

Value Education of Youth

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1. Introduction



“... it can be suggested that the measurement of values is relevant to virtually any human problem one might be able to think of.”

Rokeach
(1918 – 1988)



When studying the topic of value education one can easily be overwhelmed by the vast amount of literature and studies, as well as the eclectic nature of the topic. It is a concern of many different disciplines to understand the concept and dimensions of values, and explore the history and the change of values in society. Philosophers, theologians, educators, sociologists, psychologists, and many more have written and discussed the issue from different angles and viewpoints. It would be beyond the range of this thesis to expand on the discussion of values and value change in general; the emphasis rather lies on certain psychological value theories and their implications for value education, as well as the measurement of values.

A great number of authors have formulated concrete suggestions regarding the practical implications of value theories in the educational context. Many books, articles or other sources of information begin by demonstrating the decay of moral values and the urgent need for value education. Even though there is a consensus that today's moral decay requires change, yet there clearly is no consensus as to how and in which context this change possibly may occur. Whether to adopt a systematic or flexible, philosophical or religious, authoritative or laissez-faire approach, is a question intensely discussed from a great variety of viewpoints and in many different disciplines. Where does the obligation to teach values lie, is it the responsibility of the family, the school, the media, society, the government, or other institutions? The problem, however, is not only *who* should teach, but also *which* values should be taught and *how*?

Interestingly, there is a greater public demand for value education at this point in history when many basic values have lost their relevance, especially amongst adolescents, and moral decay seems to be at its peak. Does this reflect an attitude of indifference towards value education in the past or rather a state of helplessness regarding the question of how to teach values?



This study is an attempt to examine the values of youth in diverse school settings; it aims at identifying those factors that contribute to the differences and the development of values in order to possibly draw some conclusions regarding value education at school.

In Chapter 2, I will demonstrate the theoretical background which constitutes the foundation of the purpose of this study. This literature review focuses on the main existing value theories, on some theories and projects in the field of value education, on the psychology of religion, and on the role of teachers in the process of value education; furthermore it briefly explains the main concepts of boarding schools. At the end of this chapter the ten main questions of interest which are the basis for the following chapters will be outlined.

Chapter 3 describes the Method followed. First of all I will briefly introduce the eight schools that participated in the study, and describe the student ($N_1 = 1541$, $N_2 = 1278$) and the teacher ($N_1 = 168$, $N_2 = 94$) samples at the two measurement times. Further, I will present the design of the study, the measures that were applied for students and teachers, and the statistical analyses used for evaluation.

In Chapter 4, I will summarise the results of the student and the teacher data. In ten sections, one by one, each of the above mentioned ten questions of interest will be referred to and analysed with the help of different methods of statistical analyses.

In Chapter 5, I will discuss these results, draw some practical implications with regard to value education, demonstrate and evaluate the limitations of the study, and make suggestions for improvement. Finally, I will list some suggestions for future research. This chapter ends with concluding remarks to show whether and how the purpose of the study was fulfilled.

Chapter 6 is a general summary of the entire study, and Chapter 7 is a list of references followed by the appendix.

2. Theoretical Background



“A man will turn over half a library to make one book.”

Samuel Johnson
(1709 - 1784)



Overview

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In this chapter I will elaborate the theoretical background for the later discussion of value education based on the data of this study. First I will outline a few central value theories and concepts of value development, followed by the main existing theories of value education. In a third part I will expand on the psychology of religion, and introduce a number of studies regarding the relation between values and religiosity. After that I will elaborate on some other factors that may influence the development of values, such as the exemplary role of the teachers, and the effect of boarding schools. In the last section I will introduce the main aims of this study.

In the following I will mostly refer to the term *value education* as opposed to *moral education*; the second being a specific form of the previous. However, when introducing certain moral development or moral education theories, the original term *moral education* will be used.



2.1 Value Theories

Values represent what people regard as good or bad, desirable or undesirable. However, values do not necessarily imply energy nor lead to action. For example, a person may believe that it is good to be rich or to have children but do nothing to bring these values into being. (Wrubel, Benner, & Lazarus, 1981)

In this first section I will focus on two major branches of psychology that have made breaking contributions to the research of moral development and the nature of human values. I will briefly describe the stage-psychological and the social-psychological approach, with the emphasis laying on the latter. In an attempt to synthesise the vast amount of literature and concepts, I will only outline the main researchers and their contributions in order to prepare the reader for the rationale behind the design of this study.

2.1.1 Stage-Psychological Concepts

The Cognitive-Developmental Approach: John Dewey, Jean Piaget, Lawrence Kohlberg

This approach is called cognitive because it recognises that moral education, like intellectual education, is based upon active *thinking* of the child about moral issues and decisions. It is called developmental because it considers the aim of moral education as *progressive movement* through moral stages.

John Dewey and Jean Piaget

The American philosopher and educator John Dewey (1964), one of the first theoretical authors in this area, postulated three levels of moral development: 1) the pre-moral or pre-conventional level of behaviour motivated by biological and social impulses with results for morals, 2) the conventional level of behaviour in which the individual accepts with little



critical reflection the standards of his or her group, and 3) the autonomous level of behaviour in which conduct is guided by the individual thinking and judging for him- or herself whether a purpose is good, and the standard of his or her group is not accepted without reflection.

Jean Piaget (1932) based his theory of moral development on Dewey's theoretical approach, as well as his own elaboration of a stage model of cognitive development. By asking children in the age range of three to eleven about the rules of games, the distribution of goods, and the concept of justice with regard to different kinds of crime, Piaget concluded that there must be three phases in moral development. The first is the pre-moral stage where there is no sense of obligation to rules. The second stage is the heteronomous stage; in this phase, starting at the age of four to five, rules and standards are set by authorities, and the child offers literal obedience. In this stage the child submits to power and punishment. It is a stage of one-way respect for authority and the rules. In the course of development this stage is overcome and superseded by the autonomous stage, where the purpose and consequences of following rules are considered by the child. This third stage is a stage of reciprocity and cooperation. Here the child, around nine to eleven years old, decides alone what is right and what is wrong. His or her decisions are based on the measure of justice, he or she creates and changes rules accordingly, but always in concordance with the other participants in the social setting. Hence, moral autonomy is based on insight for the purpose and sense of norms for a smooth running of the social life. Breaking a norm equals an endangerment of social bonds, of trust, and of mutual responsibility.

Lawrence Kohlberg

In his theoretical thinking, Lawrence Kohlberg (1978, 1985, 1987, 1996a, 1996b) was mainly influenced by Piaget and Dewey. In 1955 Kohlberg started to redefine and validate the Dewey-Piaget levels and stages and therewith contributed a great amount of understanding to



the research in the field of moral development. His focus, however, was not on the content of the norms that adolescents have, nor whether they adhere to these norms or not. Rather, Kohlberg was primarily interested in the stages of moral judgement and the development of the reasoning and directions that these judgements are lead by. Kohlberg defines stages as structured wholes or organised systems that form an invariant sequence - the movement is generally towards the next step up - and follow the concept of hierarchical integration, a higher stage comprehends within it a lower stage. Over a 20 year period, with the help of moral dilemmas and following discussions, where he was mainly interested in the pattern of argumentation rather than the content of the argument, he validated the stage theory and formulated six stages of moral development (see Table 2.1).

Table 2.1

Six Stages of Moral Judgement According to Kohlberg (1978, 1985, 1987, 1996a, 1996b)

Levels	Stages	Basic concept
1. Pre-conventional level	Stage 1	The punishment and obedience orientation
	Stage 2	The instrumental relativist orientation
2. Conventional level	Stage 3	The interpersonal concordance orientation
	Stage 4	The “law and order” orientation
3. Post-conventional level	Stage 5	The social-contract legalistic orientation
	Stage 6	The universal ethical-principle orientation

The first level of moral thinking is generally found at the elementary school age. In the first stage of this level, children behave according to socially acceptable norms because they are told to do so by some authority figure (e.g., parent or teacher). This obedience is compelled by the threat or application of punishment. The second stage of this level is characterised by a view that right behaviour means acting in one's own best interests. The aim is to instrumentally satisfy one's own interests, and sometimes those of others.



The second level of moral thinking is generally found in society, hence the name “conventional”. The first stage of this level (stage 3) is characterised by an attitude which seeks to do what will gain the approval of others. It is also called the “good boy – nice girl” orientation. The second stage (stage 4) is one oriented to abiding by the law and responding to the obligations of duty.

The third level of moral thinking is one that Kohlberg (1978) felt is not reached by the majority of adults. Its first stage (stage 5) is an understanding of social mutuality and a genuine interest in the welfare of others. There is a clear awareness of the relativism of personal values and opinions and a corresponding emphasis upon procedural rules for reaching consensus. The result is an emphasis upon the “legal point of view”, but with an additional emphasis upon the possibility of changing the law in terms of rational considerations of social utility. The last stage (stage 6) is based on respect for universal principles and the demands of individual conscience. These principles are abstract and ethical (the Golden Rule, the categorical imperative); they are not concrete moral rules like the Ten Commandments. At heart, these are universal principles of justice, of the reciprocity and equality of human rights, and of respect for the dignity of human beings as individual persons. Even though Kohlberg always believed in the existence of stage 6 and had some nominees for it, he could never get enough subjects to define it, much less observe their longitudinal movement to it.

To measure the level of moral judgement within a person, the Standard Issue Moral Judgement Interview (MJI) was designed along with a Scoring System (Colby & Kohlberg 1987; Walsch & Beltz, 1985). This measure provides a semistandardised method for identifying the developmental level of moral judgements used by a subject to resolve hypothetical moral dilemmas. Even though the assumption lying behind this method is that



moral judgement is a crucial component of human morality, one cannot simplify by saying that this measure determines the level of morality per se. It is a means of assessing the development of the structure or organisation of an individual's moral judgements.

Based on Kohlberg's concept, at a later stage other tests were developed, for example the Defining Issues Test (DIT, Rest, 1979), which is quite a solid measure of moral reasoning (Walsch & Beltz, 1985).

2.1.2 Social-Psychological Concepts – Milton Rokeach and Shalom Schwartz

2.1.2.1 Milton Rokeach

“It is difficult for me to conceive of any problem social scientists might be interested in that would not deeply implicate human values.” (Rokeach, 1973, p. 1)

2.1.2.1.1 Theory and Definition

Milton Rokeach (1960, 1968, 1973), who not only developed a conceptional theory of human values and values systems, but also conceived instruments to measure values, is one of the most known and quoted researchers in the field of value studies. In his long years of research he applied the concept of values to several related topics, such as beliefs, attitudes, behaviour, and change. Rokeach developed his theory of human values with the following assumptions in mind:

1. The total number of values that a person possesses is relatively small.
2. All human beings possess the same values to different degrees.
3. Values are organised into value systems.
4. The antecedents of human values can be traced to culture, society and its institutions, and personality.



5. The consequences of human values will be manifested in virtually all phenomena that social scientists might consider worth investigating and understanding.

In spite of the fact that many writers in the fields of philosophy, psychology and sociology differentiate between the *object* that “has a value” and the *human being* that “has a value” Rokeach (1973) concludes “that the study of a person’s values is likely to be much more useful for social analysis than a study of the values that objects are said to have.” (p. 5)

Rokeach (1973) offers the following definition of what it means to have a value and a value system:

A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence. A value system is an enduring organisation of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance. (p. 5)

He explores some aspects of this definition:

Enduring: Any conception of human values, if it is to be fruitful, must be able to account for the enduring character of values, as well as for their changing character. The enduring character arises from the fact that values are initially taught and learned in isolation from other values in an absolute, all-or-none manner. We are taught that a specific endstate of behaviour is always desirable. We are not taught that it is desirable, for example to be a little bit honest, or to strive for a little bit of peace. Nor are we taught that this endstate is sometimes desirable and sometimes not. It is the isolated and absolute learning of values that more or less guarantees their endurance and stability.



Belief: Rokeach (1968) distinguishes three types of beliefs: the descriptive or existential beliefs, those capable of being true or false; the evaluative beliefs, wherein the object of belief is judged to be good or bad; and prescriptive or proscriptive beliefs, wherein some means or end of action is judged to be desirable or undesirable. A value is a belief of the third kind.

Mode of conduct or end-state of existence: Rokeach (1973) calls the desirable modes of conduct *instrumental values* and the desirable end-states of existence *terminal values*. Terminal values can be divided into personal and social values, which mean that they can be self-centred or society-centred, intrapersonal or interpersonal in focus. Salvation and peace of mind belong to the personal values, whereas world peace and brotherhood are examples for social values. He further divides the group of instrumental values in *moral values* (e.g., behaving honestly) and *competence values* (e.g., behaving logically) – both being the means with which to attain desirable end-states. When analysing the question of which values have a stronger “ought to” character Rokeach concludes that moral values have more “oughtness” to them than do either competence values or terminal values. Society demands more moral values than competence or terminal values.

Preferable: Values represent a person’s “conceptions of the desirable”, which really means the preference for a certain value when compared to other ones within his or her value system (e.g., peace is preferred to wealth, or honesty is preferred to politeness) or with the opposite (e.g., peace is preferred to war, or honesty is preferred to dishonesty).

In the following I would like to summarise Rokeach’s (1973) elaborations on the change of value systems, the function of values, the relation between values and behaviour, and the measurement of values and value systems.



2.1.2.1.2 Change of Value Systems

Value systems must be considered as stable over time but also as unstable with regard to the hierarchy of values. Cultural, social, or personal events can lead to changes in the values system.

After a value is learned it becomes integrated somehow into an organised system of values wherein each value is ordered in priority with respect to other values. Such a relative conception of values enables us to define change as a reordering of priorities and, at the same time, to see the total value system as relatively stable over time. It is stable enough to reflect the fact of sameness and continuity of a unique personality socialised within a given culture and society, yet unstable enough to permit rearrangements of value priorities as a result of changes in culture, society, and personal experience. (Rokeach, 1973, p. 11)

According to Rokeach (1973) individual differences in the value systems, as well as the stability of the value systems are mostly results of differences in intellectual development, degrees of internalisation of cultural and institutional values, identification with sex roles, political identification, and religious upbringing. In order to achieve changes in the value system of an individual, states of inconsistency must be induced. Rokeach (1968) suggests three methods for inducing states of inconsistency: First, the person may need to engage in behaviour that is inconsistent with his or her values; second, the person may be exposed to new information from a significant other, that is inconsistent with information already represented within his or her value system; third, the person is exposed to information about states of inconsistency already existing within his or her own value system.



2.1.2.1.3 Function of Values

According to Rokeach (1973) values fulfil several functions, they are standards that guide conduct and activities in many different ways, they help us to form opinions and take positions on social, religious, political or personal issues. They are central for comparison processes and give us guidelines, as to which opinions or action of others we should challenge. Values help us to determine how we would like to present ourselves to others and how we would like to influence others. Another function of values from a psychoanalytical stance is that they help us to rationalise our and others' beliefs, attitudes and actions. Furthermore, values serve as a basis for conflict resolution strategies and they motivate us to act according to our desired end-states. In general, they enable us to maintain or enhance self-esteem. Hence, values are guides and determinants of social attitudes and ideologies on the one hand and of social behaviour on the other.

2.1.2.1.4 Values and Behaviour

Rokeach (1973) concludes that there is no reason to expect that any one value or attitude should predict behaviour perfectly. Behaviour toward a particular object in a particular situation is a function of the cognitive interaction between the attitude activated by the object and the attitudes activated by the situation within which the object is encountered. These attitudes toward object and situation are each functionally related to a subset of values that are activated by the object on the one hand and by the situation on the other. He therefore believes that values are only predictive of various kinds of gross behaviours. More precise predictions will, however, require more precise specifications of the actions to be predicted, the objects toward which the action is directed, the situation within which the objects are encountered, and the values and attitudes that are activated by the objects and situation.



2.1.2.1.5 Measurement of Values and Value Systems

Before deciding which approach to take in the measurement of values, Rokeach (1973) considered two ways that seemed to be the more obvious methods. One would be, to draw inferences about a person's values from his or her behaviour in structured situations. The other would mean to ask a person to communicate his or her values in his or her own words. The first approach was rejected as it is too time-consuming, too expensive, too difficult to interpret and quantify, too biased by the observer, and cannot include large numbers of subjects. The second approach also has a number of disadvantages as the person may not be willing or able to share his or her values, or he or she might be very selective in what he or she does choose to tell. As a consequence of these considerations Rokeach (1967) elaborated the Rokeach Value Survey, which was steadily improved in its form. This survey presents the respondent with eighteen instrumental and eighteen terminal values, which were thoroughly selected after a long process, and which he or she needs to rank according to degree of importance. The instruction is to "arrange them in order of importance to YOU, as guiding principles in YOUR life." Form D (Rokeach, 1967), which is the most widely used, presents the respondent with two separate lists for instrumental (e.g., ambitious) and terminal (e.g., a comfortable life) values, each consisting of eighteen gummed labels with values printed on them. The respondent has as much time as he or she wishes to rank these labels according to importance and only has his or her own internalised system of values to help decide how to rank the two lists. Hence, it is in a way a projective measure, but with only words and numbers as stimuli.

Overall, Rokeach's (1973) theory of values has offered some more clarity and order. At a methodological level, however, criticisms have been made of Rokeach's work that had far-reaching implications for the field of value measurement. Only a few of the points of criticism regarding the Value Survey shall be mentioned here. They refer to item sampling and single-



item-measures. Rokeach himself calls the method, with which the 36 items were selected an “intuitive one”. Critics say the selection is arbitrary and subjective; they therefore identify many omissions (Braithwaite & Scott, 1991). The second problem is with regard to the issue that

...according to psychometric theory no single item is a pure measure of the construct of interest, since each reflects error, some attributable to other irrelevant constructs and some to random fluctuations. Constructs are best measured, therefore, by a number of different items that converge on the theoretical meaning of the construct while diverging on the irrelevant aspects that are being unavoidably assessed. (Braithwaite & Scott, 1991, p. 665)

This results in a lack of validity which becomes particularly problematic in cross-cultural comparisons of value systems.

2.1.2.2 Shalom Schwartz

2.1.2.2.1 Theory and Definition

Extending on the work of Rokeach (1973), Schwartz and Bilsky (1987, 1990) were the first researchers who developed a comprehensive theory of universal content and structure of values which was revised, extended, and validated over many years and has in the meanwhile reached quite a high standard of both validity and reliability. With their work (Schwartz & Bilsky, 1987, 1990; Schwartz, 1992; Schmitt, Schwartz, Steyer, & Schmitt, 1993; Schwartz et al., 2001; Bamberg, Herrmann, Kynast, & Schmidt, 2001) they have clearly conquered new grounds in the field of value research as they made a major contribution towards the comprehension of the conceptual framework of the psychological structure of values.



Schwartz and Bilsky (1987) explain the structure of human values and discuss why the knowledge of this structure can be beneficial for research. The concept of value domains as opposed to single values has the following advantages: First, the impact of values as independent variables on attitudes and behaviour can be predicted, identified and interpreted more effectively. Second, when using values as dependent variables the effects of different social structural variables (economic, political, religious, ethnic, familial) can be predicted, identified and interpreted more effectively. Third, cross-cultural comparisons of values can be refined in three ways: 1) Similarities and differences in the meaning of a value will become evident by its location in the same or different value domain in different cultures. 2) When comparing the importance of values in different cultures the researcher can draw upon more comprehensive value domains that cover all related values rather than arbitrarily picking one value that might be rooted in certain cultures. 3) Different relations of compatibilities and contradictions between value domains can be revealed in different cultures.

Schwartz and Bilsky (1987, 1990) generated a conceptual definition of values that incorporates five formal features that are common to most definitions of values in literature (Rokeach, 1973). "According to the literature, values are (a) concepts or beliefs, (b) about desirable end states or behaviours, (c) that transcend specific situations, (d) guide selection or evaluation of behaviour and events, and (e) are ordered by relative importance." (Schwartz, Bilsky, 1987, p. 551)

The authors derived three facets based on this definition. The first relates to values as *end states* or *behaviours*, which according to Rokeach's (1973) theory is their classification as representing either terminal or instrumental values. This feature constitutes the first facet, because it requires classification into one of two categories. The second facet relates to the *interest* that is served by the value. Here a distinction is made between *collective*, *individualistic*, or *combined interests*. The third facet concerns the content and structure of the



motivational domains, which later (Schwartz, 1992) were called *motivational types*. The motivational content of the value is what distinguishes one value most significantly from another. Values are cognitive representations of the important human goals or motivations about which people must communicate in order to coordinate their behaviour (Bilsky & Schwartz, 1994). According to McClelland (1985), motives and goals are separate personality constructs with a differential impact on predicting long-term behavioural trends in action as opposed to choices, attributions, and other cognitively guided behaviour. Based on his theory it would probably be the type of goal that distinguishes different value contents from each other, rather than the motivational content.

The distinct motivational types of values were derived from the three universal human requirements, which Schwartz and Bilsky (1987, 1990) summarised in the following way: a) needs of individuals as biological organisms, b) requisites of coordinated social interaction, and c) survival and welfare needs of groups. On a cognitive level these needs are represented by taking the form of values (Schwartz & Bilsky, 1990).

In the beginnings of the theory based on these fundamental human needs, seven motivational domains were derived and measured with the Rokeach Value Survey (Rokeach, 1967), or variants of it. These studies resulted in eight distinct motivational domains consisting of 36 values. A motivational distinct domain consists of single values that share the same motivational goal and are both statistically and conceptually related.

2.1.2.2.2 Further Development of the Theory

Schwartz (1992) developed a theory-based value survey, the Schwartz Value Survey (SVS), in which he combined values from the Rokeach Value Survey (1973) with values from instruments developed in other cultures. He selected 56 values, 30 terminal and 26



instrumental values, that represented eleven motivational types (replacing the term “motivational domains”). The survey asks the respondent to rate each value “as a guiding principle in my life” using a 9-point scale which ranges from “supreme importance” to “opposed to my values”. Rating on a scale is employed rather than ranking according to priority, in order to overcome some disadvantages of the latter for cross-cultural work (Schwartz, 1992).

The aim of this study as of the previous ones (Schwartz & Bilsky, 1987, 1990) was to empirically test how well the facets, content domains, exemplary values, and structural relations represent peoples’ use of values. For that, the spatial representations of the relations among values were examined through Smallest Space Analyses (Guttman, 1968). This is one of a variety of nonmetric multidimensional scaling (MDS) techniques for structural analysis of similarity data (Davison, 1983; Dillon & Goldstein, 1984; Borg, 1981). It represents the values as points in multidimensional space in a way that the distances between the points reflect the empirical relations among the values as measured by the correlations between their importance ratings. The greater the conceptual similarity between two values is, the more related they should be empirically, and hence the closer their locations should be in the multidimensional space (Schwartz, 1992). For further explanations of this method and why it was preferred to rotated factor analyses see chapters 3.4, 4.1.1.1, and 4.1.1.2.

Based on the data of his research in 20 countries, Schwartz (1992) revised and extended the original theory. As a conclusion he redefined, specified, and further elaborated some of the terms he had introduced before:

Motivational Types

Ten motivational types might be quite close to universals: Security, Conformity, Tradition, Benevolence, Universalism, Stimulation, Self-Direction, Hedonism, Power, and Achievement.



Individual, Collective and Mixed Interests

The analyses showed the assumed arrangement of interests. The value types whose attainment serve individual interests (Power, Achievement, Hedonism, Stimulation, Self-Direction) emerged as one set of adjacent regions, and those that serve collective interests (Benevolence, Tradition, Conformity) emerged as a second set of adjacent regions opposed to the first one. Those values that serve mixed interests (Universalism, Security) emerged in regions on the boundary between the individual and collective interests regions (see Figure 2.1).

Compatibilities

As expected, all pairs of value types that are simultaneously pursued emerge in adjacent regions in all cultures. Hence, these types are compatible.

Conflicts

Two dimensions of higher order types of values were identified: The first is denoted as *Openness to Change versus Conservation* and arrays values in terms of the extent to which they motivate people to follow their own intellectual and emotional interests in unpredictable and uncertain directions versus to preserve the status quo and the certainty it provides in relationships with close others, institutions, and traditions. The second dimension is *Self-Enhancement versus Self-Transcendence*, which arrays values in terms of the extent to which they motivate people to enhance their own personal interests versus the extent to which they motivate them to transcend selfish concerns and promote the welfare of others whether close or distant, and of nature (see Figure 2.1).

Motivational Continuum

The motivational types should be treated as a motivational continuum as opposed to discrete categories. Hence, single values can be conceived as arrayed on a continuum of related



motivations. This follows directly from Guttman's (1968) view that, if a sample of items adequately represents all aspects of a content domain, then those items will fill quite evenly the geometrical space formed to represent the intercorrelations among them. As a result of this, there should not be any clustering with values that have empty space around them. Schwartz (1992) therefore partitioned the space into meaningful regions based on his a priori theory of the conceptual relations among the values. The precise locations of the partition lines are arbitrary. Values found near a partition line represent a combination of the motivational goals associated with both sides of the partition line.

Figure 2.1
Theoretical Model of the Universal Structure of Value Priorities (Schwartz, 1992)



Terminal versus Instrumental Values

The distinction between terminal and instrumental values seems unnecessary, as in the SSA projections of the vast majority of samples no separate regions for these types of values emerged. Terminal phrasing, however, seems to be preferable, as this makes them less personal and there also exists a broader possibility to phrase values in a terminal way.

Value Priorities

The results showed that the responses to the survey primarily reflect personal value priorities rather than the normatively approved ideals of the group or culture the respondent belongs to. This is proven by the fact that there exists substantial individual variance in response to every



value, and also when associating individual value priorities with other variables, such as age, gender, religiosity, or education, reliable results were found (Schwartz, 1992).

In sum, the ten motivationally distinct value priorities comprise virtually all the types of values to which individuals attribute at least moderate importance as criteria of evaluation. The meaning of these value types and of most of the single values that constitute them is equivalent across most cultural groups. Schwartz (1992) claims that his findings on the structure of values are nearly universal, but not their relative importance for an individual culture. This also does not mean that any single value structure is likely to be truly universal, as the found structure stemmed from a prototype of samples from very diverse cultural, linguistic, geographic, religious, and racial groups. Figure 2.1 demonstrates the circular arrangement of value types, based on the conflicts and compatibilities inherent in the relations among them. This circular arrangement implies the pattern of associations likely to be found between the importance ratings of the value types and any outside variable (e.g., religiosity). Correlations should decrease monotonically going around the circle in both directions from the value type hypothesised to correlate most positively with religiosity (Tradition) to the type hypothesised to correlate most negatively with religiosity (Hedonism) (Schwartz & Huisman, 1995).

2.1.2.2.3 Measurement of Value Priorities with the Portraits Value Questionnaire

Schwartz et al. (2001) developed a new questionnaire which was guided by two objectives. Firstly, it should be more concrete and less cognitively complex than the SVS, hence usable with populations for which the SVS was apparently not suitable. Secondly, it should differ substantially from the SVS in its format and judgement task in order to provide an independent test of the theory of value content and structure.



Initially, the Portraits Value Questionnaire 29 (Schwartz et al., 2001) was developed, a questionnaire with 29 items that measured the ten value constructs; later this questionnaire was revised and expanded to the Portraits Value Questionnaire 40 (Schwartz, 2000). This instrument consists of 40 questions that are formulated as short verbal portraits of 40 different people. Each one describes a person's goals, aspirations, or wishes that implicitly demonstrate the importance of a value they hold. For example: "Thinking up new ideas and being creative is important to him. He likes to do things in his own original way." describes a person for whom Self-Direction values are important. "It is important to him to be rich. He wants to have a lot of money and expensive things." describes a person who cherishes Power values. For each portrait the respondents answer the question "How much like you is this person?" They check one of six boxes labelled: very much like me, like me, somewhat like me, a little like me, not like me, and not like me at all.

According to Schwartz et al. (2001) the respondents' own values can be inferred from their self-reported similarity to people described implicitly in terms of particular values. An interesting aspect of the way the instructions are formulated is that the respondents are asked to compare the portrait to themselves rather than themselves to the portrait. Comparing other to self only directs attention to aspects of the other that are portrayed, so the similarity judgement is also likely to focus on these value-relevant aspects. In contrast, comparing self to other would focus attention on self and might cause respondents to think about the wide range of self-characteristics accessible to them. If the respondents do not find these characteristics in the portrait, they might overlook the similarity of values in general.

A great advantage of this instrument is that it identifies the person's values without explicitly showing that values are the topic of investigation. It is important to bear in mind, though, that the PVQ asks about similarity to someone with particular goals and aspirations (in the form of values) rather than similarity to someone with particular traits. People who value a goal do not



necessarily exhibit the corresponding trait. This is why the theoretical structure behind the PVQ is based on the concept of "value priorities" as opposed to "values" or "traits" as such.

The portraits used in the PVQ were mainly derived from the Schwartz Value Survey. Some terms are new while still representing the conceptual definitions of the values; others were paraphrased, and again some are more concrete formulations of a phrase used in the SVS before. There are a few items for each value. The aim was to limit the number to what could be completed in a short amount of time. The number of portraits for each value depended on the breadth of its conceptual definition (Schwartz, 1992).

Portraits were ordered randomly with the constraint that those intended to represent the same value were separated by at least three other portraits. The PVQ was developed in decentred Hebrew and English, male and female, versions. The level of language was simplified until 11 year olds in Uganda, Canada, and Israel understood all items. Therefore the level of language is simple enough to allow studies with preadolescents and adolescents.

Before introducing the ten value constructs according to Schwartz (1992), I would like to make a brief general comment with regard to retest correlations of data measured with the Portraits Value Questionnaire. At least three reasons for the lack of perfect retest correlations may be considered. Firstly, random measurement error, secondly, true differential change in the trait, and thirdly, situational effects and/or person-situation interaction effects present on a particular occasion of measurement (Schmitt, Schwartz, Steyer, & Schmitt, 1993).

Definitions of Ten Value Constructs in Terms of their Goals, and Examples of PVQ 40 Items (Schwartz, 2000) that Represent them (Male Version)

Security: Safety, harmony and stability of society, of relationships, and of self. (It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without. SE 14)



Conformity: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms. (He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching. CO 7)

Tradition: Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self. (He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned. TR 25)

Benevolence: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact. (It's very important to him to help the people around him. He wants to care for their well-being. BE 12)

Universalism: Understanding, appreciation, tolerance and protection for the welfare of all people and for nature. (He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society. UN 29)

Self-Direction: Independent thought and action-choosing, creating, exploring. (He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things. SD 22)

Stimulation: Excitement, novelty, and challenge in life. (He likes to take risks. He is always looking for adventures. ST 15)

Hedonism: Pleasure and sensuous gratification for oneself. (He really wants to enjoy life. Having a good time is very important to him. HE 37)



Achievement: Personal success through demonstrating competence according to social standards. (Being very successful is important to him. He likes to impress other people. AC 13)

Power: Social status and prestige, control or dominance over people and resources. (It is important to him to be in charge and tell others what to do. He wants people to do what he says. PO 17)

2.1.2.2.4 Studies Based on Schwartz' Theory

In the past ten years a vast amount of research has been done to further explore and replicate Schwartz' (1992) theory of value priorities and to relate his values to other concepts and variables. Most of the studies used either the Rokeach Value Survey or the Schwartz Value Survey. Very little research has been done using the newly developed Portraits Value Questionnaire either as the PVQ 29 or the revised PVQ 40 version. Bamberg, Herrmann, Kynast, and Schmidt (2001) were able to replicate Schwartz' theory based on results from the Schwartz Value Survey by using the PVQ 40 on two German speaking university student samples ($N = 321$, $N = 395$) and showed that the postulated ten distinct motivational value types are not dependent on the instrument of measurement. In the following I will mention a few studies which are based on the Schwartz value theory using the Schwartz Value Survey.

Boehnke, Dettenborn, Horstmann, and Schwartz (1994) studied the value orientations of teachers and students of the teaching professions in East and West Germany. Their basic assumption was that teachers act as value multipliers, even though their values did not necessarily correspond with the value orientations prescribed by the curriculum. As there were great differences in the value scales used in former East and West Germany, for this



study the value priorities of teachers were measured with the Schwartz Value Survey being a more universal instrument. One of the interesting results was that in the East German sample “World at Peace” had first priority, whereas in the West German sample “Freedom” lay first in the ranking. “Family security” which was ranked third in the East, but did not appear in the Top Ten in the West sample at all. Another very interesting result was that the differences between teachers and students were larger than those between East and West. Power, Achievement, and Conformity values were more important to teachers, whereas Hedonism values were most important to students regardless of regional background.

On the basis of Schwartz’ (1992) theory, Bilsky and Schwartz (1994) used the Rokeach Value Survey, as well as the Freiburg Personality Inventory (FPI, Fahrenberg, Hampel, & Selg, 1989) to examine the relation between value priorities and personality traits of 331 German students from six colleges in three different states of Germany. The findings reveal both meaningful and systematic associations of value priorities with personality variables. It seems that the goals people use as guiding principles in their life, as expressed in their values priorities, are related in theoretically predictable ways to the consistent patterns of motivated behaviour tapped by the FPI scale scores (Bilsky & Schwartz, 1994). I will mention only a few examples of their findings. Impulsiveness was located in the *Conservation* region (see Figure 2.1) opposite to *Openness to Change*. The authors suggest this means that people who describe themselves as impulsive, feel a deficiency of self-control and fear of overreacting in inappropriate and harmful ways. Aggressiveness was located in the *Self-Enhancement* region, opposite to the *Self-Transcendence* region, and life satisfaction was located near the centre of the spatial configuration of all the variables, slightly closer toward the Security/Conformity region. According to Bilsky and Schwartz, values may be conceived as personality dispositions and like other dispositions they are relatively stable across time and situation.



Schwartz and Huisman (1995) studied the associations between value priorities and religiosity in four western religions (Orthodox, Catholic, Protestant, Jewish) using the Schwartz Value Survey (1992). They found little differences between the religions, no sensitivity towards demographic variables, most positive correlations between religiosity and tradition values, and most negative correlations between religiosity and Hedonism values.

Schwartz, Verkasalo, Antonovsky, and Sagiv (1997) used the Schwartz Value Survey to relate value priorities to social desirability measured with the Marlowe-Crowne scale (Crowne & Marlowe, 1960). The results confirmed the hypothesis that social desirability correlates positively with Conformity, Tradition, Security, and Benevolence – all values that emphasise social harmony; negative correlations were found for Stimulation, Hedonism, Self-Direction, Achievement, and Power – values that challenge social conventions and harmony.

Prince-Gibson and Schwartz (1998) studied the question of whether gender differences and interactions of gender with possible sociodemographic moderators of gender experience, such as age, education, and ethnicity, have an impact on value structure and value priorities. They also used the Schwartz Value Survey for their studies with a representative sample from the Israeli Jewish population (480 male adults, 519 female adults). Regarding the value structures they found that the structure for women matched the theoretical structure exactly, whereas the structure for men differed from the prototype structure (see Figure 2.1) in one aspect: the usual order or the regions of the Security value types and of the Conformity/Tradition value types were reversed. Studies on the robustness of the regions for value types in an SSA have shown that reversals of a single region can sometimes be due to chance (Schwartz & Sagiv, 1995). Hence, it can be concluded that men and women in this study perceived the same relations of compatibility and conflict among the value types and therefore it can be assumed that they attribute similar meanings to the types. Regarding the value priorities the authors had



hypothesised gender differences for eight of the ten value types, but no significant gender differences were found. Furthermore, neither age, education level, nor ethnicity moderated the effects of gender on value priorities. Hence, in this respect no interactions were found. But, as hypothesised, age had substantial effects on value priorities: negative for Achievement, Hedonism and Stimulation, positive for Tradition and Benevolence. Education level also showed effects similar to the authors' hypotheses: negative for Tradition, Conformity, and Power, positive for Stimulation, Self-Direction, and Universalism.

Aavik and Allik (2002) attempted to explore the interrelations between value describing words and value categories in the Estonian language. In this context they used the Schwartz Value Survey with an Estonian sample ($N = 294$), and were able to once more confirm Schwartz' two-dimensional theoretical model of value priorities.

2.1.2.2.5 Value Priorities and Subjective Well-Being

Oishi, Diener, Suh and Lucas (1999) studied whether value priorities serve as moderator variables. The value-as-a moderator model predicts that value-congruent activities (e.g., "recycling" as a Universalism related activity, or "going to a loud party" as a Stimulation and Hedonism related activity) are more satisfying than value-incongruent activities because it assumes that the relation between participation in activities and a sense of satisfaction will be moderated by individuals' value priorities. They used the satisfaction-with-life-scale (Diener, Emmons, Larsen, & Griffin, 1985) to measure global life satisfaction and the Schwartz Value Survey (Schwartz, 1992) to determine value priorities. The results confirm the hypothesis by showing convergence between values and the type of activities people enjoy. On the other hand the prediction (Ryan, Sheldon, Kasser, & Deci, 1996) that there are direct relations between values and subjective well-being was not supported by Oishi, Diener, Suh, and



Lucas' (1999) studies. Specifically, the assumption that there must be positive correlations between Self-Direction, Universalism, and Benevolence values with subjective well-being measures, and negative correlations between Conformity, Tradition, Security, and Power values with subjective well-being measures could not be confirmed.

Sagiv and Schwartz (2000) used an extended version of the Schwartz Value Survey to measure the associations between value priorities and subjective well-being. For subjective well-being they used two affective measures, including items from the Bradburn positive/negative affect scale (Bradburn, 1969), items from the General Mental Health Scale from the Trier Personality Inventory (Becker, 1989), and one cognitive measure: the satisfaction-with-life-scale (Diener, Emmons, Larsen, & Griffin, 1985). The results showed that there were some direct associations between value priorities and the affective component of subjective well-being, with Achievement, Self-Direction, and Stimulation values showing positive correlations, and Tradition resulting in negative correlations with subjective well-being. None of the values correlated significantly with the cognitive aspect of well-being measured by the satisfaction-with-life-scale. This strongly supports the conclusion that value priorities and satisfaction-with-life do not vary together across situations.

2.2 Value Education

Any attempt to review the literature on the topic of value education shows that it is a very broad and still unstructured field of research. Different authors and schools of thought have contributed towards an immense amount of different theoretical approaches, practical ideas, and possible solutions to the question of value education. There is a general agreement that there exists an urgent need to enhance value education but there is no consensus as to how this



can effectively be applied and which values are the “right” ones. There are also very contrary views as to whether value education can or should be part of the school curriculum.

2.2.1 Necessity, Possibilities, and Limits of Value Education

In the following I will demonstrate some of the many theories that outline why value education is needed. Furthermore, the selected authors (see Table 2.2) discuss whether it is at all possible to teach values, while identifying the limits that exist.

Table 2.2

Ten Theories Regarding the Necessity, the Possibilities, and the Limits of Value Education (in Chronological Order)

	Author	Basic concept
1	Lind (1989)	Society suffers from moral fragmentation; moral principles are needed and should be taught at school.
2	Wilson (1990)	Pupils should learn to justify their moral decisions, based on the concept of equality of all human beings.
3	Barrow (1995)	Need for moral education that creates “moral sphere”, i.e., universally accepted moral principles.
4	Adam & Schweitzer (1996)	School in its whole entity is responsible to teach moral education – cannot <i>not</i> teach values.
5	Oser (1996)	Ten Commandments for moral education.
6	Uhl (1996)	Values should be taught through models and heroic examples; exemplary role of teachers also important.
7	Wächter (1997)	Students should learn values by acquiring a sense of responsibility.
8	Zern (1997)	Interviews with teachers and teacher students regarding which values should be taught at school.
9	Giesecke (1999)	Schools teach values through curriculum, personalities of the teachers, institutional rules, social interactions.
10	Fellmann (2000)	Teachers should convey understanding of the world and ability to reflect about self.



Lind (1989) analyses the existing situation by stating that societies which suffer from value pluralism in the sense of diverging values and interests within a society, consequently also suffer from moral fragmentation. Common results of this are symptoms such as crime, suicide, substance abuse, and racism. He explains that many problems are rooted in the thinking that *all* people should live according to their own interests and the norms of the society they belong to. These norms are then considered as universally valid. Lind believes that it is only possible to achieve a morally based coexistence in this world, which is composed of very diverse beliefs, attitudes and needs, if dilemmas and conflicts can be resolved on the basis of universal moral principles. These principles mainly include the respect for human beings and nature, as well as the principle of justice. As a method for conflict resolution he suggests a rational form of dialogue that is based on the aforementioned principles. For every individual the aim should be to integrate reason and feeling in order to reach a higher level of moral understanding. As the school provides not only an academic but also a social environment it has the potential to combine the ideal circumstances to foster moral education.

Regarding the methodology of teaching values Wilson (1990) defends the need for explaining the logical basis of rational moral decision-making to pupils. The students should learn how to make up their minds on moral questions and identify, what bits of equipment they need for moral thought and action. The reasons for this rather direct approach of moral education according to Wilson are that it is honest and professional, and at the same time it gives the children something to hang on to. In a similar way, as the general uncertainty about the truth of any kind of religiosity, often has led to not teaching religion at all, a moral vacuum, which results from the indecisiveness as to which moral values should be taught, can be very harmful for the society as a whole. The aim should be to teach the pupils to be able to justify



their moral decisions, and this justification must be based on the wants and interests of human beings, considered equally.

Barrow (1995) claims that society suffers a loss of moral direction and therefore is in urgent need of moral education that provides an adequate understanding of the “moral sphere”. In order to understand what this “moral sphere” constitutes, it is necessary to find those moral principles that are the same across cultures and hence, are commonly understood in an equal way by most people. Examples of these principles are - that one should not cheat, steal or cause anybody suffering. They should be universally accepted, whereas their implications and application need to be discussed. The author claims that the teaching of morality should not consist of a long list of dogmatic do’s and don’ts, but rather be guided by a few firm and specific principles.

Adam and Schweitzer (1996) tackle the issue of whether moral education should be taught at school by arguing that it is easier to answer the question whether it is possible for a school not to convey values and norms. They clearly conclude that it is impossible for any school not to influence its students on a moral and ethical level. Obviously the school underlies great limitations when it makes an attempt to teach morality. The plurality of values existing in society makes it very difficult for a school to decide whether or not to teach a certain set of values. Additionally, students face difficulties accepting any clear line of moral values when all existing values have lost a sense of absoluteness and a generally accepted degree of relevance. Adam and Schweitzer claim that the school in its whole entity is responsible to teach moral education, and not use the ethics and religion classes as the only panel for these issues.



Oser (1996) developed a set of Ten Commandments for moral education:

1. No higher level of moral understanding without stimulating moral actions.
2. No value judgements without previous moral conflicts.
3. No criticism of the mistakes of other people without self-reflection and change within the self.
4. No learning of what one should do without learning what one should not do.
5. No supportive moral atmosphere without a form of a just and caring community.
6. No moral education in the form of indoctrination or as a relativity concept.
7. No moral education without social learning.
8. No ethical knowledge without the application of concrete moral problem solving strategies.
9. No moral discussion without the explanation of values and virtues.
10. No moral education without intense training of the teachers with regard to the professional application of moral discourse techniques.

Based on empirical findings in the field of education Uhl (1996) explores different methods of moral education and their efficiency. He concludes that in the same way as the pure transfer of knowledge on moral concepts is not sufficient in order to yield practical results, also the quite popular concepts such as values clarification (Simon, Howe, & Kirschenbaum, 1972) or the development of moral judgement (Kohlberg 1972, 1978, 1987) by themselves do not lead to any long lasting results. An attempt to reinforce the emotional links towards moral situations by training students to perceive their own feelings, to strengthen their empathy, and to enable them to change perspectives is necessary but alone will not cause any change. Uhl does not believe that efforts to teach values by controlling the students or reprimanding them through different forms of punishment reach any positive results, he rather argues that this form of extrinsic motivation could in the long run cause aggression and antisocial behaviour



patterns. A widely spread method of moral education is to teach values with the help of models or heroic examples. The exemplary function of the teacher also plays a role in this process. According to Uhl this method is only in some cases efficient but can yield good results if combined with praise, encouragement, practical exercises, or moral appeals. Good results can be achieved if moral actions or social services, such as helping poor, needy or sick people, are experienced. In order to yield a sustainable change in moral behaviour these must first be embedded in explanations of why it is necessary and desirable to help people that are in need, and further in discussions of possible difficulties and barriers. Following the actual social activities the students should evaluate and discuss the experiences.

