mean rank
Achievement	4.96	1
Benevolence	4.88	2
Self-direction	4.67	3
Conformity	4.52	4
Hedonism	4.33	5
Security	4.26	6
Universalism	4.25	7
Stimulation	4.05	8
Tradition	3.46	9
Power	2.84	10

The order in the present study was similar to that in the Schwartz and Bardi (2001) study except for the higher rating of Benevolence ranking at one with Achievement ranking at four and Universalism ranking at three compared to seven in the present study. The present study and the Schwartz and Bardi (2001) study rank Stimulation, Tradition and Power in the same order.

Saroglou (2004) and Schwartz and Huismans (2004) clustered the ten value types further into four value dimensions. A consolidation of the present study survey data into the four value dimensions is in Table 4.7. Self-enhancement is measured by thirteen value items from the motivational value types of Power, Achievement and Hedonism (α = .706, average item-total correlation = .445). Self-transcendence is measured by eighteen value items from the motivational value types of Universalism and Benevolence (α = .594, average item-total correlation = .423). Conservation is measured by sixteen items from the motivational value types of Conformity, Tradition and Security (α = .771, average item-total correlation = .528). Openness to change is measured by nine items from the motivational value types of Self-direction and Stimulation (α = .695, average item-total correlation = .533).

The value dimensions of self-enhancement, self-transcendence, conservation and openness to change are measured for the reliability and average item-total correlation of the motivational value types. All four value dimensions show a strong relationship with the underlying motivational value types. Table 4.7 reflects the results.

Table 4.7

Value dimension Cronbach's alphas and average item-total correlations

Value dimensions	Cronbach's alpha	Average item-total correlation
Self-enhancement	.706	.445
Self-transcendence	.594	.423
Conservation	.771	528
Openness to change	.695	.533

Proposition 2: No differences exist in motivational value types between students in different academic years of study

A statistical difference in the results between academic years for Tradition (CI between 11.5179 and 20.5413) is shown using a 95% Confidence Interval. An analysis of variance (ANOVA) computes the *between-* and *within-*groups statistics of the three academic years. Only one *F*-ratio ($F = 3.088$, $p = .049$) is statistically significant for Tradition. The ANOVA for the ten constructs are in Table 4.8.

Table 4.8

ANOVA of the motivational value types in different academic years

Motivational value type	Relationship	Sum of squares	*df*	Mean square	*F*	Significance
Conformity	Between Groups	53.083	2	26.542	1.445	.240
	Within Groups	2240.117	122	18.362		
	Total	2293.200	124			
Tradition	Between Groups	255.213	2	127.606	3.088	.049
	Within Groups	5040.835	122	41.318		
	Total	5296.048	124			
Benevolence	Between Groups	20.472	2	10.236	.471	.626
	Within Groups	2652.856	122	21.745		
	Total	2673.328	124			
Universalism	Between Groups	178.225	2	89.113	1.314	.272
	Within Groups	8270.767	122	67.793		
	Total	8448.992	124			

Motivational value type	Relationship	Sum of squares	df	Mean square	F	Significance
Self-Direction	Between Groups	59.277	2	29.639	1.267	.285
	Within Groups	2853.795	122	23.392		
	Total	2913.072	124			
Stimulation	Between Groups	59.112	2	29.556	2.228	.112
	Within Groups	1618.296	122	13.265		
	Total	1677.408	124			
Hedonism	Between Groups	37.186	2	18.593	1.213	.301
	Within Groups	1870.782	122	15.334		
	Total	1907.968	124			
Achievement	Between Groups	1.172	2	.586	.032	.968
	Within Groups	2216.940	122	18.172		
	Total	2218.112	124			
Power	Between Groups	45.706	2	22.853	.780	.461
	Within Groups	3572.806	122	29.285		
	Total	3618.512	124			
Security	Between Groups	52.972	2	26.486	1.184	.310
	Within Groups	2730.228	122	22.379		
	Total	2783.200	124			

A Scheffé test on the Tradition scale illustrates the significance of the differences between means of the three year groups. At ($p < .05$) significance level the Scheffé test does not show a statistically significant difference between the groups. The results of the Scheffé test are in Table 4.9.

Table 4.9

The Scheffé test for the Tradition motivational value type

Dependent variable	(I) Academic year	(J) Academic year	Mean difference (I-J)	*SE*	Significance
Tradition	Second Year	Third year	1.0116	1.28434	.734
		Honours year	4.1480	1.68493	.052
	Third year	Second Year	-1.0116	1.28434	.734
		Honours year	3.1364	1.60211	.152
	Honours year	Second Year	-4.1480	1.68493	.052
		Third year	-3.1364	1.60211	.152

An independent sample *t*-test was performed to compare the responses for the groups male (N = 27) and female (N = 85). Statistically significant gender differences in motivational value types were found for Benevolence (t(2)= -3.324, p = .001) and for Power (t(2)= 2.076, p = .04). Table 4.10 reflects the results.