Wächter (1997) argues that schools should not only teach subjects but they must also educate, in order for the students to be able to possess both knowledge and human kindness. In his opinion the school is obliged to convey moral education. His suggestion of how to teach values is by teaching students a sense of responsibility, which can be achieved on the basis of four main principles. Firstly, by giving the students the feeling that they are involved and providing opportunities for them to contribute and participate. Secondly, the teacher must not underestimate the immense influence his or her example has as a role model for the student. The student identifies with his or her teacher and closely watches all his or her actions. The greatest challenge for teachers would be to let their words and actions be in harmony. A third concept is to give the students the feeling that they belong, as one of the main causes of violence and aggression is a lack of belonging. Every student needs to feel that he or she is part of the group, and that this feeling of affiliation is independent of his or her academic achievement. The fourth suggestion of how to teach values according to Wächter is by giving students opportunities to gain experiences that affect them personally. Service projects or internships in social institutions, such as senior homes, hospitals, or orphanages allow the students to step out of their comfort zone and be challenged by the suffering and the needs of



people who are in more difficult circumstances than they are themselves. These types of projects help them to develop a spirit of service, as well as compassion and empathy.

With the help of a 73-item questionnaire Zern (1997) interviewed 133 teachers and teacher students about their attitudes towards the teaching of values in today's schools. 95% of the sample believed that values should be taught, however, not all values were equally popular. The following list shows the top percentages (above 50%) of respondents who said they taught or would teach certain values: responsibility (89%), respect (88%), honesty (86%), justice and fairness (79%), caring and trustworthiness (both 75%), value of cultural diversity (72%), civic virtue and citizenship (63%), value of religious diversity (53%). 96% of the respondents believed that teachers should be role models, and 79% thought that values should be taught in the classroom. However, there was a clear split among the respondents in expressed preference for either explicitly promoting certain values (58% of the sample) or simply clarifying students' own attitudes (the remaining 42%).

Giesecke (1999) suggests four main areas through which the school has an opportunity to convey values. Firstly, in the classroom values are taught implicitly through the choice of curriculum and the way it is taught. This form of value education, however, cannot be planned or evaluated, as it depends on how much and what the individual student learns. School life also teaches important social skills, such as empathy, tolerance, communication skills, etc. Secondly, the personality of the teacher has great influence on the development of values within the student; e.g., the way he or she communicates or handles conflict situations. This form of value education also cannot be planned directly. Thirdly, the institutional rules of the school automatically convey certain values that the school holds. Depending on the type of school and the aims of education these rules may differ. Primarily they aim at creating an atmosphere in which teaching and learning becomes possible. But they often also train the



students how to successfully and reasonably participate in the social life. Implementation of these rules can be demanded by the teachers, and is therefore largely controllable. Fourthly, all forms of social interaction in the school, not only in every day dealings in the classroom, but also projects, courses, or events teach the students which social skills are preferred and accepted.

Fellmann (2000) attributes the reason for the difficulties in teaching moral values to the fact that the conscience, which is the foundation for solid morality, is composed of both insight and feeling. It is this combination that makes the teaching of values so challenging for a teacher who strives to teach the students to be able to apply the learned knowledge in every day life. He or she needs to find the link between theory and practice. Fellmann's suggestion is that the teacher should, rather than merely conveying theoretical concepts, base his or her classes around two questions. 1) In what kind of world do we live? 2) Who am I? The thorough discussion of these two main questions will not only lead to a better understanding of the world and the current issues of society and at the same time strengthen the students' ability of self-reflection, but it also helps the students to identify what their own role is and what their active contribution to society could be.

2.2.2 Main Theories of Value Education

Oser's (2001) summary of the eight main models of value education is a very well elaborated attempt to give structure to all the different approaches. He believes that not many professionals in the field have actually thought through all the practical consequences of the different forms of value education to the end. Oser has taken the main existing concepts and structured them in a very logical and systematic way. The following overview leans on his structure and supplements it with additional literature. For a brief summary see Table 2.3. In



addition, I will present another theory which, although not directly included in Oser's structure, bears relevance to the train of thought in this study.

Table 2.3

Eight Main Models of Value Education According to Oser (2001)

Main authors	Basic concept
1 Powell, Farrar, & Cohen (1985)	Disapproval of moral education
2 Brezinka (1986)	Need for a public value atmosphere
3 Kirschenbaum (1972)	Values clarification
4 Various authors	Imparting values
5 Hall (1979)	Value analysis
6 Kohlberg & Mayer (1972), Kohlberg (1978, 1985)	Moral development according to Kohlberg
7 Puka (1990)	Learning by extraordinary example
8 Oser (1998, 2001)	Realistic discourse

The first model is the complete disapproval of moral education as a part of school education. There is a widespread opinion that schools do not have the right to teach values, as this could be interpreted as moral manipulation. This refers mainly to high schools rather than primary departments. One argument in this line is that all education in the classroom should be value-free. In their book *The Shopping Mall High School* Powell, Farrar, and Cohen (1985) show that the acquisition of knowledge can and possibly should happen in the spirit of free selection from a fair amount of offered information. Another line of thinking in this context claims that the teachers should be neutral in their values, as this belongs to the domain of privacy. This type of argumentation is also known as the concept of the "hidden curriculum". It implies that the school does not identify itself with specific values, hence, claims neutrality of the curriculum; in reality, though, every teacher, even if officially presenting him- or herself as value-free, will convey values through the way he or she chooses and accentuates topics,



deals with conflict situations and judges the various issues arising in the classroom. According to Oser this concept bears great dangers, as it allows teachers to convey whatever values they deem to be right under the protection of a pseudo-neutral learning environment.

The second model claims the need for a public value atmosphere. Based on the idea that “holding on to common values will make these values hold you” (Brezinka, 1986) it is proposed that value education must occur through a general and public climate of value transfer. This implies that there should be an atmosphere in the society and the public institutions that supports parents and teachers in their efforts to convey values. Children and youth should be encouraged to learn and apply the norms and rules of morality in their lives. It remains unclear, however, what the postulated ideals actually are, as they could include a wide range of norms and values that possibly are not acceptable for all.

The third model is generally known as values clarification. Already in the past it has often been claimed that the focus should lie on the child, which by nature is good, but is ruined through the influences of society. In a fruitful and constructive environment the child can discover his or her own values and develop them. Today this way of thinking is known as the concept of values clarification, the main authors of which are Simon, Howe, and Kirschenbaum (1972). They, as well as other authors (Hall, 1979), have elaborated practical exercises of how to allow children to find their own subjective values and act accordingly. The values clarification model is considered a very popular and widespread approach, which in literature is generally seen as the second main strand of how to educate values, after Kohlberg’s moral judgement theory (Oser & Althof, 1997; Althof, 1984). A closer look at a bibliography of the curricular effectiveness research in the field of values clarification (Leming, 1983) shows no consistent positive results. Some studies show that values clarification programmes yield significant positive increases in the students’ self-concept,



value understanding, moral action, acceptance of others, and academic achievement, whereas other studies demonstrate significant negative consequences or no effects at all. One danger of this approach is that it may lead to a relativistic value hierarchy, with every child deciding for him- or herself what is right or wrong. The consequences of this method can be quite destructive for the well-being of society as a whole, as it is not to be taken for granted that all chosen values are necessarily constructive and ethically correct, for example “values” such as fundamentalism or racism. Even though it is important that the diversity of cultures and cultural norms is respected and sustained, it seems to be necessary to have a measure of universal moral principles that are elevated to the level of generally accepted principles.

The fourth model is the concept of imparting values. At the “soft” end of the range, imparting values could mean that certain values are conveyed by transmitting stories, examples, biographies or other materials that demonstrate the necessity for certain values and show how they could be applied in everyday life. At the “hard” end of this range one could see efforts to directly teach values. Here the intention is obvious and the values are clearly defined as good, right, and necessary. The effort to form somebody’s character or to teach them virtues is considered a direct imparting of values. It can be argued that even though this way of teaching values may lead to the development of certain values, the indoctrinating nature of this method causes only extrinsically motivated values and hence, these values would lack personal conviction and commitment. In addition, it can be criticised that the earlier described need for universal values can also not be met when values are set by cultural standards. It seems impossible to agree on a standardised set of values that remain the same across cultures and across time. But does this imply that no value education should occur at all? Or, is it perhaps better for parents and teachers to teach some kind of moral and ethical values as opposed to leaving their children in a “pseudo-neutral” value-free environment?



The fifth model can be seen as a link between values clarification and the imparting of values. Hall (1979) calls it value analysis. This is a common method used in ethics or philosophy classes. Based on rational analyses, ethical values are discussed and explored in order to enable the students to understand concepts such as norms, rules, democracy, and other ethical-philosophical subjects. This method aims at teaching people the ability to thoroughly reflect and analyse but it does not necessarily lead to an increased commitment towards certain values.

The sixth model comprises the educational consequences based on the concept of moral development according to Kohlberg (1978). It is generally called a progressive model of development as it implies a continuous progression in the moral stages of the child. One stage breaks out of the other by challenging the existing concepts within the previous stage. According to Herzog (1991) moral education does not aim at making a child “good”, but enabling a child to use his or her moral judgement and intuition in order to interpret moral problems and find solutions to them. Kohlberg (Kohlberg & Mayer, 1972; Kohlberg, 1978, 1985) postulates that the aim of education should be to increase moral judgement, in order to enable the child to move from the heteronomous to the autonomous stage of moral understanding. With the help of moral dilemmas the child should constantly be challenged with counterarguments and gently pushed above its current stage of moral judgement. This is called the “plus one” strategy, because the child is pushed one level higher than it has already reached. These dilemmas should be a conscious part of the curriculum in order to train the student to formulate his or her own thoroughly elaborated arguments, and also to teach him to fully realise perspectives and threads of argumentation opposite to his or her own. Several studies have evaluated the effects of classroom discussions about moral dilemmas on the children’s level of moral judgement (Blatt & Kohlberg, 1975; Schlaefli, Rest, & Thoma, 1985) and have shown that the children who go through a moral development training



programme do move towards a higher level of thinking when compared with control groups. However, the principal findings are that the dilemma discussion and psychological development programmes produce modest overall effect sizes, that treatments of about three to twelve weeks are optimal, and that programmes with adults produce larger effect sizes than with younger subjects. In general, it seems that this way of educating towards moral values is useful and efficient but it is questionable whether the rational nature of the method allows an emotional link and leads to the ability to apply the understanding to everyday life. Another point that may be problematic is that even in this model no basic values are taken for granted as a foundation for the discussions. The full emphasis is on the moral intuition of the child, and the confidence, that the child will find the “right” judgement as it grows and develops, especially when challenged with higher staged dilemmas. This development approach can be considered as a further alternative to the relativistic individualism on the one hand and indoctrination of a “bag of virtues” on the other (Kohlberg, 1985).

Kohlberg’s (1985) “Just Community Approach” was a further development which became very popular and wide spread. Based on his visit in a Kibbutz and some observations in prisons he developed this concept which he then also integrated into his developmental theory (Reimer, 1989). The aim of this concept is to create an atmosphere that is democratic and based on values adhering to the conventional level, such as fairness, equality, and community. Respect for rules should not be perceived as allegiance to an arbitrary set of regulations handed down from an authority on high, but should be considered as respect for the agreements that a group of students make among themselves and with their educators. Based on the concept of being your “brother’s keeper” every student is not only responsible for him- or herself but also for his or her “sisters” and “brothers” as members of the community. Kohlberg calls the shared values in the community “collective normative values”. In practice the school community with the help of their teachers consult about values or problematic issues that arise and together they find solutions to the problem that serve the well-being of



all. They formulate agreements and commitments that will both help to uphold these regulations, as well as foster the values of fairness, equality, care, and responsibility.

The seventh model is called learning by extraordinary example. Puka (1990) developed a concept, which is best described by the title of his book *Be your own hero*. Students should learn from the examples of ordinary people who did extraordinary things, such as people who sacrificed their own comfort in order to help and support people in need, or those heroes who stood up for justice in a peaceful and quiet way. Either by meeting these examples or by studying their lives in literature or biographies the students are taught to look at their courage and determination and be inspired to transfer this into their own lives. It is unclear however, whether the students will really be able to apply the knowledge they get from studying these examples. Possibly it just sharpens their understanding of morally correct behaviour, but does not lead to action.

The eighth model is Oser's (1998, 2001) suggestion of a "realistic discourse" as a basic model for "Just Community Schools". This concept is based on the above described progressive model of moral development by Kohlberg (1978), as well as Kohlberg's suggestion of "Just Community Schools". Oser uses the ethics of discourse by Habermas (1983) and develops a stepwise programme of how to discuss problematic issues within the whole school community. In an organised form of progressive discourse the community as a whole step by step elaborates a solution to a concrete problem. This demands a "round table" with students and teachers, a clear set of communication rules, the permission to express contradicting views in order to find balance between justice, care, honesty, and peacefulness, a teacher that participates with an attitude of equality and yet is able to guide the process, and who gives the students an advance of trust and faith in their capabilities. The last condition is especially important as a basic foundation for a constructive solution-oriented form of discourse.



Compared to Kohlberg's progressive approach which aims at vertical development along the stages of moral development this method of discourse trains the students to search for concrete solutions that are morally sound and can be experienced in everyday life, hence, the connection to application and action may be stronger. It can be criticised that the method is too challenging for both students and teachers and that possibly the individuality and integrity of the individual student will suffer in the process of finding a solution together with the community as a whole.

A Ninth Theory

Another thorough analysis of the question of moral education is presented by Purpel (1999), one of the leading figures in the theory of moral education. The title of his book *Moral Outrage in Education* describes the background of his claim. According to Purpel the world is facing moral chaos and decay and this can only be overcome if education is consistently enriched with moral aspects. Purpel postulates that educators are responsible to ensure that their teaching is influenced by moral vision. "As educators determined to direct our energies toward the horrors of unnecessary human suffering, we must be particularly concerned with the task of consciously infusing our scholarly traditions with moral visions." (Purpel, 1999, p. 22)

The public line of argument against moral education usually states that it is impossible to decide which values should be taught and therefore it is preferable to have a value-free education. In Purpel's (1991) opinion it is impossible to separate the educational from the moral, wherefore he believes that the term moral/character education is redundant. No educator is able to teach or train a child without letting his or her moral views and opinions influence the choice of topics, the manner of teaching, the relationship with the child, and other aspects of the learning process. The discussion of which values are to be taught is, according to Purpel, also a political issue, at the core of which lies the question of which



political mantle schools should follow when teaching values. Purpel follows Lickona (1991) who is a major figure in the field of value education: “In short, the relevant issue is never ‘Should schools teach values?’ but rather ‘Which values will they teach?’ and ‘How well will they teach them?’” (Lickona, 1991, p. 21)

Lickona (1985) suggests nine ideas that can guide parents in the raising of moral children. He recommends that parents should have respect for persons, should support and challenge a child’s present developmental stage, should promote mutual respect, should set a good example, should teach values directly, should stimulate children’s moral reasoning, should give them meaningful responsibilities, should balance independence and control, and should give them love. Lickona also lists the “ten signs of moral decline” to be “violence and vandalism, stealing, cheating, disrespect for authority, peer cruelty, bigotry, bad language, sexual precocity and abuse, increasing self-centredness and declining civic responsibility, and self-destructive behaviour” (Lickona, 1991, pp. 12-18).

Purpel (1999), believing that “educators are moral leaders who work in educational institutions, not pedagogues who occasionally have to deal with ethical problems” (p. 77), concludes that the values should be derived from the major religious and spiritual traditions, especially those who are able to connect human experience with larger meaning. Similar to Puka’s (1990) concept, he draws on the power of examples and models with the conclusion that the major religious figures who have inspired millions of people through their vision and their lives should be the guiding models for teachers in their teaching work and for students to study. In sum, Purpel’s claim is a very direct one: All education must be based on spiritual and religious principles.



2.2.3 Practical Example of Implemented Value Education

There are many educational institutions that have implemented moral education programmes and even have systematically evaluated them in order to improve their application. Muson (1982), for example, has given a good overview of some educational efforts up to 1982, mainly around the concepts of “Just Community”, “Values clarification”, and programmes of the American Institute for Character Education (AICE). He discusses the possibilities and limits of moral education in schools. It is impossible, however, to even make an attempt to summarise or evaluate all moral education projects.

In light of the above mentioned theories and their criticisms, I will briefly outline and discuss one moral development project of quite a different nature. This practical example of a moral education programme has been developed by Núr University and is titled *Moral Leadership* (Anello & Hernandez, 1996).

Núr University, the second largest private institution of higher learning in Bolivia, integrates academic knowledge with both practical experience and ethical training, giving particular emphasis to community service, social justice, and respect for human diversity. Núr was founded, in large part, to help develop leadership qualities in individuals, in order to train them to make a positive and constructive contribution to society and to help them understand the linkage between individual and social transformation.

Núr’s Moral Leadership programme teaches participants that they have the obligation to search for, adopt and live by moral precepts. Leadership is shown to be a responsibility that is exercised by all members of society and requires the development of specific moral capabilities. These capabilities are taught with the help of well elaborated training modules involving learning circles that include experience, reflection, conceptualisation and practical application in order to reach sustainable transformation. Underpinning such capabilities is a commitment to pursue and apply truth in all areas of human endeavour, as well as the basic



belief in the essential nobility of every human being. Hence, it combines theoretical, practical and spiritual aspects of moral education, while allowing diversity and freedom in the search for and the application of moral principles. This programme has reached some 400 rural communities in Bolivia and more than a dozen Latin American countries. It is also being adapted and applied in several European countries, such as Bosnia, Macedonia, and Germany, mainly in youth groups and school settings.

Furthermore, Núr's Just Governance Programme provides a training for public officials, government technical staff, and members of community-based organisations. It seeks to promote good governance by exploring the different dimensions of Moral Leadership strengthening administrative and decision-making capacities in the public sector, and by promoting dialogue concerning the future development of the Bolivian society.

A related initiative, involves 5000 public high school students in promoting youth leadership. The programme works to limit youth involvement in crime, violence, and alcohol and drug consumption by preparing young people for active community service.

This concept responds to some of the earlier mentioned needs and criticisms. The principle of independent search for truth protects from the danger of inoculation of indoctrination. Basic social and spiritual values are used as a foundation and therefore provide a certain structure rather than a vacuum with disconnected values. The aim of Moral Leadership is to serve the common good, which is a universally applicable need, and even though the concrete application within a country would be culture-specific, yet the general principle of contributing to society in a way that leads it to progress is considered a culture-independent value. The belief in the essential nobility of every human being lays a positive foundation that allows people to develop values constructively by searching for and enhancing their own and other people's potential, in order to develop towards higher moral stages with the goal of pursuing personal and social transformation. The training programme which functions in learning circles provides practical application.



2.3 The Psychology of Religion

When studying the values of adolescents it is impossible not to touch the topic of their religiosity. The research on religion and faith among adolescents is still quite scarce, but in the past few years it has once again become a much more popular subject. The Journal of Adolescence has published a special edition for the Millennium (Journal of Adolescence, 1999) in which it explores aspects of religion as related to adolescent development. This issue, *Adolescents and Religion: a view from the millennium*, demonstrates the increasing interest in the subject and the stronger determination to dedicate research to these topics. In the foreword Fowler (1999) states:

“It appears to me that the new millennium is bringing, among other things, strong evidence for the vitality and increased significance of research on adolescence, and on the central role and changing shapes of adolescent faith and religion.” (p. 183)

2.3.1 Recent History of the Psychology of Religion

The beginnings of the psychology of religion were around 1900 in North America. The review of the American history of the psychology of religion by Donelson (1999) shows that the two first dominant figures were W. James (1842-1910) and G. S. Hall (1844-1924) who, already before the turn to the twentieth century, strongly encouraged research in this field. The psychology of religion predates the formal founding of the American Psychological Association (1892). Hall’s students E. D. Starbuck (1866-1947), and J. H. Leuba (1868-1946), were pioneers in empirical studies in the psychology of religion. Some of the most prominent psychologists such as G. W. Allport (1897-1967) and A. Maslow (1908-1970) dedicated parts of their research to religious topics.



However, from 1930 to 1960 the topic became largely dormant. "Psychology's early love relationship with religion gave way to the temptations of Freudianism and behaviourism" (Donelson, 1999, p. 188). Some personality psychologists, such as Jung, Fromm, Maslow, Frankel, and Allport helped with the revival of the field by relating religion to personality dynamics and distinguishing between adaptive and maladaptive religion. From about the 1960s there has been a slight resurgence of interest in science and religion, and several books, journals and bibliographies have been published.

Donelson's (1999) meta-analysis of the coverage of religion in the issues of psychological journals from the first and last five years of their publication clearly demonstrates the difference in the occurrence of topics related to religion during these two periods of time. The last five years show a clear lack of publications, ranging from none in some journals to one or two in others. In contrast, these journals had a far larger coverage of religious topics in the first years of their appearance. Journals that focus on adolescent or child development offer more articles on religion, they seem to be more attentive to religion than the field at large.

In Germany, the main forerunners in the area were S. Freud (1856-1939) and C. G. Jung (1875-1961) who thoroughly explored the concept of religion and embedded it into their own psychological concepts. Many other authors dealt with religious topics and through their endeavours, the psychology of religion entered into many of the main schools of psychology. During National Socialism and World War II there was a great gap in the research on religion as many of the leading psychologists were forced to emigrate or to remain silent (Holm, 1990). Only in the 1960s, especially under the protection of the 1961 reestablished *Internationale Gesellschaft für Religionspsychologie und Religionswissenschaft* (International society for the psychology of religion and the science of religion), the research of the psychology of religion gradually began to flourish again.



Before expanding on the definition of the psychology of religion and the studies done in this context, I would like to elaborate on the reasons why it has been a taboo for such a long time. A closer look at the literature in this area shows that it has only been in the past three or four decades that the scientific research of religiosity is gradually surfacing again, after a long break.

2.3.2 The Psychology of Religion – a Taboo?

For a long time studying religiosity meant being non-academic or perhaps even trying to convert others towards a certain religious direction. Beit-Hallahmi (1985) believes that one of the reasons for the lack of research in this area lies in the fact that most psychologists who study religion are religiously committed themselves. This has obviously affected the whole tenor of the field of the psychology of religion, and has contributed to its difficulties.

The difference between a religious psychology and a psychology of religion is that between defending religious beliefs and explaining them. Psychology of religion treats religion as a phenomenon for systematic psychological study, whereas religious psychology aims at promoting religion through the adaptation and use of psychological concepts. (Beit-Hallahmi, 1985 p. 20)

In his opinion the researcher's religious tradition always has an effect on his or her work as a psychologist of religion in terms of the choice of questions for research, the interpretation of findings, and the formulation of a general theory of religion. The danger could also be that a specific kind of religious behaviour, with which the researcher is most familiar, may become the model for religion in general, and the basis for a general theory of religion.

Donelson (1999) explains that the neglect of religion by many authors may reflect the lack of knowledge about the psychology of religion. The main contemporary, standard, psychology



journals do not provide much opportunity or inspiration for psychologists to become informed about the psychology of religion. Summarising various sources of literature about this topic, Donelson concludes that psychologists are less religious than most of the American population. It is also shown that scientists and academics are less religious than the rest of the population, with differences among academic disciplines (Beit-Hallahmi, 1977). This may result in academics being a sub-society not fully in touch with the rest of society. An interesting effect in this context is the *scholarly distance hypothesis* (Lehman & Shriver, 1968) which states that the extent to which an academic discipline considers religion a legitimate area of study is inversely related to proximity of the discipline to the human beings involved in religion. Thus, physicists are expected to be, and found to be, more religious than social scientists. A related hypothesis is the *personal relevance hypothesis* (Beit-Hallahmi, 1977) which suggests that if psychologists see religion as irrelevant to their own lives, they are likely to think it is irrelevant to other people as well.

Vianello (1991) believes that the lack of research on religious beliefs in children and young adolescents does not depend on the little interest in the subject, but rather on various prejudices which have a negative effect on researchers. Some of these stem from the lack of confidence in making a scientific approach to a subject which has been considered insoluble, due to problems regarding will and faith. Other prejudices are produced by the conviction that the subject does not deserve attention “because God does not exist in any case”.

2.3.3 Definition and Main Topics of Research

The psychology of religion is considered a subdiscipline within psychology concerned with the origins of religions, their role in human existence, the nature of religious attitudes, of religious experiences, etc. (Reber, 1985). According to Holm (1990) the psychology of



religion is a science that explores the relation between religious forms of expression and psychological processes. Religious forms of expression consist firstly, of views, thoughts, insights, and understanding; secondly, of behaviour, such as rituals, cults or other individual or collective forms of religious activity; and thirdly, of experiences, such as mystical and personal religious feelings. In a scientific sense the psychology of religion attempts to describe, explain and predict facts or human behaviour that are related to the religious life of human beings. In this context the extreme privacy related to this topic, and hence, the consequent limitations for its study must not be underestimated.

According to Grom's (1992) definition the general psychology of religion explores the psychosocial and the internal psychological conditions of people's relation to a transcendent cause. This includes religious understanding, behaviour, and experiences. Psychosocial questions would include the influence of the family, the community, the religious leader, or the social environment on the religiosity of an individual. The exploration of internal psychological conditions is concerned with questions such as: Is religiosity an instinctive search for protection (I. P. Pawlow)? Does religiosity serve the yearning for infinity (B. Malinowski)? Is religiosity an obsession or the regressive desire to be protected by an almighty father (S. Freud)? Is religiosity rooted in desires, values and the search for a purpose (G. W. Allport)? In addition, various possible motives for religiosity can be explored, such as neurotic obsession, the desire for control, fears, magical thinking, a search for self esteem, the need for admiration and gratitude, the desire to demonstrate prosocial behaviour, or the yearning after insights regarding the world and humanity.

Donelson (1999) suggests that the main topics covered in publications related to religion are: gender, family, religious experience, abortion and sexuality, mental health and coping defences, eating disorders, substance abuse, and conversion behaviour.



2.3.4 Development of Religiosity within the Individual

There are many different views that try to explain how religiosity develops within the individual. Fraas (1990) summarises the following causes for the development of religiosity: conversion, religious aptitude, the combination of environment and heritage, cognitive theories, learning theories mainly through imitation, and socialisation theories. The following brief examples show how researchers embedded the question of religiosity into their general line of psychological research from the perspective of cognitive structural developmental theories.

As mentioned above, Kohlberg's (1978) theory of moral development involves six stages of moral judgement. He never developed a separate developmental theory for religiosity, but did contribute to the psychology of religion with two basic theorems. Firstly, he considered a seventh stage (Kohlberg, 1973; Kohlberg, 1984; Holm, 1990; Oser & Reich, 1992; Kuhmerker, 1996), which he called the religious, the transcendent, the cosmic, or the infinite stage. He believed that stage seven is to be taken in a metaphoric way, as it results as a consequence of the questions and conflicts dealt with in stage six. It seems that in later works he detached himself from this concept again, as it was too difficult to measure and not concrete enough. Secondly, Kohlberg stated that any stage of moral judgement precedes the respective religious one, as the latter always includes the moral elements of the previous.

Fowler (1976) developed a theory based on a series of interviews in which he suggests six observable stages of religious development (Oser & Reich, 1992; Kuhmerker, 1996) (see Table 2.4).



Table 2.4

Six Observable Stages of Religious Development According to Fowler (1976)

Stages	Observable stages of religious development
Stage 1	Intuitive-projective faith and impulsive self
Stage 2	Mythical-literal faith and the imperial self
Stage 3	Synthetical-conventional faith and the interpersonal self
Stage 4	Individualising-reflective faith and the institutional self
Stage 5	Connecting faith and the inter-individual self
Stage 6	Universalising faith with self rooted in God

Stage 1: Intuitive-projective faith and impulsive self: The child projects its fantasies and feelings onto reality, faith is related to long lasting feelings and imaginations.

Stage 2: Mythical-literal faith and the imperial self: Reported stories become the instrument to construct and uphold faith. Experiences and wishes of the self become the filter through which it interprets all perceptions. God is a source of reward and punishment.

Stage 3: Synthetical-conventional faith and the interpersonal self: The acquired ability to change perspective allows identification with others. Faith helps to find identity: God helps me to find myself.

Stage 4: Individualising-reflective faith and the institutional self: Possibility to gain distance and re-evaluate faith and symbols related to faith. Results in “profits” and “losses”.

Stage 5: Connecting faith and the inter-individual self: Integration of self with those aspects that were lost as a result of gaining self-confidence in stage 4. True willingness for deep and



mutually enriching conversations with people of other traditions than one's own (only very few subjects).

Stage 6: Universalising faith with self rooted in God: This is a hypothetical stage that is attributed to people such as Mahatma Gandhi or Martin Luther King (without having had an interview with them).

Oser (Oser & Reich, 1992; Reich, Oser & Scarlett, 1999) developed a model which comprises the following five stages of religious judgement:

Stage 1: There is an Ultimate Being who protects you or sends you something hurtful, dispenses health or illness, joy or despair. The Ultimate Being's Will must always be fulfilled.

Stage 2: The Ultimate Being can be influenced by prayers, offerings, the following of religious rules, etc. If one cares about the Ultimate Being and passes the tests He sends, He will act like a loving and trusting father.

Stage 3: The individual assumes responsibilities for his or her or her own life, and for matters of the world. The Ultimate Being's wholeness encompasses a freedom, hope, and meaning that are different from the human ones. Transcendence is outside the individual but represents a basic order of world and life.

Stage 4: The individual continues to assume responsibility, but he or she wonders about the conditions for the mere possibility to carry responsibility. The transcendence is now partly inside (immanence), the Ultimate Being becomes the condition for the possibility of human freedom, independence, etc., via the divine plan.



Stage 5: The Ultimate Being appears in every commitment, yet transcends it at the same time. Transcendence and immanence interact completely. This total integration renders possible universal solidarity with all human beings.

The cognitive approach to the development of religiosity bears many problematic issues, as it possibly cannot give justice to the nature of religious experience as a whole. The structural developmental aspect of the theory also can be criticised on many levels, mainly from the point of view that this form of approach risks the existence of judgements, such as higher or lower, in the sense of better or worse religiosity.

Vianello (1991) conducted a study with the attempt to investigate the development of possible correlations between religious beliefs and personality traits in adolescence. The research revealed that on a religious level early adolescence appears to be a period of transition. The results showed that 12-year-olds still assimilate religious elements passively and not very critically; for them religion has a reassuring role and correlates positively with variables that emphasise the security and magical aspects of God and religion, whereas 14-year-olds begin to consider religion in a personalised, critical and autonomous way. From this age, comprehension of religious elements is correlated to a much greater extent with intellectual and affective Self-Direction.

2.3.5 Measurement of Religiosity

The methods of research in the psychology of religion are similar to other methods in the area of social studies. Observations, interviews, analysis of content, tests, and experimental designs are generally used. The preferred methods are questionnaires as they are structured and economical (Haub, 1992). Researchers in the psychology of religion use either



unidimensional or multidimensional scales. The unidimensional scales measure religiosity or one aspect of religiosity through a number of items that all represent the same issue. The instrument must demonstrate a very high reliability, as the items correlate highly with each other. The multidimensional scales consist of several groups of items which are similar within one group but distinctive between the groups. These groups represent different dimensions of one construct.

In addition to the dimensions of religiosity another aspect that needs measurement is the intrinsic or extrinsic motivation of religiosity (Allport, 1962; Grom, 1992). The extrinsic outlook on religion is utilitarian, self-centred, opportunistic, and other-directed. The intrinsic, in contrast, includes basic trust, a compassionate understanding of others so that dogma is moderated through humility, and with increasing maturity does not serve self-interest. Intrinsically motivated religiosity is a result of conviction, appreciation and practice of a religious life, in the sense of loving your neighbour and living according to religious laws.

Nobody is totally either extrinsic or intrinsic, but all range somewhere along the continuum from one pole to the other. Gorsuch (1988) claims that any study involving religion even as a non focal variable should use a more sophisticated measurement than religious membership or preference. Measures of church attendance and intrinsic/extrinsic religiousness scales should be the minimum standard for measuring religiousness. According to Roof (1979) a unidimensional approach is more appropriate when firstly, the primary interest is in relating religiosity to broad cultural attitudes or values rather than in unravelling relations among the various components of religion; secondly, the same set of hypotheses is tested in different religions, thus requiring a conception and operationalisation of religious commitment that emphasises the common denominator of religiosity rather than its discrete aspects; and thirdly, the samples studied are from a general population that is heterogeneous with regard to



religious commitment rather than from a religiously committed group (Schwartz & Huisman, 1995).

2.3.6 Religiosity and Values

It is widely accepted that one part of religiosity is the quest for moral and ethical values and the demand to demonstrate virtuous behaviour (Hellpach, 1939). In the following some studies shall be mentioned where religiosity has been measured and related to other values.

2.3.6.1 Religiosity and Schwartz' Value Priorities

Schwartz and Huisman (1995) analysed value priorities and religiosity in four Western religions. The results showed most positive correlations between religiosity and Tradition ($r = .54$), and most negative correlations with Hedonism ($r = -.39$). Conformity ($r = .30$), Benevolence ($r = .15$), and Security ($r = .15$) also correlated positively with religiosity, whereas Stimulation ($r = -.34$) and Self-Direction ($r = -.33$) showed negative correlations. Another result was that Universalism ($r = -.24$), Power ($r = -.08$), and Achievement ($r = -.13$) values generally correlated negatively with religiosity, but showed less negative correlations than Stimulation and Self-Direction, and less positive correlations with religiosity than Conformity, Benevolence, and Security. The results were largely consistent across the four religious groups (Israeli Jews, Spanish Roman Catholics, Dutch Calvinist Protestants, Greek Orthodox), and the correlations of values with religiosity showed invulnerability to the influence of demographic variables (age, gender, education, income).

The authors also found mutual influences of values and religiosity. The influence flows in both directions between religiosity and value priorities. Religious socialisation influenced the more strongly committed persons to accept the value priorities that express and support basic theological doctrines and institutional interests. Because religions explicitly promote



Tradition and reject Hedonism, the above mentioned results showed strong evidence for the impact of religious socialisation. On the other hand, Schwartz and Huisman (1995) postulate that individuals who have developed particular value priorities in response to their personal needs and socially structured experiences, become more or less committed to religion depending on the opportunities or barriers it poses to the attainment of their valued goals. The negative correlations of religiosity with Universalism, Stimulation, and Self-Direction values can be seen as evidence for this, as the correlations contradict or are unrelated to the expectations from the deliberate, manifest teachings of the religions in the sample.

2.3.6.2 Religiosity and Well-Being

Emmons (1999) summarises the research on the effects of religiosity on psychological well-being, based on variables such as life satisfaction, happiness, existential well-being, meaning in life, etc. He concludes that it is impossible to give a general answer to the question of whether religiosity is related to mental health. It depends on how both the religious and the mental health variables are defined and measured. Without mentioning exact coefficients, Emmons summarises that the distinction between extrinsic and intrinsic religiosity has generally shown that well-being correlates positively with intrinsic religiosity, and negatively with extrinsic religiosity (Ventis, 1995).

Donelson's (1999) overview of research in the field of religiosity and well-being also shows that the results are largely ambiguous. There is some evidence for a positive association between church attendance and self-defined religiousness, lower levels of distress and worry, and better adjustment and life satisfaction. It remains unclear in which direction the causal effects goes. The inconsistency of the results is mainly due to the diversity of often gross measures of both religion and mental health. When distinguishing extrinsic and intrinsic



religiosity, Donelson concludes that recent research shows a positive association between intrinsic religion and both mental and physical well-being, as well as openness to change.

Lewis, Joseph, and Noble (1996) found no association between the satisfaction-with-life-scale (Diener, Emmons, Larsen, & Griffin, 1985) and measures of religiosity.

2.3.6.3 Religiosity and Other Values

Hood, Spilka, Hunsberger, and Gorsuch (1996) conclude that past research on religiosity and values has demonstrated that across various religions, people who are more religious have more conservative values. Markstrom (1999) found that none of the religiosity variables were associated with general self-esteem, but school self-esteem was associated with more frequent religious attendance, involvement in a youth group, and involvement in a Bible study group.

Rokeach (1968) found empirical evidence that religious people are more likely to express antihumanitarian attitudes, bigotry, and anxiety. He also discovered that religious similarity and dissimilarity play an important role in marital conflict. He suggests that this is a result of the extrinsic rather than the intrinsic orientation toward religion. Rokeach's (1973) research of values and behaviour uses church attendance as a measure of religiosity. High church attendance in his studies placed greater value on salvation, being helpful, and being obedient, and lesser value on a comfortable life, an exciting life, freedom, pleasure, and being imaginative, independent, intellectual, and logical. Churchgoers in comparison with non-churchgoers, think of themselves as relatively less materialistic, less hedonistic, less concerned with personal freedom and independence, and less concerned with intellectual values. In contrast, they think of themselves as more conformity-oriented, more willing to forgive, more concerned with the welfare of their fellow man, and more concerned with a life hereafter.



Bruggeman and Hart (1996) have examined the incidence of cheating and lying from a sample of high school students who attended either a religious or a secular (public) school. With the help of the Defining Issues Test (Rest, 1979, 1990) they measured the level of moral reasoning. The results show that there are no significant differences between religious and secular high school students in the level of principled moral reasoning. It therefore cannot be assumed that either of the groups has higher cognitive morality. Furthermore, a vast majority of students showed a tendency toward dishonest behaviour, regardless of type of school attended. 70% of the religious school students engaged in lying, cheating, or both, compared with 79% of the secular school students. These results revealed no significant differences. In addition it appears that family adherence to religious practice, teaching, and values is related to attendance at religious schools, but the manifestation of those values on the part of the students is not related to the type of school they attend. Bruggeman and Hart suggest that their findings should not lead to the conclusion that religious education is ineffective or that it does not provide a basis for strong moral commitment. Rather, they propose that their results should compel parents and educators to examine what changes might be made to achieve their goals in religious moral education. Undoubtedly moral reasoning develops from a variety of factors, only one of which may be religious education.

2.3.7 Religious Education or Moral Education with Religious Values?

The debates whether religious education should be a part of the school curriculum and whether religious values should be taught in the context of moral education is very controversial and is being discussed thoroughly and intensely both in literature, as well as the media. In the context of curriculum development this is a major topic of concern in many countries. Questions arise as to whether a school has the right to teach religion, and if it does, then which religion should it teach. Even people who favour religious education in the school



do not necessarily agree on how it is taught. Discussed further is the point of whether the teaching of religion should be on a matter-of-fact level, informative and objective, or rather on an emotional level, identity forming and faith oriented. Another difficult issue is which values are actually religious values and which values are taught by which religions.

The main question pertaining to this issue is, whether it is necessary to teach religion in order to teach values, or whether religion and values should be strictly divorced. It would, however, be beyond the scope of this thesis to explore all the policies, as well as political and educational arguments for and against religious education.

2.4 The Role of Teachers in the Process of Value Education

Rules for teachers posted by a school principal in New York in 1872 included notes that women teachers who married or "engaged in unseemly conduct" would be fired and that any teacher who smoked, drank, frequented pool or public halls, or got shaved in a barber shop would be under suspicion for lack of integrity, worth, and honesty. A teacher's contract in the 1930s in North Carolina incorporated a promise to abstain from dancing and immodest dress, not to go out with men except to stimulate Sunday School work, and not to fall in love (Nelson, 1980).

Despite a strong liberalisation of schools there still remains a public expectation that teachers will exhibit a higher standard of moral values than is expected of other members of the community. This leads to two major questions: Firstly, how important is the model function of the teacher? Secondly, why is it difficult for the teacher to be a role model?

I will briefly touch on a few points regarding these two issues.



2.4.1 How Important is the Model Function of the Teacher?

Albert Schweitzer said: “Example is not the main thing in influencing others. It is the only thing.” The importance of the exemplary role of teachers in the process of value education has already been outlined in section 2.2 (Uhl, 1996; Wächter, 1997; Giesecke, 1999). There have been a range of other authors who have explored this question.

Cartledge and Milburn (1978) note several studies in which modelling produced more persistent gains in prosocial behaviour and reduction of aggression than did behaviour shaping by reinforcement or other techniques. It is possible that the teacher’s actions has more effect than what he or she says. If so, the selection of good moral models as teachers could perhaps be more effective than any curriculum change.

Campbell and Bond (1982) suggest that modelling can be extended beyond teachers to the whole school as an institution. If the adults who operate a school are honest, kind, and just, and the rules and procedures reflect these qualities, the students will also tend to acquire these as values and character traits.

McClelland (1982) examined school programmes that were effective in promoting moral development. Some of his conclusions are summarised in the following:

1. Educational efforts that are based on curriculum reform are unlikely to promote moral maturity unless they provide opportunities for active participation in decision making by students and are implemented by teachers who like and respect their students and have faith in the programme.
2. Support should be given to gain knowledge about what programmes best improve moral development, provided the programmes involve teachers at the district level who have faith in the programmes and in their students, and have skill in



encouraging student participation in the programme – provided a design for evaluating the impact of the programme is included.

3. Alternative plans should be supported and evaluated by state, regional, or local educational groupings to find ways of providing staff development workshops for teachers to learn how to implement effectively the programmes that work best for promoting moral maturity.
4. More knowledge is needed on moral thoughts and actions as they occur in naturalistic or field settings, as contrasted with artificial laboratory settings or in responses to hypothetical dilemmas.
5. More research is needed on whether it is true that in a rapidly changing society a number of children fail to attain even the earliest stage of moral conformity, and if so, what educational methods can be used most successfully to start them on the path to moral maturity.
6. More research is needed on the impact on moral and social development of natural experiments such as the way devout religious groups or very different cultures rear their children.

Hence, it is obvious that the modelling role of the teacher in the value education process cannot be underestimated. However, how strong it really is, has yet to be identified.

2.4.2 Why is it Difficult for the Teacher to be a Role Model?

According to Rheinberg and Minsel (1994) there are three issues that are teacher specific and help to explain why actions in the classroom frequently are not consistent with the higher goals of a teacher. Firstly, there can be conflicts between two equally ranked goals, for example, while promoting the aim of self-assertion, possibly courtesy could be endangered.



As a result either one or both aims could be ignored. Secondly, a teacher might realise the inefficiency of his or her actions for the achievement of his or her goals. When, for example, a teacher thoroughly explains all the reasons of why human aggression is unacceptable and then two students begin a physical fight, it is possible that the teacher's aims gradually turn into mere wishes. Thirdly, teachers are confronted with a whole class of students and therefore need to create an atmosphere that allows the learning process to happen. The daily efforts to establish discipline and a sufficient amount of attention in the classroom require so much energy and time that the teacher often does or does not do things that he or she would consider as goal-oriented in a more relaxed atmosphere.

2.4.3 Person Profile Fit

In order to explore whether the values of the teachers correspond with those of their students, in the following a measure of fit will be introduced that has mainly been used in the field of organisational psychology.

The concept of fit or congruence between individual attributes and the characteristics of a situation is generally an important explanation for differences in individual performance or satisfaction at work. A great deal of theory and research has attempted to link individual characteristics and particular aspects of the situation (Caldwell & O'Reilly, 1990). Especially in the field of the study of organisational behaviour, many measures have been devised that aimed at identifying the relations between the characteristics of a person and those of his or her organisation in order to explain individual behaviour. It is assumed that the interaction of these two sets of variables will explain greater variance than either set alone.

Caldwell and O'Reilly (1990) introduce a technique – the profile-comparison process – for examining how the fit of individual skills to specific task requirements is related to job performance. This measure should allow for a holistic comparison of the set of individual and



situational variables to determine their overall degree of match (Bem & Funder, 1978). Brandstatter (1994) also used the correlation of personal and environmental motive profiles to determine the degree of motivational person-environment fit. This fit measure was then entered as a predictor to predict intra-individual and intra-situational well-being.

In general, the Person Profile Fit measure is used as a variable that can statistically be related to other variables of interest (Caldwell & O'Reilly, 1990; Brandstatter, 1994). In this way it is possible to apply this technique for the measurement of the Person Profile Fit of individual students with the profile of their teachers, in order to identify the level of similarity between these two sets of variables; in a next step this similarity can be related to other variables.

2.5 Boarding Schools

Backes' (2000) research on boarding schools sheds a lot of light on the topic. The concept of boarding schools has changed a lot over the course of the last few decades. It is losing its stereotyped stigma of being a place only for "the elite" or "academically weak, but financially strong children" whose parents can "buy" them a high school diploma. The popularity of boarding schools has generally decreased in the past 40 years, and therefore the schools often cannot be as selective with their students to the extent that their school philosophy would recommend. Many boarding schools have a large group of students who demonstrate learning or behaviour difficulties, and/or stem from problematic family backgrounds.

There is not very much research done in the area of boarding schools, and there is barely any literature that comprises different types of boarding schools as opposed to analysing just one school type. The reasons for this are, firstly, that most authors are former students or staff of



boarding schools themselves and therefore are able to only portray their own school, secondly, boarding schools are mostly exclusive institutions that are not in the focus of the general public and therefore remain unknown, and thirdly, the administration of boarding schools often advocate their own school system in an attempt to win new supporters or sponsors, and therefore they do not like to mingle with other comparable schools.

Backes (2000) defines the concept of boarding schools by stating that they are institutions with clear boundaries towards the outside world in which children and youth are taught academic knowledge, are satisfied in their basic needs for food and shelter, and are educated towards a clearly defined goal, often on the grounds of a certain philosophy of life.

Kalthoff (1997) distinguishes boarding from regular schools by saying that in contrast to a regular school, a boarding school detaches its “objects” more comprehensively from their previous life environment and observes and educates them under specific conditions.

Poirot and Richard (1992) see the main distinction between boarding schools and equally strong day schools in the fact that in boarding schools the children live together. This can be an opportunity for enhancing the education they might receive at a day school, but also constitutes the greatest challenge. According to Poirot and Richard most families have at least one of three reasons for considering boarding school. The first is about the child, the second about the family, and the third about the environment. “He or she might be bright and bored, bright and lazy, average but ambitious, highly talented, easily distracted, or lost in the crowd” (Poirot and Richard, 1992, p. 9). Many of these are reasons to consider independent schools in general rather than boarding schools in particular. If, however, such descriptions of the child are coupled with a family situation that does not allow the parents to give the child sufficient academic or emotional support, or if they are combined with an environment in which the



child is in danger of being influenced in directions that the parents do not agree with, boarding schools become a realistic alternative.

Another advantage of boarding schools is that the staff have chosen to live with children, day and night, and are willing to deal with all the problems that the lives of adolescents entail. Most boarding schools have strong principles and regulations for both the social and the academic life of the student, and therefore provide, not only an enriching environment, but also clear guidance for them.

There are also obvious disadvantages of life in boarding schools. Not all students are able to deal with being around their peers day and night, they are unable to adhere to the rules and regulations that are necessary in such a setting, they miss their home and their parents, or even feel rejected by their parents. Possibly the decrease in the amount of attention, which previously had been provided by the parents, combined with the newly gained seeming freedom can lead to an extreme overstepping of boundaries.

2.6 Aims of this Study and Questions of Interest

2.6.1 Rationale of this Study

As shown, there are many different theories of moral development and value education. Following the model of Bull (1969) I would like to make a distinction between direct and indirect moral education.

A great amount of research has been done on the influence of direct moral education programmes, such as value training programmes, ethics courses, dilemma discussions, concrete experience situations, and other forms of direct moral influence. When studying these programmes, the researchers explore how efficient these moral education programmes are, how long they need to be implemented, and how sustainable their effects are. Further



general questions of research are, which moral education programmes are particularly useful in order to achieve a certain form of moral consciousness, and which moral values can/should an educational institution convey?

Indirect moral education happens at home, at school, through the peers, through the influence of society, and possibly through the affiliation with a church or other religious communities. This form of moral education often takes place without any active effort from the educators; in some cases it is not even intentional and therefore can barely be evaluated. Very often this form of education cannot be controlled or focussed in a certain direction. Sometimes a certain educational process is intended but the contrary is achieved. In some cases the consistent modelling of certain values, whether consciously or not, and the consequent application of these in different situations, can lead to rather long lasting and sustainable results. In some settings indirect moral education also allows more compliance when the youth do not feel provoked or pressured into any direction. Consequently, the danger of upheaval and rebellion may be less than those under direct moral education programmes.

The school is an indirect institution of moral education and has a very strong moral influence on the students. This occurs in two main ways: firstly, through the general ethos of the school and the way issues are dealt with within the school community, and secondly, in the different classes and courses, or the school assembly which often is used as a channel for conveying values and moral concepts. Additionally, the teachers and the director of each school act as a major catalyst of moral education, as they daily confront the students with moral decisions and (re-)actions, and consequently teach the values they hold – whether this is intended or not. The mere decision of how to handle a certain infringement shows the students, which values and which set of principles are important for the authorities in charge. Many authors claim that the school should be a value-free environment. I do not believe that it is possible to have



any value-free environment, as the effort not to teach any concrete values, itself conveys a certain way of thinking and consequently promotes a specific set of values.

McCartin and Freehill (1986) compared the values of 266 students in five different schools that were differentiated on four bases: ethnic mix/Caucasian, religiously affiliated/public, urban/rural, and low socio-economic status (SES)/upper middle SES. They found differences that were related to distinctions between schools on a composite dimension that included ethnicity, SES, and rural/urban factors. Fewer significant distinctions were found for religiously affiliated schools compared with public schools. The authors conclude that there “is a need for definitive studies of value difference by school settings” (McCartin & Freehill, 1986, p. 378).

As schools vary from one another in curriculum and instruction, as well as in social variables, it is to be expected that student attitudes and values will differ from school to school. Many schools attempt to convey values through their general school programme. Most of the schools have a catalogue of principles and rules to ensure a moral, social, and humane development of their students. Sometimes they also offer direct moral education programmes as part of their curriculum, but generally they rely on the shaping influence of the atmosphere and ethos of the school. Do these schools achieve what they want to achieve? How can this be validated? How do students develop in a liberal-democratic school as opposed to a religious-traditional school? Does it make a difference whether a school is private or public? It is possible that the students already had different attitudes and values before they attended a particular school, as the choice of their school usually is a consequence of their own and their families' values.



2.6.2 Aims of this Study

One of McClelland's (1982) conclusions was that more research is needed on moral thoughts and actions as they occur in naturalistic or field settings, as opposed to laboratory settings or in responses to hypothetical dilemma discussions.

With this study I intended to explore how students' values developed depending on which school they attended. For this it was necessary to explore the indirect influence of the schools on the students' value development without any form of direct intervention, such as moral education training courses etc. I investigated the development of values in schools with diverse programmes and identified which values were conveyed in which type of school. In order to accurately determine the effect of the school on this development, the students' value priorities were measured at two measurement times, once at the beginning and once at the end of the school year. Hence, I was able to identify the change of values during the allocated time span, and the factors that influenced the development of these values. With the help of a measure for religiosity, I analysed the indirect influence of religiosity on values, and compared it to the effects of the school. Furthermore, I explored how the students' value priorities and their religiosity related to their school commitment. Did their value priorities influence their academic achievement and their satisfaction with life? A comparison was also conducted between the values of the teachers and those of the students to possibly understand more about how values are conveyed at school.

Hence, the overall purpose of this study was to identify factors that were responsible for the development of certain value priorities within students, in order to contribute to the research and the deeper understanding of the process of value education. The following ten questions were the focus of my study.



2.6.3 Ten Questions of Interest

Question 1: Can the *Universal Structure of Human Values* be Replicated in a Student Sample?

Based on Schwartz' (1992) model, I assumed that the theoretical structure of value priorities would remain applicable for my sample. The Portraits Value Questionnaire 40 is an instrument which is simple enough that it can be used for adolescents and preadolescents (Schwartz, 2001) and at the same time is a very thorough measure for value priorities. Up to now no studies have been done with such a large sample of high school students, using the PVQ 40. Therefore the first aim of my study was to replicate Schwartz' theoretical model of a universal structure of value priorities on a sample of youth. Based on Schwartz who was able to confirm his model in over 20 countries, I assumed that I would be able to replicate the Universal Structure of Human Values with my samples.

At two measurement times I used the PVQ 40 on a rather large sample of German and international students that attended eight different schools. I measured their value priorities and compared the resulting structure to the theoretical model suggested by Schwartz (1992).

Question 2: Different Schools - Different Value Priorities?

Do different schools form different configurations of value priorities amongst their students? Are there any similarities in the value profiles of these schools? Which are the highest and the lowest value priorities of the students in these schools?

McCartin and Freehill (1986) concluded that there "is a need for definitive studies of value difference by school settings". No analyses of school differences with regard to value priorities have been conducted using the PVQ 40 as instrument. I predicted that there would be substantial differences in the students' value priorities, if the selected schools are different in their value education programmes.



For my study I chose eight schools whose programmes were very diverse in their approach regarding their efforts to teach values. Some of the schools were religious, others were completely non-religious; some were public, some were private. Most of the schools included boarding and day students. From a cross-sectional perspective I examined the differences between the eight schools in their value priorities and compared the profiles with each other. Furthermore, I analysed each value priority to identify which schools scored higher or lower on this value priority.

Question 3: Do Value Priorities Change in the Course of One Year?

Another aim of my study was to explore how values change and develop in the course of one school year, and which factors are responsible for this change. With this approach, it was also possible to draw some conclusions as to whether or not the affiliation to a specific school type had any impact on the development of value priorities.

Rokeach (1973) states that value systems are stable over time but also unstable with regard to the hierarchy of values. Cultural, social, or personal events can lead to changes in the value system. In order to achieve changes in the value system of an individual, states of inconsistency must be induced. This view is similar to Kohlberg's (1978) approach, which claims that moral development is achieved with the help of moral dilemmas in order to push the person from one stage of moral development into the next. My hypothesis was that – despite there being high stability in the students' values – change would occur in the course of one year. I expected that, in addition to other factors, the diverse school programmes would be related to these changes.

From a longitudinal perspective I first measured the stability of the value priorities across the year, and then identified which values changed and how much they changed. Furthermore, I predicted this change through the influence of the schools, while controlling for the value priority from the first measurement, and the demographic variables.

**Question 4: How are Value Priorities Related to Age and Gender?**

I wanted to examine how age and gender relate to value priorities. Are older students more conservative than younger ones? Do girls regard traditional values higher than boys? Furthermore, the effects of age and gender on the change of the value priorities were a point of interest.

Prince-Gibson and Schwartz (1998) found no gender differences in the value priorities of a representative sample from the Israeli Jewish population ($N = 999$). However, they did find that age related negatively to Achievement, Hedonism, and Stimulation, and positively to Tradition and Benevolence. As my samples (German high school students) were quite different from those of the above authors, I was interested to explore how strongly the results of my data would reflect their findings.

From a cross-sectional perspective I analysed how age and gender related to value priorities, and whether there were any differences between boys and girls, as well as age groups; from a longitudinal point of view I examined the influence that these variables had on the change of value priorities.

Question 5: How is Religiosity Related to Value Priorities?

Religiosity may or may not be an important factor for the development of value priorities among students. I wanted to analyse the effects of religiosity on the value priorities of the students and examine how being religious contributes to the development of a certain value profile. Is it the students' religiosity or the type of school they attend that best predicts the change of value priorities across the year? Do students in religious schools become more religious in the course of one year? How does their religiosity relate to age and gender?

Fowler (1999) stated: "It appears to me that the new millennium is bringing, among other things, strong evidence for the vitality and increased significance of research on adolescence, and on the central role and changing shapes of adolescent faith and religion." (p. 183)



Schwartz and Huisman (1995) analysed how value priorities related to religiosity and showed that there were most positive correlations between religiosity and Tradition, and most negative correlations with Hedonism. I predicted that there would be substantial differences in the value priorities of religious and non-religious students, and assumed that they would reflect the findings of Schwartz and Huisman. I was further interested to investigate how religiosity changed in the course of the year, but had no clear predictions in this respect.

In this study I used a measure of religiosity to determine how religious each student was. From a cross-sectional perspective I related the students' religiosity to the other variables; from a longitudinal point of view I predicted the change of value priorities with religiosity, as well as the schools, after controlling for the initial value and the demographic variables.

Question 6: How are Value Priorities, Religiosity, Age, and Gender Related to School Commitment and its Change?

I was interested to examine how school commitment relates to the students' value priorities and their religiosity. Is school commitment dependent on any demographic variables? Do the students of different schools have different levels of school commitment? How does their school commitment develop in the course of one year, and which factors are responsible for this change? Lastly, I wanted to explore the relation between school commitment and religiosity. Are the more committed students also more religious, or vice versa?

According to Kuhn and Todt (2002), school commitment decreases in the course of high school. Markstrom (1999) found that religiosity did not relate to general self-esteem, but school self-esteem was associated with more frequent religious attendance, involvement in a youth group, and involvement in a Bible study group. I predicted that, depending on the schools and their programmes, the students would have different levels of school commitment. I assumed that individual religiosity would play a role in the level of school commitment, which may be independent of the attendance at a specific school. Furthermore, I



was interested to find out whether, similar to Kuhn and Todt's findings, school commitment in the schools of my study, which were mainly private schools, would decrease during the year.

I designed six questions to measure school commitment, and used the data of both measurement times for cross-sectional and longitudinal analyses. I related school commitment to the other variables and examined the differences between the schools. Across the measurement times I analysed the change in school commitment and identified those factors that predicted this change. To analyse the relation between school commitment and religiosity I not only correlated these two measures but also identified their causal direction.

Question 7: How do the Duration of School Attendance, Academic Achievement, and Satisfaction with Life Relate to Value Priorities and their Change?

Does the duration which a student has attended his or her school influence the value priorities he or she has, and how does it contribute to their change? Does academic achievement relate to the value priorities, school commitment, religiosity, and any of the demographic variables? How satisfied are the students with their lives, and how does this satisfaction influence their value priorities, their school commitment, and their religiosity? Are there age and gender differences in satisfaction with life? Are there any differences depending on the school the student attends?

I assumed that – depending on how long a student attended his or her school – he or she would have been more or less strongly influenced by its value education programme. I predicted that students with longer duration of school attendance would have different value priorities than those students with shorter school attendance time. I further expected that the students' academic achievement would in some ways relate to the value priorities they have – whatever the causal direction. Sagiv and Schwartz (2000) found no relations between satisfaction with life and value priorities; I wanted to explore whether this result would be



repeated with the samples in my study, and whether the students in different schools had different scores of life satisfaction.

I measured the duration of school attendance at both measurement times and related it to the other variables. I also used it as a factor to predict the change of the value priorities. I measured academic achievement and satisfaction with life at the second measurement time, and identified how these variables were connected to the value priorities, school commitment, religiosity, age, and gender. I also identified whether there were any school differences in satisfaction with life.

Question 8: Which Value Priorities do Teachers Have?

Are there any patterns in the value priorities of teachers? How does their religiosity influence their values? Does their school commitment relate to any of these factors? Are the teachers' values priorities more stable than those of the students? Do teachers display gender differences in the value priorities they uphold? Due to the universality of the Schwartz (1992) theoretical model, I predicted that in general the patterns of teacher value priorities would be similar to those of the students; yet I was interested to explore whether there were any dissimilarities due to age and role differences.

I measured the value priorities, religiosity, school commitment, and demographic variables of the teachers from the eight studied schools at both measurement times, and conducted cross-sectional and longitudinal analyses, in order to identify how these variables influenced each other, and to measure the stability of the value priorities.

Question 9: Do Value Priorities of Teachers and Students Correspond?

How similar are teachers and students in their value priorities and which consequences does this similarity have? My aim was to explore whether there was any connection between students' similarity to their teachers and their school commitment, in order to possibly find



some clues as to how values are transmitted in the schools. Are those students who uphold similar values to their teachers also more committed to their school? Does the similarity predict the change of school commitment in any ways? In addition, I wanted to analyse whether this similarity is dependent on age, gender, or religiosity? Does it relate to or even predict academic achievement? From a different perspective, I was interested to find out, whether the school director's assessment of which value priorities are important, corresponds with the judgement of his or her teachers?

I predicted that the teachers would have higher school commitment and religiosity scores than their students, as I assumed that they would function as role models in this respect. Furthermore, I expected that student-teacher similarity would result in higher school commitment scores of the students, as both of these measures seem to be based on a good student-teacher relationship.

I compared the means of the students' and the teachers' data to identify the differences between these two groups. Furthermore, I conceived three different measures to identify the profile similarities between students and teachers in their value priorities and used these measures in all further analyses with regard to school commitment, age, gender, religiosity, and academic achievement. I interviewed the directors, and identified which value priorities they deemed important for their schools; I then related these data to the corresponding data of the teachers.

Question 10: Wishful Thinking or Real Every Day Classroom?

I wanted to investigate how capable teachers feel to realise desirable educational aims in the every day teaching situation. In this way I hoped to be able to estimate the possible impact of the teachers' value priorities on the educational process in the classroom. I measured the desirability and realisation of educational aims and related these measures to the Schwartz value priorities, as well as school commitment.



I expected that the realisation of educational aims would relate positively to the teachers' school commitment, as probably teachers who feel able to realise their aims in the classroom are also more content as teachers and may have better relationships with their students, and vice versa.

“Sometimes, the question is more important than the answer.”

Plato

3. Method



“There is one thing even more vital to science than intelligent methods; and that is, the sincere desire to find out the truth, whatever it may be.”

Charles Sanders Pierce
(1839 - 1914)



Overview

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3.1 Preparation and Samples

The following sections will describe the preparation of the study as well as the characteristics of the participants.

3.1.1 Preparation

I sent letters to approximately 35 schools and asked the directors whether they would be willing to allow their students and teachers to participate in the study. The aim was to find five to ten schools that were as diverse as possible in their philosophy and system. Eight directors granted permission to administer the prepared questionnaires to students and teachers at two measurement times. Seven of the schools were located in Germany, three of which were in the state of Hessen, two in Baden-Württemberg, one in Brandenburg, and one in Berlin. One of the schools was located in the Czech Republic.

I will briefly introduce the schools on the basis of the following criteria:

- 1 High school or school of similar standard to high school
- 2 German or international
- 3 Co-educational
- 4 Boarding or day students
- 5 Public or private schools
- 6 School philosophy based on religious or non-religious values



Table 3.1 introduces each one of the schools. The criteria are numbered according to the above mentioned list.

Table 3.1

Description of the Schools that Participated in the Study

Schools/ Criteria	School 1	School 2	School 3	School 4	School 5	School 6	School 7	School 8
1	high school similar	high school similar	high school	high school	high school	high school	high school	high school
2	German	German	German	German	German	German	international	international
3	co-ed	co-ed	co-ed	co-ed	co-ed	co-ed	co-ed	co-ed
4	boarding and day private	boarding private	boarding and day public	boarding private	boarding private	day public	boarding private	boarding and day private
5	private	private	public	private	private	public	private	private
6	non-religious	non-religious	non-religious	non-religious	non-religious	non-religious	religious	religious

Parents' permissions were required for all students under 18 years of age in public schools. Each parent was sent a letter, which briefly explained the objectives of this study as well as assured them of confidentiality and anonymity.

The visits to all schools were scheduled in coordination with the schools' exam times, vacations and other activities, such as excursions etc. I visited each school at both measurement times.

3.1.2 Samples

Number of Participants at Both Measurement Times

At the first measurement time 1541 students (845 males, 695 females, 1 unknown) and 168 teachers (81 males, 84 females, 3 unknown) participated in the study. At the second measurement time 1278 students (698 males, 580 females) and 94 teachers (51 males, 41 females, 2 unknown) participated in the study. Before entering the acquired data I had



eliminated those questionnaires which obviously showed an attempt to sabotage the study. The sets of data at both measurement times were put together into a matched file in order to identify all those who participated at both times. The results demonstrated that 811 students (432 males, 379 females) filled in both questionnaires at Time 1 and Time 2.

This equals a drop-out rate of 47.4% of all students at the first measurement time and 36.5% of all students at the second measurement time. The main reason for this drop-out rate were irregularities in the schools' schedules, as well as excursions on the days of my visit. Tables 3.2 and 3.3 demonstrate an overview of the number of student and teacher data including the gender distribution.

Table 3.2

Number of Students and Teachers at Both Measurement Times

Time 1				Time 2			
Students		Teachers		Students		Teachers	
1541		168		1278		94	
Male	Female	Male	Female	Male	Female	Male	Female
845	695	81	84	698	580	51	41

Some students did not respond to the question of gender.

Table 3.3

Matched Data of Students and Teachers who Participated at Both Measurement Times

Students		Teachers	
811		55	
Male	Female	Male	Female
432	379	30	25

Characteristics of Participants at Both Measurement Times

Tables 3.4, 3.5, and 3.6 list the frequencies of demographic variables and other measured characteristics of both students and teachers at the two measurement times.



Table 3.4

Characteristics of Students at Both Measurement Times

Variables	Characteristics	Time 1	Time 2	Matched Data *
Gender	Female	695	580	379
	Male	845	698	432
	No information	1	0	0
School (total number of students in brackets)	PTI (91)	66	72	35
	KI (147)	139	89	57
	SIS (190)	114	133	61
	OSO (235)	205	179	117
	HL (164)	134	104	69
	LG (826)	518	357	193
	BFA (271)	266	253	200
	TIS (106)	99	91	79
Age	10	0	1	0
	11	5	5	0
	12	79	23	10
	13	168	123	66
	14	242	175	123
	15	236	223	125
	16	278	213	133
	17	243	211	153
	18	182	121	89
	19	74	131	80
	20	22	32	22
	21	10	7	7
	22	0	2	1
	No information	2	11	2
Class level	5	0	8	0
	6	0	12	1
	7	138	157	85
	8	226	198	135
	9	267	251	138
	10	303	242	160
	11	257	159	126
	12	217	149	102
	13	127	96	61
		No information	6	6
Nationality	German	1096	887	521
	Other	417	375	284
	No information	28	16	6
Boarding/ day student	Boarding	588	663	464
	Day	638	610	343
	No information	315	5	4
Language of questionnaire	German	1181	934	532
	English (+Engl. beginner)	344 (+16)	332 (+12)	267 (+12)
Religion	Catholic	174	139	88
	Protestant	279	249	158
	Christian (unspecified)	289	272	203
	Bahá'í	55	54	49
	None/Atheist	692	501	289
	Other	50	56	23
	No information	2	7	1
Faith in God	Yes	584	533	386
	Sometimes	247	181	98
	No	681	534	309
	No information	29	30	18

* Information based on second measurement time.



Table 3.5

Distribution of Girls and Boys who Participated per School, and their Class Levels

School	Time 1*		Time 2		Class levels that participated	Class levels that participated
	Girls	Boys	Girls	Boys		
PTI	12	54	14	58	7-10	5-10
KI	29	110	24	65	7-13	7-12
SIS	53	61	62	71	7-10	7-13
OSO	71	134	63	116	7-13	7-13
HL	41	93	29	75	7-13	7-12
LG	309	208	217	140	7-13	7-13
BFA	130	136	123	130	7-12	7-12
TIS	50	49	48	43	8-13	8-13
Total	695	845	580	698		

* no information was given in one case

Table 3.6

Characteristics of Teachers at Both Measurement Times

Variables	Characteristics	Time 1	Time 2	Matched Data *
Gender	Female	84	41	25
	Male	81	51	30
	No information	3	2	0
School (total number of teachers in brackets)	PTI (12)	3	6	2
	KI (42)	23	17	8
	SIS (24)	2	2	0
	OSO (55)	27	22	13
	HL (41)	20	8	7
	LG (53)	36	4	3
	BFA (53)	47	26	18
TIS (25)	10	9	4	
Age	Age range in years	21-71	24-66	24-66
Nationality	German	106	55	34
	Other	58	36	21
	No information	4	3	0
Language of questionnaire	German	111	59	33
	English	57	35	22
Religion	Catholic	18	16	10
	Protestant	52	32	16
	Christian (unspecified)	27	14	12
	Bahá'í	11	6	4
	None/Atheist	53	24	12
	Other	3	0	1
Faith in God	No information	4	2	0
	Yes	93	50	37
	Sometimes	18	11	2
	No	47	27	13
	No information	10	6	3

* Information based on second measurement time.



3.2 Measures

In the following section I will introduce the measures used for students and teachers at both measurement times. Table 3.7 displays a brief overview.

Table 3.7

Measures Used in the Study

	Time 1	Time 2
Students	Portraits Value Questionnaire 40 School Commitment Scale Duke University Religion Index Demographic Variables	Portraits Value Questionnaire 40 School Commitment Scale Duke University Religion Index Satisfaction-with-Life-Scale Academic Achievement Parents' Degree Demographic Variables
Teachers	Portraits Value Questionnaire 40 School Commitment Scale Duke University Religion Index Demographic Variables Educational Aims Questionnaire	Portraits Value Questionnaire 40 School Commitment Scale Duke University Religion Index Demographic Variables Educational Aims Questionnaire
Director	-	Semistandardised interview
School Programmes	Evaluation	-

I compiled a set of ten questionnaires: four student versions of the basic value questionnaire, four teacher versions of the basic value questionnaire, and two teacher versions of the educational aims questionnaire. The four student questionnaires included a female version in English and German and a male version in English and German; the four teacher questionnaires included a female and a male version in both English and German; the questionnaire measuring educational aims was available both in English and German, but required no gender specification. All questionnaires included several parts, which will be described in subsections 3.2.3 and 3.2.4 (see Appendix A1-A4).



3.2.1 Translation of the Questionnaires

Depending on the original language of the scales, all translations were performed based on translation/back-translation procedures from German into English and vice versa. The back-translations were done with the assistance of linguistic students and native English and German speakers.

3.2.2 Anonymity of the Questionnaires

The aim was to guarantee anonymity in the context of a longitudinal design, which called for the necessity to find a code that does not reveal the subject's identity, yet it can be reproduced by the subject after the duration of one school year. This was attained by using a code, which was determined by the subjects themselves. The code consisted of a letter-number combination of the capital letter of the subject's first name, the capital letter of the subject's surname, the capital letter of the subject's mother's first name, the capital letter of the subject's father's first name, and the day of the subject's birthday. The code had to be filled in at the top of every questionnaire.

3.2.3 Student Questionnaires

The four versions of the student questionnaire differed only in language and gender specific formulations (see 3.2.3.1). The student questionnaire at Time 1 included three main parts and a set of additional questions. After evaluating the results of Time 1, three additional sections and a few more factual questions were added to the questionnaire at Time 2 in order to complete the data. All sections as well as the additional questions were put together into one coherent questionnaire (see Appendix A1, A2), which will be described in the following subsections.



3.2.3.1 First Part: Portraits Value Questionnaire 40

The Portraits Value Questionnaire 40 (PVQ 40) has been designed by Schwartz (2000) with the purpose of measuring value priorities. I chose this instrument, because it was the latest revision of Schwartz' value measurement instruments with the advantages that it does not reveal the fact that values are being investigated, that it is easy to administer, and that it can be used for adolescents (Schwartz, 2000, 2001).

The PVQ 40 consists of 40 statements which are verbal portraits of different people, such as "It is important to him to be rich. He wants to have a lot of money and expensive things." or "He believes all the world's people should live in harmony. Promoting peace among all groups in the world is important to him." In the female version all portraits are formulated in the female form, such as "She likes surprises. It is important to her to have an exciting life." For each one of these statements the respondents are asked to answer the question "How much like you is this person?" on a six-point response scale ranging from "very much like me" to "not like me at all". The 40 items represent ten value priorities: Tradition, Conformity, Universalism, Benevolence, Security, Self-Direction, Hedonism, Stimulation, Power, and Achievement.

Originally the questions were in English. For the purpose of this study they were translated into German (see 3.2.1). I used the PVQ 40 at both measurement times. For further statistical analyses, I calculated the means of all items attributed to each scale (according to the Schwartz scoring key – see Appendix A5) and used these sum scales as the measures for the ten value priorities used in the theory. In my study, the ten scales yielded quite satisfactory Cronbach's alpha coefficients at both times, which will be displayed in Chapter 4.



3.2.3.2 Second Part: School Commitment

Based on Grässmann, Schultheiss, and Brunstein (1998) I developed a brief scale to measure School Commitment. The questions were designed in German and translated into English (see 3.2.1). The scale included six questions that covered two topics: positive emotional affiliation to the school and the learning process; positive appreciation of teachers' role and work. All questions had three answer options: Yes, Sometimes, or No.

For the first topic the following three questions were chosen:

- Do you enjoy going to school?
- Do you enjoy learning?
- Do you feel safe at school?

For the second topic the following three questions were chosen:

- Do you like your teachers?
- Are your teachers examples for you?
- Do you think your teachers are working hard?

The internal consistency of the whole scale resulted in $\alpha = .74$ for Time 1 and $\alpha = .73$ for Time 2. Hence, it was possible to treat the scale as one. I chose School Commitment as the overall topic of the questions. After recoding the responses in a way that “no” had the lowest numeric value and “yes” the highest, all further calculations used the means of the six items as the measure for School Commitment. I measured School Commitment at both measurement times.

3.2.3.3 Third Part: Duke University Religion Index

I selected the Duke University Religion Index (DUREL, Koenig, Parkerson, & Meador, 1999) as a measurement for religiosity, because it is brief (five items), comprehensive, and yet non-offensive. A further advantage of this scale is that it can be applied for members of different



religious groups, which was an important criterion due to the religious diversity within the samples of the study. Conceptually, DUREL measures three major dimensions of religiousness: organisational (OR), non-organisational (NOR), and intrinsic religiosity (IR). The first item of this scale measures OR. The question is “How often do you attend church or other religious meetings?” and provides six response options ranging from “more than once a week” to “never”. The second item measures NOR: “How often do you spend time in private religious activities, such as prayer, meditation, or Bible study?” Respondents can answer on a scale with six options ranging from “more than once a day” to “rarely or never”. The authors present no reliability data on the first two items.

The last three items measure IR and are formulated as statements that need to be confirmed or denied. These items are described as follows:

- In my life, I experience the presence of the Divine (i.e., God).
- My religious beliefs are what really lies behind my whole approach to life.
- I try hard to carry my religion over into all other dealings in life.

The respondents can answer on a scale with five options ranging from “definitely true of me” to “definitely not true”. The authors report a Cronbach’s alpha coefficient of $\alpha = .75$ for the last three items.

For further analyses, the answers were recoded to equal low religiosity with a low numeric value and high religiosity with a high numeric value. All items were z-standardised. Conceptually the DUREL is a five-item multidimensional scale, but effectively my data suggest a unidimensional scale, as the standardised Cronbach’s alpha coefficients resulting from my study were $\alpha = .96$ for Time 1 and $\alpha = .96$ for Time 2 across all five items. These high internal consistencies suggest that all items can be treated as one scale by using the means of all five items. Hence, the DUREL will further be treated as one scale measuring the



religiosity of students and teachers. Originally the questions were in English. For the purpose of this study they were translated into German (see 3.2.1). I measured religiosity at both measurement times.

3.2.3.4 Fourth Part: Satisfaction with Life

Among the various components of subjective well-being, the satisfaction-with-life-scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985) is narrowly focused to assess global life satisfaction. Life satisfaction refers to a cognitive-judgmental process. This instrument is suited to be used for different age groups. It consists of five statements, to which respondents are asked to indicate their degree of agreement, using a seven-point scale, ranging from “strongly disagree” to “strongly agree”. I reduced the seven-point response scale to a five-item response scale that still ranged from “strongly disagree” to “strongly agree”. Originally the scale was designed in English. For the purpose of this study it was translated into German (see 3.2.1). Satisfaction with Life was measured at Time 2 only. The scale includes the following five items:

- In most ways my life is close to my ideal.
- The conditions of my life are excellent.
- I am satisfied with my life.
- So far I have gotten the important things I want in life.
- If I could live my life over, I would change almost nothing.

The authors report a satisfying alpha coefficient of .87. The Cronbach’s alpha results from my set of data resulted in an internal consistency of $\alpha = .80$. For further statistical analyses, the means of the five items were used as the measure for Satisfaction with Life.



3.2.3.5 Fifth Part: Academic Achievement

At Time 2, I measured Academic Achievement. This score was based on four grades that the students were asked to fill in: the semester grade in Mathematics, and German (for German students) or English (for international students); last year's grade in Mathematics, and German or English respectively. The questions were designed in German and translated into English (see 3.2.1). After recoding the grades, analysis of the data at Time 2 showed significant high positive correlations of these four grades with each other (see Table 3.8). Higher numeric values of the grades stand for better results.

Table 3.8

Correlations of Academic Grades at Time 2 (N = 1160 to 1192)

	Semester grade Mathematics	Semester grade English/German	Last year's grade Mathematics
Semester grade English/German	.512**		
Last year's grade Mathematics	.628**	.417**	
Last year's grade English/German	.391**	.666**	.577**

** p < .01.

As different school systems use different grading methods, I z-standardised the grades subject by subject for each school separately. For further calculations, the means of these four z-standardised grades (per school) were used as the measure for Academic Achievement.

3.2.3.6 Sixth Part: Parents' Degree

I measured two themes related to socio-economic background. Firstly, the amount of books the students' parents have at home was measured with the help of a seven-point response scale with scopes ranging from "none" to "more than 500". Secondly, the students were asked to describe both their father's and their mother's educational degree by choosing one of the



three response options: no high school graduation, high school graduation, university degree. The questions were designed in German and translated into English (see 3.2.1). The items showed significant high positive correlations with each other (see Table 3.9). Hence, for further calculations the means of the mother's and the father's degree were used as the measure for Parent's Degree. The amount of books was no longer considered. The variable Parents' Degree was measured at Time 2 only.

Table 3.9

Correlations of Parents' Degree with Amount of Books at Time 2 (N = 1171 to 1194)

	Father's degree	Mother's degree
Amount of books	.294**	.273**
Father's degree		.560**

** p < .01.

3.2.3.7 Additional Questions

At both measurement times, I spread a few other basic questions between the different parts of the questionnaire. I asked the students about their gender, age, class level, duration of attendance at this particular school, nationality, career wish, religious affiliation, their faith in God, and whether they are boarding or day students. Not all of this additional information was used for further analyses. The questions were designed in German and translated into English (see 3.2.1).

3.2.3.8 Grouping of Schools

In an attempt to simplify my analyses, I tried to group the data of the eight schools into smaller subgroups. The general impression gained from the value profiles of the schools



suggested that this grouping could be possible due to the similarities that some schools seemed to have with each other. Further analyses with the help of ANOVAs with Post Hoc Scheffe Procedures demonstrated that from a statistical viewpoint no grouping of schools was justified, as across all value priorities, the schools were placed into different configurations of homogeneous subsets. Thus, in my statistical analyses I treated the eight schools separately.

3.2.4 Teacher Questionnaires

At both measurement times all teachers received two questionnaires: a female or male version of the values questionnaire, which was an amended version of the students' questionnaire, and a questionnaire measuring their educational aims. Similar recoding and scaling procedures apply as for the students' questionnaires. Both questionnaires existed in English and German and were identical at both measurement times (see Appendix A3 and A4 for complete versions of both questionnaires).

3.2.4.1 Values Questionnaire (Teacher Version)

The values questionnaire included the Portraits Value Questionnaire 40, the Duke University Religion Index, and an amended version of the School Commitment scale with the following six questions:

- Do you enjoy going to school?
- Do you enjoy teaching?
- Do you feel safe at school?
- Do you like your students?
- Do you think your students see you as an example?
- Do you think your students realise how hard you work?



The internal consistencies of the PVQ 40 scales will be reported in chapter 4. The Cronbach's alpha coefficients for the Religiosity scale were $\alpha = .97$ at Time 1 and $\alpha = .98$ at Time 2. The Cronbach's alpha coefficients for the School Commitment scale were $\alpha = .69$ at Time 1 and $\alpha = .70$ at Time 2.

Furthermore, the questionnaire asked about gender, age, teaching subjects, duration of teaching at this specific school, duration of teaching experience, nationality, Faith in God, and religious affiliation. Again, not all of this information was used for further analyses. For the purpose of anonymity, a code had to be filled in at the top of every questionnaire (see 3.2.2).

3.2.4.2 Educational Aims Questionnaire

This questionnaire was originally designed by Mischo and Rheinberg (1995) with the purpose of measuring the desirability and realisation of educational aims. In the first part, the respondents were presented with 38 educational aims, such as "To observe the lesson plan" or "To promote self-esteem in the student" and were asked to mark how desirable they find each one of these aims on a five-point scale ranging from "not at all" to "extremely". The second part includes the same 38 educational aims with the request to mark how successful they are with the realisation of each one of these aims during their lessons. Again, the answer options ranged from "not at all" to "extremely" on a five-point scale.

The original version of the questionnaire existed in German and was translated into English (see 3.2.1). I added a few questions on the cover page, where the teachers once again were asked to fill in the code, their gender, age, and duration of teaching experience, as well as their religious affiliation.



3.2.5 Interviews with Directors

Based on the questions of my thesis, I prepared a semistandardised interview for the directors which aimed at exploring the main goals of their school, the educational and academic programme, and the values held by both the teachers and the director. The questions investigated the director's perspective on value education in his or her school, and how this is implemented on the teacher and the student level. I interviewed all directors at my second visit. Each interview lasted about 25 minutes. I tape recorded the interviews and later transcribed all answers according to a standardised scheme (see Appendix A6, A7).

3.2.6 Evaluation of School Programmes

During my first visit to the schools, I collected all materials provided by these schools regarding their aims, their philosophy, and their programmes. Furthermore, I asked the staff and the director for some additional explanation of some of the issues mentioned above.

3.3 Procedure of Data Collection

3.3.1 Administering the Questionnaires

I visited all schools for the first time at the beginning of the school year in September 2000, and for the second time at the end of the school year in June 2001. In some schools it was possible to organise a school assembly and administer the questionnaires to all students and teachers at the same time, however, in other schools the students needed to be visited class by class. In very few cases the teachers administered the questionnaires in my absence. The clear instructions given in these questionnaires allowed them to be administered by another person than myself. The teachers' questionnaires were mostly handed out by myself during the



teachers' meetings and then immediately collected. In some cases, the teachers asked for the questionnaires to be collected by the director and sent to me by mail at a later date.

3.3.2 Duration of Data Collection

Depending on the age of the students it took 15 to 35 minutes to fill in the questionnaire. The younger students needed more time than the older students. The teachers filled in two questionnaires and needed an average of 30 minutes for both questionnaires.

3.4 Statistical Analyses

I analysed all the data gathered from the questionnaires with SPSS 9.0. The following statistical procedures were applied:

Cronbach's Alpha Coefficient

The Cronbach's alpha coefficient is calculated as a measure for the internal consistency of all items within each of the sum scales. The assessment of scale reliability is based on the correlations between the individual items or measurements that make up the scale, relative to the variances of the items.

Pearson Correlation

Pearson correlation determines the extent to which values of two variables are "proportional" to each other. The correlation coefficient r represents the linear relationship between two variables, but does not determine a causal relation. In order to evaluate the correlation between variables, it is important to know its direction (positive or negative), its "strength"



(value) as well as the significance of the correlation. In my analyses all tests of significance were two-tailed.

Partial correlations are conducted to describe the linear relationship between two variables while controlling for the effects of one or more additional variables. The retest-reliability of a scale across two measurement times can also be determined with the Pearson correlation.

T-Test, Analysis of Variance, and Post Hoc Scheffe Test

The t -test is a method used to evaluate the differences in means between two groups, whereas the purpose of the Analysis of Variance (ANOVA) is to test for significant differences in means between more than two groups. After obtaining a statistically significant F -test from the ANOVA, it is necessary to find out which of the means contributed to the effect, i.e., which groups are particularly different from each other. The Post Hoc Scheffe procedure performs simultaneous joint pairwise comparisons for all possible pairwise combinations of means.

General Linear Model for Repeated Measures

The General Linear Model (GLM) for Repeated Measures is a procedure that provides an ANOVA when the same measurement is made several times on each subject. The amount of repeated measurements is defined through the Within-Subjects Factor; in the case of two measurements this factor could be called Time and would include two levels. The Within-Subjects Variables are determined by the dependent variables measured at both measurement times. Furthermore, the Between-Subjects Factors divide the population into groups. They are independent variables, such as age, gender, school types, etc.



Multiple Regression Analysis

The purpose of Multiple Regression analyses is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable. The Beta coefficients represent the independent contributions of each independent variable to the prediction of the dependent variable. The R^2 value is an indicator of how well the model fits the data, i.e., how much of the variance is explained. For the analyses in this study I mainly used Hierarchical analyses. The choice of a particular sequence (hierarchy) in which the independent variables are entered is made in advance based on the purpose and logic of the research. Some of the basic principles underlying the hierarchical order for entry are causal priority and the removal of confounding or spurious relationships, research relevance, and structural properties of the research factors being studied. The independent variables are entered either cumulatively or with sets of variables. The R^2 and partial coefficients are determined as each block joins the others; the R^2 increments are identified. Because with each new block the R^2 increases, the ordered series of R^2 s in Hierarchical analyses is called the cumulative R^2 series.

A special case of the Hierarchical model is the analysis of change (Cohen & Cohen, 1983). Under circumstances in which pre and post values are available on some variables, and the researcher wishes to determine whether and to what extent treatment of other variables are associated with change, the postscore may be used as the dependent variable, with prescore entered as the first independent variable in the hierarchy. When subsequent independent variables are entered into the equation their partial correlations will reflect their relationship with postscores from which prescore influence has been removed. Hence, this method is an analysis of residual variance.



Cross-Lagged Panel Design

Cross-Lagged Panel Designs (Kenny, 1975, 1979) using data from a longitudinal panel include observations from n cases at x time points or waves. At each time point, observations on one or more variables are obtained. The simplest design is the two-wave, two-variable longitudinal panel. Cross-lagged correlations are used to identify causal effects. For two variables, X and Y , the causal influences are represented by the Regression parameters of the path from a prior X to a later Y and from a prior Y to a later X .

Factor Analysis

The main applications of factor analytic techniques are firstly, to reduce the number of variables and, secondly, to detect structure in the relationships between variables, that is to classify variables. Various rotational strategies are used for this purpose. The goal of these strategies is to obtain a clear pattern of loadings, i.e., factors that are somehow clearly marked by high loadings for some variables and low loadings for others. With the help of the variance maximising (varimax) rotation technique, a rotation is to be found that maximises the variance on the new axes. A pattern of loadings shall be obtained on each factor which is as diverse as possible, and therefore allows easier interpretation.

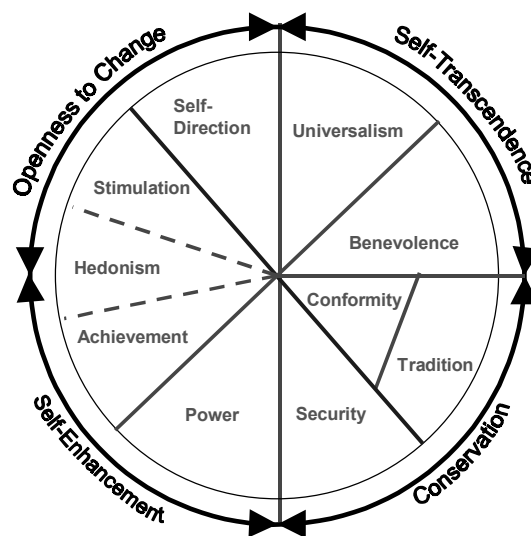
Multidimensional Scaling

The Multidimensional Scaling (MDS) technique (Borg, 1981) represents items as points in a multidimensional space in such wise that the distances between the points reflect the interrelations among the items. In general, MDS attempts to arrange variables in a space with a particular number of dimensions in order to reproduce the observed distances or similarities the items have with each other. It is a particularly suited procedure for assessing the fit of data to theories that postulate, that the constructs of interest are arrayed on a continuum in the



space and ordered in a specified manner. The goodness-of-fit measure (stress value) is used to evaluate how well a particular configuration reproduces the observed distance matrix. Further details of the procedures used for this set of data will be described in chapter 4.

4. Results



“Our mind is capable of passing beyond the dividing line we have drawn for it. Beyond the pairs of opposites of which the world consists, other, new insights begin.”

Hermann Hesse
(1877 - 1962)



Overview

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The following is the report of the results corresponding with the ten questions of interest. The first seven sections present the results from the analyses of students data. For the cross-sectional analyses, I used the two groups of data for Time 1 ($N = 1541$) and Time 2 ($N = 1278$). For the longitudinal analyses the calculations were based on the set of matched data ($N = 811$). In the final three sections I will describe the teachers' data, partly in connection with the students' data.



4.1 Question 1

Can the *Universal Structure of Human Values* be Replicated in a Student Sample?

This first section describes the results of the replication of Schwartz' (1992) theoretical structure of human values. As Schwartz used Multidimensional Scaling as the method of analysis, I will first briefly explain this technique, and then use it to investigate whether the data of my sample reflect his theoretical structure of value priorities. I will then describe the Pearson correlation coefficients between the different value priorities.