Table 4.10

Independent samples t-test for gender differences

Motivational value type	*t*	*d.f.*	Sig. (2-tailed)	Mean Difference	*SE* Difference
Conformity	-1.261	110	.210	-1.20828	.95810
Tradition	-1.790	110	.076	-2.54902	1.42372
Benevolence	-3.324	110	.001	-3.26928	.98355
Universalism	-.577	110	.565	-1.05577	1.82869
Self-Direction	-1.005	110	.317	-1.09673	1.09077
Stimulation	-.061	110	.951	-.05054	.82491
Hedonism	-.342	110	.733	-.28279	.82634
Achievement	-.723	110	.471	-.68366	.94571
Power	2.076	110	.040	2.49760	1.20311
Security	-.549	110	.584	-.57865	1.05417

Proposition 3: A relationship exists between motivational value types and religiosity

A descriptive statistics cross-tabulation determines the nature of the relationship between each motivational value type and religiosity. The Pearson's *r* and Pearson's r^2 statistics illustrate the direction and strength of the religiosity relationship with each motivational value type. The results are in Table 4.11.

Table 4.11

Total sample effects of religiosity on motivational value types

Motivational value type	*N*	*r*	r^2
Conformity	121	.335*	.112
Tradition	119	.553*	.305
Benevolence	122	.340*	.115
Universalism	120	.043	.002
Self-Direction	122	-.035	.001
Stimulation	121	-.053	.003
Hedonism	123	-.164	.027
Achievement	119	.252	.064
Power	120	-.071	.005
Security	125	.179	.032

Note: (*) denotes statistical significance ($p < .001$)

The relationship of the value types with religiosity is in Table 4.11. The strongest relationship (30.5%, $r^2 = .305$) is of Tradition with religiosity. Self-direction has the weakest relationship (0.1%, $r^2 = .001$) with religiosity. The Conformity, Tradition and Benevolence motivational value types represent a strong relationship with religiosity ($r > .3$).

Furthermore, Tradition, Conformity, Benevolence, Universalism, Achievement and Security demonstrate a positive relationship with religiosity whereas Hedonism, Self-Direction, Stimulation and Power all demonstrate a negative relationship with religiosity.

Conclusion

The correlation of results in the present study indicates a strong relationship between the value items for eight of the ten motivational value types. Three of the motivational value types are statistically significant for the group as a whole.

A ranking of the motivational value types showed Achievement with the highest importance and Power with the lowest importance.

A statistical relationship of religiosity is strongest with Tradition and weakest with Self-direction.

CHAPTER 5

Discussion

The aim of the present study is to determine whether the survey results of the present study correlate with the results of other studies when the fifty-seven value items clustered into the ten defined motivational value types. The findings of a South African student sample compare against other international studies using the Schwartz Values Survey (SVS).

The business student sample provides opportunity to make comparisons with other international studies about values and vocational choices. Comparative studies have used the SVS and other instruments to measure the values of business students and students from other study disciplines.

An examination of the influence of the degree of religiosity on defining individual values compares the findings of the present study to other studies.

The present study formulates three broad propositions for investigation to achieve the aim of the study. Each proposition is discussed in turn and uses the results from the present study as well as comparative results from other studies.

Proposition 1: The SVS is a reliable instrument to measure motivational value types for South African students.

To test proposition one a reliability analysis determines the item-total correlation of all the value items.

A strong internal consistency reliability rating is shown in the present study for eight of the ten motivational value types. Stimulation and Security show the weakest reliability relationships.

Schwartz and Bardi (2001) report Benevolence, Self-Direction and Universalism as being most prevalent motivational value types across different nations, except for Uganda, Nigeria and Figi where the Conformity motivational value type was more prevalent than Self-Direction. The findings here show an orientation towards individualistic values in the majority of the nations whereas in the Uganda, Nigeria and Figi societies there is more of an orientation towards the

importance of community and the nation, hence represented by collectivistic values.

In a sample of Northern Sotho participants in South Africa Tradition, Conformity and Benevolence were reported as the most prevalent (Renner et al., 2003), again representing a collectivistic values orientation.

The results of the present study found a strong relationship in factor one with the collectivistic value orientation. Consequently, the result compares well to the collectivistic values orientation of other less socio-economically developed nations such as Uganda, Nigeria and Figi.

In the present study the results of factor two represent an individualistic values orientation (Self-direction, Stimulation, Hedonism and Power). Factor two could represent the ambivalent nature of the sample: an educated (university entrant) student in the Western Cape that subscribes to Western cultures and values who, at the same time, is located within a socio-economically developing country, thus influenced by both Western and African cultures.