4.1.1 Replicating Schwartz' Theoretical Structure of Value Priorities with a Multidimensional Scaling Technique

4.1.1.1 Brief Explanation of the Procedure

In order to measure the theoretically postulated structure of the ten value priorities, Schwartz (1992) used the statistical procedure "Smallest Space Analysis" (SSA; Borg, 1981; Borg & Shye, 1993; Guttman, 1968) to analyse the inter-correlation matrix of Pearson correlations between the importance ratings of the values of his samples.

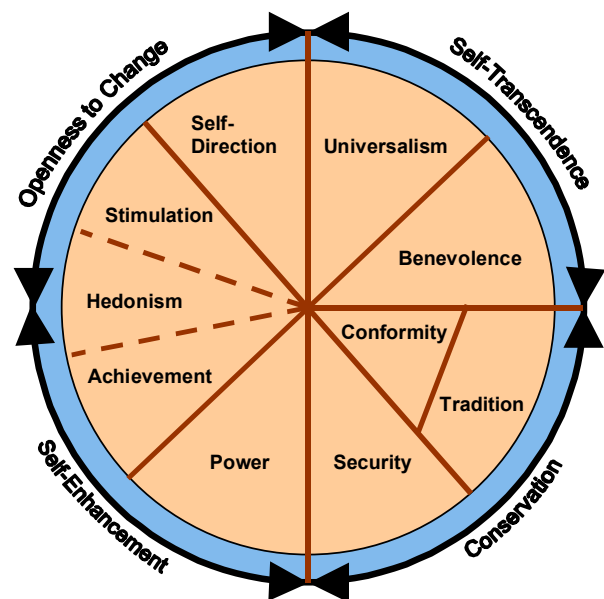
SSA is one of the many types of non-metric multidimensional scaling (MDS) techniques for the structural analysis of similarity data. It is called non-metric, because it assumes that the data are measured on an ordinal level, i.e., based on the rank position of similarity. This technique represents the values as points in multidimensional space such that the distances between the points reflect the empirical relations among values as measured by the correlations between their importance ratings. The greater the conceptual similarity between two values, the more related they should be empirically, and hence, the closer their locations should be in the multidimensional space. To interpret the SSA, Schwartz (1992) used the



“configurational verification” approach (Davison, 1983) to examine whether the items intended to measure each value priority form separate regions in the space, and whether these regions are located relative to one another according to the hypothesised relations of conflict and compatibility described in Figure 4.1. Dimensionality refers to the number of directions

(i.e., coordinate axes) needed to locate a particular point in the configuration. The amount of dimensions is determined by the Stress-value which ranges from 0 to 1 and determines how well a chosen configuration fits the data. If the stress value is low the configuration fits the data well, and therefore, the chosen amount of dimensions can be kept. I will follow the solution selected by Schwartz, which is two-dimensional with the axes *Openness to Change* versus *Conservation*, and *Self-Enhancement* versus *Self-Transcendence*.

Figure 4.1
Theoretical Model of the Universal Structure of Value Priorities (Schwartz, 1992)



4.1.1.2 MDS instead of Factor or Cluster Analysis

Neither factor nor cluster analysis can yield the same results as the multidimensional scaling techniques. Factor analysis attempts to identify underlying variables or factors that explain the pattern of correlations within a set of observed variables. It is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. Cluster analysis attempts to identify relatively homogeneous groups of cases based on selected characteristics. The “configurational verification” approach,



with which the SSA is interpreted, however, is particularly suited to assess the fit of data to theories which postulate, that the constructs of interest are arrayed on a continuum in the space and ordered in a specified manner. This technique does not attempt to reduce or classify data, but rather creates a spatial representation of the data.

In order to examine the consequences of performing a cluster analysis over MDS fitted data, I conducted a K-Means Cluster Analysis with the aim of identifying eight separate clusters that represent the schools based on their value profiles. Crosstabulation, however, did not yield a constellation of clusters which would replicate the distribution of the schools. There was no consistent pattern along the clusters.

4.1.1.3 Replication of the Schwartz Theory with the Data of this Study

For the MDS analysis of my data I used the SPSS procedure *ALSCAL* to identify their configuration. This procedure is a Multidimensional Scaling technique, which uses the procedure *PROXIMITIES* to produce a transformed correlation matrix as input for the analysis. Following Schwartz' (1992) method, I chose a two-dimensional solution to replicate the postulated structure of the model. In order to identify the value priorities and their order along the continuum, I had to divide the resulting configuration of points by drawing partition lines. These partition lines separate the items into wedgelike regions. They may be straight or curved, as long as they yield regions having continuous boundaries that do not intersect with the boundaries of other regions. To determine where to place the partition lines between the regions, I first drew boundary lines which connected the values located at the outer edges of each region, avoiding any overlap of region boundaries (Lingoes, 1977, 1981). Then I placed the partition lines between these boundaries and used the criteria suggested by Schwartz to decide whether a set of value points formed a bounded region confirming the existence of a given value priority. The region must include (1) minimum 60% of the values postulated a



priori to constitute that value priority, and (2) maximum 33% of the values postulated to constitute any other single value priority. If these criteria are not met, a region combining two value priorities is to be formed, which contains at least 50% of the values postulated to constitute each value priority. If none of these criteria are met, the existence of the value priority must be taken as disconfirmed.

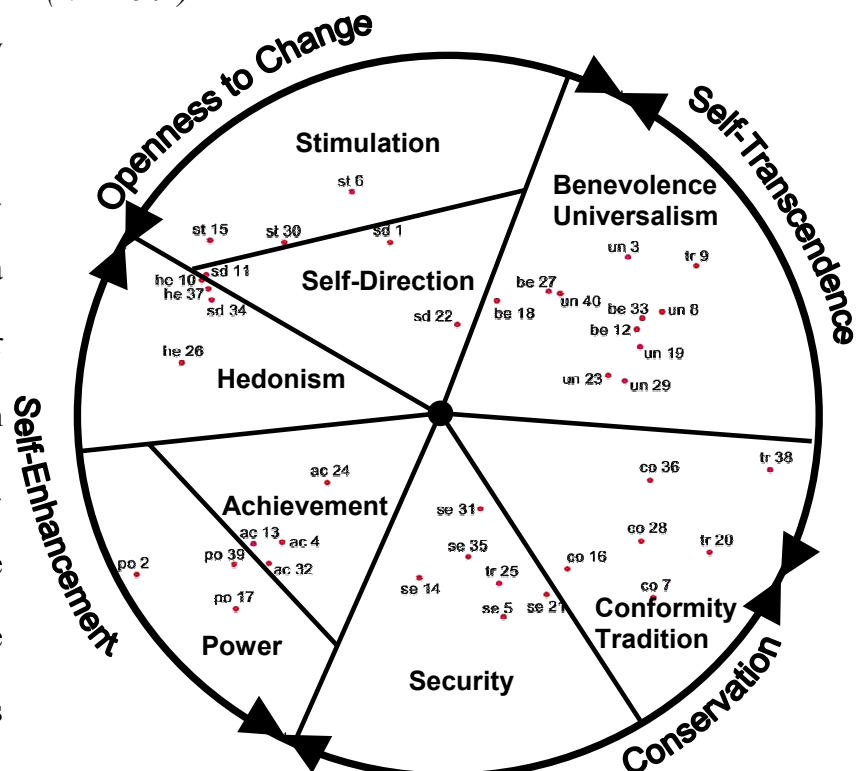
4.1.1.4 Confirmation of the Theoretical Structure Postulated by Schwartz (1992)

As shown in Figure 4.2 the two-dimensional solution yielded eight distinct regions for the ten value priorities at Time 1. Two value priorities were combined to form one region twice. 37 of the 40 items emerged in the region of the value priority they were intended to represent. The remaining three items (Nr. 9, 25, 34) were located in a region adjacent to their expected value priority, a degree of deviation consistent with error variation (Schwartz et al., 2001). At Time 2 (see Figure 4.3) the two-dimensional solution yielded ten distinct regions for the ten value priorities. Again, 37 of the 40 items emerged in the region of the value priority they were intended to represent.

The remaining three items (Nr. 3, 8, 25) were located in a region adjacent to their expected value priority, an acceptable degree of deviation. Hence, the observed structure of relations among the value priorities essentially resembles

Figure 4.2

Multidimensional Scaling Solution Student Sample Time 1 (N = 1541)



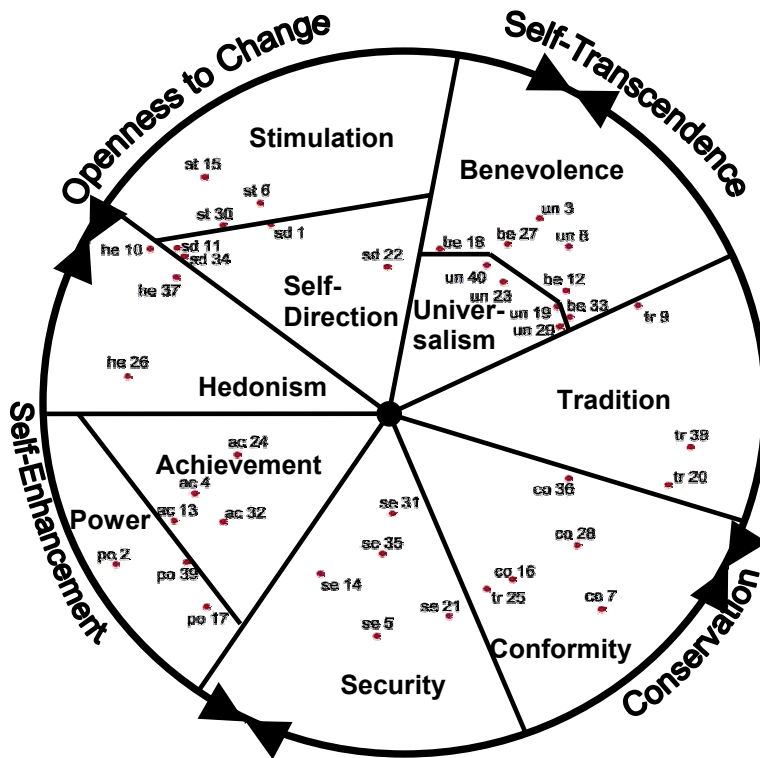


Figure 4.3
Multidimensional Scaling Solution Student Sample Time 2
($N = 1278$)

To explore the stability of the MDS results, I additionally analysed the multidimensional scaling solutions for both measurement times for which I used the combined set of data, which included only those students who had participated at both times ($N = 811$). At both measurement times the results resembled the original structure postulated by Schwartz (1992). According to his criteria, at both times two neighbouring value priorities were combined in two cases (Benevolence with Universalism, and Self-Direction with Stimulation). Further, at Time 1 Conformity and Tradition were combined.

These results demonstrate that Schwartz' (1992) theoretical structure also applied for the student samples of my study, measured with the Portraits Value Questionnaire 40.

priorities were combined in two cases.

In sum, it can be concluded that Schwartz' (1992) theoretical structure could be confirmed with the data of my samples at both measurement times.



4.1.2 Correlations of Schwartz Value Priorities

In this subsection I will demonstrate the Pearson correlations of the ten value priorities at both measurement times. Furthermore, I will display the Cronbach's alpha coefficients for each scale at both measurement times (see Table 4.1). With a few exceptions, the internal consistency coefficients demonstrated satisfactory results. Many of the scales resulted in reliability coefficients equal or above .7 at both measurement times. The Security and Stimulation alphas were above .6, whereas Tradition and Self-Direction had even lower alphas at Time 1, both of which slightly rose at the second measurement time. The Pearson correlation coefficients indicated a substantial number of significant correlations. An interesting pattern evolved when analysing those correlations which were not only significantly positive, but also had rather high coefficients ($r > .4$). This examination showed that a few scales were very closely related to each other at both measurement times. They formed the following four groups: Security, Conformity, and Tradition; Benevolence, and Universalism; Self-Direction, Stimulation, and Hedonism; Achievement and Power. Furthermore, Security, Conformity, and Tradition related positively to Benevolence and Universalism, while Self-Direction, Stimulation, and Hedonism related positively to Achievement and Power. This pattern perfectly reflected Schwartz' (1992) structure of compatibilities and conflicts (see Figure 4.1).

An analysis of the individual scales showed the following significant effects: At both times Security positively correlated with all scales except for Stimulation. Conformity related negatively to Stimulation and Hedonism and positively with all other scales, except for Self-Direction and Power, with which there were no significant relations at all. For both times this pattern was identical. At these times, Tradition positively related to Security, Conformity, Benevolence, and Universalism, and negatively to Self-Direction, Hedonism, Achievement, and Power. In addition, Tradition related negatively to Stimulation at Time 2. Benevolence related negatively only to Power, and positively to all other scales at both times, except for



Achievement at Time 2, with which there were no significant relations at all. Universalism showed identical patterns at both measurement times. There were significant positive relations

Table 4.1

Pearson Correlations of Schwartz Value Priorities at Time 1 and Time 2, Including Cronbach's Alpha Coefficients of the Scales at Time 1 and Time 2

α I α II	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
SE	(.62) (.62)	.48**	.24**	.23**	.37**	.17**	-.04	.11**	.36**	.20**
CO	.44**	(.72) (.73)	.54**	.37**	.34**	.00	-.10**	-.16**	.17**	.01
TR	.22**	.54**	(.45) (.51)	.31**	.31**	-.07**	-.03	-.23**	-.09**	-.15**
BE	.19**	.35**	.33**	(.70) (.71)	.49**	.26**	.17**	.09**	.06*	-.12**
UN	.28**	.28**	.32**	.50**	(.78) (.77)	.28**	.09**	.00	.05	-.16**
SD	.16**	-.04	-.10**	.28**	.28**	(.54) (.59)	.39**	.31**	.31**	.17**
ST	.02	-.12**	-.07*	.21**	.13**	.43**	(.66) (.67)	.44**	.18**	.10**
HE	.14**	-.20**	-.27**	.08**	.04	.37**	.50**	(.71) (.75)	.29**	.24**
AC	.39**	.12**	-.13**	.05	.05	.38**	.22**	.34**	(.77) (.79)	.52**
PO	.28**	.04	-.13**	-.15**	-.15**	.20**	.15**	.24**	.56**	(.70) (.71)

** $p < .01$. Standardised Cronbach's alpha coefficients directly above and below the diagonal line in brackets.
* $p < .05$. Above the diagonal line student data Time 1 ($N = 1531$ to 1537).
Below the diagonal line student data Time 2 ($N = 1274$ to 1278).



to all scales except for Hedonism and Achievement; the only negative correlation was between Universalism and Power. Self-Direction also showed identical patterns at both measurement times. Self-Direction correlated negatively with Tradition and positively with all other scales. No correlations were found between Self-Direction and Conformity. Stimulation at both times correlated positively with Benevolence, Universalism, Self-Direction, Hedonism, Achievement, and Power, and negatively with Conformity. Additionally, at Time 2, Stimulation negatively related to Tradition. At both times Hedonism correlated negatively with Conformity and Tradition, and positively with all other scales except for Universalism, with which there were no significant relations at all. At both times Achievement correlated negatively with Tradition. All other scales had positive correlations with Achievement, except for Universalism at both times and Benevolence at Time 2. The only scale that had no significant relation to Power at both times was Conformity. Tradition, Benevolence, and Universalism showed significant negative correlations with Power, whereas Security, Self-Direction, Stimulation, Hedonism, and Achievement related positively to Power. Both times showed identical patterns.

In summary, the Pearson correlations also reflected a similar pattern to the MDS solution.

Summary

Schwartz' (1992) theoretical model of a *Universal Structure of Human Values* was replicated with the data of the student samples at both measurement times. With a Multidimensional Scaling technique, this result was obtained for the cross-sectional, as well as the longitudinal data.



4.2 Question 2

Different Schools - Different Value Priorities?

I would like to begin this section by summarising my evaluation of the aims and programmes of the eight schools which participated in the study. It would be helpful for the reader to bear in mind the various characteristics of each school, in order to better comprehend the following statistical results. Upon introducing these schools, I will demonstrate the results of the statistical analyses, in which the different schools were compared to each other.

4.2.1 Introduction of Schools and their Programmes

In the following section, I will summarise the aims, the educational philosophy, and some aspects of the organisation of each of the eight schools. These summaries are based on the materials provided by the schools, as well as my own impressions and conversations with the directors and staff. For the formal characteristics of the schools see Method section 3.1. After an overview (see Table 4.2) I will outline the outstanding aspects of the eight schools.

Table 4.2

Brief Overview of Characteristics of the Eight Schools

School	Public/ private	Boarding/ day students	Religious/ non-religious	Main principles and values	Amount of high school students
1	private	both	non-religious	order, social skills, autonomy, responsibility	91
2	private	boarding	non-religious	“rehabilitation” of academically weak students	147
3	public	both	non-religious	music, arts, sports	190
4	private	boarding	non-religious	democracy; liberal, and humanistic values	235
5	private	boarding	non-religious	high academic standard, self-confidence, good behaviour	164
6	public	day	non-religious	good academic knowledge, cultural openness, tolerance	826
7	private	boarding	religious	biblical values, high moral standards	271
8	private	both	religious	religious tolerance, world peace, virtues, moral values	106



4.2.1.1 School 1

School 1 is a private boarding school, which also accepts day students and was founded in the year 1999. It is located in Hessen, Germany, and the language of instruction is German. The high school classes are up to grade 10 and reach a maximal class size of 20. School 1 is a non-religious school with strong educational principles based on a holistic concept. The balance of academic and personal development is very important to the school.

The aim is to promote both the social skills, as well as the individual capabilities of every student. Upon graduating from this school, the students should be capable of making mature and sound decisions, and be able to conduct their lives in such wise that they can take advantage of their academic knowledge for the achievement of higher goals and aspirations. A strong emphasis is laid on the advancement of individual capacities and talents. Tolerance and independence are promoted. The following key qualities are emphasised in their training: autonomy, ability to work in teams, creativity, and responsibility. The students are supervised in the afternoons to complete their homework and scholastic tasks. Their academic achievement is regularly evaluated, and feedback is given to the parents.

The school has very clear rules on violence and drugs, and a thoroughly elaborated system of consequences. They predominantly use positive reinforcement strategies to foster correct behaviour; punishments are given for inappropriate behaviour. A strong emphasis lies on the development of “internal” and external orderliness.

4.2.1.2 School 2

School 2 is a private boarding school founded in the year 1961. It is a non-religious school, which mainly focuses on academic achievements. It is located in Baden-Württemberg, Germany; the language of instruction is German. School 2 considers itself as a “rehabilitation” institution, with the purpose of reintegrating academically weak students into



the public school system. It attempts to prove to the students that learning can be fun. Small class size (maximum eight students per class) and “silence” time after every class where students are supposed to quietly review the lesson again, constitute the foundation of the school’s academic concept. Supervision of homework and other academic advancement programmes are part of the regular school day. School 2 offers a strong musical and artistic programme, as well as practical courses such as cooking and handicraft.

4.2.1.3 School 3

School 3 is a public boarding school, which includes day students and was founded in the year 1922 by the reform educator Wilhelm Blume. The school follows the general curriculum of the state’s Ministry of Education. School 3 is a non-religious school, which is located in Berlin, Germany; the language of instruction is German.

The aim is to promote musical, artistic, and water sport skills. The school strives for a high academic standard in their high school diploma compared to the state standard. It offers courses for handicraft, cooking, and drama, as well as a philosophical discussion forum.

4.2.1.4 School 4

School 4 is a private boarding school, which was founded in the year 1898 by the reform educator Paul Geheeb. It is located in Hessen, Germany; the language of instruction is German. School 4 is a non-religious school, which conceptually follows the educational system of the “Landerziehungsheime” (LEH, Educational institutions in the country side). This structure is upheld by approximately 20 boarding schools in Germany, as it combines a holistic approach to education with a well elaborated framework of how to organise the school and the boarding situation. The distinct aspect of LEHs is that they consider themselves as “educational” schools as opposed to “academic” schools. Furthermore, there is



a very strong emphasis on creating a family-like atmosphere with all staff members functioning both as teachers and educators. There are eight to ten students in one family unit, who live together with one teacher/educator. These family units organise common social events and excursions, and sit together at meal times. The LEHs are all located in the country side in order to protect the students from the negative influences of the city. The guiding principle of education in School 4 can best be described with a quote by the founder:

“Become who you are, transform into this unique, singular, and distinct being that is already fundamentally established within you.” (Paul Geheeb, 1870-1961)

School 4 provides the opportunity of a new beginning for all students who want to rediscover their opportunities in life. Intellectual challenges go hand in hand with the promotion of artistic and technical talents. In addition, the independent and unique identity of every student is developed without rigid external guidance. Democracy is considered a very high value. A strong emphasis lies on the community, which is predominated by an absence of hierarchy and power. This school promotes an atmosphere of equality, freedom, and trust combined with a sense of commitment in all personal relationships. It is expected that the students not only perform well academically, but also acquire civil virtues, such as generosity, sensitivity, and fellowship.

At School 4, students have the possibility to attain different forms of school diplomas. Even practical and technical courses can be attended and studied. In addition, it offers many handicraft, artistic and musical programmes. Certain school services are obligatory, such as serving meals or collecting garbage on the school grounds. School 4 has an international student exchange programme. All teachers and representatives of each class must attend the daily tea conference to discuss daily issues and existing problems. There is a general school assembly two or three times per year, in which major issues and new developments are discussed.



On a voluntary basis, all students can commit themselves to a social service project for a certain amount of time. The services can be rendered in psychiatric hospitals, homes for refugees, community institutions, or by carrying out jobs that need to be done within the school community, such as supervising the reception desk, manning the tea house, driving the younger students to certain destinations or supervising their homework.

4.2.1.5 School 5

School 5 is a private boarding school, which was founded in the year 1898 by the reform educator Hermann Lietz. It is located in Hessen, Germany; the language of instruction is German. School 5 is a non-religious school, which also conceptually follows the educational system of the “Landerziehungsheime” (see School 4). This school is divided into two parts for the older and the younger students. For reasons of simplicity in this study, both parts of the school are dealt with jointly.

School 5 demands a very high academic and behaviour standard; it emphasises tidiness, courtesy, and good behaviour. Most of the students come from a very high social and economic background. 15-20% are supported by the state. The school aims at training the students to grow up with confidence, courage, and good academic performance. The teachers should function as examples on a moral, mental, and physical level. The class size is a maximum of 15 students to ensure focussed learning.

School 5 offers applied ecology and a practical economy course. Furthermore, they have an international student exchange programme. All students are obliged to attend practical handicraft courses, as well as to complete practical jobs, such as supervision of the library or snack preparation. The younger students have the option of attending orthographic and reading training programmes. Once a week there is a school assembly, which is obligatory for all students. These assemblies originally were aimed at conveying ethical and moral



principles. Today, they are means of teaching general information by offering concerts, dramatic performances, lectures, and discussion panels. Religious education is one of the subjects in the curriculum, but there is no active attempt to promote religious education in the every day life of the students. The school has very clear rules regarding drugs and alcohol with a consistently applied punishment system that includes expulsion.

4.2.1.6 School 6

School 6 is a non-religious public high school with day students only. It is located in Brandenburg, Germany; the language of instruction is German. School 6 was restructured in the year 1991.

The aim is to prepare the students for a working life in a prospective unifying Europe. In addition to conveying sound academic knowledge, the school attempts to promote social skills, tolerance, cultural openness, and responsibility. The students are expected to demonstrate the willingness to perform academically, the courage to be autonomous, and the ability to function in a team.

Since 1998/1999 the school has been part of a pilot project in which the younger students attend a course called *Life Skills, Ethics, Religion*. This course aims at teaching general life skills, values and norms, and general knowledge about the different existing religions. Furthermore, the school actively participates in a European exchange project, which aims at promoting cultural awareness and tolerance.

4.2.1.7 School 7

School 7 is a private international boarding school with day students; it was founded in the year 1956. This school is located in Baden-Württemberg, Germany; the language of



instruction is English. It is aimed at Protestant Christians and mostly children of missionaries. The students represent around 15 nationalities.

The philosophy of the school is based on Protestant Christian education principles with the purpose of promoting a sound Christian identity. The scholastic programme of the school is based on the values and principles of the Bible, and it strives to help the students “unfold their full potential academically, spiritually, and socially”.

To gain admittance to the graduation exams, a student must fulfil the following criteria:

- he/she must have a good character
- he/she must actively support the Christian principles of the school
- he/she must have completed social service projects of 150 hours, such as babysitting or missionary work abroad
- he/she must demonstrate satisfying academic results

School 7 attempts to enforce moral and ethical education through the example of the staff and the regular study of the Bible followed by discussions; the students attend regular Bible study classes and social projects. Other religions are taught in a very rudimentary manner and from a Christian perspective. All academic subjects in the curriculum are linked to the Bible. Church attendance, as well as meditation and prayer sessions are obligatory. In addition, the school offers training programmes for students with learning disabilities and provides psychotherapy. School 7 has very clear rules regarding drugs, alcohol, and sexual behaviour. The rules, as well as the consequences are based on biblical quotes and principles. The punishment system is grounded on the concept of sin and mercy.



4.2.1.8 School 8

School 8 is a private international boarding school including day students, which was founded in the year 1992. The students come from diverse social, cultural, and religious backgrounds. They represent around 30 nationalities. School 8 is located in Southern Bohemia, Czech Republic; the language of instruction is English.

The philosophy of the school is based on the teachings of the Bahá'í Faith. The guiding principle of education in this school can best be summarised with the following quote:

“Regard man as a mine rich in gems of inestimable value. Education can, alone, cause it to reveal its treasures, and enable mankind to benefit therefrom.” (Bahá'u'lláh, 1817 – 1892)

The aim is to promote values, such as respect, commitment, honesty, courage, steadfastness, compassion, equality, helpfulness, and the desire to be of service to the community and society as a whole. Furthermore, global thinking and a sense of responsibility for the environment are promoted. Appreciation for the diversity of different cultures and religions is advanced through the school's curriculum, as well as free time activities. Following holistic principles, School 8 attempts to empower the physical, intellectual, and spiritual nature of each student. The teachers are expected to teach moral values by being role models. Moral education is considered higher than academic education, nevertheless, the students are also expected to perform academically well and strive for excellence.

School 8 teaches World Religion, World Geography, World History, and Social Behaviour as part of the basic school curriculum. In addition, there are tutorial groups and weekly school assemblies with the purpose of teaching values, virtues, and general principles based on the school philosophy, such as tolerance, responsibility, and respect. In this forum, current problems of society are discussed with the entire school community. All students are obliged to attend weekly service projects in orphanages, senior homes, schools, or other local social institutions. Certain services offered to the school community, such as preparation of meals, cleaning, and supervision tasks during exam times are mandatory. The school organises



cultural evenings, dance and theatre workshops that address social issues, sport and artistic programmes, and psychological counselling. All students must wear school uniform in order to promote the concept of equality and justice. The dormitory requires attendance at prayer gatherings and discussion groups about spiritual and social topics.

The required *Code of Conduct* is based on 1. Honour, 2. Respect, 3. Responsibility, 4. Leadership Qualities, and 5. Commitment. School 8 has very clear rules regarding psychological and physical violence, drugs, alcohol, and sexual behaviour. Consequences of breaking the rules can include expulsion, suspension or practical chores.

4.2.2 Cross-Sectional Analyses of School¹ Differences

After presenting whether there are any significant differences between boarding and day students, I will demonstrate the differences between the value priorities that the students of the different schools uphold. I will treat the two measurement times separately and demonstrate the results in three different ways. Firstly, I will demonstrate the differences between the schools by displaying the school differences for each value priority. In the second step, I will display the mean differences of the value priorities school by school. These two ways of demonstration will clarify how the schools scored on each value, and how the values compared within each school. Finally, I will present a profile comparison where each individual school profile is depicted in relation to the average of all the schools involved.

4.2.2.1 Mean Differences between Boarding and Day Students

In order to evaluate whether there was a significant difference in the Schwartz value priorities between boarding and day students, I conducted Analyses of Variance (ANOVAs) for both

¹ In the following the term *school* is used to signify the students of the school; e.g., *school differences* refers to the differences between the students of the schools; *School 1* refers to the students of School 1.



measurement times. Only the students attending boarding schools (either as boarding or day students) were considered; the only day school was excluded in the calculations. The factor was the form of school attendance (boarding or day student) and the dependent variables were all value priorities. The results indicated that at both times Self-Direction was significantly higher for the boarding students. Furthermore, at Time 1 the boarding students scored higher on Power, and at Time 2 on Benevolence. However, these results were not replicated at both measurement times, hence, their reliability is low. See Table 4.3 for all significant results.

Table 4.3

Oneway Analyses of Variance for Boarding and Day Students on Schwartz Value Priorities

	<i>M</i> Time 1	<i>SD</i> Time 1	<i>M</i> Time 2	<i>SD</i> Time 2	<i>df</i> Time 1	<i>F</i> -value Time 1	<i>df</i> Time 2	<i>F</i> -value Time 2
Self-Direction					1, 704	5.57*	1, 914	4.51*
Boarding	4.93 (<i>n</i> = 586)	.66	4.82 (<i>n</i> = 660)	.72				
Day	4.77 (<i>n</i> = 120)	.75	4.70 (<i>n</i> = 256)	.77				
Power					1, 703	7.46**		
Boarding	3.37 (<i>n</i> = 585)	1.23						
Day	3.04 (<i>n</i> = 120)	1.25						
Benevolence							1, 915	5.80*
Boarding			4.68 (<i>n</i> = 661)	.82				
Day			4.53 (<i>n</i> = 256)	.80				

** $p < .01$.

* $p < .05$.

Scales are scored from 1 to 6.

Regression analyses of the Schwartz value priorities on the schools, carried out separately for each of the two groups, showed no consistent patterns which would suggest the need to distinguish boarding and day students when analysing the effects of schools on the change in value priorities. Hence, in the following analyses boarding and day students are joined.



4.2.2.2 Mean Differences between Schools for Each Value Priority

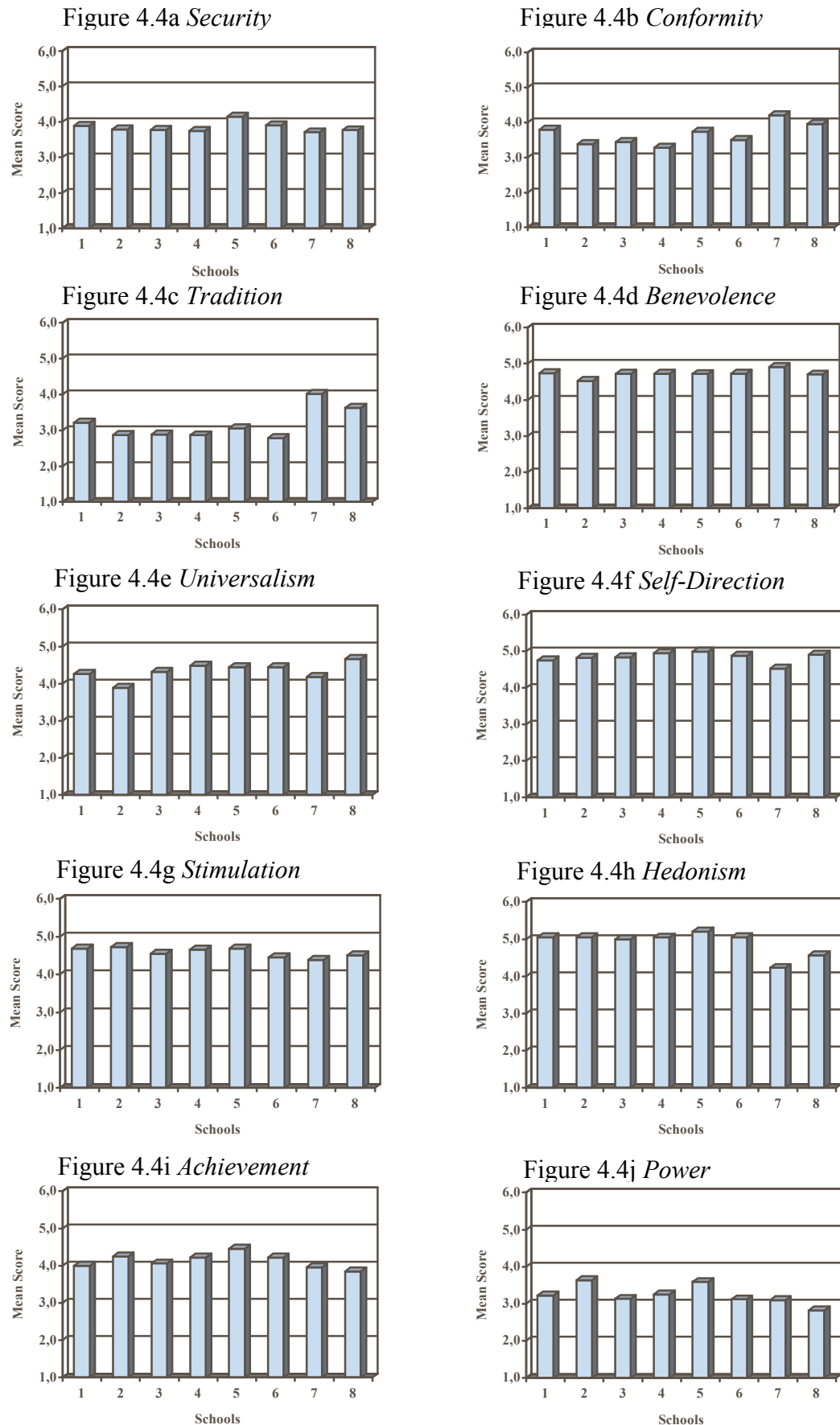
The Multivariate Tests using the schools as factor and the Schwartz value priorities as dependent variables yielded the following results: At Time 1, there were highly significant mean differences between the schools, with $F(7, 1517) = 13.59, p = .000$, and at Time 2, there were highly significant differences, with $F(7, 1264) = 10.13, p = .000$.

The results of the Oneway ANOVAs ($N = 1532$ to 1536) demonstrated that the school differences at Time 1 were significant for Stimulation at $p = .001$, Benevolence at $p = .002$, and for all other value priorities at $p = .000$ (see Figures 4.4 a-j). At Time 2 ($N = 1274$ to 1277) they were significant for Stimulation at $p = .016$, Security at $p = .029$, and for all other values at $p = .000$ (see Figures 4.5 a-j).



Figures 4.4 a-j

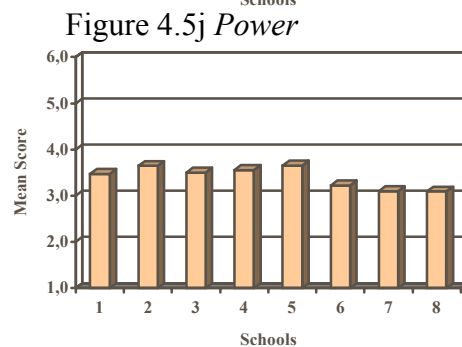
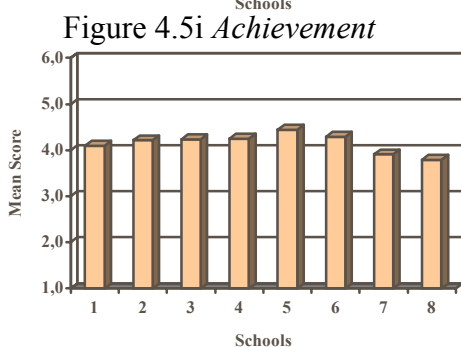
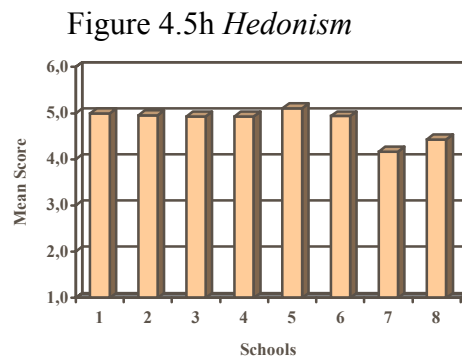
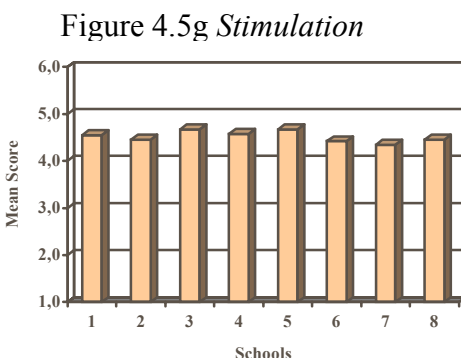
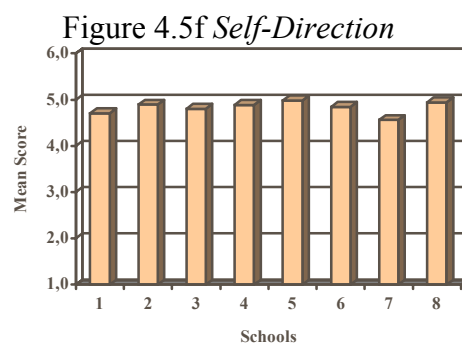
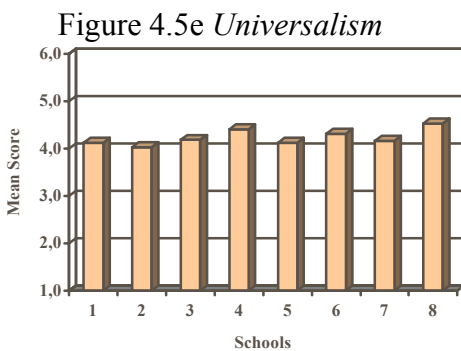
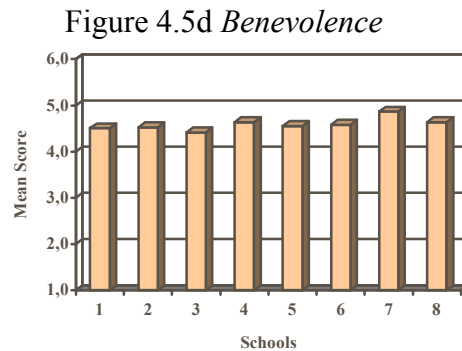
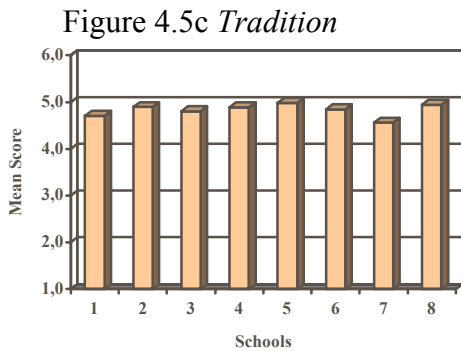
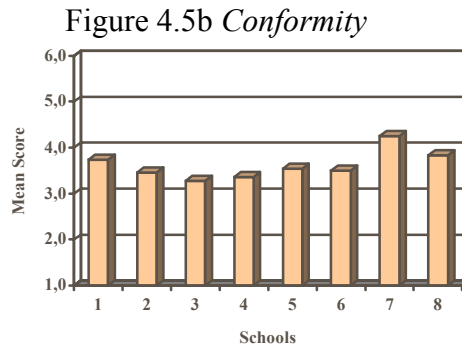
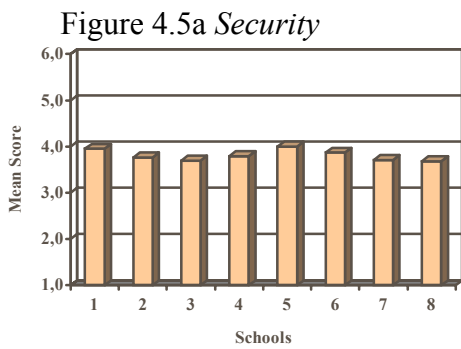
Mean Differences between Schools for Each Value Priority at Time 1 (N = 1541)





Figures 4.5 a-j

Mean Differences between Schools for Each Value Priority at Time 2 (N = 1278)





Post Hoc Tests with Scheffe procedure divided the schools into homogeneous subsets ($\alpha = .05$) for all value priorities. Table 4.4 displays those schools that were at the extreme edges of the lowest and the highest subsets at Time 1. A maximum of three schools will be named per group. Security resulted in two subsets, School 7 had the lowest and School 5 the highest mean. Conformity had four subsets, School 4 had the lowest and School 7 the highest mean. Tradition had three subsets, School 6 had the lowest and Schools 8 and 7 the highest means. Benevolence had two subsets, School 2 had the lowest and School 7 the highest mean. Universalism had three subsets, School 2 had the lowest and School 8 the highest mean. Self-Direction had two subsets, School 7 had the lowest mean and Schools 8, 4, and 5 had the highest. Stimulation had only one subset. Hedonism had two subsets, Schools 7 and 8 had the lowest means and all other schools joined in the second subset, with School 5 having the highest mean. Achievement had two subsets, Schools 8, 7, and 1 had the lowest means and School 5 the highest. Power had three subsets, School 8 had the lowest mean and School 2 the highest.



Table 4.4

Highest and Lowest Mean of Value Priority, and Number of Homogeneous Subsets ($\alpha = .05$) after Post Hoc Tests with Scheffe Procedure at Time 1

Value priority	Lowest M (School)	Highest M (School)	Number of subsets
Security	3.71 (7)	4.15 (5)	2
Conformity	3.27 (4)	4.20 (7)	4
Tradition	2.79 (6)	3.63 (8); 4.01 (7)	3
Benevolence	4.53 (2)	4.91 (7)	2
Universalism	3.89 (2)	4.66 (8)	3
Self-Direction	4.53 (7)	4.91 (8); 4.95 (4); 4.99 (5)	2
Stimulation	4.38 (7)	4.73 (2)	1
Hedonism	4.23 (7); 4.57 (8)	5.20 (5)	2
Achievement	3.84 (8); 3.96 (7); 4.00 (1)	4.46 (5)	2
Power	2.82 (8)	3.64 (2)	3

Scales are scored from 1 to 6.

Table 4.5 displays those schools that were at the extreme edges of the lowest and the highest subsets at Time 2. Again only a maximum of three schools will be named per group. Security had one subset only. Conformity had three subsets, School 3 and 4 had the lowest means and School 7 the highest. Tradition had three subsets, Schools 2, 6, and 3 had the lowest means and School 7 the highest. Benevolence had two subsets, School 3 had the lowest mean and School 7 the highest. Universalism had two subsets, School 2 had the lowest mean and School 8 the highest. Self-Direction had two subsets, School 7 had the lowest mean and Schools 8 and 5 the highest. Stimulation had one subset only. Hedonism had two subsets, Schools 7 and 8 had the lowest means and all other schools joined in the second subset, with School 5 having the highest mean. Achievement had three subsets, School 8 had the lowest mean and School 5 the highest. Power had two subsets, Schools 8 and 7 had the lowest means and Schools 2 and 5 the highest.



Table 4.5

Highest and Lowest Mean of Value Priority, and Number of Homogeneous Subsets ($\alpha = .05$) after Post Hoc Tests with Scheffe Procedure at Time 2

Value priority	Lowest M (School)	Highest M (School)	Number of subsets
Security	3.68 (7)	4.00 (5)	1
Conformity	3.28 (3); 3.36 (4)	4.25 (7)	3
Tradition	2.86 (2); 2.87 (6); 2.89 (3)	4.05 (7)	3
Benevolence	4.41 (3)	4.86 (7)	2
Universalism	4.03 (2)	4.52 (8)	2
Self-Direction	4.56 (7)	4.94 (8); 4.98 (5)	2
Stimulation	4.35 (7)	4.67 (3)	1
Hedonism	4.17 (7); 4.42 (8)	5.10 (5)	2
Achievement	3.79 (8)	4.44 (5)	3
Power	3.09 (8); 3.10 (7)	3.65 (2); 3.65 (5)	2

Scales are scored from 1 to 6.

A general pattern was that the students of Schools 7 and 8 generally scored higher in the value priorities belonging to *Conservation* (except for Security) and *Self-Transcendence*, whereas their means were amongst the lower ones in the *Openness to Change* and the *Self-Enhancement* sections. For Self-Direction there was a split. School 7 had the lowest mean in Self-Direction, whereas School 8 had one of the highest scores on this value priority. Another consistent result was that at both measurement times the students of School 5 were at the top of all schools on the value priorities Security, Hedonism, and Achievement.