The factor loadings are on Achievement and Security. The Achievement motivational value type also ranks as highest on the survey results for the present study. The need to protect oneself and one's community can mean that the Security motivational value type is important as contextualised within the South African environment. It is possible that the result of the factor loading is poor discriminant validity for these two constructs rather than a true reflection of the group.

In studies by Schwartz (1992, p. 45) two of the correlations for the value items *healthy* and *sense of belonging* were found to be weak for the Security motivational value type. Ryckman and Houston (2003, p. 130) dropped a total of four items from their study based on the correlation: three items, *reciprocation of favours, healthy and clean,* for the Security scale and one, *mature love,* for the Benevolence scale.

The present study compares well with the Ryckman and Houston (2003) findings on the Security scale to drop the value item *reciprocation of favours.* The survey instrument in the present study does not make provision for the other

dropped value items from the Security scale in the Ryckman and Houston (2003) and Schwartz (1992) studies. The present study survey instrument does not contain the mature love value item on the Benevolence scale. It is also not required of the present study to drop a value item from the Benevolence scale.

A weak correlation with the d*aring* value item in the Stimulation motivational value type is shown in the present study. This finding is not present in other studies. Consequently, the assumption is that the degree of religiosity of the sample may influence the weak relationship with the daring value item, although the finding will require more research.

The internal consistency reliability findings of the motivational value types in the present study are consistent with other studies. The exception is of Stimulation where the internal consistency reliability is weakest in the present study.

Proposition 2: No differences exist in motivational value types between students in different academic years of study

The ANOVA examines the between-group and within-group means of each of the sets of data administered across a cross-sectional study of three academic years. Other literature in this area refer to more broad distinctions between secondary school students, university students and teachers (Menezes & Campos, 1997; Schwartz & Bardi, 2001) or the comparison of education level (Schwartz, Melech, Lehmann, Burgess, Harris and Owen, 2001) as well as students across different disciplines and in different countries (Bond et al., 2004).

The results of the present study are clustered into the four value dimensions: *self-enhancement, self-transcendence, conservation and openness to change* in order to compare with the Bond et al (2004) study conducted on 180 undergraduate level students. The differential between the Bond et al. (2004) Cronbach's alpha results and the Cronbach's alpha results of the present study (represented in Table 4.6) for three of the value dimensions is small (< .15). The largest difference in Cronbach's alpha (difference in α = .256) is shown by the value dimension self-transcendence, with the Bond et al. (2004) study showing a

Cronbach's alpha (α = .84) compared to the present study Cronbach's alpha (α = .59).

Self-transcendence represents the values related to the external environment and the welfare of others, an externally focussed dimension. The assumption in the present study is that the students are more externally focused on the welfare of others. In the Bond et al. (2004) study, the finding is more of an inclination towards a collectivistic value orientation. It is proposed that this is influenced by contextual factors where the present study is conducted in a socio-economically less developed country and therefore more collectivistic value dimensions are prominent. This is not, however, a statistically significant enough difference for the finding to be meaningful.

Schwartz et al. (2001) found seven of the ten motivational value types can be clearly discriminated: Self-direction, Hedonism, Stimulation, Achievement, Power, Tradition, and Conformity. In the present study eight of the ten motivational value types can be discriminated. Benevolence and Universalism are discriminated in the present study in place of Stimulation in the Schwartz et al. (2001) study and Security can not be clearly discriminated in either study. The omission of Stimulation in favour of Benevolence and Universalism reinforces the possibility of the sample being influenced by more collectivistic value orientation than in other studies (Bond et al., 2004; Schwartz et al., 2001).

In the Bond et al. (2004) study it is shown that respondents with stronger self-enhancement values prefer conventional occupations (e.g. accountant, banker) and enterprising occupations (e.g. sales representative, department store manager). Respondents with strong self-transcendence values prefer artistic occupations (e.g. architect, writer) and social occupations (e.g. counsellor, social worker).

The assumption in the present study is that the business science students prefer more conventional and enterprising occupations given that the findings were stronger for self-enhancement and weaker for self-transcendence, with self-transcendence showing the weakest Cronbach's alpha of all the value

dimensions. The findings for all four of the value dimensions are not sufficiently different from each other to make any meaningful assumptions about the sample.

Schwartz et al. (2001) found that business science students attribute more importance to Power and Achievement with Humanities students attributing more importance to Tradition. The present study finding supports the Achievement finding but not with the Power motivational value type as Achievement ranks the highest of the motivational value types and Power ranks the lowest.

The finding of the present study does not show statistical significant difference between-groups in the different academic years of study. Schwartz et al. (2001) found increased educational levels result in more openness, flexibility and a broader perspective resulting in more positive attribution for Self-direction values and, but to a lesser extent Stimulation values (the openness to change dimension) and less attribution to Conformity and Tradition motivational value types (the conservation dimension). The present study concurs with the finding on the openness to change and self-enhancement dimensions and also finds positive attribution to Conformity and Tradition motivational value types (the conservation dimension).

Consequently, the assumption is that individuals with higher education levels are more internally focused and open to exploring possibilities. It is also possible given that South Africa is a developing country that there is more focus on the collectivistic dimension of values therefore the higher ranking for Tradition and lower ranking for Stimulation.

In comparing motivational value types according to gender two, Benevolence and Power, of the ten motivational value types in the present study show statistically significant differences. Schwartz et al. (2001) in other studies found Benevolence, Tradition and Stimulation as the motivational value types that differed between the genders. In the Ryckman and Houston (2003) study a gender difference was found for Benevolence but no gender difference for Power.

Proposition 3: A relationship exists between motivational value types and religiosity

A cross-tabulation analysis was performed to determine the relationship between the motivational value types and the degrees of religiosity. The findings in the present study show Tradition, Security and Conformity (the conservation dimension) as the motivational value types associated with high degrees of religiosity with Tradition displaying the highest relationship. These are followed by a positive relationship between Benevolence and Universalism (the self-transcendence dimension), and Achievement (part of the self-enhancement dimension) and religiosity.

The motivational value types associated with the least degree of religiosity are Hedonism and Power (part of the self-enhancement dimension) followed by Self-Direction and Stimulation (the openness to change dimension). Hedonism displays the lowest relationship with religiosity in the present study.

The findings in the present study support findings in other studies (e.g. Roccas (2005); Schwartz and Huismans (1995)) where Tradition correlated most positively with religiosity, followed by Benevolence and Conformity and Hedonism correlated most negatively with religiosity, followed by Stimulation, Self-direction and Universalism.

When considering the findings in the present study from a values dimension perspective the findings compare well with the Bond et al. (2004) study where religiosity relates positively to the value dimensions of self-transcendence and conservation and negatively to self-enhancement.

The Achievement motivational value type is contained in the self-enhancement dimension and the finding of a positive relationship between Achievement and religiosity in the present study may be a consequence of the academic orientation of the sample and the finding in proposition two where business science students attribute more value to Achievement values.

Limitations

A number of limitations in the present study require consideration. A limitation is that the sample size was relatively small, both overall (*N*=125) and especially within the Honours year group (*N*=22). Caution regarding the interpretation of the results is therefore recommended. The small sample size may influence the analysis and generalisability of the results.

A further limitation is the small representation of religious affiliation other than Christianity (*N*=83). Analysis of motivational value type composition at the level of religious affiliation is not meaningful as the response distribution for the other religious affiliations is small.

There are no other studies to compare value orientations across different academic years and this presents a further limitation. Consequently, the comparison is extended to vocational orientation and gender comparisons of students in other studies from various study disciplines.

Conclusion and Recommendations

The results of the present study support the applicability of the Schwartz Values Survey as a reliable instrument for the measurement of value items and motivational value types.

Some inconsistencies show in the present study when compared with the literature. For example, Stimulation has low internal consistency reliability in the present study and this is not the case in the other literature. Achievement ranks as the most important value type in the present study and Achievement correlates positively with religiosity.

The findings in the present study for the Achievement motivational value type are different to other studies where Achievement ranks much lower in importance and a negative correlation exists for the relationship between Achievement and religiosity.

Consequently, this presents an opportunity for future research within the South African context. This research could extend specifically to the higher

education context to determine whether the generalisability of the Achievement value extends across the sector to other South African university students.

Measuring the internal consistency reliability of the instrument supports the notion that value items can be consolidated into ten motivational value types. The universality of the motivational value types is supported where the results of the present study correlate with other studies. This is true for nine of the ten value types. Further investigation is required for the internal consistency reliability of the Stimulation motivational value type across various other South African contexts.

Motivational value types are shown to be consistent irrespective of the academic year of study of the participants. The vocational orientation of the business science students in the present study also correlates well with previous studies when comparing the findings of the value dimensions.

Comparative studies were used for the exploration of the results of the three propositions of the present study. In proposition one the measure of internal consistency reliability supports the null hypothesis in the case of nine of the motivational value types. Comparative studies did not present low internal reliability for the Stimulation motivational value type.

In proposition two, the comparison between academic years of study, the null hypothesis is supported. The findings in the present study for the value dimensions, and the link to vocational orientations, concur with previous studies.

Proposition three, comparing the relationship between motivational value types and religiosity, supports the null hypothesis. This is true except for Achievement where a positive relationship with religiosity is shown in the present study whereas other studies find a negative relationship.

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