4.2.2.3 Mean Differences of Value Priorities for Each School

I computed the means of all value priorities for each school separately for both measurement times. At both measurement times the patterns were identical. The students in Schools 1, 2, 3, 4, 5, and 6 had the lowest means in Tradition and the highest in Hedonism. At School 7, the



lowest mean was in the value priority Power and the highest in Benevolence, whereas at School 8 the lowest mean was Power, and the highest was Self-Direction. Table 4.6 displays the means for the highest and lowest value priority for each school at both measurement times.

Table 4.6

Means of Highest and Lowest Value Priority (VP) for Each School at Both Measurement Times (N1 = 1533 to 1537, N2 = 1275 to 1278)

School	Lowest VP Time 1	<i>M</i> Time 1	Highest VP Time 1	<i>M</i> Time 1	Lowest VP Time 2	<i>M</i> Time 2	Highest VP Time 2	<i>M</i> Time 2
1	Tradition	3.21	Hedonism	5.05	Tradition	3.19	Hedonism	5.00
2	Tradition	2.87	Hedonism	5.05	Tradition	2.86	Hedonism	4.96
3	Tradition	2.89	Hedonism	5.00	Tradition	2.89	Hedonism	4.93
4	Tradition	2.86	Hedonism	5.04	Tradition	3.02	Hedonism	4.92
5	Tradition	3.05	Hedonism	5.20	Tradition	3.04	Hedonism	5.10
6	Tradition	2.79	Hedonism	5.05	Tradition	2.87	Hedonism	4.93
7	Power	3.10	Benevolence	4.91	Power	3.10	Benevolence	4.86
8	Power	2.82	Self- Direction	4.91	Power	3.09	Self- Direction	4.94

Scales are scored from 1 to 6.

Figures 4.6 a-h display the value priorities of the students of each school for both measurement times.



Figures 4.6 a-h

Value Priorities for Each School at Both Measurement Times (N1 = 1541; N2 = 1278)

Figure 4.6a School 1

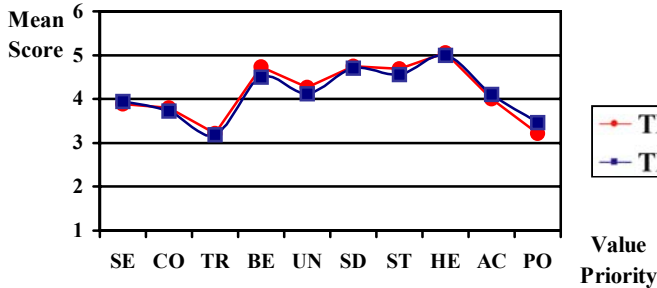


Figure 4.6b School 2

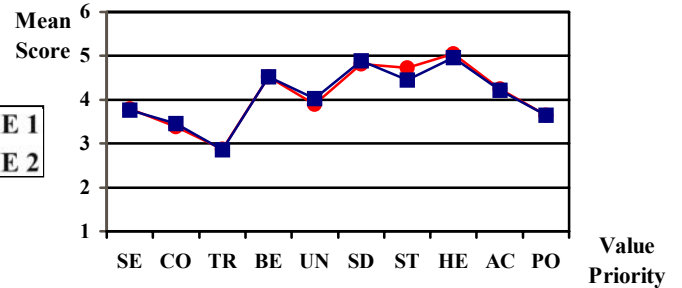


Figure 4.6c School 3

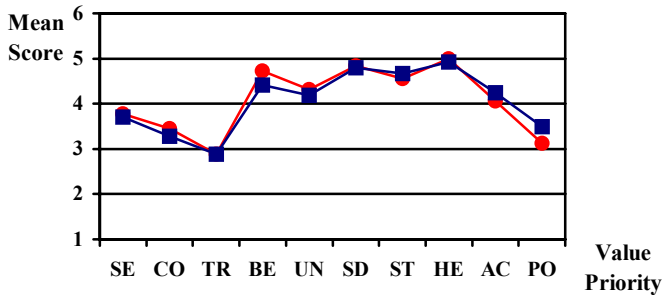


Figure 4.6d School 4

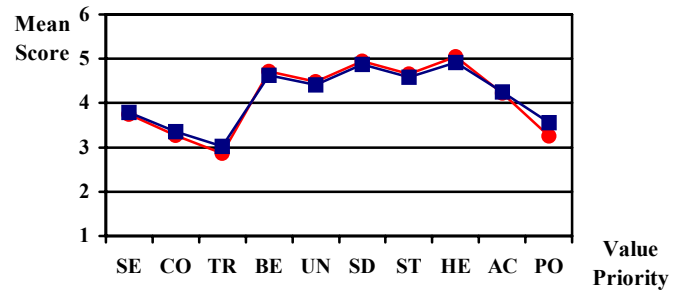


Figure 4.6e School 5

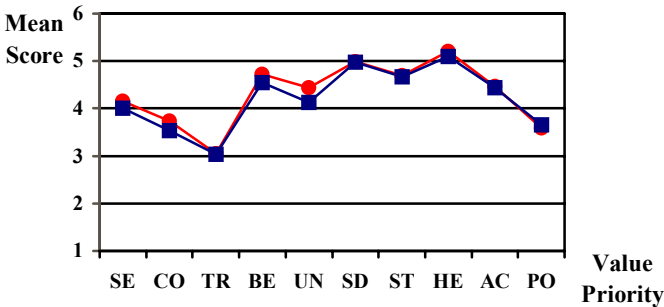


Figure 4.6f School 6

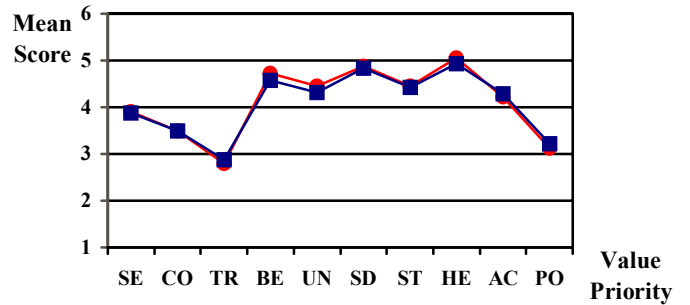


Figure 4.6g School 7

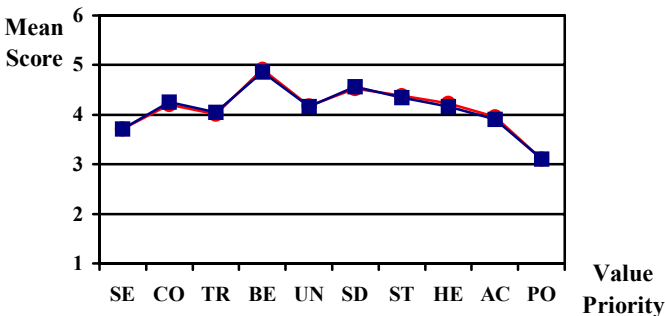
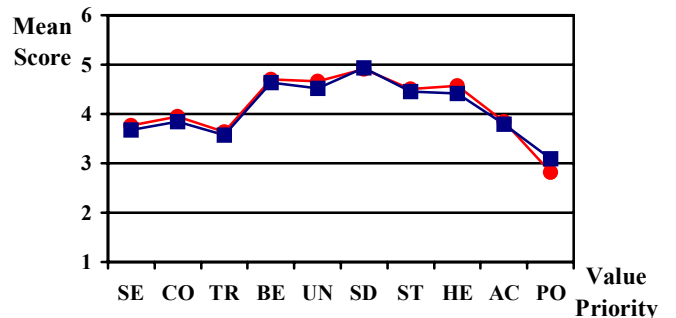


Figure 4.6h School 8

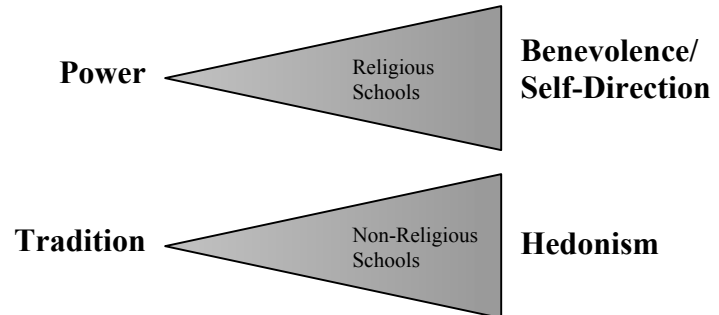




It can be summarised that all the six schools which had no religious affiliation (Schools 1 to 6) had a similar pattern regarding their highest and lowest value priorities; Hedonism was the highest, and Tradition the lowest value priority. The two religious schools (7 and 8)

Figure 4.7

Highest and Lowest Value Priorities in Religious and Non-Religious Schools



were similar, as their lowest value priority was Power. Benevolence was the highest value priority for School 7, and Self-Direction for School 8. This can possibly be explained through the specific concepts of these schools. For demonstration see Figure 4.7.

4.2.2.4 School Profiles Compared with Each Other

This form of presentation demonstrates the school profiles as they compare to the average of all the schools involved. I z-standardised the results across all schools and placed the scores of each school in relation to the zero-line representing the average score for that respective value. Figures 4.8 a-h show each school and its value priorities in comparison to the average scores of all the schools. The samples of both measurement times were considered independently.



A general summary: School 1 was quite close to the average at both measurement times, except for Hedonism which was clearly located above average. The value priorities in School 2 were below average for the values on the *Self-Transcendence/Conservation* sections of the Schwartz (1992) circular model, whereas they were mostly above average for the values located on the other half of the circle. Universalism was particularly low in this school. School 3 also was below average for the right half of value priorities on the circular model and above average for most parts of the left sections. School 4 was below average in Security, Conformity, and Tradition, on average in

Figures 4.8 a-h

School Profiles at Both Measurement Times

Figure 4.8a School 1

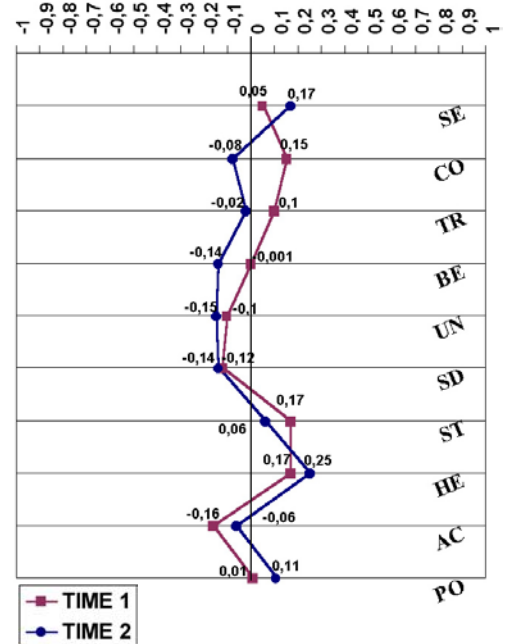
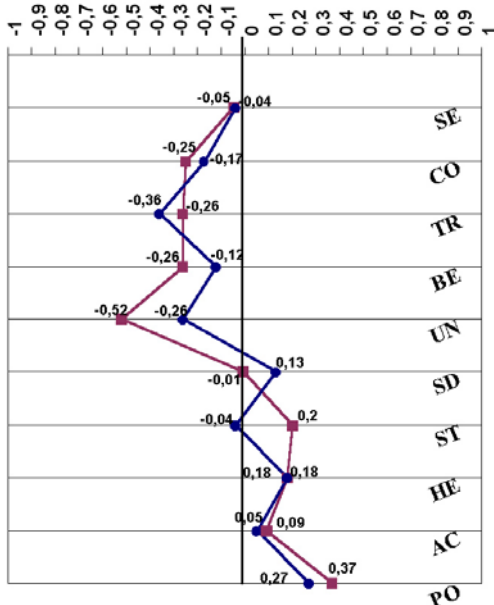


Figure 4.8b School 2



Benevolence, and above average in all the other value priorities. The major difference of School 5 with the previous ones was that it was above average in the value priority Security. For Universalism both measurement times showed different results. School 6 had very consistent results across both measurement times. It was strongly below average in Tradition and above average in Hedonism; the other value priorities were quite close to average. School 7

had quite extreme deviations from the average of the other schools. It was highly above average in Tradition and Conformity. Furthermore, Benevolence was above average. Hedonism and Self-Direction were strongly below average at both measurement times. Similarly, School 8 was not very close to the average; it was highly above average in



Tradition and Universalism. In addition, Conformity and Self-Direction were higher than the average of the other schools. Below average were the values Hedonism, Achievement, and Power. The detailed results will be discussed in chapter 5.

Figure 4.8c School 3

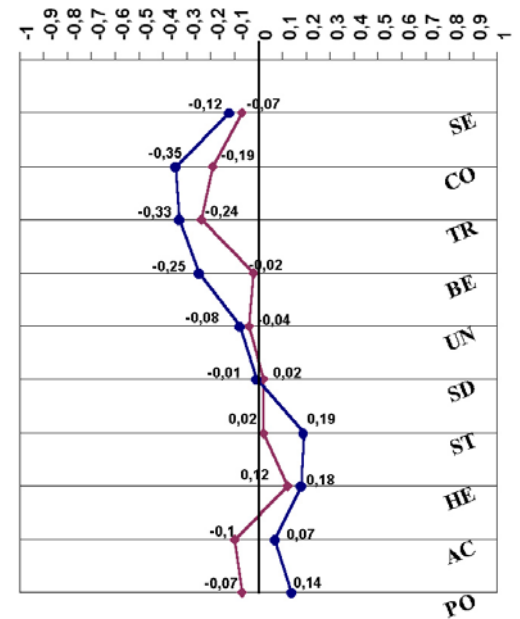


Figure 4.8d School 4

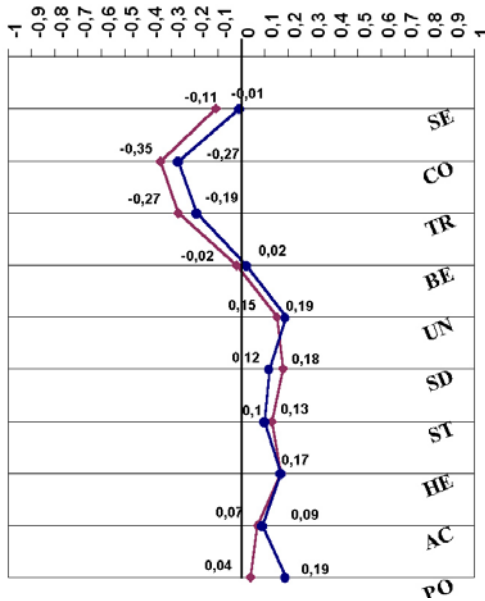


Figure 4.8e School 5

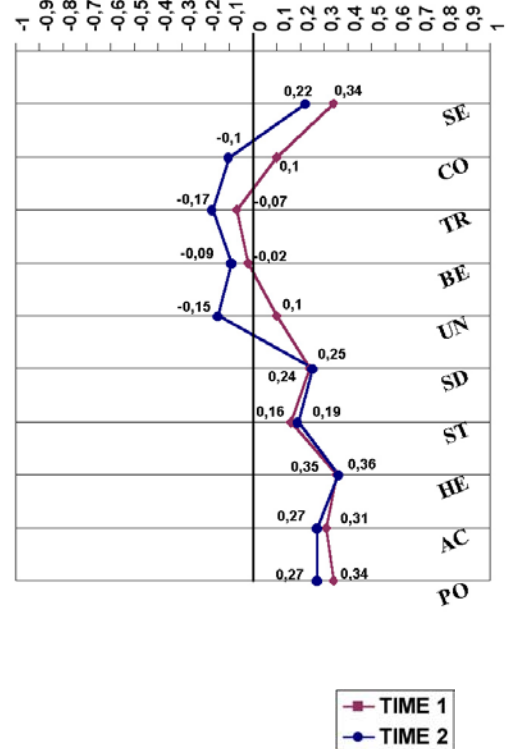


Figure 4.8f School 6

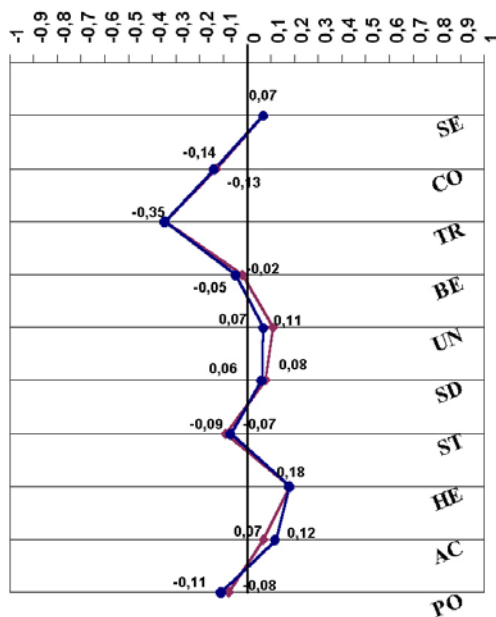




Figure 4.8g *School 7*

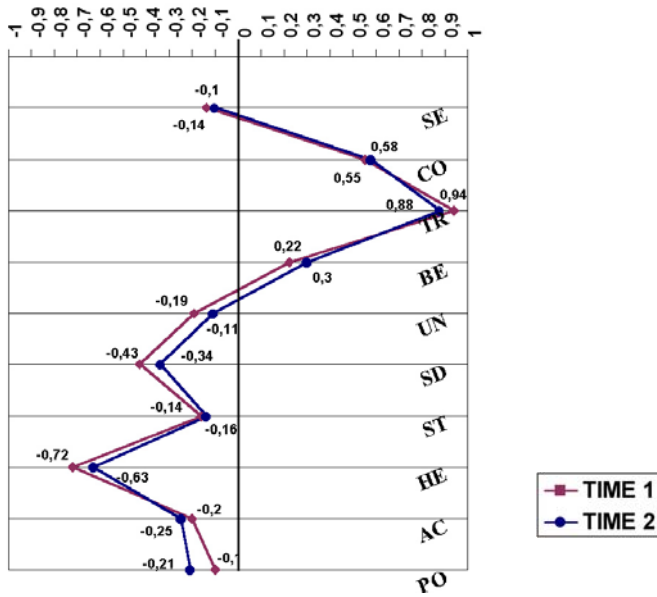
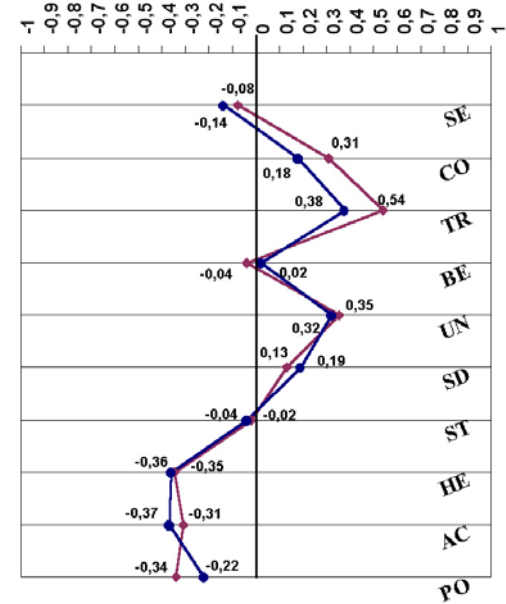


Figure 4.8h *School 8*



Summary

The results showed that at both measurement times there were significant differences between all schools with regard to their value priorities. The most consistent pattern was found in the distinction of religious and non-religious schools. The lowest value priority in all non-religious schools was Tradition, whereas the highest was Hedonism. In the religious schools the lowest value priority was Power, and the highest was Self-Direction/Benevolence. There were no notable differences between boarding and day students.



4.3 Question 3

Do Value Priorities Change in the Course of One Year?

This section focuses on the question of how the value priorities of students changed during the course of one school year. First, I will demonstrate the retest-reliabilities of the different variables concerned, then I will analyse the change with the help of *t*-tests for Repeated Measures and General Linear Models. The change in the value priorities will be analysed both across all schools, as well as school by school. Lastly, I will display the results of Hierarchical Regression analyses that included the schools as predictor and controlled for the initial value priorities and other demographic variables, in order to identify how strong the predictive power of the schools was on the development of the value priorities in the course of one year.

For the following longitudinal analyses of the Schwartz value priorities I created a matched file that included all those students who participated at both measurement times ($N = 811$).

4.3.1 Retest-Reliabilities of Schwartz Value Priorities, School Commitment, and Religiosity across Both Measurement Times

I calculated Pearson correlation coefficients to determine the retest-reliability of each Schwartz value priority, School Commitment, and Religiosity across both measurement times (see Table 4.7).



Table 4.7

Retest-Reliabilities of Schwartz Value Priorities, School Commitment (SC), and Religiosity across Both Measurement Times (N = 811)

	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO	SC	Relig.
<i>r</i>	.64**	.70**	.68**	.62**	.62**	.57**	.62**	.60**	.63**	.66**	.72**	.94**

** $p < .01$.

The retest-reliabilities of all scales were satisfactory. Self-Direction had the lowest coefficients; Religiosity was extremely stable.

4.3.2 Analyses of Change in Value Priorities across All Schools

I performed Paired Samples t -tests for Repeated Measures to explore the mean differences of the Schwartz value priorities for the two measurement times across all schools. All value priorities at Time 1 correlated significantly positive ($p < .001$) with the respective value priorities at Time 2 ($N = 804$ to 807). The t -tests produced two-tailed significant results for the comparison of mean differences of the following value priorities at both measurement times: Benevolence ($t = 3.76$, $df = 805$, $p < .001$), Universalism ($t = 3.56$, $df = 806$, $p < .001$), Achievement ($t = -3.08$, $df = 803$, $p < .005$), and Power ($t = -5.74$, $df = 805$, $p < .001$). Benevolence and Universalism decreased from the first to the second measurement time, whereas Achievement and Power increased. Table 4.8 displays the mean differences, standard deviations and t -values for all value priorities across both measurement times.



Table 4.8

Mean Differences Measured with Paired Samples T-Tests across Both Measurement Times (N = 804 to 807)

	<i>M</i> Time 1	<i>SD</i> Time 1	<i>M</i> Time 2	<i>SD</i> Time 2	<i>t</i> -value	<i>df</i>	Significance (two-tailed)
Security	3.84	.89	3.81	.88	1.41	806	.159
Conformity	3.74	1.03	3.72	1.04	.66	803	.511
Tradition	3.31	.96	3.30	.98	.15	805	.881
Benevolence	4.76	.81	4.67	.79	3.76	805	.000
Universalism	4.39	.85	4.30	.84	3.56	806	.000
Self-Direction	4.76	.72	4.80	.71	-1.63	804	.105
Stimulation	4.44	1.01	4.46	.97	-.94	806	.349
Hedonism	4.75	.93	4.71	.94	1.51	803	.130
Achievement	4.06	.99	4.15	.98	-3.08	803	.002
Power	3.09	1.11	3.28	1.10	-5.74	805	.000

Scales are scored from 1 to 6.

4.3.3 Analyses of Change in Value Priorities in Each School

I used Paired Samples *t*-tests for Repeated Measures to analyse the mean differences between the value priorities at Time 1 and Time 2 within each school. For every one of the eight schools the pairs of value priorities at Time 1 and Time 2 correlated positively with each other ($p < .01$). At School 1 the mean difference between the two measurement times was only significant for Universalism ($t = 2.12$, $df = 34$, $p < .05$). At School 2 none of the mean differences between the two measurement times were significant. At School 3 the mean differences between the two measurement times were significant for Tradition ($t = 2.29$, $df = 60$, $p < .05$), Benevolence ($t = 2.64$, $df = 60$, $p < .05$), Stimulation ($t = -2.60$, $df = 60$, $p < .05$), and Power ($t = -2.37$, $df = 60$, $p < .05$). At School 4 the mean differences between the two measurement times were significant for Tradition ($t = -2.15$, $df = 116$, $p < .05$) and Power ($t = -4.28$, $df = 116$, $p < .001$). At School 5 the mean difference between the two measurement



times was significant for Universalism ($t = 2.34$, $df = 68$, $p < .05$). At School 6 the mean differences between the two measurement times were significant for Benevolence ($t = 2.46$, $df = 191$, $p < .05$), Universalism ($t = 2.99$, $df = 192$, $p < .01$), Achievement ($t = -3.94$, $df = 192$, $p < .001$), and Power ($t = -2.21$, $df = 192$, $p < .05$). At School 7 the mean difference between the two measurement times was only significant for Self-Direction ($t = -2.35$, $df = 198$, $p < .05$). At School 8 the mean differences between the two measurement times were significant for Universalism ($t = 2.60$, $df = 74$, $p < .05$) and Power ($t = -4.11$, $df = 74$, $p < .001$).

The figures 4.9 a-h display the mean differences of the value priorities of Time 1 and Time 2 within each school.

Figures 4.9 a-h

Mean Differences of Value Priorities in Each School (N = 811)

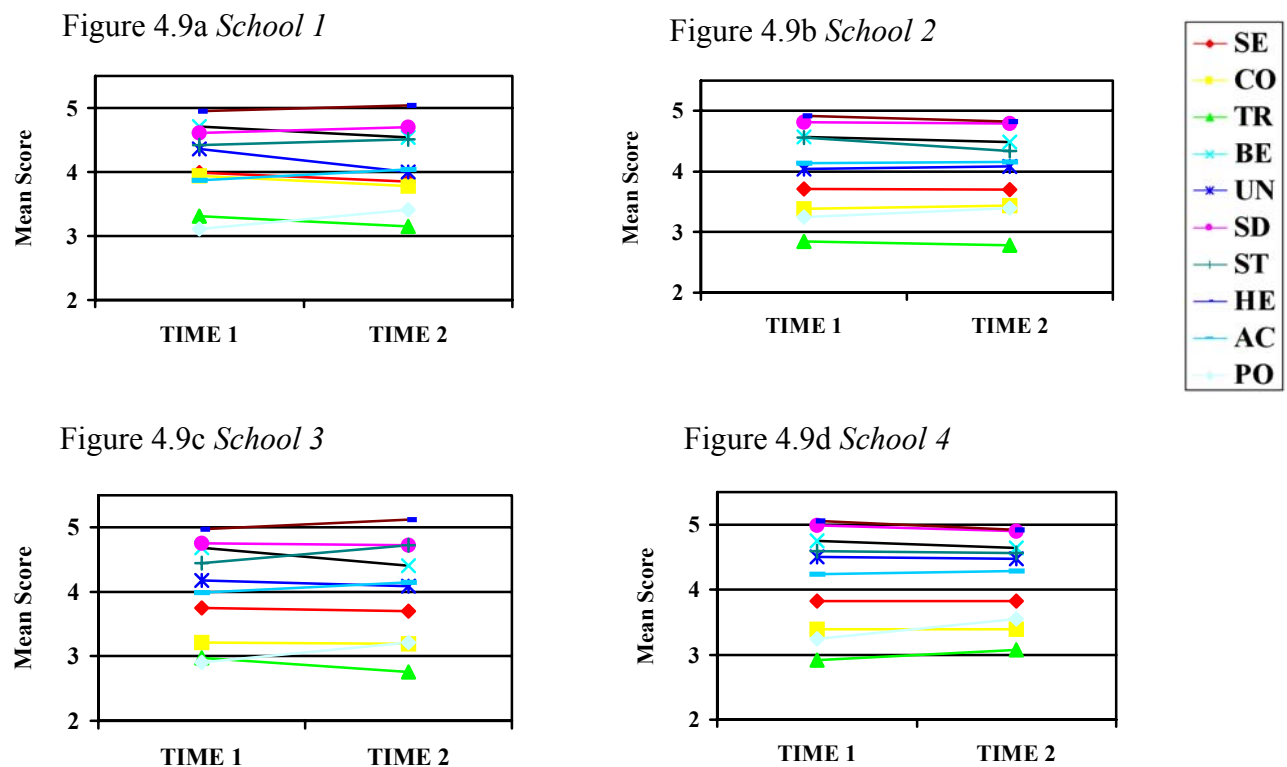




Figure 4.9e School 5

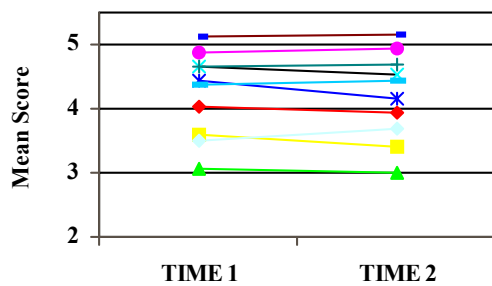


Figure 4.9f School 6

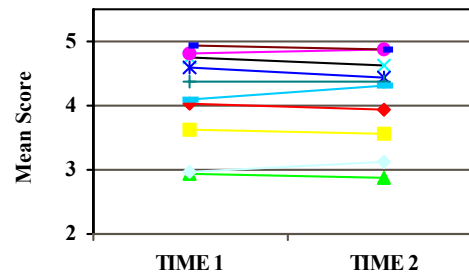


Figure 4.9g School 7

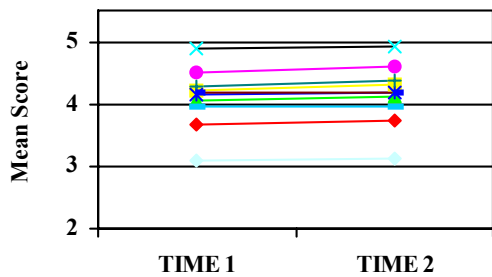
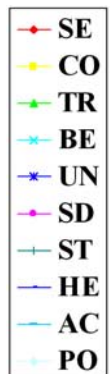
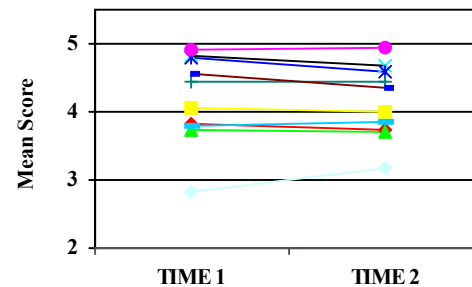


Figure 4.9h School 8



4.3.4 Analysis of Change for Each Value Priority at Both Measurement Times

To measure the change in value priorities in the eight schools, I used General Linear Models (GLM) for Repeated Measures that I defined in the following manner: The Within-Subjects Factor was Time, which included the two levels Time 1 and Time 2 and the Within-Subjects Variables consisted of the ten value priorities at both measurement times. Furthermore, the Between-Subjects Factors were the eight schools.

The Multivariate Tests yielded the following significant results: The Time effect was significant for Benevolence $F(1, 798) = 17.74, p < .001$, Universalism $F(1, 799) = 17.92, p < .001$, Achievement $F(1, 796) = 6.77, p < .01$, and Power $F(1, 798) = 35.98, p < .001$. This suggests that these four value priorities changed in the course of one year when analysed across all schools, a result which is consistent with the results reached with the Paired Samples t -tests (see 4.3.2, Table 4.8). Only for Universalism additionally the Time x Schools effect was significant with $F(1, 799) = 2.87, p < .01$. The analyses of the change in the value



priorities in each school (see 4.3.3) showed that in four out of the eight schools the means of Universalism were significantly different at both measurement times. In these four schools Universalism decreased across the year. This was the case for School 1 ($t = 2.12, p < .05$), School 5 ($t = 2.34, p < .05$), School 6 ($t = 2.99, p < .01$), and School 8 ($t = 2.60, p < .05$). In the remaining four schools no significant differences in Universalism were found.

A follow-up analysis of this interaction showed that at both measurement times the highest means for Universalism were at School 8 (Time 1: $M = 4.78, SD = .63$; Time 2: $M = 4.60, SD = .71$). At Time 1, the lowest mean for Universalism was at School 2 ($M = 4.04, SD = 1.03$), and at Time 2, the lowest mean was at School 1 ($M = 4.00, SD = .92$).

The following figures 4-10 a-j display an overview of the mean differences between the eight schools with respect to the changes in each value priority from Time 1 to Time 2.

Figures 4.10 a-j

Mean Differences between Schools, for Each Value Priority (N = 811)

Figure 4.10a *Security*

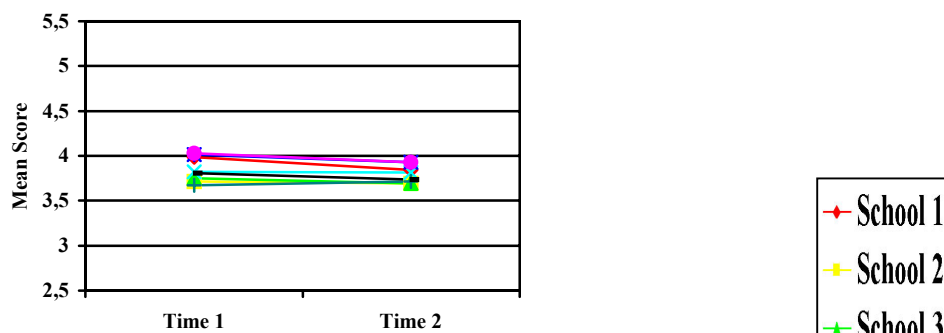


Figure 4.10b *Conformity*

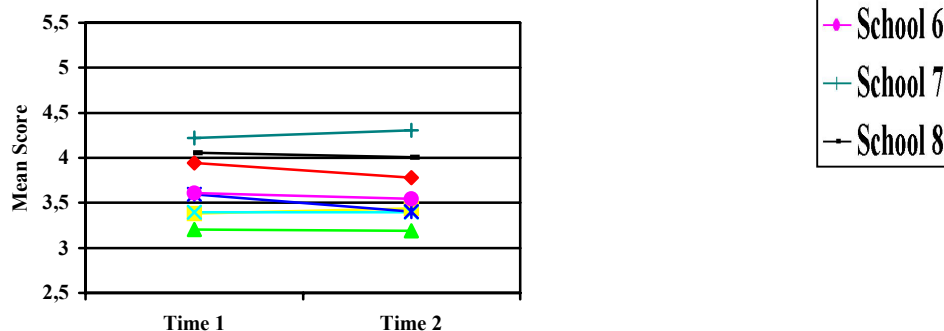




Figure 4.10c *Tradition*

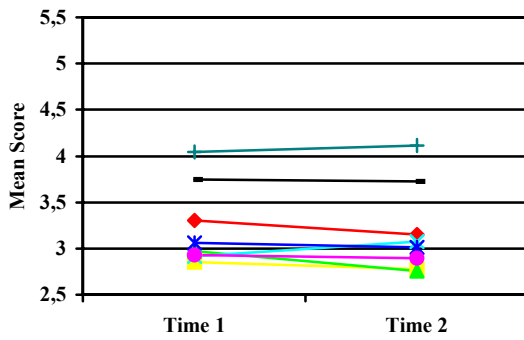


Figure 4.10d *Benevolence*

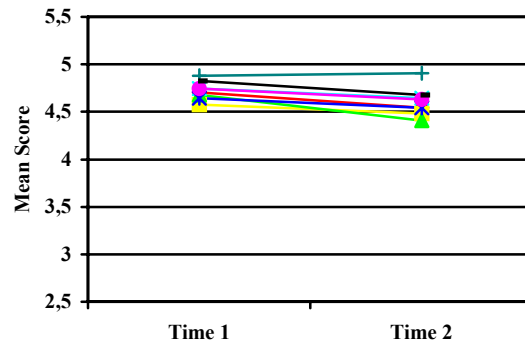


Figure 4.10e *Universalism*

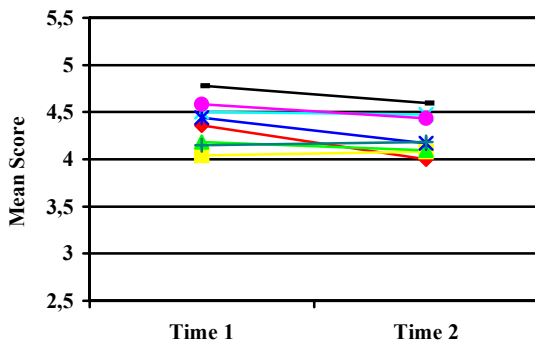


Figure 4.10f *Self-Direction*

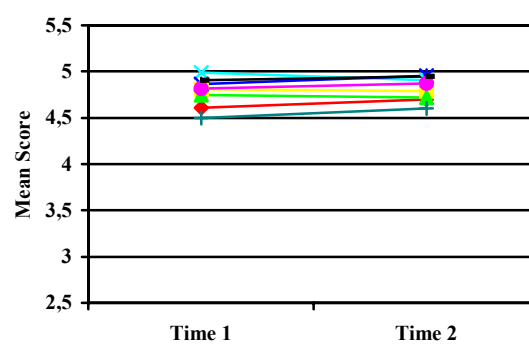


Figure 4.10g *Stimulation*

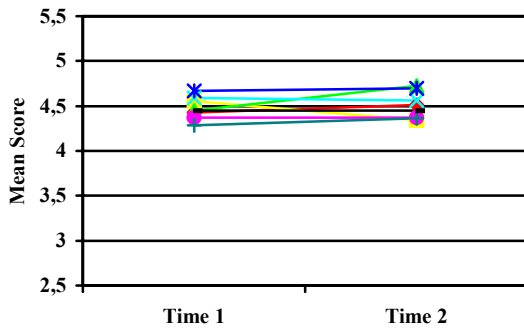


Figure 4.10h *Hedonism*

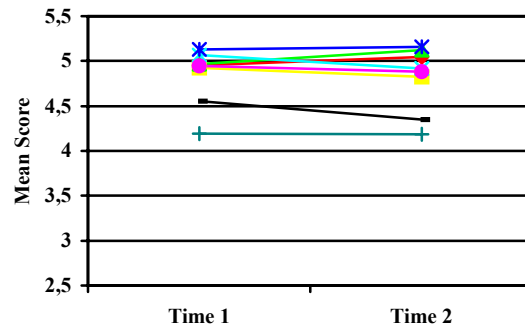


Figure 4.10i *Achievement*

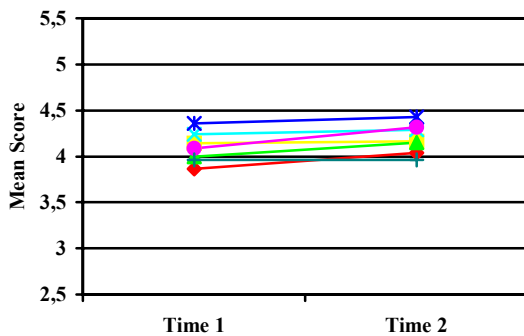
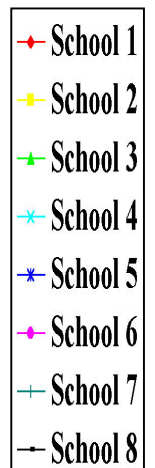
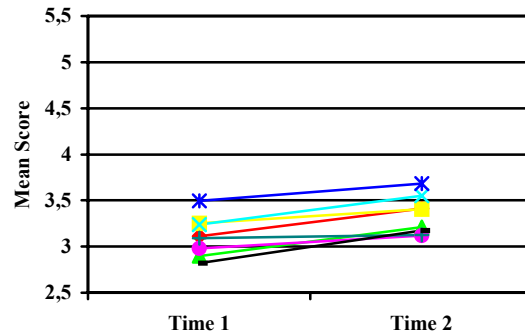


Figure 4.10j *Power*





4.3.5 Hierarchical Regression Analyses to Predict the Changes in Value Priorities

I performed Hierarchical Regression analyses to determine the predictive power of the independent variables on the change in value priorities across both measurement times (Cohen & Cohen, 1983). In this case the focus of interest lay in inclusion of the schools into the Regression equation. How strongly did they predict the change in value priorities in the course of one year?

The Schwartz value priorities at Time 2 were predicted as follows: After controlling for the initial value at Time 1, the set of demographic variables Gender, Age, and Parents' Degree was entered into the Regression equation followed by the dummy coded schools. All ten Schwartz value priorities were analysed. For six value priorities, the schools significantly contributed to the predictive power of the equation (see Table 4.9). The Beta weights in the Table are taken from the final equation.

Power: After controlling for Time 1 Power, which accounted for 43.8% of the variance in Time 2 Power, the set of demographic variables significantly contributed to the predictive power of the Regression equation, $\Delta R^2 = .010$, $\Delta F(3, 774) = 4.74$, $p < .01$ (see Model 2). The significant Beta coefficients indicated that boys scored higher on Time 2 Power than girls (partial $r = .10$). Furthermore, students with parents who had higher degrees scored higher on Time 2 Power than children of parents with lower degrees (partial $r = .01$). The partial r of Age with Time 2 Power was .08. Inclusion of the dummy coded school variables (see Model 3) further improved the prediction of Time 2 Power, $\Delta R^2 = .013$, $\Delta F(7, 767) = 2.64$, $p < .05$. As shown in subsection 4.3.3, Power significantly increased in Schools 3, 4, 6, and 8. The other schools demonstrated no significant changes in Power.



Table 4.9

Hierarchical Regression of Time 2 Schwartz Value Priorities (VP) on Schools, Controlling for Time 1 Value Priority, Gender (1 = Female, 2 = Male), Age, and Parents' Degree (Demographic Variables)

VP		Power				Tradition			
Block	Predictor	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF	b
1	Time 1 VP	.438	1, 777	606.72***	.64***	.458	1, 778	657.80***	.55***
2	Dem. Var.	.010	3, 774	4.74**		.008	3, 775	3.78*	
	Gender				.06*				.02
	Age				.05				.00
	Degree				.06*				-.02
3	Schools	.013	7, 767	2.64*		.049	7, 768	11.14***	
	Cum. R^2	.462				.515			

* $p < .05$. ** $p < .01$. *** $p < .001$. The predictor schools consists of eight dummy coded schools.

Table 4.9 continued

VP		Conformity				Benevolence			
Block	Predictor	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF	b
1	Time 1 VP	.484	1, 776	728.58***	.65***	.383	1, 777	482.50***	.60***
2	Dem. Var.	.002	3, 773	.88		.004	3, 774	1.85	
	Gender				-.01				-.05
	Age				.03				-.02
	Degree				-.07*				-.03
3	Schools	.030	7, 766	6.73***		.019	7, 767	3.45**	
	Cum. R^2	.516				.406			

* $p < .05$. ** $p < .01$. *** $p < .001$. The predictor schools consists of eight dummy coded schools.

Table 4.9 continued

VP		Hedonism				Universalism			
Block	Predictor	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF	b
1	Time 1 VP	.370	1, 776	456.71***	.55***	.389	1, 778	495.24***	.62***
2	Dem. Var.	.012	3, 773	5.20**		.002	3, 775	.96	
	Gender				-.04				-.03
	Age				-.09**				-.02
	Degree				.02				-.03
3	Schools	.031	7, 766	5.82***		.013	7, 768	2.33*	
	Cum. R^2	.414				.404			

* $p < .05$. ** $p < .01$. *** $p < .001$. The predictor schools consists of eight dummy coded schools.



Tradition: After controlling for Time 1 Tradition, which accounted for 45.8% of the variance in Time 2 Tradition, the set of demographic variables significantly contributed to the predictive power of the Regression equation, $\Delta R^2 = .008$, $\Delta F(3, 775) = 3.78$, $p < .05$ (see Model 2). The partial correlations for these variables were partial $r = .01$ for Gender, partial $r = .04$ for Age, and partial $r = .11$ for Parents' Degree. Inclusion of the dummy coded school variables (see Model 3) further improved the prediction of Time 2 Tradition, $\Delta R^2 = .049$, $\Delta F(7, 768) = 11.14$, $p < .001$. Tradition significantly decreased in School 3, and increased in School 4. The other schools showed no significant changes in Tradition.

Conformity: After controlling for Time 1 Conformity, which accounted for 48.4% of the variance in Time 2, the set of demographic variables did not contribute to the predictive power of the Regression equation. The partial correlations were partial $r = -.05$ for Gender, partial $r = .03$ for Age, and partial $r = .03$ for Parents' Degree. Further inclusion of the dummy coded school variables (see Model 3) improved the prediction of Time 2 Conformity, $\Delta R^2 = .030$, $\Delta F(7, 766) = 6.73$, $p < .01$. There was no change in Conformity in any of the eight schools.

Benevolence: After controlling for Time 1 Benevolence, which accounted for 38.3% of the variance in Time 2 Benevolence, the set of demographic variables did not contribute to the predictive power of the Regression equation. The partial correlations were partial $r = -.07$ for Gender, partial $r = .00$ for Age, and partial $r = .05$ for Parents' Degree. Inclusion of the dummy coded school variables (see Model 3) improved the prediction of Time 2 Benevolence, $\Delta R^2 = .019$, $\Delta F(7, 767) = 3.45$, $p < .01$. In the course of the year, Benevolence significantly decreased in School 3, and increased in School 6. There were no significant changes in any of the other schools.



Hedonism: After controlling for Time 1 Hedonism, which accounted for 37.0% of the variance in Time 2 Hedonism, the set of demographic variables significantly contributed to the predictive power of the Regression equation, $\Delta R^2 = .012$, $\Delta F(3, 773) = 5.20$, $p < .01$ (see Model 2). Beta coefficients indicated that Age uniquely accounted for the variance in Time 2 Hedonism (partial $r = -.11$). Hence, Age related negatively to an increase in Hedonism. Further partial correlations were partial $r = -.02$ for Gender, and partial $r = -.07$ for Parents' Degree. Inclusion of the dummy coded school variables (see Model 3) further improved the prediction of Time 2 Hedonism, $\Delta R^2 = .031$, $\Delta F(7, 766) = 5.82$, $p < .001$. None of the schools showed significant changes in Hedonism across the year.

Universalism: After controlling for Time 1 Universalism, which accounted for 38.9% of the variance in Time 2 Universalism, the set of demographic variables did not contribute to the predictive power of the Regression equation. The partial correlations were partial $r = -.06$ for Gender, partial $r = .00$ for Age, and partial $r = -.01$ for Parents' Degree. Inclusion of the dummy coded school variables (see Model 3) improved the prediction of Time 2 Universalism, $\Delta R^2 = .013$, $\Delta F(7, 768) = 2.33$, $p < .05$. Across the year, Universalism significantly decreased in Schools 1, 5, 6, and 8. The other schools showed no significant changes.

The results of the detailed analyses of Age and Gender will be displayed separately in the following section. In sum, the results showed that for the value priorities Power, Tradition, Conformity, Benevolence, Hedonism, and Universalism the schools significantly contributed to the predictive power of the equation. Hence, the type of school contributed to predict the changes in these value priorities in the course of one school year. For the four remaining value priorities Achievement, Stimulation, Security, and Self-Direction the schools did not contribute to the predictive power of the equation (see Table 4.10).



Table 4.10

Hierarchical Regression of Time 2 Schwartz Value Priorities (VP) on Schools, Controlling for Time 1 Value Priority, Gender (1 = Female, 2 = Male), Age, and Parents' Degree (Demographic Variables)

VP		Achievement				Stimulation			
Block	Predictor	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF	b
1	Time 1 VP	.375	1, 775	464.85***	.60***	.376	1, 778	468.60***	.61***
2	Dem. Var.	.006	3, 772	2.70*		.011	3, 775	4.70**	
	Gender				.03				.02
	Age				.04				-.10**
	Degree				-.04				.05
3	Schools	.011	7, 765	2.01		.011	7, 768	1.98	
	Cum. R^2	.393				.398			

* $p < .05$. ** $p < .01$. *** $p < .001$.

The predictor schools consists of eight dummy coded schools.

Table 4.10 continued

VP		Security				Self-Direction			
Block	Predictor	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF	b
1	Time 1 VP	.391	1, 778	499.78***	.62***	.320	1, 777	365.65***	.55***
2	Dem. Var.	.003	3, 775	1.47		.002	3, 774	.80	
	Gender				.03				-.05
	Age				.06*				-.02
	Degree				.01				.04
3	Schools	.002	7, 768	.35		.008	7, 767	1.30	
	Cum. R^2	.397				.330			

* $p < .05$. ** $p < .01$. *** $p < .001$.

The predictor schools consists of eight dummy coded schools.

Summary

Across the two measurement times, there were significant differences in the following value priorities: Benevolence and Universalism decreased, whereas Achievement and Power increased. Regression analyses showed that the schools significantly contributed to the changes in Power, Tradition, Conformity, Benevolence, Hedonism, and Universalism, but not to the changes in Achievement, Stimulation, Security, and Self-Direction.



4.4 Question 4

How are Value Priorities Related to Age and Gender?

In this section I will display how Age and Gender related to the value priorities. The analyses include the cross-sectional and the longitudinal approach. The procedures were based on correlations, mean differences, and Regression analyses. First I will demonstrate the results with regard to Age, and then those related to Gender.

4.4.1 Age

4.4.1.1 Correlations of Age with Schwartz Value Priorities at Both Measurement Times

Table 4.11 displays the Pearson correlations of Age with all Schwartz value priorities. At Time 1, the results showed that Age correlated negatively ($p < .01$) with the value priority Tradition, whereas Self-Direction, Hedonism, and Power correlated positively ($p < .01$) with Age. Additionally, Benevolence and Achievement correlated positively with Age on a significance level of $p < .05$. At Time 2, the results showed that Age correlated positively ($p < .01$) with Self-Direction and Power. Additionally, Age correlated positively with Achievement on a significance level of $p < .05$. A highly significant negative correlation was found between Age and Stimulation.

Table 4.11

Pearson Correlations of Age with Schwartz Value Priorities at Time 1 (N = 1531 to 1534) and Time 2 (N = 1264 to 1267)

	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
Age Time 1	.04	-.04	-.11**	.05*	-.03	.17**	-.03	.07**	.06*	.11**
Age Time 2	.04	.00	-.03	.04	-.01	.14**	-.08**	-.04	.06*	.08**

** $p < .01$. * $p < .05$.



In conclusion, there were consistent results across both measurement times only for the correlations of Age with Self-Direction, Achievement, and Power. At both times the results demonstrated that these three value priorities increased with growing age.

4.4.1.2 Mean differences Between Age Groups for Schwartz Value Priorities

According to a 33.3% quota based on the frequencies of the age groups existing in my sample, I formed three age groups: The youngest group ranged from 10 to 14 years, the middle group included students who were 15 and 16 years old, and the oldest group consisted of students between 17 and 22 years.

I used Oneway ANOVAs to analyse the mean differences between the age groups for the Schwartz value priorities across all schools. At Time 1, seven out of the ten scales showed significant age differences. The directions of development, however, were inconsistent. At Time 2, three out of the ten scales showed significant age differences across all schools. Table 4.12 displays the means for both measurement times.

Table 4.12

Means of Schwartz Value Priorities for Three Age Groups at Both Measurement Times

Means of value priorities across all schools											
Time 1	Age	SE ***	CO *	TR **	BE	UN ***	SD ***	ST	HE	AC *	PO ***
(N=	10-14	3.87	3.72	3.21	4.72	4.45	4.69	4.54	4.85	4.10	3.10
1531-	15-16	3.70	3.55	3.13	4.69	4.21	4.82	4.59	4.86	4.10	3.13
1534)	17-22	3.96	3.65	3.02	4.80	4.39	4.96	4.47	4.95	4.25	3.38
Time 2	Age	SE	CO	TR	BE	UN	SD ***	ST *	HE *	AC	PO
(N=	10-14	3.83	3.66	3.21	4.59	4.32	4.68	4.58	4.80	4.11	3.29
1264-	15-16	3.74	3.62	3.24	4.59	4.23	4.77	4.50	4.84	4.15	3.27
1267)	17-22	3.84	3.66	3.19	4.68	4.24	4.90	4.42	4.68	4.20	3.43

*** $p < .001$. ** $p < .01$. * $p < .05$.



A school by school analysis at Time 1 demonstrated that age differences appeared in all schools except for School 8. An individual analysis of each school at Time 2 demonstrated that only Schools 1 and 5 had no age differences in any of the scales.

4.4.1.3 Testing the Interaction between Age and Time

I defined the General Linear Models for Repeated Measures in the following manner: The Within-Subjects Factor was Time, which included the two levels Time 1 and Time 2, and the Within-Subjects Variables consisted of the ten value priorities at both measurement times. The Between-Subjects Factor was Age.

The Multivariate Tests showed that the Time effect was only significant for Hedonism, $F(1, 792) = 5.67, p < .05$. Analysed with the t -test for Repeated Measures Hedonism decreased in the course of the year ($M_1 = 4.75, M_2 = 4.71$). The mean difference, however, was not significant. Also the Time x Age effect was only significant for Hedonism, $F(10, 792) = 2.09, p < .05$.

4.4.1.4 Hierarchical Regression Analyses to Predict the Change in Value Priorities

As displayed in Tables 4.9 and 4.10 the Beta weights for the predictor Age were highly significant for the value priorities Hedonism and Stimulation. In both cases, amongst the demographic variables, Age uniquely accounted for the variance of the Time 2 value priority. The negative Beta weights indicated that the younger students scored higher on Time 2 Hedonism and Stimulation than the older students.



4.4.2 Gender

4.4.2.1 Mean Differences of Gender for Schwartz Value Priorities at Both Measurement Times

In order to compare the mean differences of Gender, I calculated Oneway ANOVAs in which Gender was the factor and the Schwartz value priorities were the dependent variables. These analyses were conducted for both measurement times across all schools. Figures 4.11 a-b display the mean differences for girls and boys in the Schwartz value priorities.

Figures 4.11 a-b

Mean Differences of Gender

Figure 4.11a *Student Sample at Time 1 (845 Boys, 695 Girls)*

Figure 4.11b *Student Sample at Time 2 (698 Boys, 580 Girls)*

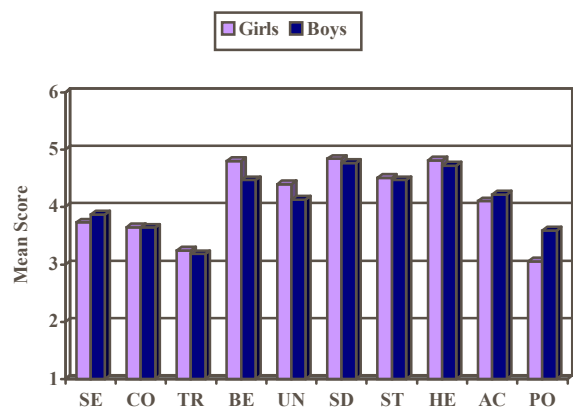
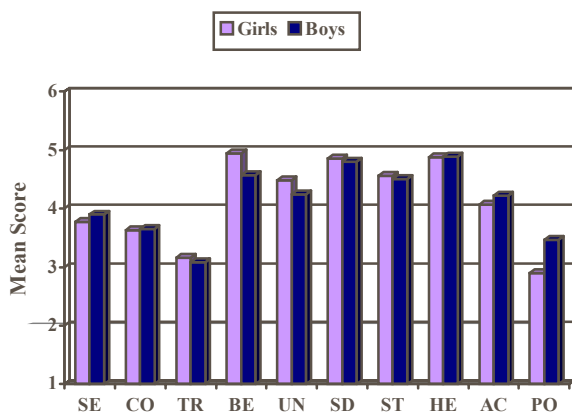


Table 4.13 displays the significant gender differences in the Schwartz value priorities. At both measurement times girls scored higher on Benevolence and Universalism, whereas boys scored higher on Security, Achievement, and Power.



Table 4.13

Oneway Analyses of Variance for Gender Differences in Schwartz Value Priorities at Both Measurement Times

	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i> -value	<i>df</i>	<i>F</i> -value
	Time 1	Time 1	Time 2	Time 2	Time 1	Time 1	Time 2	Time 2
Benevolence					1, 1531	91.68***	1, 1275	56.29***
Boys	4.57	.84	4.47	.85				
Girls	4.94	.66	4.80	.71				
Universalism					1, 1533	27.36***	1, 1276	30.74***
Boys	4.24	.97	4.13	.90				
Girls	4.47	.76	4.40	.76				
Security					1, 1533	8.01**	1, 1276	8.18**
Boys	3.90	.94	3.87	.92				
Girls	3.77	.86	3.73	.84				
Achievement					1, 1531	9.31**	1, 1274	4.59*
Boys	4.22	1.01	4.22	.98				
Girls	4.07	.96	4.10	1.04				
Power					1, 1532	99.01***	1, 1275	75.90***
Boys	3.47	1.16	3.59	1.11				
Girls	2.90	1.03	3.05	1.08				

\underline{n}_1 boys = 841 to 842, \underline{n}_1 girls = 691 to 693, \underline{n}_2 boys = 697 to 698, \underline{n}_2 girls = 579 to 580.

*** $p < .001$. ** $p < .01$. * $p < .05$. Scales are scored from 1 to 6.

I analysed the gender differences school by school and found different patterns for each school. For reasons of simplicity I refrain from the description of all gender differences in each school at both measurement times, as they did not provide any consistent results.

4.4.2.2 Hierarchical Regression Analyses to Predict the Change in Value Priorities

As displayed in Tables 4.9 and 4.10 the Beta coefficient for the predictor Gender was only significant for the value priority Power. The positive weight indicated that boys scored higher on Time 2 Power than girls.

Summary

At both measurement times Self-Direction, Achievement, and Power increased with growing age. Age related negatively to an increase in Hedonism and Stimulation. The results on Gender showed that at both measurement times girls had significant higher scores on Benevolence and Universalism, whereas boys scored higher on Security, Achievement, and Power.



4.5 Question 5

How is Religiosity Related to Value Priorities?

This section deals with the question of how Religiosity related to the value priorities and whether it was an important predictor for the change in the value priorities. First, I will describe how Age and Gender related to Religiosity; secondly, I will display the differences between the schools; and lastly, how the students' Religiosity developed in the course of one year, as well as how strongly it predicted the change in value priorities during that time span.

4.5.1 Correlations of Religiosity with Age and Schwartz Value Priorities

I performed Pearson correlations to analyse the relations of Religiosity with Age and the Schwartz value priorities. The results were very consistent across both measurement times (see Table 4.14).

Table 4.14

Pearson Correlations of Religiosity (Relig.) with Age and Schwartz Value Priorities at Time 1 (N = 1525 to 1531) and Time 2 (N = 1259 to 1270)

	Age	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
Relig. Time 1	-.01	.01	.35**	.62**	.19**	.10**	-.10**	-.06*	-.34**	-.08**	-.06*
Relig. Time 2	.06	-.01	.35**	.60**	.20**	.11**	-.10**	-.06*	-.34**	-.15**	-.11**

** $p < .01$. * $p < .05$.

The results showed that Religiosity positively related to those value priorities that are located in the *Self-Transcendence* and *Conservation* parts of the Schwartz' model (see Figure 4.1), and negatively to those from the *Openness to Change* and *Self-Enhancement* segments, except for Security. In addition, there were no relations between Religiosity and Age.



4.5.2 Mean Differences of Religiosity between Age Groups at Both Measurement Times

According to a 33.3% quota based on the frequencies of the age groups existing in my sample I formed three age groups: The youngest group ranged from 10 to 14 years, the middle group included students who were 15 and 16 years old, and the oldest group consisted of students between 17 and 22 years of age.

With Oneway ANOVAs I analysed the mean differences between the age groups for Religiosity across all schools. At Time 1, there were no significant differences between the age groups. At Time 2, Religiosity had significant age differences, $F(2, 1256) = 4.95, p < .01$. Post Hoc Tests with Scheffe procedure resulted in two homogeneous subsets ($\alpha = .05$), in which the younger age group was located in the lower subset and the oldest age group was placed in the higher subset. The middle age group was in both subsets. Hence, according to these calculations the older students at Time 2 had higher Religiosity scores than the younger ones.

In sum, Age only significantly related to Religiosity at the second measurement time, when comparing the mean differences of age groups. According to these results Religiosity increased with growing age.

4.5.3 Mean Gender Differences in Religiosity

I used Oneway ANOVAs to analyse the mean differences between girls and boys for Religiosity across all schools. There were no significant differences at both measurement times.



4.5.4 Mean Differences of Religiosity in Each School

Looking at Religiosity from a cross-sectional viewpoint, Oneway ANOVAs demonstrated that the mean differences of Religiosity were highly significant across all schools at both measurement times.

Post Hoc Tests with Scheffe Procedure showed that at Time 1 there were four homogeneous subsets ($\alpha = .05$) with only School 6 being distinctively located in the lowest subset, followed by Schools 1 and 2, which were both located in the two lowest subsets. The second lowest subset further consisted of Schools 3, 5, and 4. The second highest subset included School 8, and the highest subset contained School 7 only.

At Time 2 the mean differences of Religiosity again resulted in four subsets. School 6 was located in the lowest subset, School 3 shared the lowest and the second lowest subset. Schools 2, 4, 5, and 1 further shared the second lowest subset, followed by School 8 in the second highest and School 7 in the highest subset.

In conclusion, at both measurement times School 6 had the lowest means for Religiosity, while Schools 7 and 8 (the two religious schools) had the highest. All other schools were located in between.

4.5.5 Change in Religiosity in the Course of One Year

I used the General Linear Model procedure to identify the Time x School effect on the development of Religiosity. The Multivariate Tests with the Within-Subjects Factors being Religiosity at both times, and the Between-Subjects Factors being the schools, resulted in a significant Time effect, $F(1, 798) = 45.40, p < .001$ and a significant effect of the Time x School interaction, $F(7, 798) = 3.17, p < .01$.

The results of the Paired Samples *t*-tests for Religiosity at both measurement times ($N = 806$) showed that when calculated across all schools, Religiosity decreased in the course of one



year ($t = 8.72$, $df = 805$, $p < .001$). Religiosity at Time 1 had a z-standardised mean of $M = .23$, and Religiosity at Time 2 had a z-standardised mean of $M = .12$.

When analysing the change in Religiosity for each school individually, the results indicated that the decreasing pattern was consistent for most of the schools ($p < .001$ for Schools 6, 7, and 8; $p < .01$ for Schools 3 and 4). At Schools 1, 2, and 5 no significant changes were measured in the Religiosity of the students.

4.5.6 Religiosity and Schools as Predictors for the Change in Value Priorities

Based on the above mentioned calculations, I assumed that Religiosity played a major role in predicting the Schwartz value priorities, as it significantly correlated with most of the scales (see Table 4.14). Therefore, I carried out Hierarchical Regression analyses for all the Time 2 Schwartz value priorities. I included Time 1 Religiosity as an additional predictor, after controlling for the initial value, Gender, Age, and Parents' Degree. I entered Religiosity before entering the schools in order to determine the predictive power of the schools after having controlled for Religiosity. Religiosity significantly added to the predictive power of the Regression equations for the Time 2 value priorities Conformity, Hedonism, and Universalism (see Table 4.15); only Universalism had a significant positive Beta weight (taken from the final equation), which indicated that the more religious students scored higher on Time 2 Universalism than the less religious ones. Hence, Religiosity was related to an increase in Universalism (partial $r = .07$). Furthermore, Religiosity was also related to an increase in Conformity (partial $r = .18$), whereas it was related to a decrease in Hedonism (partial $r = -.17$).

For Conformity, Hedonism, and Universalism, the inclusion of the dummy coded school variables additionally accounted for the variance in the Time 2 variables.



Table 4.15

Hierarchical Regression of Time 2 Schwartz Value Priorities (VP) on Religiosity at Time 1 and Schools, Controlling for Time 1 Value Priority, Gender, Age, and Parents' Degree

VP	Conformity				Hedonism				Universalism			
	Predictor	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF
Religiosity	.016	1,770	24.64***	.01	.017	1,770	21.95***	-.08	.003	1,772	4.29*	.12*
Schools	.013	7,763	3.03**		.015	7,763	2.85**		.012	7,765	2.30*	
Cum. R^2	.516				.416				.407			

* $p < .05$. ** $p < .01$. *** $p < .001$. The predictor schools consists of eight dummy coded schools.

For the Time 2 value priorities Power, Tradition, Benevolence, and Achievement, Religiosity also significantly added to the predictive power of the Regression equation, whereas, the dummy coded schools did not improve the prediction of the respective Time 2 value priority (see Table 4.16). The Beta weights for Religiosity were only significantly positive for Tradition and Benevolence, which indicated that the more religious students had higher scores on Time 2 Tradition and Benevolence than the less religious students. Also, the partial correlations showed that Religiosity was related to an increase in Tradition (partial $r = .32$), as well as an increase in Benevolence (partial $r = .16$). Furthermore, Religiosity was related to a decrease in Power (partial $r = -.10$), as well as a decrease in Achievement (partial $r = -.10$).

Table 4.16

Hierarchical Regression of Time 2 Schwartz Value Priorities (VP) on Religiosity at Time 1 and Schools, Controlling for Time 1 Value Priority, Gender, Age, and Parents' Degree

VP	Power				Tradition			
	Predictor	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF
Religiosity	.005	1,771	7.65**	-.03	.055	1,772	88.77***	.27***
Schools	.008	7,764	1.57		.008	7,765	1.90	
Cum. R^2	.462				.533			

* $p < .05$. ** $p < .01$. *** $p < .001$.
The predictor schools consists of eight dummy coded schools.



Table 4.16 continued

Hierarchical Regression of Time 2 Schwartz Value Priorities (VP) on Religiosity at Time 1 and Schools, Controlling for Time 1 Value Priority, Gender, Age, and Parents' Degree

VP	Benevolence				Achievement			
	ΔR^2	df	ΔF	b	ΔR^2	df	ΔF	b
Predictor								
Religiosity	.016	1, 771	20.61***	.15*	.006	1, 769	7.11**	-.03
Schools	.008	7, 764	1.46		.006	7, 762	1.10	
Cum. R^2	.412				.393			

* $p < .05$. ** $p < .01$. *** $p < .001$.

The predictor schools consists of eight dummy coded schools.

Religiosity did not add to the predictive power of the Regression equation for the value priorities Self-Direction, Stimulation, and Security.

Summary

At the second measurement time, there were significant higher Religiosity scores in the older age group. There were no gender differences. The mean differences between the schools attributed the lowest Religiosity scores to School 6, and the highest to Schools 7 and 8. Across all schools Religiosity decreased in the course of one year. A one by one analysis showed that this was only the case in five of the eight schools, whereas in the remaining three schools no changes occurred.

From a longitudinal perspective, the analyses of change showed that Religiosity significantly contributed to an increase in the value priorities Conformity, Universalism, Tradition, and Benevolence, whereas, it significantly contributed to a decrease in the value priorities Hedonism, Power, and Achievement. For the value priorities Conformity, Hedonism, and Universalism, the schools additionally contributed to the predictive power of the equation, whereas the schools did not contribute to Time 2 Power, Tradition, Benevolence, and Achievement.



4.6 Question 6

How are Value Priorities, Religiosity, Age, and Gender Related to School Commitment and its Change?

In this section I will demonstrate how School Commitment related to Age, Religiosity, Gender, and the Schwartz value priorities. In addition, I will display the mean differences of School Commitment between the schools. From a longitudinal perspective I will demonstrate how School Commitment changed in the course of the year and present the results from the Hierarchical Regression analyses that predicted its development throughout the year. Finally, I will demonstrate the relation between School Commitment and Religiosity.

4.6.1 Correlations of School Commitment with Age, Religiosity, and Value Priorities

Pearson correlations of School Commitment with Age, Religiosity, and the Schwartz value priorities at Time 1 resulted in highly significant positive correlations between School Commitment and Religiosity, Security, Conformity, Tradition, Benevolence, and Universalism. Furthermore, there were highly significant negative correlations between School Commitment and Hedonism, and Power. School Commitment related significantly negative to Stimulation on a $p < .05$ level (see Table 4.17).

Table 4.17

Pearson Correlations of School Commitment (SC) with Age, Religiosity (Relig.), and Schwartz Value Priorities at Time 1 (N = 1531 to 1539)

	Age	Relig.	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
SC	.04	.53**	.17**	.45**	.44**	.30**	.26**	.03	-.06*	-.27**	.01	-.10**

** $p < .01$. * $p < .05$.



At Time 2 the correlations between School Commitment and Age, Parents' Degree, Religiosity, and the Schwartz value priorities resulted in highly significant positive correlation coefficients between School Commitment and Age, Parents' Degree, Religiosity, Security, Conformity, Tradition, Benevolence, and Universalism. Furthermore, there were highly significant negative correlations between School Commitment and Stimulation, Hedonism, and Power (see Table 4.18).

Table 4.18

Pearson Correlations of School Commitment (SC) with Age, Parents' Degree (Degr.), Religiosity (Relig.), and Schwartz Value Priorities at Time 2 (N = 1265 to 1276)

	Age	Degr.	Relig.	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
SC	.09**	.24**	.49**	.15**	.42**	.37**	.32**	.22**	.00	-.09**	-.23**	.01	-.10**

** $p < .01$.

In summary, the results showed consistent patterns at both measurement times, except for the relations with the variable Age. Regarding the Schwartz value priorities, those values from the *Conservation* and *Self-Transcendence* areas correlated positively with School Commitment, whereas the other related negatively to School Commitment, except for Self-Direction and Achievement, which did not significantly correlate with School Commitment. The high positive correlations between School Commitment and Religiosity at both measurement times will be further explored under subsection 4.6.6.

4.6.2 Mean Gender Differences in School Commitment

I used Oneway ANOVAs to analyse the mean differences between girls and boys for School Commitment across all schools. At Time 1, there were no significant gender differences, whereas at Time 2, the girls scored significantly higher on School commitment with $F(1, 1274) = 11.59, p < .01$.



4.6.3 Mean Differences in School Commitment between the Schools at Both Measurement Times

I calculated Oneway ANOVAs in which the schools were the independent variables and School Commitment was the dependent variable. The results at Time 1 showed a significant difference in School Commitment between the schools with $F(7, 1531) = 86.98, p < .001$. Also, at Time 2 the results showed a significant difference in School Commitment between the schools with $F(7, 1268) = 63.94, p < .001$. Table 4.19 displays the means of each school.

Table 4.19

*Means of School Commitment for the Schools at Both Measurement Times
(N1 = 1539, N2 = 1276)*

School	<i>M</i> Time 1	<i>SD</i> Time 1	<i>M</i> Time 2	<i>SD</i> Time 2
1	2.15	.47	2.01	.47
2	1.89	.45	1.99	.41
3	1.92	.42	1.91	.40
4	2.16	.37	2.06	.38
5	2.12	.38	1.97	.44
6	2.02	.34	2.00	.32
7	2.60	.31	2.54	.36
8	2.35	.35	2.25	.35

Scale is scored from 1 to 3.

Post Hoc Tests with the Scheffe procedure divided the schools at Time 1 into the following four homogeneous subsets ($\alpha = .05$): Schools 2 and 3 were located in the lowest subset, followed by School 6, which was in both the first and the second subset. The second subset included Schools 5, 1, and 4; the third consisted of School 8, and the fourth contained School 7. At Time 2 the Post Hoc Tests divided the schools into three distinct homogeneous subsets ($\alpha = .05$). Schools 3, 5, 2, 6, 1, and 4 were located in the lowest subset, followed by School 8



which was in the second subset, and School 7 which was located in the third subset. Hence, the results showed that Schools 7 and 8, which were the religious schools, scored significantly higher on School Commitment at both measurement times.

4.6.4 Change in School Commitment during the Course of One Year

The results of the Paired Samples t -tests for School Commitment at both measurement times ($N = 808$) indicated that across all schools School Commitment decreased during the course of one year ($t = 5.47$, $df = 807$, $p < .001$). At Time 1, the mean for School Commitment was $M = 2.24$, $SD = .43$; at Time 2, it was $M = 2.18$, $SD = .43$.

When analysing the change in School Commitment for each school individually, the results showed that the decreasing pattern was consistent for five of the eight schools. In School 2 School Commitment significantly increased in the year; Schools 3 and 6 displayed no significant changes (see Table 4.20).

Table 4.20

Mean Differences of School Commitment Measured with Paired Samples T-Tests across Both Measurement Times

School	M Time 1	SD Time 1	M Time 2	SD Time 2	t -value	df	Significance (two-tailed)
1	2.20	.39	1.96	.46	4.27	34	.000
2	1.89	.42	2.03	.41	-2.78	56	.007
3	1.95	.43	1.97	.39	-.43	59	.671
4	2.23	.32	2.09	.36	4.32	116	.000
5	2.09	.35	1.97	.43	2.99	67	.004
6	2.05	.35	2.02	.30	1.46	192	.146
7	2.62	.31	2.56	.36	3.16	199	.002
8	2.36	.36	2.26	.34	3.10	77	.003

Scale is scored from 1 to 3.



4.6.5 Hierarchical Regression Analyses to Predict Change in School Commitment

I performed Hierarchical Regression analyses in which School Commitment at Time 2 was predicted with the following sets of hierarchically entered predictors: After controlling for the initial value at Time 1, Gender and Age were entered, followed by Parents' Degree, students' Academic Achievement (z-standardised), Schwartz value priorities at Time 1, Religiosity at Time 1, and finally the dummy coded schools. All predictors except for Parents' Degree significantly contributed to the predictive power of the equation, which resulted in Cumulative $R^2 = .591$.

In the following description of the results only those Beta weights were considered that appeared in the final model. School Commitment at Time 1 accounted for 52.1% of the variance in Time 2 School Commitment, $F(1, 748) = 813.94$, $p < .001$. Age and Gender significantly contributed to the predictive power of the Regression equation, $\Delta R^2 = .007$, $\Delta F(2, 746) = 5.47$, $p < .01$. Age had a significant positive Beta coefficient, as opposed to Gender. The partial correlation for Age (partial $r = .08$) showed that Age related to an increase in School Commitment.

Furthermore, the positive partial correlation for Parents' Degree (partial $r = .04$) showed that higher Parents' Degree related to an increase in School Commitment. Also, Academic Achievement significantly contributed to the predictive power of the Regression equation, $\Delta R^2 = .010$, $\Delta F(1, 744) = 15.32$, $p < .001$. The significant Beta coefficient indicated that Academic Achievement was a positive predictor of School Commitment at Time 2 (partial $r = .14$). Additionally, the Schwartz value priorities significantly contributed to the predictive power of the Regression equation, $\Delta R^2 = .018$, $\Delta F(10, 734) = 2.94$, $p < .01$. Only Hedonism had a significant Beta coefficient which indicated that it was a negative predictor for Time 2 School Commitment. Religiosity also significantly contributed to the predictive power of the



Regression equation, $\Delta R^2 = .010$, $\Delta F(1, 733) = 16.73$, $p < .001$, whereas the Beta coefficient was not significant for Religiosity. The positive partial correlation (partial $r = .15$) demonstrated that Religiosity related to an increase in School Commitment across the year. Inclusion of the dummy coded school variables into the Regression equation further improved the prediction of Time 2 School Commitment, $\Delta R^2 = .025$, $\Delta F(7, 726) = 6.31$, $p < .001$.

4.6.6 Relation between Religiosity and School Commitment

At Time 1, Religiosity and School Commitment correlated highly positively with each other ($r = .53$, $p < .001$) (see Table 4.17). At Time 2, I found a similarly strong effect between these two variables ($r = .49$, $p < .001$) (see Table 4.18). Hence, the relation between Religiosity and School Commitment needs to be further analysed.

4.6.6.1 Correlations of Religiosity with School Commitment in Each School at Both Measurement Times

To explore the relations of Religiosity and School Commitment school by school, I correlated these two variables for each school at both measurement times. The results from these cross-sectional analyses showed twelve significant correlations. In School 6 Religiosity correlated negatively with School Commitment at Time 2, whereas all other correlations were significantly positive. At Schools 2 and 3 there were positive correlations only at one measurement time (see Table 4.21). At School 5 there was no positive correlation between Religiosity and School Commitment. The results were consistent in Schools 1, 4, 7, and 8.



Table 4.21

Pearson Correlations of Religiosity with School Commitment at Both Measurement Times

	School 1	School 2	School 3	School 4	School 5	School 6	School 7	School 8
Time 1	.33**	.29**	.11	.23**	.10	.18**	.32**	.41**
Time 2	.37**	.11	.20*	.21**	.19	-.12*	.32**	.39**

** $p < .01$. * $p < .05$.

4.6.6.2 Cross-Lagged Correlations between Religiosity and School Commitment

With the help of Cross-Lagged Correlations I wanted to shed more light on the direction of the causal influence between Religiosity and School Commitment. Despite the existing debate whether Cross-Lagged Panel Designs can provide sound information concerning causal effects (Rogosa, 1980) or not, I chose this method, as it seemed the most efficient to indicate the causal direction of the high correlations between Religiosity and School Commitment in my set of data.

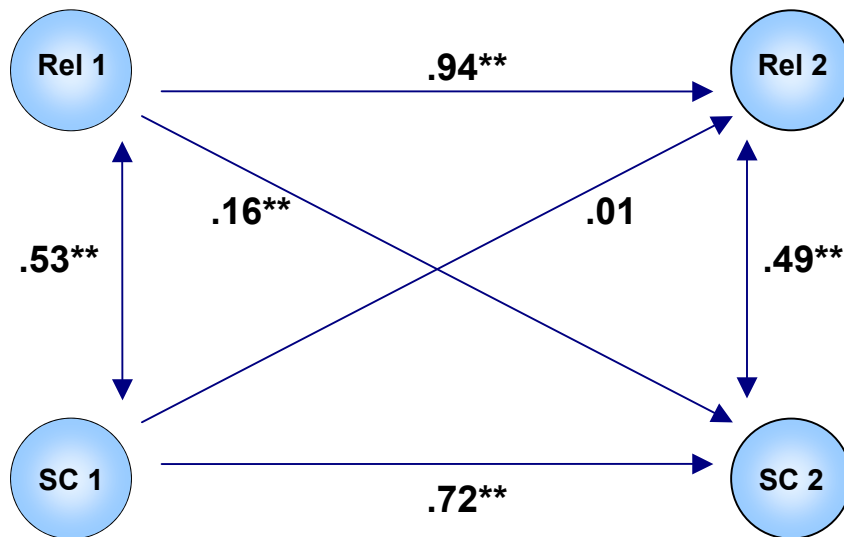
For my longitudinal data, I used a two-wave, two-variable panel. Figure 4.12 displays the Cross-Lagged Panel Design across all students ($N = 811$). The parameters along the horizontal lines represent the influence of the variables on themselves over time; these stabilities were very high. The parameters along the vertical lines represent the correlations of the two variables on both cross-sectional levels; also these correlation coefficients were quite high. The Beta coefficients along the diagonal lines represent the lagged, reciprocal causal effects between the two variables, which are the key quantities in the investigation of reciprocal causal effects. Figure 4.12 shows that there was a highly significant positive Beta coefficient on the path from Time 1 Religiosity to Time 2 School Commitment, whereas in the opposite direction the Beta coefficient was not significant. This leads to the assumption that the causal effect between Religiosity and School Commitment lead from Time 1 Religiosity to Time 2 School Commitment. This result also confirms the general principle that



a more stable variable usually predicts the less stable variable. Additionally, I analysed each school individually with this procedure, but found no significant lagged causal effects.

Figure 4.12

Cross-Lagged Panel Design across all Schools¹



** $p < .01$. * $p < .05$.

4.6.6.3 Analysing the Joint Effect of the Interaction of School Commitment and Religiosity on the Value Priorities

To explore the effect of the interaction of School Commitment and Religiosity on the value priorities, I entered School Commitment, as well as the interaction between School Commitment and Religiosity into the Hierarchical Regression equation, based on the models demonstrated in Tables 4.15 and 4.16. The ten equations had the following design: Each value priority at Time 2 was the criterion. The predictors were entered in two blocks. The first block consisted of the initial value priority at Time 1, Age, Gender, Parents' Degree, the dummy coded schools, Religiosity at Time 1, and School Commitment at Time 1. The second block consisted of the interaction School Commitment (Time 1) x Religiosity (Time 1). The results

¹ Rel 1 = Religiosity Time 1 Rel 2 = Religiosity Time 2
 SC 1 = School Commitment Time 1 SC 2 = School Commitment Time 2



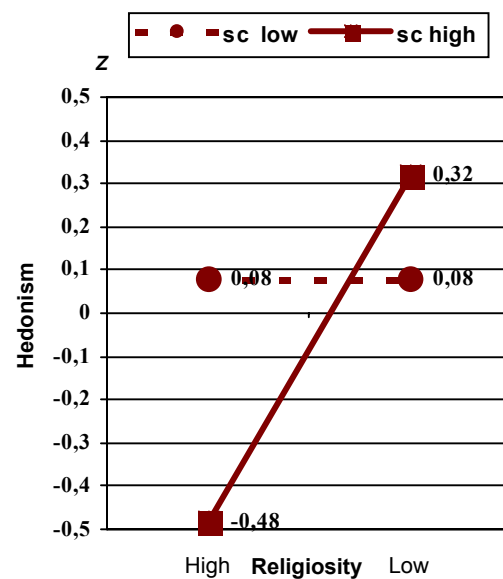
showed that the School Commitment x Religiosity interaction was significant for the change in Hedonism only, with, $\Delta R^2 = .004$, $\Delta F(1, 761) = 5.63$, $p < .05$.

To illustrate the nature of the significant interaction, I computed z-standardised School Commitment and Religiosity scores at values one standard deviation above and below the means of the predictor (Cohen & Cohen, 1983).

This analysis revealed that the highest Hedonism scores were achieved under the condition High School Commitment and Low Religiosity, whereas the lowest Hedonism scores were under the condition High School Commitment and High Religiosity (see Figure 4.13). A further glance at the Beta weights for School Commitment at Time 1 showed that this predictor had a significant Beta weight ($\beta = .098$, $p < .01$) only for the model predicting the change in Universalism.

Figure 4.13

Interaction of School Commitment (SC) and Religiosity on Hedonism



Summary

School Commitment related positively to age at Time 2. Girls scored significantly higher on School Commitment than boys at the second time. There were significant School Commitment differences between the schools. The students in the religious schools had higher scores than the students in the non-religious schools. Across all schools School Commitment decreased during the course of the year. This pattern was consistent in five out of the eight schools. There were highly positive correlations between School Commitment and Religiosity at both measurement times. The causal effect seems to lead from Time 1 Religiosity to Time 2 School Commitment. The highest Hedonism scores were achieved under the condition High School Commitment/Low Religiosity, whereas the lowest Hedonism scores were under the condition High School Commitment/High Religiosity.



4.7 Question 7

How do the Duration of School Attendance, Academic Achievement, and Satisfaction with Life Relate to Value Priorities and their Change?

In this section I will explore whether the duration of a student's attendance at his or her school has had an effect on his or her value priorities. I will moreover describe the analyses regarding the variables Academic Achievement and Satisfaction with Life.

4.7.1 Duration of School Attendance

I used the duration of each student's attendance in his or her particular school to analyse whether it had any effect on the existence and change in value priorities.

4.7.1.1 Correlations of Duration of School Attendance, Age, and Grade/Level

I conducted Pearson correlations to determine how the duration of the attendance at the school related to Age and the grade/level the student attended. Table 4.22 shows that these three variables correlated very highly with each other at both measurement times. Hence, it is necessary to control for age, when using the variable Duration as a predictor.

Table 4.22

Pearson Correlations of Duration of School Attendance (Duration) with Age and Grade/Level at Time 1 (N = 1516 to 1535) and Time 2 (1249 to 1263)

	Age	Grade/Level
Duration Time 1	.40**	.53**
Duration Time 2	.43**	.52**

** $p < .01$.



4.7.1.2 Mean Differences of Value Priorities Depending on the Duration of School

Attendance

I used Oneway ANOVAs with the Duration (in months) as factor and the ten Schwartz value priorities as dependent variables in order to determine whether the Duration of school attendance had an influence on the value priorities. At Time 1, the variable Duration resulted in significant mean differences for Security, Conformity, Tradition, and Hedonism. At Time 2, the mean differences were significant for Benevolence and Stimulation. These results showed no consistent pattern and suggest that the differences in the duration of school attendance had no relevant influence on the existing value priorities at both times.

4.7.1.3 Hierarchical Regression Analyses to Predict Change in Value Priorities from

Duration of School Attendance

I performed Hierarchical Regression analyses to determine whether the Duration of school attendance contributed to the change of value priorities in the course of one year. For this purpose the ten Schwartz value priorities at Time 2 were predicted as follows: After controlling for the initial value at Time 1, a second block consisting of the demographic variables Gender, Age, and Parents' Degree was entered into the Regression equation followed by the dummy coded schools in the third block. The fourth block was the Duration of school attendance in months. Finally, all ten Schwartz value priorities were included. The variable Duration only significantly contributed to the predictive power of Time 2 Conformity and Universalism.

After controlling for Time 1 **Conformity**, which accounted for 47.9% of the variance in Time 2 Conformity, the set of demographic variables did not contribute to the predictive power of the Regression equation. The dummy coded schools significantly contributed with $\Delta R^2 =$



.029, $\Delta F(7, 758) = 6.51$, $p < .001$. Inclusion of the Duration of school attendance into the Regression equation further improved the prediction of Time 2 Conformity with $\Delta R^2 = .004$, $\Delta F(1, 757) = 5.73$, $p < .05$. The positive significant Beta coefficient ($\beta = .070$, $p < .05$) indicated that students who had attended their school longer had higher scores on Time 2 Conformity. Altogether this model explained 51.4% of the variance (Cumulative R^2).

After controlling for Time 1 **Universalism**, which accounted for 38.4% of the variance in Time 2 Universalism, the set of demographic variables did not contribute to the predictive power of the Regression equation. The dummy coded schools significantly contributed with $\Delta R^2 = .012$, $\Delta F(7, 760) = 2.15$, $p < .05$. Inclusion of the Duration of school attendance into the Regression equation further improved the prediction of Time 2 Universalism with $\Delta R^2 = .006$, $\Delta F(1, 759) = 7.49$, $p < .01$. The positive significant Beta coefficient ($\beta = .089$, $p < .01$) indicated that students who had attended their school longer had higher scores on Time 2 Universalism. Altogether this model explained 40.5% of the variance (Cumulative R^2).

In sum, these results showed that, after controlling for the initial value, the demographic variables, and the schools, higher Duration of school attendance positively related to an increase in Conformity and Universalism. These results, however, were not highly significant.

4.7.2 Academic Achievement

Academic Achievement was measured only at Time 2. For the following calculations I used the z-standardised value for Academic Achievement in order to adjust the diverse grading systems used in the different schools.



4.7.2.1 Correlations of Academic Achievement with Age, Parents' Degree, School Commitment, Religiosity, and Schwartz Value Priorities

Pearson correlations of Academic Achievement with Age, Parents' Degree, School Commitment, Religiosity, and Schwartz value priorities at Time 2 resulted in highly significant positive correlations between Academic Achievement and the Parents' Degree, School Commitment, Conformity, and Universalism. Furthermore, there was a significant correlation between Academic Achievement and Self-Direction ($p < .05$). Significant negative correlations were found between Academic Achievement and Stimulation, and Hedonism (see Table 4.23).

Table 4.23

Pearson Correlations of Academic Achievement (Acad. Ach.) with Age, Parents' Degree, School Commitment (SC), Religiosity, and Schwartz Value Priorities at Time 2 (N = 1172 to 1218)

	Age	Degree	SC	Relig.	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
Acad. Ach.	-.02	.09**	.16**	.01	.02	.08**	.01	.04	.11**	.06*	-.09**	-.11**	.04	.02

** $p < .01$. * $p < .05$.

In addition, I performed partial correlations with the above mentioned variables, in which I controlled for the schools. This procedure did not change the significance of the results.

4.7.2.2 Mean Gender Differences in Academic Achievement at Time 2

I calculated a Oneway ANOVA in which gender was the factor and the z-standardised value for Academic Achievement was the dependent variable to compare the mean differences between boys and girls at Time 2. There was a significant difference between the groups with $F(1, 1216) = 9.98$, $p < .01$. Girls scored higher on Academic Achievement than boys.



4.7.3 Satisfaction with Life

I will now display the results obtained with the questions on Satisfaction with Life. This variable was measured only at Time 2.

4.7.3.1 Correlations of Satisfaction with Life with Age, Religiosity, School Commitment, Academic Achievement, and Value Priorities at Time 2

Pearson correlations of Satisfaction with Life with Age, Religiosity, School Commitment, Academic Achievement, and Schwartz value priorities at Time 2 resulted in highly significant positive correlations between Satisfaction with Life and School Commitment, Academic Achievement, Security, Conformity, Benevolence, Universalism, Self-Direction, Hedonism, and Achievement. Stimulation related positively to Satisfaction with Life on a $p < .05$ level (see Table 4.24).

Table 4.24

Pearson Correlations of Satisfaction with Life (SWL) with Age, Religiosity (Rel.), School Commitment (SC), Academic Achievement (Acad. Ach.), and Schwartz Value Priorities at Time 2 (N = 1256 to 1267)

	Age	Rel.	SC	Acad. Ach.	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
SWL	.02	-.03	.21**	.11**	.16**	.14**	.03	.14**	.08**	.12**	.07*	.09**	.14**	.05

** $p < .01$. * $p < .05$.

There were no significant relations between Age and Satisfaction with Life. Also, when analysed with Oneway ANOVAs for three age groups (based on a 33.3% split) the mean differences were not significant.



4.7.3.2 Mean Gender Differences in Satisfaction with Life

With Oneway ANOVAs I analysed the mean differences between girls and boys for Satisfaction with Life across all schools. The results were not significant.

4.7.3.3 Mean Differences in Satisfaction with Life for Each School at Time 2

I performed Oneway ANOVAs with Post Hoc Tests using the Scheffe procedure, in which the schools were the independent variable and Satisfaction with Life was the dependent variable. The results at Time 2 showed a significant difference in Satisfaction with Life between the eight schools with $F(7, 1259) = 3.56, p < .01$. However, Post Hoc Tests with the Scheffe procedure positioned all schools into one homogeneous subset ($\alpha = .05$). Table 4.25 displays the descriptive statistics for each school.

Table 4.25

Descriptive Statistics for Satisfaction with Life for Each School at Time 2 (N = 1267)

School	<i>M</i> Time 2	<i>SD</i> Time 2
1	3.23	.84
2	3.19	.77
3	3.35	.74
4	3.32	.78
5	3.46	.82
6	3.49	.72
7	3.34	.80
8	3.16	.73

Scale is scored from 1 to 5.

Summary

There were no notable differences in the change of value priorities with regard to the Duration of school attendance. Girls had higher Academic Achievement scores than boys. School Commitment and Academic Achievement correlated positively with Satisfaction with Life.



4.8 Question 8

Which Value Priorities do Teachers Have?

In the following three sections I will present the results of the teachers' data and compare them to the students' data. This first subsection will display the value priorities of the teachers, how these related to School Commitment and Religiosity, and whether there were any gender differences. I will then display the retest-reliabilities of their value priorities across both measurement times.

4.8.1 Correlations of Schwartz Value Priorities

Table 4.26 demonstrates how the value priorities related to each other at both measurement times. In addition, it shows the Cronbach's alpha coefficients for each value priority. The alpha coefficients were all above .6, and therefore, quite satisfying. Almost all significant correlations were positive, except for the following three relations: Stimulation with Security at both measurement times, Self-Direction with Tradition at both measurement times, and Self-Direction with Conformity at Time 1. When analysing the significant correlation coefficients a general pattern evolved: at Time 1 almost all contrasting value priorities did not correlate significantly, whereas the compatible value priorities mostly did correlate positively. At Time 2 this pattern did not evolve as clearly as at Time 1, because more relations correlated positively; but it was still evident that the compatible value priorities had much stronger positive correlations than the contrasting ones.



Table 4.26

Pearson Correlations of Schwartz Value Priorities at Time 1 and Time 2, Including Cronbach's Alpha Coefficients

α I α II	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
SE	(.67) (.71)	.29**	.07	.18*	.34**	.05	-.32**	.24**	.31**	.34**
CO	.50**	(.75) (.82)	.66**	.32**	-.07	-.38**	-.08	-.06	.04	-.02
TR	.25*	.68**	(.65) (.72)	.31**	-.12	-.36**	-.07	-.12	-.09	-.12
BE	.35**	.43**	.42**	(.69) (.62)	.25**	-.01	.15	.08	.05	-.05
UN	.27**	-.00	-.02	.22*	(.66) (.71)	.23**	-.12	.15	.10	.11
SD	.14	-.12	-.21*	.24*	.33**	(.67) (.67)	.35**	.32**	.22**	.31**
ST	-.29**	-.01	-.08	.17	-.08	.32**	(.75) (.72)	.19*	.17*	.07
HE	.26*	.14	.06	.23*	.25*	.26*	.14	(.79) (.75)	.43**	.42**
AC	.39**	.29**	.09	.21*	.22*	.16	.08	.43**	(.83) (.85)	.65**
PO	.28**	.09	-.06	.14	.17	.22*	.10	.40**	.65**	(.69) (.78)

** $p < .01$. * $p < .05$.

Standardised Cronbach's alpha coefficients directly above and below the diagonal line in brackets.

Above the diagonal line teacher data Time 1 ($N = 163$ to 165).

Below the diagonal line teacher data Time 2 ($N = 92$).



4.8.2 Correlations of Religiosity with Schwartz Value Priorities

I performed Pearson correlations of Religiosity with the Schwartz value priorities (see Table 4.27). At both measurement times Religiosity correlated significantly positively with Conformity, Tradition, and Benevolence. Additionally, at the first measurement time it related negatively to Security, Universalism, Self-Direction, Hedonism, and Power.

Table 4.27

Pearson Correlations of Religiosity and Schwartz Value Priorities at Time 1 (N = 162 to 164) and Time 2 (N = 90)

	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
Religiosity Time 1	-.16*	.48**	.74**	.27**	-.24**	-.33**	.06	-.21**	-.14	-.20*
Religiosity Time 2	.17	.56**	.81**	.34**	-.12	-.18	.06	.02	.04	-.07

** $p < .01$. * $p < .05$.

4.8.3 Correlations of School Commitment with Religiosity and Schwartz Value Priorities

I computed Pearson correlations of School Commitment with Religiosity and the Schwartz value priorities at both measurement times (see Table 4.28). At both measurement times School Commitment correlated significantly positively with Religiosity and Benevolence. The other results were not as consistent for both times. Furthermore, at the second measurement time the positive correlation between Tradition and School Commitment was highly significant.



Table 4.28

Pearson Correlations of School Commitment (SC) with Religiosity (Relig.) and Schwartz Value Priorities at Time 1 (N = 162 to 164) and Time 2 (N = 90 to 91)

	Relig.	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO
SC Time 1	.20**	.00	.19*	.12	.29**	-.02	-.08	.11	-.01	.09	.06
SC Time 2	.30**	.25*	.21	.28**	.22*	.14	-.09	-.13	.16	.00	.10

** $p < .01$. * $p < .05$.

4.8.4 Mean Gender Differences in Value Priorities

I used Oneway ANOVAs to identify gender differences for the Schwartz value priorities. At Time 1, there were significant gender differences only for Security, Tradition, and Hedonism (see Table 4.29). The females had higher scores for Security and Hedonism, whereas the males scored higher on Tradition. At Time 2, there were no significant gender differences for the value priorities. At both times there were no gender differences for School Commitment.

Table 4.29

Oneway Analyses of Variance for Gender Differences on Schwartz Value Priorities

	<i>M</i> Time 1	<i>SD</i> Time 1	<i>df</i> Time 1	<i>F</i> -value Time 1
Security			1, 163	7.79**
Male (<i>n</i> = 81)	4.04	.89		
Female (<i>n</i> = 84)	4.39	.73		
Tradition			1, 163	4.64*
Male (<i>n</i> = 81)	3.72	1.02		
Female (<i>n</i> = 84)	3.37	1.04		
Hedonism			1, 161	4.86*
Male (<i>n</i> = 80)	3.63	1.08		
Female (<i>n</i> = 83)	4.00	.96		

** $p < .01$. * $p < .05$. Scales are scored from 1 to 6.



4.8.5 Retest-Reliabilities of Scales across all Schools

I matched the teachers' data of both measurement times and created a new file, which included only those teachers who responded to the questionnaire at both measurement times ($N = 55$). Table 4.30 displays the Pearson correlation coefficients that determine the retest-reliabilities of each scale.

Table 4.30

Retest-Reliabilities of Scales across Both Measurement Times (N = 55)

	SE	CO	TR	BE	UN	SD	ST	HE	AC	PO	SC	Religiosity
<i>r</i>	.82**	.89**	.86**	.51**	.80**	.82**	.78**	.80**	.77**	.87**	.79**	.97**

** $p < .01$.

The retest-reliabilities were quite satisfying. The correlations were much higher than the respective ones for the students. Religiosity had a very high retest-reliability, whereas Benevolence had the lowest retest-reliability, the coefficient was even lower than the one for the students.

Summary

At both measurement times the teachers' Religiosity correlated significantly positively with Conformity, Tradition, and Benevolence. Furthermore, at both times School Commitment correlated significantly positively with Religiosity and Benevolence. The gender differences were inconsistent. The retest-reliabilities of the value priorities were quite satisfying, and in general much higher than the respective ones for the students.



4.9 Question 9

Do Value Priorities of Teachers and Students Correspond?

I will now present those analyses and results that shed some light on the extent to which the value priorities of the students and the teachers corresponded. Additionally, I investigated whether there were different scores of similarity in these eight schools. This section will demonstrate how these similarities related to School Commitment and other variables of interest. Did the more committed students share more similarities with their teachers? Furthermore, I explored whether the teachers' values corresponded with those that the directors deemed important for the school.

The teachers' data did not allow for multi-level analyses as due to the need for data protection, it was not possible to identify the respective teachers and their students. Statistically it was also not always possible to use all of the eight schools, based on the teachers' data as one unit of analysis (e.g., as a predictor), because in this case the sample size would be $n = 8$, which is too small.

This section includes five parts. In the first part, I will demonstrate how the mean scores of the students and the teachers compared to each other. In the next three parts I will present different measures that determine the student-teacher similarity: firstly, a measure that computes student-teacher distances; secondly, a Person Profile Fit measure that is based on correlation coefficients of the teachers' with the students' scores; and thirdly, a combination of the previous two. These three measures were all based on the data of the first measurement time. I will also present how these measures related to other measured variables. Finally, in the fifth part I will make some comments regarding the interviews with the school directors.



4.9.1 Comparison of Student and Teacher Data

The following will demonstrate how similar the students' and the teachers' value priorities, School Commitment, and Religiosity were. I will first display the results across all schools, and then those of some selected schools.

4.9.1.1 Comparison of Student and Teacher Data across All Schools

I conducted Oneway ANOVAs to identify the mean differences between the teachers and students at both measurement times. At both times there were significant mean differences in all scales except for Self-Direction and Religiosity. The teachers had significantly higher means in the value priorities Security, Conformity, Tradition, Benevolence, Universalism, whereas the students had significantly higher means in Stimulation, Hedonism, Achievement, and Power. School Commitment was significantly higher for the teachers. For further details see Table 4.31.



Table 4.31

Oneway Analyses of Variance for Student-Teacher Differences on Schwartz Value Priorities and School Commitment across all Schools at Time 1 and Time 2

	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i> -value	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i> -value
	Time 1	Time 1	Time 1	Time 1	Time 2	Time 2	Time 2	Time 2
Security			1, 1699	26.21***			1, 1368	11.34**
Students	3.84	.90			3.80	.88		
Teachers	4.22	.83			4.12	.86		
Conformity			1, 1697	42.59***			1, 1367	22.77***
Students	3.64	1.03			3.64	1.03		
Teachers	4.19	.93			4.18	1.04		
Tradition			1, 1698	29.08***			1, 1367	23.03***
Students	3.12	.95			3.21	.96		
Teachers	3.54	1.04			3.71	1.08		
Benevolence			1, 1697	6.93**			1, 1367	10.91**
Students	4.74	.79			4.62	.81		
Teachers	4.90	.63			4.90	.58		
Universalism			1, 1699	10.62**			1, 1368	13.60***
Students	4.35	.89			4.25	.85		
Teachers	4.58	.68			4.59	.70		
Self-Direction			1, 1699	.78			1, 1366	.07
Students	4.83	.69			4.80	.72		
Teachers	4.88	.68			4.82	.68		
Stimulation			1, 1698	113.28***			1, 1367	73.78***
Students	4.53	.98			4.49	.95		
Teachers	3.67	1.01			3.61	.92		
Hedonism			1, 1694	200.35***			1, 1365	93.96***
Students	4.89	.91			4.76	.95		
Teachers	3.81	1.03			3.77	.96		
Achievement			1, 1696	90.45***			1, 1366	27.99***
Students	4.15	.99			4.16	1.01		
Teachers	3.38	1.00			3.59	1.00		
Power			1, 1697	11.93**			1, 1367	8.23**
Students	3.21	1.14			3.34	1.13		
Teachers	2.89	.95			3.00	1.01		
School Com.			1, 1701	178.43***			1, 1365	96.76***
Students	2.16	.43			2.12	.43		
Teachers	2.62	.28			2.58	.31		

*** $p < .001$. ** $p < .01$.

\underline{N} Time 1: 1533 to 1539 students, 164 to 165 teachers.

\underline{N} Time 2: 1275 to 1278 students, 91 to 92 teachers.

Schwartz scales are scored from 1 to 6. School Commitment scale is scored from 1 to 3.

4.9.1.2 Comparison of Student and Teacher Data in Selected Schools

Due to the inconsistencies in the number of teachers who agreed to participate in this study, some schools had very small sample sizes. Therefore, it was not possible to calculate mean differences between the schools. For the results in the following subsections, I considered only those schools that had a teacher sample size of $\underline{n} > 20$. At Time 1, this included School 2



($n = 22$), School 4 ($n = 25$), School 6 ($n = 36$), and School 7 ($n = 47$). At Time 2, this included only School 4 ($n = 22$) and School 7 ($n = 25$).

I will first describe the mean differences between the students and the teachers in each school. The Tables 4.32 and 4.33 show which of the value priorities, School Commitment, or Religiosity, had significantly higher means for either the teachers or the students. Only those variables with significant mean differences are displayed.

Table 4.32

Overview of Significant Mean Differences of Value Priorities between Teachers and Students at Time 1

Schwartz Value Priorities, School Commitment, and Religiosity		
School	Means of teachers significantly higher for ...	Means of students significantly higher for ...
2	Security, Conformity, Tradition, Universalism, School Commitment	Stimulation, Hedonism, Achievement
4	Tradition, School Commitment	Stimulation, Hedonism, Achievement, Power
6	Security, Conformity, Universalism, School Commitment	Stimulation, Hedonism, Achievement, Religiosity
7	Security, Conformity, Tradition, Benevolence, School Commitment	Stimulation, Hedonism, Achievement, Power, Religiosity

Table 4.33

Overview of Significant Mean Differences of Value Priorities between Teachers and Students at Time 2

Schwartz Value Priorities, School Commitment, and Religiosity		
School	Means of teachers significantly higher for ...	Means of students significantly higher for ...
4	Security, Conformity, Tradition, Universalism, School Commitment	Stimulation, Hedonism, Achievement, Power
7	Security, Conformity, Tradition, School Commitment	Stimulation, Hedonism, Religiosity

In summary, some of the value priorities that belong to the sections *Self-Transcendence* and *Conservation* had higher scores for the teachers, whereas the students had higher means in the



value priorities that belong to the areas *Openness to Change* and *Self-Enhancement*. School Commitment was mostly higher for teachers, and Religiosity for students (in Schools 6 and 7).

4.9.2 Student-Teacher Distance at Time 1

The following three subsections will introduce three different measures that gave further insights with regard to how similar students were to their teachers. In this subsection I will introduce the student-teacher distance measure. I conceived this measure to identify the student-teacher distance within each school, in order to analyse how this measure related to other variables, such as Age and Gender. This distance measure allowed conclusions to be made about the similarities between students and teachers. As the teachers could not be directly related to the students class per class, the students and teachers were considered across each school as a whole.

I used the following procedure in order to identify how different the students and teachers were in the Schwartz value priorities at Time 1. The calculations were conducted school by school; for all calculations related to this measure I used the data of the first measurement time only.

First, I computed the means of the teachers for each value priority; this measure was the average teacher value of the respective school. For the ten value priorities I obtained ten teacher means: Teacher M Security (TM SE), Teacher M Conformity (TM CO), Teacher M Tradition (TM TR), etc. In the second step, I determined the distance of every student from this mean by computing the absolute difference between the value priority of the student and the Teacher M. These new variables were called seDiff, coDiff, trDiff, etc.

$$TM\ SE - SE = seDiff \quad \text{or} \quad TM\ CO - CO = coDiff \quad \text{or} \quad TM\ TR - TR = trDiff \quad \text{etc.}$$



The sum of these absolute differences is

$$\text{Diffsum} = \text{seDiff} + \text{coDiff} + \text{trDiff} + \dots$$

In the third step, I divided the terms seDiff, coDiff, trDiff, etc. by the Standard Deviations of the teachers (TSD) for every value priority, in order to correct for their variance. Hence, the following terms resulted:

$$\text{seDiff} / \text{TSD SE} = \text{seDiffSD} \quad \text{or}$$

$$\text{coDiff} / \text{TSD CO} = \text{coDiffSD} \quad \text{or}$$

$$\text{trDiff} / \text{TSD TR} = \text{trDiffSD} \quad \text{etc.}$$

The sum of these by the Standard Deviations divided differences is

$$\text{DiSDsum} = \text{seDiffSD} + \text{coDiffSD} + \text{trDiffSD} + \dots$$

The term DiSDsum shall further be referred to as the *Cumulative Student-Teacher Distance* (CSTD). From this measure the similarity of student and teacher values could be inferred. The higher the CSTD, the less similar were the students' value priorities to those of their average teacher.

4.9.2.1 Correlations of Cumulative Student-Teacher Distance with Other Variables

I performed Pearson correlations to measure the relation between CSTD and School Commitment in each of the four schools (see Table 4.34). The results showed that this relation was significantly positive in all schools except for School 4.



Table 4.34

Pearson Correlations of CSTD with School Commitment at Time 1

School	<i>r</i>	<i>n</i>
2	-.364**	138
4	-.123	202
6	-.230**	518
7	-.330**	266
All schools	-.297**	1124

** $p < .01$.

Furthermore, I calculated Pearson correlations between CSTD and other relevant measures, such as Age, Duration of School Attendance, and Religiosity. The results demonstrated that both Age and Religiosity related negatively to CSTD, which indicates that a larger distance between students' and teachers' value priorities was negatively related to Age and Religiosity (see Table 4.35). This means that the older the students were, the more similar they were to their teachers. Also, higher scores in Religiosity went hand in hand with higher similarity with their teachers.

Table 4.35

Pearson Correlations of CSTD with Age, Duration of School Attendance, and Religiosity across all Four Schools ($n = 1109$ to 1124)

	Age	Duration	Relig.
CSTD	-.064*	-.008	-.168**

** $p < .01$.

* $p < .05$.



4.9.2.2 School Differences in Cumulative Student-Teacher Distance

I performed Oneway ANOVAs to calculate the mean differences for the CSTD of the four schools. There was a significant difference between the schools, $F(3, 1120) = 14.52, p < .001$. Table 4.36 displays the descriptive statistics, as well as the minimum and maximum CSTD values reached by the students in each school.

Table 4.36

Descriptive Statistics of CSTD Values for Each School

School	<i>M</i>	<i>SD</i>	Minimum	Maximum
2	12.26	3.75	4.77	23.58
4	10.70	3.24	2.99	31.37
6	12.00	3.49	3.87	25.07
7	10.63	3.67	3.30	25.65

Post Hoc Tests using the Scheffe Procedure located the schools into two homogeneous subsets ($\alpha = .05$). The lower subset included Schools 7 and 4, which had significant lower CSTDs than Schools 2 and 6.

4.9.2.3 Gender Differences in Cumulative Student-Teacher Distance

I moreover analysed the gender differences with the help of Oneway ANOVAs. There was a significant difference between girls ($\underline{M} = 11.24, \underline{SD} = 3.34, \underline{n} = 539$) and boys ($\underline{M} = 11.69, \underline{SD} = 3.79, \underline{n} = 584$), with the girls scoring a lower CSTD than the boys, $F(1, 1121) = 4.55, p < .05$. This means that the girls were more similar to their teachers in their value priorities.

In order to explore whether this result is related to the gender distribution amongst the teachers, I will display this distribution:



School 2	10 females	12 males
School 4	9 females	16 males
School 6	30 females	6 males
School 7	21 females	26 males
Sum	70 females	60 males

The male-female balance between the teachers was quite even across all four schools. Hence, it seems that the gender effect was independent of the male-female distribution amongst the teachers.

4.9.2.4 Age Differences in Cumulative Student-Teacher Distance

Age was used as independent factor to determine whether the CSTD was different between the age groups. Age was split into three groups according to a 33.3% split. There was a significant difference between the three age groups, $F(2, 1121)$, $p < .05$. The highest age group (17 years and above) had the lowest CSTD. Post Hoc Scheffe Procedures distinguished this age group significantly from the lowest age group (14 years and below), which had the highest CSTD. The middle age group (15 to 16 years) was located in both subsets. Hence, the results suggest that the similarity between the students' and teachers' value priorities increased with Age (see 4.9.2.1).

4.9.2.5 Cumulative Student-Teacher Distance, of Boarding versus Day Students

The four schools consisted of 610 boarding students (schools 2, 4, and 7) and 518 day students (school 6). This equals a 54.1% – 45.9% quota. The CSTD means of the boarding and the day students were significantly different, $F(1, 1122) = 21.09$, $p < .001$, with the boarding students reaching a lower mean ($M = 11.02$, $SD = 3.61$) than the day students ($M = 12.00$, $SD = 3.49$). Probably this result reflects the differences between the schools, as among



the selected four schools, School 6 was a pure day school, whereas the other three had boarding students only.

4.9.2.6 Conclusion of Results Measured with Cumulative Student-Teacher Distance

Except for School 4, within the three remaining schools, School Commitment related significantly positively to student-teacher similarity. Additionally, Age and Religiosity positively correlated with student-teacher similarity. Girls were more similar to their teachers with regard to their value priorities than boys, Schools 2 and 6 had significantly higher distance scores than Schools 7 and 4.

4.9.3 Person Profile Fit

Another technique useful for the measurement of the relation between teachers and students uses a measure of fit based on a profile-comparison process, the Person Profile Fit (Caldwell & O'Reilly, 1990; Brandstatter, 1994).

In the case of my data, I calculated the fit of the students' value priorities with the average teacher profile by correlating the set of value priorities of each student with the respective set of value priorities of the average teacher within each school at Time 1. Only those four above mentioned schools were included which had a teacher $\bar{r} > 20$. These correlations represented the measure of the extent to which the value priorities of each individual student corresponded with the value priorities of his or her average teacher. Hence, they were a direct measure for the Person Profile Fit (PPF). The PPF can be correlated to other measures and used as a predictor or variable in further calculations. I calculated the PPF measure for the first measurement time based on the matched data set of students at both measurement times in order to enable calculations on a longitudinal level.



The PPF had a range from $r = -.693$ to $r = .970$. The mean was $M = .46$ with a standard deviation of $SD = .31$. Note, that unlike the CSTD, which measures distance, the PPF measures the opposite, as it is a measure of fit. Hence, a higher PPF indicates a stronger closeness between the student and the teacher profile.

4.9.3.1 Correlations of the Person Profile Fit with Other Variables

For each of the four schools, I performed Pearson correlations to measure the relations between PPF and School Commitment (Time 1), Age, Duration of school attendance, Religiosity (Time 1), Academic Achievement (Time 2), and CSTD (see Table 4.37). All variables except for Academic Achievement were taken from the first measurement time. Across all schools the results indicated that School Commitment and Academic Achievement related significantly positively to PPF, whereas Religiosity related negatively to PPF. The measures PPF and CSTD related significantly negative with each other, which confirms that they measured similar concepts.

The school by school analyses showed that the positive correlation of PPF and School Commitment existed in all schools except for School 4; on the other hand, School 4 was the only school with a positive relation between PPF and Age. The Duration of school attendance did not relate to the profile similarity between students and teachers. Religiosity and PPF had highly significant positive correlations for Schools 2 and 7, despite a slightly negative correlation across all schools. Academic Achievement correlated positively with PPF in Schools 6 and 7.

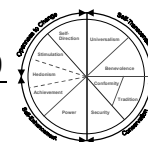


Table 4.37

Pearson Correlations of Student-Teacher PPF with School Commitment (SC), Age, Duration of School Attendance, Religiosity, Academic Achievement (Acad. Ach.), and CSTD

School	SC	Age	Duration	Religiosity	Acad. Ach.	CSTD	<i>n</i>
2	.366**	-.061	.002	.436**	.017	-.520**	57
4	-.030	.186*	-.008	-.025	.104	-.650**	117
6	.220**	-.022	-.038	-.074	.209**	-.702**	193
7	.395**	.083	-.059	.301**	.165*	-.723**	200
All schools	.130**	.012	.016	-.088*	.142**	-.621**	567

** $p < .01$. * $p < .05$.

4.9.3.2 School Differences in Person Profile Fit

I performed Oneway ANOVAs to calculate the mean differences for each of the four schools in their PPF at Time 1. There was a significant difference between the schools, $F(3, 563) = 12.652$, $p < .001$. Table 4.38 displays the descriptive statistics, as well as the minimum and maximum PPF values reached by the students in each school.

Table 4.38

Descriptive Statistics of PPF Values for Each School

School	<i>M</i>	<i>SD</i>	Minimum	Maximum
2	.31	.30	-.38	.82
4	.48	.26	-.33	.97
6	.54	.20	-.07	.94
7	.40	.38	-.70	.97

Post Hoc Tests using the Scheffe Procedure located the schools into three homogeneous subsets ($\alpha = .05$). The lowest subset included School 2, and the highest included School 6.



School 7 was located in the lowest and the middle subset, and School 4 was located in the middle and the highest subset.

4.9.3.3 Gender Differences in Person Profile Fit

Furthermore, I used Oneway ANOVAs to analyse the gender differences at Time 1. There was a significant difference between girls ($M = .51$, $SD = .27$, $n = 282$) and boys ($M = .41$, $SD = .33$, $n = 285$), with the girls scoring a significantly higher PPF than the boys, $F(1, 565) = 14.59$, $p < .001$. This means that the girls had a higher Person Profile Fit with their teachers in their value priorities, than did boys.

4.9.3.4 Age Differences in Person Profile Fit

Age was used as independent factor to determine whether the PPF was different between the age groups at Time 1. Age was split into three groups according to a 33.3% split. There were no significant differences between the three age groups.

4.9.3.5 Person Profile Fit of Boarding and Day Students

The four schools consisted of 374 boarding students (Schools 2, 4, and 7) and 193 day students (School 6). This equals a 66.0% – 34.0% quota. The PPF means between the boarding and the day students were significantly different at Time 1, $F(1, 565) = 23.76$, $p < .001$, with the boarding students reaching a lower mean ($M = .41$, $SD = .34$) than the day students ($M = .54$, $SD = .20$). This result contradicted the one reached with the CSTD measure, and again probably only reflects the differences between the schools, as among the selected four schools, School 6 was a pure day school, and the other three had boarding students only.



4.9.3.6 Person Profile Fit Scores between Teachers and Directors

Each director was asked to respond to the following question and had to rate the answers on a five pointed scale:

Which aspect of personality development do you consider as especially important at your school?

- Striving after security, stability and order (SE)
- Good behaviour, courtesy and respect (CO)
- Modesty, humility and contentment, as well as religiosity (TR)
- Human virtues such as care, helpfulness and loyalty (BE)
- Concern for the welfare of all mankind and nature (UN)
- Independent thought and action (SD)
- Search for an eventful life and openness for new things (ST)
- Fun and joy of life (HE)
- Success and recognition (AC)
- Leadership qualities and the pursuit of a high social position (PO)

For each of the four selected schools, I calculated the Person Profile Fits of the average teacher scores with the respective director's scores by performing Pearson correlations of the set of the average teachers' value priorities with the set of the director's scores. Table 4.39 displays the school by school relations between the teachers' value priorities and the directors' importance ratings of these value priorities.

Table 4.39

Person Profile Fit Scores between Teachers and Directors

School	r
2	.544
4	.861
6	.423
7	.209

School 4 clearly had the highest positive correlation coefficient, hence, the highest Person Profile Fit between the teachers and the director.



4.9.3.7 Conclusion of Results Measured with Person Profile Fit

For the student-teacher PPF the following results were found: Except for School 4, School Commitment related significantly positively to the Person Profile Fit within the three remaining schools. Additionally, Academic Achievement positively correlated with PPF, and Religiosity related negatively to PPF. Girls had more similar Person Profile Fits to their teachers than boys, and School 6 had the highest scores, as opposed to School 2 which had the lowest. No age differences were found. The teacher-director correlations were positive; the highest coefficient was in School 4.

4.9.4 Student-Teacher Profile Similarity (STPS)

As the results of the two above mentioned measures CSTD and PPF were not always identical, it seemed necessary to create a third measure to possibly level out some of these differences. Hence, I combined the two student-teacher measures, by z-standardising and recoding the CSTD score and z-standardising the PPF score; then I added them up to a new measure. In the following this measure will be referred to as *Student-Teacher Profile Similarity* (STPS). STPS is a z-standardised measure that represents the similarity of the student with the average teacher profiles.

$$\text{STPS} = z\text{CSTD} \times (-1) + z\text{PPF}$$

4.9.4.1 Correlations of Student-Teacher Profile Similarity

I performed Pearson correlations between STPS and School Commitment, Age, Duration of School Attendance, Religiosity, and Academic Achievement (z-standardised). All variables except for Academic Achievement were taken from the first measurement time. The results showed that both School Commitment and Academic Achievement related positively to STPS (see Table 4.40).



Table 4.40

Pearson Correlations of STPS with School Commitment, Age, Duration of School Attendance, Religiosity, and Academic Achievement across all Four Schools (n = 546 to 566)

	School Commitment	Age	Duration	Religiosity	Academic Achievement
STPS	.214**	.052	-.012	.023	.134**

** $p < .01$.

4.9.4.2 Differences in Student-Teacher Profile Similarity, with Regard to School, Gender, Age, and Day versus Boarding Students

I used Oneway ANOVAs to determine the mean differences in STPS. At Time 1, there was a significant difference between the schools, $F(3, 562) = 4.510$, $p < .005$. Post Hoc Tests using the Scheffe Procedure located the schools into two homogeneous subsets ($\alpha = .05$). The lowest subset included School 2, and the highest included Schools 6 and 4, with School 4 having the highest scores. School 7 was located in both subsets.

At Time 1, there was a significant difference between girls ($z\bar{M} = .15$, $SD = 1.67$, $n = 282$) and boys ($z\bar{M} = -.16$, $SD = 1.91$, $n = 284$), with the girls scoring a significantly higher STPS than the boys, $F(1, 564) = 4.217$, $p < .05$.

I divided Age into three groups according to a 33.3% split and found no significant STPS differences between the three age groups at Time 1.

No differences were found between boarding and day students at Time 1. This result can be explained by the fact that this measure is a combined measure of the previous two, which had both yielded opposite results on this dimension.



4.9.4.3 Student-Teacher Profile Similarity as Predictor for School Commitment and Academic Achievement at Time 2

4.9.4.3.1 Hierarchical Regression Analyses to Predict the Change in School Commitment

Despite the fact that the correlations between STPS and School Commitment were very high at Time 1, and therefore, the prediction of any further change would be difficult, I performed Hierarchical Regression analyses to predict the change in School Commitment in the course of one year. School Commitment at Time 2 was predicted with the following sets of hierarchically entered predictors: After controlling for the initial value at Time 1, I entered the variables Gender and STPS, followed by the interaction of Gender x STPS. In this model only Time 1 School Commitment significantly contributed to the predictive power of the equation, which resulted in Cumulative $R^2 = .528$. School Commitment at Time 1 accounted for 52.3% of the variance in Time 2 School Commitment with $F(1, 564) = 618.92, p < .001$.

In a second model, School Commitment at Time 2 was predicted with four blocks of entered predictors: The first block was School Commitment at Time 1, the second was STPS, the third consisted of the dummy coded schools, and the fourth block consisted of the interaction of STPS x dummy coded schools. In this model School Commitment at Time 1 significantly contributed to the predictive power of the Regression equation (see above), and furthermore, the dummy coded schools, with $\Delta R^2 = .050, \Delta F(3, 560) = 22.27, p < .001$. This second model resulted in Cumulative $R^2 = .578$.

In sum, STPS did not contribute to the change in School Commitment in the course of one year.



4.9.4.3.2 Hierarchical Regression Analyses to Predict Academic Achievement at Time 2

I chose two models to predict Academic Achievement (z-standardised). In the first model I entered the following four blocks: First, I entered School Commitment at Time 1, second, the dummy coded schools, third STPS, and finally, the interaction of STPS with the dummy coded schools. This model resulted in Cumulative $R^2 = .030$. In this model only STPS significantly contributed to the predictive power of the Regression equation, with $\Delta R^2 = .013$, $\Delta F(1, 540) = 6.92$, $p < .01$. The positive partial correlation coefficient demonstrated that high student-teacher profile similarity positively related to Academic Achievement at Time 2 (partial $r = .11$).

For the second model I entered five blocks: First, I entered School Commitment at Time 1, second, the dummy coded schools, third, Gender, fourth STPS, and last the interaction of STPS x dummy coded schools, as well as the interaction of STPS x Gender. This model resulted in Cumulative $R^2 = .036$. Also in this model, only STPS (fourth block) significantly contributed to the predictive power of the Regression equation, with $\Delta R^2 = .011$, $\Delta F(1, 539) = 6.34$, $p < .05$. Again, the positive partial correlation coefficient showed that high student-teacher profile similarity positively related to Academic Achievement at Time 2 (partial $r = .11$).

In sum, only STPS significantly contributed to the prediction of Academic Achievement at Time 2, as opposed to School Commitment, Gender, or the dummy coded schools.

4.9.4.4 Conclusion of Results Measured with Student-Teacher Profile Similarity

For better understanding of these results, it is important to remember that STPS was a combined measure of the distance and the fit measure. Girls had a higher Student-Teacher



Profile Similarity than boys; School 4 had the highest similarity scores, directly followed by School 6; School 2 had the lowest. This reflects the average of the results from the two earlier mentioned measures. Also, STPS correlated positively with School Commitment and Academic Achievement. There were no age differences or differences between boarding and day students. Girls scored higher on STPS than boys. STPS did not predict School Commitment, but related positively to Academic Achievement at Time 2.

4.9.4.5 Summary across all Three Measures

It can be summarised that all measures showed that girls were more similar to their teachers than boys. Across all four schools, student-teacher similarity related positively to School Commitment. In the school by school analyses, both the distance and the fit measure showed that School 4 was the only school, where this correlation did not occur. Upon combining the two measures, the age differences and differences between boarding and day students disappeared. This combined measure of similarity related positively to Academic Achievement, but did not contribute to the change in School Commitment. Moreover, these measures demonstrated that School 2 had the lowest student-teacher similarity, whereas Schools 4 and 6 had the highest student-teacher similarity scores. School 7 was located in between. The directors' scores of the value priorities correlated positively with the teachers' scores in all schools. The highest correlation was in School 4.

4.9.5 Interviews with the Directors

During my second visit to the schools, I interviewed all directors with a previously designed semistructured interview (see Appendix A6). I summarised the responses (see Appendix A7) and used the information to confirm my comprehension of the school programmes. An evaluation of these interviews showed that many of the answers mainly reflected the



personality and attitude of the directors, and their idealism with regard to their school programme. Hence, these answers were not used for further statistical analyses.

The last questions, however, dealt with aspects of personality development/values that the directors deemed important for their students, as well as with the students' Satisfaction with Life. The answers were given on a quantitative scale with scores from 1 to 5, and therefore, were used for a few calculations (see also 4.9.3.6).

Table 4.41 displays the students' mean scores for Satisfaction with Life compared with the directors' estimations of this same variable. The scales were identical, with scores ranging from 1 to 5.

Table 4.41

*Student Means of Satisfaction with Life Scores at Time 2
(N =1267) Compared with Directors' Scores*

School	Students		Directors' estimation
	<i>M</i> Time 2	<i>SD</i> Time 2	SWL
1	3.23	.84	2
2	3.19	.77	4
3	3.35	.74	3
4	3.32	.78	3
5	3.46	.82	3-4
6	3.49	.72	3
7	3.34	.80	4
8	3.16	.73	4

Scale is scored from 1 to 5.

In order to compare the scores of the students with the directors, I examined in which schools the directors' estimates were in the range of the students' mean scores plus/minus their



standard deviations. According to this procedure the director of School 1 underestimated his students' Satisfaction with Life, whereas the directors of Schools 2 and 8 overestimated their students' Satisfaction with Life. All other estimates were in a realistic range.

Summary

Across all schools there were significant mean differences in all scales except for Self-Direction and Religiosity. The teachers scored higher on those value priorities that belong to the *Self-Transcendence/Conservation* half of Schwartz' (1992) circular model, whereas the students had higher means in the value priorities belonging to the *Openness to Change/Self-Enhancement* region.

When considering only those four schools with a teacher $n > 20$, School Commitment was mostly higher for teachers, and Religiosity for students. Girls were more similar to their teachers than boys. Across all four schools student-teacher similarity related positively to School Commitment. In the school by school analyses the results showed that School 4 was the only school, where this correlation did not occur. Student-teacher similarity related positively to Academic Achievement, but did not contribute to the change in School Commitment. The directors' scores of the value priorities correlated positively with the teachers' scores in all schools. The highest correlation was in School 4.



4.10 Question 10

Wishful Thinking or Real Every Day Classroom?

All teachers received a second questionnaire in which they were asked about the desirability and realisation of educational aims. The following results indicate how able the teachers felt to put their educational aims into realisation in their every day classrooms. With these measures I hoped to better determine how possible it would be for teachers to convey their values in their classrooms.

Firstly, I will report the results of the factor analyses based on the data of my study. Secondly, I will describe the internal consistencies of the Desirability and the Realisation scales, and thirdly, I will relate these scales to the Schwartz value priorities and School Commitment. The following analyses were performed across all schools.

4.10.1 Factor Analyses of the Desirability and Realisation Scales

There were two reasons why I decided to perform factor analyses with my data in order to identify the factors that can be considered as “dimensions of educational aims”, as opposed to using the suggested factor solution described by the authors (Mischo & Rheinberg, 1995). Firstly, my sample sizes were much larger than the original study in which 55 teachers participated, of which 51 completed the full questionnaire. My study involved 168 teachers at Time 1 and 94 teachers at Time 2. 158 teachers returned the questionnaire at Time 1, and 91 teachers returned the questionnaire at Time 2. Secondly, the characteristics of my samples were very different to the original study. The original study involved 55 public high school teachers, whereas the teachers in my samples were mainly teachers from boarding schools, partly with an international and a very religious background.



For the factor analyses I used similar procedures to the ones used by the authors in order to make the results comparable. I calculated Principal Component Analyses with varimax rotations on the basis of excluding cases pairwise, as this created the best possible fit between the original factor solution and the solution resulting from my study. All items with absolute values less than .50 were suppressed. In all four analyses I accepted a four factor solution, as it explained 45.27% of the total variance of the Desirability Scale at Time 1, 50.52% of the total variance of the Realisation Scale at Time 1, 45.62% of the total variance of the Desirability Scale at Time 2, and 53.92% of the total variance of the Realisation Scale at Time 2. These results were similar to the results of the authors, who were able to explain 47.0% of the total variance of the Desirability Scale and 45.5% of the total variance of the Realisation scale with a four factor solution. Table 4.42 shows the 38 items of both scales for further reference (for complete questionnaire, see Appendix A4).



Table 4.42

38 Items of Desirability and Realisation Scales

Number and content of items

1. To observe the lesson plan
2. To act in accordance with specialised knowledge
3. To try to be objective
4. To maintain the educational standards of the school
5. To maintain classroom discipline
6. To support every student individually
7. To strive for justice
8. To be popular amongst the students
9. To fulfil the educational duties even beyond the classroom
10. To create a trusting relationship with the student
11. To gain the respect and esteem of colleagues
12. In some areas to be an example for the student
13. To comprehend the student's actions as well as his/her personality
14. To create respect for the teacher in the students
15. To act in accordance with educational-psychological knowledge
16. To gain the respect and esteem of parents
17. To promote self-esteem in the student
18. To promote ambition in the student
19. To promote diligence and willingness to perform in the student
20. To promote autonomy and independence in the student
21. To encourage the student towards discipline and order
22. To convey to the student good specialised knowledge in specific (my) subjects
23. To promote creativity and imaginative performance within the student
24. To educate the student towards a critical attitude
25. To convey to the student respect for established norms and values
26. To promote social competence in the student
27. To convey good general knowledge to the student
28. To create interest in the subject
29. To promote idealism and commitment for higher goals in the student
30. To promote realistic self-appraisal in the student
31. To educate the student towards systematic, logical thinking
32. To educate the student towards cooperation and helpfulness
33. To diminish self-centredness in the student
34. To educate the student towards sincerity and honesty
35. Not to create fear in the student
36. To awaken joy for learning in the student
37. To promote tolerance towards minorities and disadvantaged people in the student
38. To show the students that they are loved

The tables in Appendix A8 to A11 display the item numbers that were attributed to the four factors with their respective loadings, as well as the explained variance. Furthermore, the tables present possible correspondence with the factors extracted by the authors (1995, $N = 51$). The best possible fit of factors and items was chosen.



I compared the results of the factor analyses run by the authors (Mischo & Rheinberg, 1995) with the factor analyses resulting from the data of my study, and discovered that only 11 items matched in both scales at Time 1, 10 items were parallel in the Desirability Scale at Time 2, and 9 items corresponded in the Realisation Scale at Time 2. The analogies were not very strong. Additionally, the different factors covered very similar topics. Hence, for all further analyses I used the sum scales of the complete Desirability scale and of the complete Realisation scale.

4.10.2 Reliabilities of Desirability and Realisation Scales

The Cronbach's alpha coefficients for the Desirability scale were $\alpha = .91$ at Time 1, and $\alpha = .92$ at Time 2. The Cronbach's alpha coefficients for the Realisation scale were $\alpha = .95$ at Time 1, and $\alpha = .96$ at Time 2. These high coefficients justified that the two scales can each be considered as one complete scale

4.10.3 Correlations of Desirability and Realisation Scales with Schwartz Value Priorities and School Commitment at Both Measurement Times

I correlated the Desirability scale with the Realisation scale for each of the two measurement times and yielded the following results: At Time 1, the correlation coefficient was $r = .51$ ($p < .01$), and at Time 2 it was $r = .45$ ($p < .01$).

Table 4.43 displays the correlations coefficients of the two scales with the teachers' value priorities and School Commitment.



Table 4.43

Pearson Correlations of Desirability and Realisation Scales with Schwartz Value Priorities and School Commitment at Both Measurement Times

Value Priorities/ School Commitment	Desirability Scale		Realisation Scale	
	Time 1 (N = 153-155)	Time 2 (N = 81)	Time 1 (N = 150-152)	Time 2 (N = 80)
Security	.26**	.22*	.20*	.16
Conformity	.34**	.11	.36**	.15
Tradition	.22**	.08	.28**	.24*
Benevolence	.40**	.24*	.38**	.32**
Universalism	.27**	.31**	-.04	.15
Self-Direction	.15	.22	.03	-.04
Stimulation	.06	.08	.16	.14
Hedonism	.09	.20	.20*	.21
Achievement	.20*	.23*	.20*	.17
Power	.10	.03	.19*	.13
School Commitment	.36**	.22*	.44**	.46**

* $p < .05$.

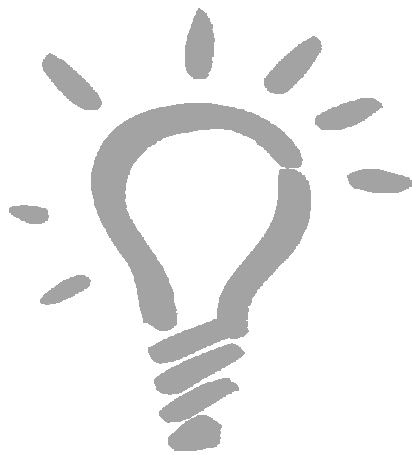
** $p < .01$.

The results showed that the scales correlated more positively with the value priorities from the *Self-Transcendence/Conservation* half of the circular model by Schwartz (1992) than with those of the other half. At both measurement times School Commitment correlated more positively with the Realisation scale than with the Desirability scale.

Summary

Most of the teachers' educational aims correlated positively with the value priorities from the *Self-Transcendence/Conservation* half of the circular model by Schwartz (1992). At both measurement times School Commitment showed more positive correlations with the Realisation scale than with the Desirability scale.

5. Discussion



“When you know a thing, to hold that you know it; and when you do not know a thing, to allow that you do not know it – this is knowledge.”

Confucius
(551 BC - 479 BC)



Overview

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In the five following sections of this chapter, I will first discuss the ten questions of interest, which were the focus of my study; then I will discuss the limitations of my study and present several practical implications. Finally, I will make a few suggestions for future research and draw some conclusions.

5.1 Discussion of the Ten Questions of Interest

5.1.1 Question 1: Can the *Universal Structure of Human Values* be Replicated in a Student Sample?

The only published study using the Portraits Value Questionnaire 40 on a German sample was a study by Bamberg, Herrmann, Kynast, and Schmidt (2001) who were able to replicate Schwartz' theoretical model with two German speaking university student samples ($N = 321$; $N = 395$). Therefore, my aim was to once again replicate his theoretical structure with my student samples.

Based on a Multidimensional Scaling solution, at both measurement times, 37 of the 40 items of the PVQ 40 emerged in the region of the value priority they were intended to represent. The remaining three items were located in a region adjacent to their expected value priority, a degree of deviation consistent with error variation. At Time 1 the results yielded eight distinct regions for the ten value priorities; according to Schwartz' (1992) criteria, twice two neighbouring value priorities were combined. At Time 2 the solution yielded ten distinct value priorities. The order of contrasts and compatibilities was confirmed with both solutions.



These results demonstrate that at both measurement times Schwartz' theoretical model of the *Universal Structure of Human Values* was replicated with the data of my study. Hence, his theory has once again been validated, in this case with an even larger sample which consisted of German and international youth and young adults (10 to 22 years old) who came from diverse educational backgrounds, especially with regard to their religious and value education. In sum, the results of my study confirmed that Schwartz' theoretical structure of human values can indeed be called *universal*.

5.1.2 Question 2: Different Schools - Different Value Priorities?

In this chapter I will discuss my findings that relate to school differences. When comparing the eight different school types, for all value priorities, there were significant differences between the schools. First of all, I will briefly comment on the differences between day and boarding students, and then I will compare the religious to the non-religious schools. In the last part of this chapter I will compare the value profiles of all schools with each other.

Day Students versus Boarding Students

The assumption that the school programme influences boarding students in a different way than day students (Kalthoff, 1997) could not be confirmed from the data of this study. This implies that whether one is a day or a boarding student does not contribute to a different development in the value priorities.

Religious versus Non-Religious Schools

McCartin and Freehill (1986) found no significant differences in the values of students from religious or non-religious schools, and suggest that further studies in this field need to be



conducted. A school by school analysis with the data of my study showed a very interesting pattern that separated the religious from the non-religious schools.

1. Religious Schools

The results of my study indicated that the students of the religious schools generally scored higher on most of the value priorities attributed to the regions *Conservation* and *Self-Transcendence*. This is probably due to the fact that the religious values of these schools correlated highly with those value priorities that claim traditional and virtuous thinking and behaviour.

Benevolence was a very high value priority in School 7, a finding that probably reflects the strong Christian influence within this school. Based on Schwartz' (1992) theory, Benevolence contains many aspects that are similar to the basic teachings of the Bible. It may be possible, however, that Benevolence was merely a highly esteemed value priority amongst the students, a value strictly taught at their school, and therefore, within this setting it is considered to be the expected norm. This would confirm the findings of Schwartz, Verkasalo, Antonovsky, and Sagiv (1997) who found positive correlations between Benevolence and social desirability. On the other hand, it may also be possible that these students have internalised these values and, therefore, are able to practice them more than others.

Universalism was a very high value priority in School 8. Also this is understandable when one closely analyses the school programme, in which concepts such as world peace, equality, abolition of prejudice, and justice are at the core of the curriculum. School 8's programme is based on a world-embracing view on religious and social issues, which includes some of the values related to Universalism.



Self-Direction splits over the two religious schools. School 7 had the lowest Self-Direction scores, and School 8 the highest. A possible reason for this result could be that School 8 strongly promotes an attitude of independent search for truth, whereas School 7 claims that the Bible is the only truth. Furthermore, School 8 encourages religious and racial diversity and promotes mutual understanding and harmony, whereas School 7 is mainly open for Protestant Christian students who come from Missionary families, and attempts to strengthen Christian identity. Hence, the path of development is already clearly outlined by the school.

2. Non-Religious Schools

Even though the six non-religious schools did not have congruent profiles, their highest and lowest esteemed value priorities were identical. In all these schools the students had the lowest scores in Tradition and the highest in Hedonism. This result could possibly be considered a counterpiece to the findings of Schwartz and Huisman (1995) who showed that there were most positive correlations between religiosity and Tradition, and most negative correlations between religiosity and Hedonism. However, it also confirms the general prejudice and stereotype that society and the “elder” generation have about “today’s youth”, when they claim that the youth lack traditional, religious, and moral values and instead strive for fun and pleasure. But, the question is whether these youth really love themselves more than their neighbour. I would like to mention a few ideas related to these issues.

With regard to the low scores in **Tradition**: The mere fact that many youth do not value traditional customs and religion should not necessarily make them morally lower than other people. Obviously non-religious people can also have sound moral values. Is it really necessary to adhere to religion or tradition in order to have morally sound values, and do all religious people have moral values? I believe that the answer is twofold: On the one hand, many of the main moral codes stem from Holy Scriptures, such as the Ten Commandments,



and therefore, the religions claim to be the source and the promoters of many moral values. On the other hand, religious fanaticism and blind adherence to traditional superstition have also been the cause of much strife and dissent amongst people. Hence, it depends on the measure, the form, and the content of religious belief; whether it is constructive to the well-being of the individual and society, or whether it is fanatic and destructive.

More delicate in my eyes is the fact that for the students who attended non-religious schools **Hedonism** was their highest value priority. This result emerged at Time 1 and was replicated at Time 2. Schwartz (1992) defines Hedonism as *pleasure and sensuous gratification for oneself*. This definition has a connotation of fun and indulgence. Society often claims that we live in a fun-obsessed society, and perhaps these findings confirm this. If the highest value of our youth is to have pleasure, then, according to Schwartz' concept of compatibilities and contrasts, that would mean that they value indulgence rather than loving kindness. I do not think that this conclusion can be drawn easily, and I wonder whether perhaps the youth are aware of the correct moral and ethical values, but choose to not behave accordingly, especially when they are influenced by their peers. In an attempt to argue *in dubio pro reo*, it might be possible that responding according to hedonistic values and against traditional values is considered "cool".

If Hedonism is the highest value priority of today's youth, it would be interesting to carry this issue further and investigate the reasons. The recent 14th Shell Study (2002), which was conducted in Germany to examine the values of adolescents (12 to 25 years old), showed that - compared to the 1980s - values, such as Security, Achievement, and Power have become stronger amongst the youth, and are nowadays at the top of the value priority list, together with Creativity, Tolerance, and Pleasure. With regard to Pleasure, this reflects the findings of the present study.



Perhaps the youth mistake Hedonism for happiness and have lost a sense of true happiness - whatever that may be. From a psychological point of view, one could argue that they suffer from a lack of purpose in life, a loss of understanding and empathy, or that they have too few positive role models. From a religious point of view, however, it is possible that the loss of true spirituality and the abolition of core religious truths is responsible for this effect.

To better understand this issue, let us once again look at the students of the two religious schools. The students of both Schools 7 and 8 had the lowest scores in Power - a value clearly adherent to the *Self-Enhancement* area. It consequently seems that values such as social status, prestige, or dominance are not esteemed highly by the religious students, which is understandable considering that most religions teach equality, humility, and servitude. Benevolence had the highest scores in School 7, which can be explained with the fact that it is the value priority that most befittingly reflects the teachings of the Bible. Self-Direction was the highest value priority in School 8, which possibly reflects their aim of promoting openness, tolerance, and independent and creative thought and action. This and other results demonstrated that the two schools with religious affiliation are not necessarily comparable either, but when compared to the non-religious schools, they do appear quite similar.

Do these results indicate that religious students have more desirable values than non-religious students? This of course depends on how one judges the value priorities in Schwartz' model. If we consider the *Self-Transcendence* or *Conservation* values the "desirable" ones, the religious students certainly seem to possess the more desirable combination of value priorities (or, perhaps, they just *know* better what their value priorities should be). If, however, one believes that the *Self-Enhancement* and *Openness to Change* values are more desirable, the religious students appear rather conservative and narrow-minded. The main problem is that, unfortunately, the Portraits Value Questionnaire does not give any clues about people's actions as a result of their value priorities.



Comparison of School Profiles

The comparison of each school profile with the average of all schools helps to detect the differences between all eight schools. I will try to interpret these differences based on my knowledge and understanding of the school programmes.

School 1: This school is a very new school which aims to support academically weak students. They have quite elaborate behaviour and order rules. In general the two measurement times generated quite different results. This may be a consequence of being a recently established school - I visited this school in its third year of operation - while perhaps still lacking any established culture of value priorities. Basically, even the students with the longest attendance had only been there for two or three years at that time. Furthermore, the students in average were younger (grades 5 to 10) than those of the other schools. The profile suggests a rather average distribution of value priorities, yet, with a clear peak at the value Hedonism. Universalism, Self-Direction, and Achievement were clearly below average, whereas Security, Stimulation, and Hedonism were above average.

School 2: This school follows the aim of reintegrating academically weak students into the regular school system by teaching them that learning can be fun. Good academic performance is the main aim of School 2. This may relate to the result that Hedonism, Achievement and Power were the strongest value priorities at both measurement times, clearly above average. Other analyses have shown that this school was top in the value priority Power at both measurement times, with School 5 sharing this position at Time 2. The five values from the *Self-Transcendence/Conservation* half of the model (Schwartz, 1992) were all below average. The value by value comparison showed that out of all schools, School 2 had the lowest Universalism scores at both times. Similar to School 1 there are quite a few zigzags across the



average line, and two value priorities scored once above and once below average at both measurement times (Self-Direction, Stimulation).

School 3: Like School 6, this school is a public high school. School 3, however, includes boarding students. It strives to teach the students arts and music, and a high academic standard. At Time 2 the profile very clearly divides the students' value priorities between the two halves of Schwartz' (1992) circle. All values belonging to the *Self-Transcendence/Conservation* area were below average and the others were in or above average. At Time 1, however, Achievement and Power were also below average. A closer look at the two times indicates that at Time 1 the students generally scored closer to average, whereas at Time 2 their deviations from the average in both directions were stronger. It seems that in the course of the year the students became more self-enhancing and less self-transcending. Considering that the school has no specific value education programme, this may reflect the general development of the students in the course of time. The strong increase of Achievement and Power may be due to the stress that is resulted from the end of the year pressure at Time 2. This issue will be critically discussed at a later stage.

School 4: Unlike the first three schools, this school has a very clear code of values. Liberal and humanistic thinking, as well as democracy are at the core of its educational programme. The clear line of education may be the reason for the fact that the results at both measurement times were quite similar. The fact that it is a very liberal school possibly explains why Conformity and Tradition were the lowest value priorities in this school; the scores were clearly below average. Security also was not very important to most of the students, especially at Time 1. Benevolence was average at both times, but all the remaining values were above average, with no extreme peaks. The fact that Universalism and Self-Direction were regarded higher than Benevolence confirms the school's aim to teach civil virtues such as freedom,



equality, and fellowship. The students' scores on Benevolence were average, which – compared to the other non-religious schools – is rather high. This may also be due to the fact that this school offers social service projects which teach the students to value kindness, helpfulness and regard for the well-being of others. The wish to convey an absence of power and hierarchy has not resulted in low scores on the value priority Power. In general, this profile quite closely reflects the philosophy that School 4 upholds and shows that the students prioritise accordingly.

School 5: An interesting pattern can be seen in the two profiles of School 5. At Time 2 the students had much lower scores on the value priorities belonging to the *Self-Transcendence/Conservation* half of the Schwartz (1992) circle, whereas they scored quite similarly for the other five value priorities. School 5 is a school with high academic and behaviour standards. The students come from rather elite backgrounds and are very ambitious. Religious and ethical education is not a priority of this school. This may explain why the students had above average scores on Security, Self-Direction, Stimulation, Hedonism, Achievement, and Power. The value by value comparison even showed that amongst all schools at both times School 5 was top on the value priorities Security, Self-Direction, Hedonism, and Achievement. This possibly reflects the ethos and aims of the school. It is surprising, however, that the value priorities Conformity, Tradition, Benevolence, and Universalism decreased in the course of the year. Perhaps, this effect is the price to be paid for the strength in the other values.

School 6: This school was the only regular public high school, but also the only school with students mainly from Eastern Germany. School 6 follows the regular high school curriculum, and in addition it strongly promotes the concepts of tolerance and cultural openness. At both times the profiles were almost identical. The educational background of these students and



their teachers in a state with a very high rate of atheism may explain why in this school Tradition was far below average. It is interesting, however, that at Time 2, the Schools 2 and 3 had similar Tradition scores to School 6. Similar to most of the previous schools, Conformity in this school was below average. Furthermore, Security, Universalism, Self-Direction, Hedonism, and Achievement were above average, whereas Stimulation, Power, and Benevolence were below average, with the latter being almost on average. Compared to the other non-religious schools, only School 6 and School 4 had consistently above average scores on Universalism. This may be a result of the school programme that emphasises tolerance, cultural openness and international student exchange. The Life Skills, Ethics and Religion programme that this school has newly established may help to understand the comparatively high scores in Benevolence, which are quite similar to School 4.

School 7: Out of all schools this particular school had the strongest deviations from the average. Being a school with a curriculum mainly based on Biblical values, it is not surprising that School 7 had strongly above average scores in the values Tradition, Conformity, and Benevolence. The definitions of these three value priorities are obviously conforming with the programme of the school. Similar to the other religious school it also had below average scores in the value priorities Security, Stimulation, Hedonism, Achievement, and Power. It is interesting that in School 7 Hedonism and Self-Direction were extremely low compared to the average. Furthermore, Universalism was below average, which may be a consequence of the rather exclusive approach to religious truths which reveals itself by accepting preferably Protestant Christian students, considering the Bible as the only truth, and aiming at educating future missionaries. Social and global issues are not as strongly emphasised in the curriculum as Bible Studies. The low Self-Direction scores possibly could be seen as the counterpart to the high scores in Conformity.



School 8: Similar to the Schools 4, 6, and 7, School 8 did not have major differences between the two measurement times. The programme of this school is based on the Bahá'í principles and hence, has a religious foundation. In addition to the basic religious and spiritual truths of all major religions (love, fellowship, and other virtues) this school promotes social responsibility and global thinking, religious and racial tolerance, respect and honour, and is open to students of all religious and racial backgrounds. Its obvious similarity to School 7 is that it had above average scores in Tradition and Conformity. In addition, it had below average scores in Security, Stimulation, Hedonism, Achievement, and Power. The low scores in Hedonism, Achievement, and Power in both religious schools can possibly be explained through the basic religious teachings of selflessness, humility, moderation, strife for spiritual growth, and servitude. The below average scores for Security in these two schools may be due to the fact that their students were mainly international with parents residing all over the world. With this background there may be less need for stability and safety. Furthermore, School 8 scored average on Benevolence, which is unexpected, as the spiritual principles and virtues taught at a religious school would suggest that the students score higher than just average on this value priority. One needs to bear in mind, however, that this school is attended by students of different religious and even non-religious background. The above average scores in Universalism very strongly reflect the philosophy of the school, which promotes global responsibility and thinking about issues related to world peace and the welfare of society. Also the above average value priority Self-Direction can be understood in the light of the school's principle in regard to the independent search for truth, as opposed to blind acceptance of old customs and traditions, as a high value.

There is a similarity of programmes for Schools 7 and 8 in that they both have obligatory social service programmes for all students. According to Uhl (1996) social services can yield a sustainable change in moral behaviour, if they are embedded in explanations of why it is necessary and desirable to help people who are in need. Also Wächter (1997) suggested



service projects as one way to assist students to develop a spirit of service, as well as compassion and empathy. Perhaps, service projects combined with the religious values taught in these schools may be the source of the generally stronger weight on the *Self-Transcendence/Conservation* value priorities, compared to the six non-religious schools.

The next step is to investigate whether these differences are related to the school differences, or whether they are a result of the students' educational backgrounds, as most parents send their children to a school that best reflects their own values and educational ideals. Hence, does the student of a Christian school (School 7) regard Benevolence as his or her highest value priority because he or she is attending a Christian school, or because Benevolence had always been a strong value at his or her home and therefore he or she was sent to this school? Or, is it surprising that children coming from a high social class (School 5) regard Achievement more important than Tradition? To answer these questions I will now discuss the results with regard to the change of value priorities in the course of the year.

5.1.3 Question 3: Do Value Priorities Change in the Course of One Year?

According to Rokeach (1973) individual differences, as well as the stability of value systems are influenced by many different factors, such as differences in intellectual development, identification with sex roles, and religious upbringing. Schmitt, Schwartz, Steyer, and Schmitt (1993) mention three reasons that could be responsible for the lack of perfect retest correlations:

1. random measurement error
2. true differential change in the trait
3. situational effects and/or person-situation interaction effects present on a particular occasion of measurement



The present study was designed as a longitudinal one, as it aimed at exploring how the students' value priorities changed in the course of one school year, and which factors were responsible for this change. This design has the advantage that the initial score from the first measurement time can be controlled, in order to identify the “purified” difference that has occurred during the year – a method for the measurement of change. Generally, values are quite stable especially when measured across such a short time span. On the one hand, this study confirmed this, but on the other, it also showed that there were some changes in the course of the year. There are many possible explanations of why these changes occurred, such as the differences in the two measurement situations, the natural development through age, or the general maturation process. In addition, a certain social or religious background can influence this development, as it provides the students with a specific disposition and code of values. The aim of this study was to analyse the change of value priorities and identify some factors that were responsible for this change, with a major focus on the effect of the different types of schools, but also the demographic variables and Religiosity.

In the following, I will discuss the main results obtained from the analyses of the two measurement times. For these analyses only the matched data of both student samples were used ($N = 811$). Firstly it is important to note, that the retest-reliabilities of the Schwartz value priorities were quite satisfying. Except for Self-Direction, all correlation coefficients were above .6. Religiosity was extremely stable as indicated with $r = .94$. A comparison of the means of two measurement times indicated that across all schools only Benevolence, Universalism, Achievement, and Power significantly changed in the course of the year. It is interesting, however, that Benevolence and Universalism decreased, whereas Achievement and Power increased. In the following I will discuss these four value priorities one by one.



I would like to first take a closer look at the change in Benevolence and Universalism. General Linear Models showed that for Benevolence only the Time effect was significant, whereas for Universalism, additionally, the Time x School effect was significant.

Benevolence: Hierarchical Regression analyses shed more light on this. The Regression analysis of Time 2 Benevolence on Benevolence at Time 1, the demographic variables, and the schools, showed that the schools significantly explained the variance of Benevolence at Time 2. This means that unlike the other predictors, the type of school significantly accounted for the change in this value priority. In order to delve deeper into this matter, I will consider the results obtained from the inclusion of Religiosity into the Regression equation. In this model the schools lost their predictive power and instead Religiosity significantly predicted the variance of the criterion. These results demonstrated that, more than the demographic variables and the schools, Religiosity accounted for the change in Benevolence. The results moreover indicated that Religiosity positively correlated with Benevolence at Time 2.

Universalism: The first Regression analysis of Time 2 Universalism yielded similar results to those described for Benevolence. Also here, after controlling for the initial value priority and the demographic variables, the schools significantly contributed to the predictive power of the equation. However, when adding Religiosity as a predictor, unlike for Benevolence, both the schools and Religiosity significantly accounted for the variance of Universalism at Time 2. This means that the influence of the school type, as well as Religiosity predicted the change in Universalism. Again, the results suggest a positive correlation between Religiosity and Universalism at Time 2. Despite decreasing Universalism in the course of the year, School 8 had the highest scores in this value priority at both measurement times. This is a rather constant result, which may – as mentioned earlier – possibly be related to the school programme.



The significant Time x School effect demonstrates that this decreasing pattern did not occur in all eight schools. The analyses showed that in the course of the year Universalism only decreased in Schools 1, 5, 6, and 8; there were no changes in the remaining four schools. For School 8 this is particularly interesting as it had the highest Universalism scores at both times. But also for the other three schools, it remains unclear, why Universalism significantly decreased during the year. This could be related to the school programmes, but it could also merely reflect the personal situation or interests of the students at the end of the year.

One explanation for the decrease of these above mentioned value priorities may be that it is related to the general decrease of Religiosity measured across the year. A further explanation could relate to the state of mind of a student at the beginning and the end of a school year. At the beginning of the year he or she arrives with many positive thoughts and resolutions for his or her personal and his or her academic life, whereas at the end of the year he or she may be rather exhausted, under stress, and possibly disillusioned by the negative experiences or grades. Also the end of the year report cards and final exams put pressure on the mind, which may cause a less “self-transcending”, and rather “self-enhancing” attitude to life.

This explanation may also help to understand, why Achievement and Power increased in the course of the year. For these two value priorities only the Time effect was significant.

Achievement: Achievement at Time 2 was not predicted by the schools at all. After adding Religiosity as a predictor to the Regression equation, this variable significantly accounted for the variance of Time 2 Achievement. The results also indicated that Achievement correlated negatively with Religiosity.



Power: Power at Time 2 was significantly predicted by the schools; after including Religiosity the schools lost their predictive power. Again, the results indicated that Religiosity negatively correlated with Power at Time 2.

To conclude, Benevolence, Achievement, and Power at the second measurement time were significantly predicted by Religiosity at Time 1, whereas Universalism at Time 2 was predicted by both the schools and Religiosity. These results may explain the changes in these value priorities during the course of the year.

Further results from longitudinal analyses showed that Tradition, Conformity, and Hedonism were significantly predicted by the schools. Including Religiosity into the Regression analyses showed that Tradition was only predicted by Religiosity, whereas Conformity and Hedonism were significantly predicted by both Religiosity and the schools. A closer look at the definition of Tradition and Conformity explains why Religiosity related positively to these two value priorities at Time 2, whereas it related negatively to Time 2 Hedonism.

In sum, when analysing the changes in the value priorities it becomes clear that for Universalism, Hedonism, and Conformity both the schools *and* the students' Religiosity contributed to the changes. Religiosity contributed to an increase in Universalism and Conformity, and to a decrease in Hedonism. Benevolence, Tradition, Achievement, and Power at Time 2 were mainly predicted by Religiosity; the first two correlated positively with Religiosity, and the latter ones negatively. These results are consistent when compared to the content of the value priorities. They partly support what Bruggeman and Hart (1996) concluded from their research on religious and non-religious schools: Moral reasoning develops from a variety of factors, only one of which may be religious education.



5.1.4 Question 4: How are Value Priorities Related to Age and Gender?

Studies by Prince-Gibson and Schwartz (1998) found no gender differences for the value priorities; they did, however, find negative correlations between age and Achievement, Hedonism, and Stimulation, and positive correlations of age with Tradition and Benevolence.

These results were only partly confirmed with the data of my study. At both measurement times age positively related to Self-Direction, Achievement, and Power, which means that with growing age the students regarded these values as more and more important. These results do not confirm the findings of the above mentioned authors, but are not surprising either, considering that issues such as independent thought and action, success, and status become more and more relevant when you become a young adult. On a longitudinal level the results of Regression analyses of the value priorities on age showed that with growing age the values Hedonism and Stimulation declined in their priority. This result confirms the above mentioned findings and can be explained with the assumption that children gradually lose their need for fun, pleasure, and excitement, and rather exchange it for values such as independence, success, and prestige.

The results on gender showed that girls scored higher on Benevolence and Universalism, whereas boys scored higher on Self-Direction, Achievement, and Power. These results do not confirm the results found by Prince-Gibson and Schwartz (1998).



5.1.5 Question 5: How is Religiosity Related to Value Priorities?

Schwartz and Huismans (1995) found positive correlations between Religiosity and Tradition, Conformity, Benevolence, and Security. Furthermore, they found negative correlations between Religiosity and Hedonism, Stimulation, Self-Direction, Universalism, Power, and Achievement.

Most of the longitudinal results with regard to the effects of being religious, on the change of the value priorities in the course of the year have already been discussed in section 5.1.3. I will now supplement these descriptions with some further results obtained from my study. The correlations of Religiosity with the value priorities do not completely confirm the results found by the above mentioned authors. Except for Security, all values belonging to the *Self-Transcendence/Conservation* half of the Schwartz (1992) circular model correlated significantly positive with Religiosity at both measurement times, whereas those values adhering to the other half of the circle at both times correlated significantly negative with Religiosity. This suggests that the self-transcending and conserving values defined by Schwartz are similar to the values promoted by religious belief. On the other hand, the values related to *Openness to Change* and *Self-Enhancement* seem to be opposite to religious belief. In this context it must be remembered that a large number of the religious students in this study adhered to the Christian church.

Another result was that the religious Schools 7 and 8 had the highest scores in Religiosity, whereas School 6, a school located in one of the states with the highest rates of atheism in Germany, had the lowest scores in Religiosity. These results are not surprising.

Even though in general Religiosity decreased in the course of the year, the school by school analysis showed that this decrease only took place in the Schools 3, 4, 6, 7, and 8. The other



schools were not affected by this. For the Schools 6, 7, and 8 this is a particularly interesting result, as these were the schools positioned at the extreme ends of Religiosity. School 6 had the lowest scores, and Schools 7 and 8 the highest. It remains unclear, however, why Religiosity decreased in general, and why it did so only in five out of the eight schools.

5.1.6 Question 6: How are Value Priorities, Religiosity, Age, and Gender Related to School Commitment and its Change?

School Commitment was another variable of interest in my study. I wanted to explore how content the students were with their school, how much they enjoyed learning, whether they liked their teachers, and whether they considered them as role models. These questions were supposed to shed further light on the attitude of the students towards the learning process and their school in particular, and possibly show how strong the bond between the students and teachers was.

Value Priorities

Similar to Religiosity, a division between the *Self-Transcendence/Conservation* half and the *Self-Enhancement/Openness to Change* half of the Schwartz (1992) circular model could be identified for School Commitment. Except for Achievement and Self-Direction, at both measurement times School Commitment related positively with the self-transcending and conserving value priorities, and negatively with the *Self-Enhancement* and *Openness to Change* values. This result indicates that students with *Self-Transcendence/Conservation* values also had closer bonds to their teachers and a better relation to their school and the learning process. The school by school analysis showed that the religious Schools 7 and 8 at both times had higher School Commitment scores than the remaining six schools.



Religiosity

I will now briefly describe the relationship between Religiosity and School Commitment. Markstrom's (1999) findings suggested that religiosity variables were positively associated with school self-esteem. In my study the Pearson correlations showed that at both measurement times there was a significant positive relation between School Commitment and Religiosity across all schools. A Cross-Lagged Panel Analysis further demonstrated that Religiosity at Time 1 was positively related to School Commitment at Time 2, whereas School Commitment at Time 1 had no influence on Religiosity at Time 2. This pattern of results suggests that the causal direction may go from Religiosity to School Commitment.

Possible explanations could be that the religious students have been taught a more constructive approach to learning, and as a consequence of their belief in a higher force, have less difficulties with authorities. Or, perhaps the religious schools generally provide a more friendly learning environment and try harder to achieve a good student-teacher relationship, as this is part of their school philosophy.

Results of the school by school analysis, however, do not support the latter possibility of interpretation. In Schools 1, 4, 7, and 8, at both times there were significant positive correlations between School Commitment and Religiosity. In Schools 2, 3, and 6, at one of the two times there was a significant positive correlation between these two variables. These results suggest that it is the religious attitude of the students, independent of their school, that is related to stronger School Commitment.

At School 5, however, no correlations between Religiosity and School Commitment were found. Possibly this is due to the fact that – as mentioned earlier – this school has such a strong focus on the value priorities Security, Self-Direction, Hedonism, and Achievement – all of which are values from the *Self-Enhancement/Openness to Change* area.



A surprising result was that School 6 yielded a highly significant positive correlation between School Commitment and Religiosity at the beginning of the school year, and then a significantly negative correlation at the end of the year ($p < .05$). In this school Religiosity had significantly decreased in the course of the year, but School Commitment had not changed. The results including the teachers' data showed that in School 6 the students at Time 1 had significantly higher scores in Religiosity than their teachers. One possible explanation of this effect could be that in this school Religiosity was discouraged by the teachers during the course of the year, and therefore, it may be possible that the religious students distanced themselves from the school and their teachers.

Age and Gender

An analysis of age and gender differences indicated that the older students had higher School Commitment scores. Possibly this could be related to the fact that with growing age, they are more easily able to cope with academic demands and pressure. Maybe their growing independence also allows them to have better relationships with their teachers, as they may have improved communication and conflict resolution skills. Hedonism decreased with growing age, which may result in stronger studying efforts. The exact reasons for this effect, however, remain undisclosed.

Girls at Time 2 had higher School Commitment scores than boys. This result supports the findings of Jenkins (1995) who suggested that higher School Commitment is associated with being female. It is surprising, though, that this result was not apparent at Time 1.

Change of School Commitment

The longitudinal analyses showed that in the course of the school year School Commitment decreased across all schools. This result supports the fact (Kuhn & Todt, 2002) that through the course of high school the students' School Commitment diminishes. This may have many



reasons, such as a change of interests, a desire for stronger autonomy, or the peer norms that often are antiacademic. On the other hand, this result contradicts the above mentioned findings that older students had higher School Commitment scores. It seems that the growing loss of interest in school is counterbalanced with an increase in maturity and a growth of understanding, how necessary it is to perform well in order to find a sound career. These questions need to be further explored.

A school by school analysis indicated that School Commitment only decreased in Schools 1, 4, 5, 7, and 8. In School 2, School Commitment increased in the course of the year, which may be related to their strong attempt to teach the students that learning can be fun. Also, it needs to be considered that the students in this school have entered the school because they were not succeeding in the regular school system. This “rehabilitation” of weak students has obviously helped them to strengthen their School Commitment, compared to where they came from. However, School 2 had the lowest School Commitment scores at the beginning of the year, and with the significant increase was rather average at the end of the school year. Schools 3 and 6 showed no changes in School Commitment. These were the only two public schools, which may or may not explain the unchanged School Commitment across the year. Also, these two schools had rather low School Commitment scores at both measurement times.

To conclude, the results showed that School Commitment related positively to the value priorities in the *Self-Transcendence/Conservation* half of Schwartz’ (1992) circular model. Furthermore, it related positively to Religiosity, and possibly was caused by higher Religiosity scores. In the course of the year School Commitment decreased, but with age it increased. A consequence would be that School Commitment is a rather “conservative” value, which goes hand in hand with growing maturity, and values that are rather traditional, such as Conformity or Benevolence.



5.1.7 Question 7: How do the Duration of School Attendance, Academic Achievement, and Satisfaction with Life Relate to Value Priorities and their Change?

Duration of School Attendance

For the variable Duration of school attendance, the results were not convincingly consistent. It had a slight predictive power on Time 2 Conformity and Universalism, but generally I would conclude that compared to all the other variables measured in this study this variable did not provide any crucial clues of how values develop.

Academic Achievement

Girls scored higher on Academic Achievement than boys, which is consistent with the earlier mentioned result that girls had higher School Commitment scores at Time 2. Academic Achievement correlated positively with School Commitment, Parents' Degree, Conformity, Universalism, and Self-Direction.

The relation between Academic Achievement and School Commitment probably is a two-way process – the more committed the students are to their school and their teachers, the better they perform academically, and vice versa.

With regard to the Parents' Degree, Jenkins (1995) found that youth with more educated mothers and youth whose parents are highly involved in their schooling are also more educationally committed. According to Wild and Wild (1997) the motivation to learn is partially mediated by the parents' school-related commitment. Students' academic aspirations are closely linked with their parents' child-related academic aspirations and hardly with their pedagogical practices. Wild and Wild's results indicate that the influence of parents' socio-economic status is mediated by the quality of parent-child-interaction and by parents' expectations regarding their children's educational career.



Less easy to interpret are the positive relations between Academic Achievement and Conformity, and Universalism. These two value priorities also correlated positively with School Commitment. The positive correlation between Academic Achievement and Conformity suggests that an attitude to conform with rules and regulations, and to practice a restraint of actions that could upset other people, seems to go hand in hand with higher academic grades.

Universalism is a value from the *Self-Transcendence* area and goes along with a strong sense of responsibility, understanding, appreciation, and tolerance for the welfare of others and nature. As in a correlation the direction of causality is not clear, it is possible that people with Universalism attributes have certain qualities which cause high academic grades, or that high academic achievement goes along with more alertness and awareness of one's surroundings and hence, a stronger sense of responsibility for these matters.

Self-Direction did not relate to School Commitment, but it did correlate with Academic Achievement, even if not with a highly significant coefficient. Possibly the growing independence also leads to higher academic achievements and more awareness of the need to prepare for a career.

Academic Achievement correlated negatively with Stimulation and Hedonism. It is possible that these two values, which mainly are based on the concept of fun, pleasure, excitement, and novelty do not go hand in hand with strong academic grades, especially not in the manner our school system is currently organised.

Satisfaction with Life

In my sample there were no age or gender differences for Satisfaction with Life. The highest positive correlation was between Satisfaction with Life and School Commitment. Furthermore, Academic Achievement related positively to Satisfaction with Life. These



results possibly reflect the fact that students' general well-being and satisfaction often goes hand in hand with their success at school.

Oishi, Diener, Suh, and Lucas (1999), as well as Sagiv and Schwartz (2000) conclude that there are no direct relations between value priorities and Satisfaction with Life. In my study all value priorities, except for Tradition and Power, related significantly to Satisfaction with Life. It is interesting that all these significant correlations were positive. These results resemble the findings of Bilsky and Schwartz (1994) that life satisfaction was located near the centre of the spatial configuration of all the variables, slightly closer toward the Security/Conformity region. It seems that Satisfaction with Life was not dependent on either being closer to the *Self-Enhancement/Openness to Change* half of Schwartz' (1992) circular model, or the other half. The non-significant correlations with Religiosity, Tradition, and Power confirm this, as they show that the students' Satisfaction with Life did not relate to their adherence to the more religious and traditional values or to the ones that led to a rather self-enhancing life.

One possible explanation for this effect is that the questions regarding Satisfaction with Life can have different connotations depending on your attitude towards life in general, and therefore, may be detached from a religious or non-religious attitude towards life. The gist of the items is whether you feel that your life is going according to how you want it to be, how satisfied you are with it, and how much you would want to change it if you could live it over again. A person striving to live a life full of fun and pleasure with a lot of excitement and great achievements can consider his or her life as satisfied if he or she has achieved these things, and therefore, does not want to change anything; or he or she could want even more of it and therefore is not satisfied. In the same way a religious and traditional person who lives a life of servitude and religious piety could be satisfied with the way it is going; or he or she



could feel that he or she needs to improve his or her character and his or her religious life, and that he or she could be serving humanity even more.

This suggests that Satisfaction with Life depends more on the attitude one has towards his or her life and how content one can be with the things one has achieved by now, rather than on the values one upholds. I believe that the more we practice contentment and the more we look at the “full half of the cup” rather than the “empty half” the more satisfied we become with the life we have created for ourselves. Hence, Satisfaction with Life in this sense does not give any clue about how value priorities of youth develop. In this light it is not surprising that there were no clearly distinguishing differences in Satisfaction with Life between the students of the eight schools.

5.1.8 Question 8: Which Value Priorities do Teachers Have?

Unfortunately, for reasons that I will discuss later, not all teachers were as cooperative as I had hoped them to be. Consequently, in this part of my results some analyses did not include data from all eight schools. However, even the data from the selected schools, present some very interesting findings.

I will now discuss the results of the complete teacher data. A closer look at the internal consistencies of the scales shows that those scales which yielded quite low Cronbach’s alphas in the student samples were much higher for the teacher samples. Both, Tradition and Self-Direction had alpha coefficients above .6, and with this were similarly reliable than the other scales. This suggests that teachers (or adults) have been better able to interpret the individual items of each scale according to the theoretical design, which is not surprising considering that the PVQ 40 was mainly designed and validated by adults.



The general pattern of the results based on Pearson correlations is similar to that of the students except for Universalism, which related positively to Religiosity in the student body, but had the opposite relation for the teachers.

When examining the variable School Commitment for the teachers, the only two consistent results across both measurement times were that School Commitment related significantly positively with Universalism and Security. With Conformity, Tradition, and Benevolence there were significant positive correlations at one of the two times only. It is interesting, however, that unlike the student data there were no correlations between School Commitment and the values from the *Self-Enhancement/Openness to Change* half of the circular model (Schwartz, 1992). Apparently for the teachers School Commitment was detached from these values. Regarding those teachers who prioritised Universalism and Security, I would like to suggest some possible interpretations. Perhaps, those teachers who generally feel responsible for the welfare of others and the world in general (Universalism) are also more committed to their school, enjoy going to school and strive to build up good relationships with their students (School Commitment). They believe in the importance of education for the betterment of society. And furthermore, those teachers who feel safe and good at school (School Commitment), which of course represents their workplace, possibly also perceive more security in general (Security).

5.1.9 Question 9: Do Value Priorities of Teachers and Students Correspond?

Schwartz (1992) reports that a comparison of teachers with students in 14 countries showed that teachers attributed more importance to Conformity, Security, Tradition, and Benevolence than students, in almost all countries, whereas students attributed more importance to Hedonism, Stimulation, and Self-Direction than teachers. Boehnke, Dettenborn, Horstmann,



and Schwartz (1994) compared the value priorities of teachers and students, and found that Power, Achievement, and Conformity were more important to teachers, whereas Hedonism was more important to students.

I included the teachers in my study in order to explore how similar or dissimilar they were to their students. I hoped to find connections between this similarity and School Commitment. In the following, I will first discuss the student-teacher comparison across all schools, followed by a school by school analysis. In the last part of this chapter I will elaborate on the student-teacher similarity.

Student-Teacher Comparison across all Schools

Across all schools there were no significant differences between the mean scores of students and teachers for the variables Self-Direction and Religiosity at both measurement times. This means that independent thought and action, as well as religious values had similar importance to the teachers as it did to the students. The school by school comparisons, however, showed different results for Religiosity, which I will describe later in this section. Furthermore, the student-teacher differences demonstrated that at both times the teachers had significantly higher scores in the values priorities adhering to the *Self-Transcendence/Conservation* area, and significantly lower scores for the *Self-Enhancement/Openness to Change* value priorities than the students. These results largely confirm the findings of the above mentioned authors and suggest that teachers generally are more self-transcending and conserving than students. It remains unclear, however, whether this reflects the fact that they are teachers, or whether it is a result of them being older and largely coming from a different generation.

One further effect deserves a comment: At both times the highest value priority for students was Hedonism, whereas for teachers it was Benevolence – two values directly opposite to



each other according to the Schwartz (1992) model! Does this mean that students strive for fun and pleasure, whereas teachers attempt to be kind and caring?

One could speculate about reasons for this result, but it is important to bear in mind that these results must be interpreted with caution as the teacher sample does not represent all schools with equal proportions. For example at Time 1, 47 out of 168 participating teachers were from School 7, the school with the highest Benevolence scores amongst the students. Also at Time 2, 26 out of 94 teachers stemmed from this school.

School by School Analysis

A school by school analysis included only those schools from which more than 20 teachers participated. At Time 1 I included Schools 2, 4, 6, and 7; and at Time 2 Schools 4 and 7. The most astonishing results were obtained from the student-teacher comparison in Religiosity. When including only those selected four/two schools, two schools displayed significant differences between students and teachers in their Religiosity scores. In School 6 (included at Time 1) and School 7 (included at both times) the students had higher Religiosity scores than their teachers. The reasons for these results can only be guessed. In the case of School 6, which is located in Eastern Germany and had the lowest Religiosity scores, it is possible that as a result of the turnover of the government in 1989 the youth now show more openness and curiosity towards religious movements, and therefore, are more religious than their teachers who partly still come from a communist and very atheistic regime, and consequently never had any tradition of religion.

For School 7 this result is more difficult to explain, as one would expect that in a religious school the teachers should be the role models and examples, and therefore should even have stronger religious values than their students. Is it possible that the disciples are more firm than their master? Or, in other words, sometimes youth are more dedicated or even more rigid



towards what they have been taught than the adults who have seen and experienced more of the realities of life and have found more balance and moderation in all things. Sometimes it is even necessary for young people to be very strong and uncompromising in their ideals and values, in order to then mature into adults who despite the experiences and disappointments of life still uphold sustainable values. As to whether this explanation is close to the real causes of the difference in Religiosity between students and teachers, further exploration is necessary.

Student-Teacher Similarity

I used three measures to determine student-teacher similarity with regard to their value priorities, which with some differences in the nuances yielded quite similar results. I will now discuss the summary of these insights across all students. First of all, the results showed that girls were more similar to their teachers than boys. This is consistent with the results mentioned earlier, with regard to School Commitment and Academic Achievement. They suggest that girls are more similar to their teachers, while they are also more committed and appreciative of them and yield better academic grades.

Overall the results showed that student-teacher similarity correlated significantly positively with School Commitment, even though it did not predict School Commitment at Time 2. This positive correlation can be interpreted in two directions. It needs to be remembered that some of the School Commitment questions include whether the student likes his or her teachers and considers them as role models.

One possible explanation for this finding could be that students who are more committed to their school and their teachers may be or become more similar to them in their value priorities; on the other hand, if students find similarities between their own and their teachers' values, their school commitment and appreciation of these teachers possibly grows. Hence, it remains open whether the more committed students also more readily accept the values



transmitted by their teachers, or whether students who find similarities between their own and their teachers' values become more committed to their school?

A school by school analysis for the four selected schools showed that this positive correlation of student-teacher similarity and School Commitment was consistent in each of the schools, except for School 4. Here, there was no correlation between the similarity scores and School Commitment. The reasons for this may be manifold. The most obvious lies in the focus of the school programme itself. School 4 strongly promotes the concept of democracy and pluralism. The school opposes hierarchy and top to bottom power structures. This may explain why School Commitment was not related to student-teacher similarity. Probably in this school student-teacher similarity is not a desirable aim, and therefore, does not relate to School Commitment, which on the other hand yielded average scores in this school. Concretely, this means that a student can like his or her school and his or her teachers, no matter whether he or she feels that they think alike and hold similar values. Pluralism is encouraged.

It becomes even more complicated when considering that Schools 4 and 6 had the highest student-teacher similarity scores. This means that at School 4 student-teacher similarity did not influence School Commitment, or vice versa, and yet, teachers and students were more similar to each other in their value priorities than at some of the other schools. Possibly the concept of democracy and pluralism can be accepted more easily by students, and hence, teachers and students are more similar in their value priorities.

It is interesting in this context, that in School 4 not only the student-teacher similarity was very high, but also the director-teacher similarity (measured with Person Profile Fits) was the highest.

Another notable result across all students was that student-teacher similarity correlated significantly positively with Academic Achievement, which could have many reasons and



implications. The results show that those students who are more similar to their teachers, also have higher grades. It is possible that students are more willing to learn and cooperate in the classroom if they share points of commonality with their teachers. On the other hand, it is also possible that students who are more similar to their teachers are better able to understand and learn in their classroom, because they can better relate to their teachers and their way of thinking. Viewed from a different perspective an explanation could be that better students gradually conform with their teachers. Or, a rather harsh speculation would be that this result merely is a matter of sympathy and antipathy in the grading process by the teachers.

Which conclusions can we draw from the teachers' results? I would suggest that the crux of the question lies in the variable School Commitment. In most of the schools, high School Commitment went hand in hand with high student-teacher similarity in value priorities. This result confirms that the person-environment fit method which is often used in organisational psychology in order to predict job satisfaction (Hochwarter, Perrewe, Ferris, & Brymer, 1999) can and should also be applied in the school setting.

Furthermore, the results show that School Commitment relates to the teacher and his or her similarity to the students with regard to value priorities. As the School Commitment scale includes questions about the relationship to the teachers, as well as the attitude towards the school and learning, these coefficients propose that a good relationship with the teachers is strongly related to a positive attitude towards the school and the learning process, and again is related to student-teacher similarity.



5.1.10 Question 10: Wishful Thinking or Real Every Day Classroom?

The most interesting result from the data obtained with the educational aims questionnaire was that School Commitment correlated more positively with the Realisation scale than with the Desirability scale. The first measures how capable teachers feel to realise certain educational aims in the classroom, whereas the latter asks how desirable they find these aims. The positive correlation between the Realisation scale and School Commitment suggests that the higher the teachers' School Commitment was, the more able they felt to realise their desirable educational aims in the classroom, or vice versa. This could have many implications for the every day classroom as it shows that the realisation of educational aims is more a question of attitude and of a good relationship to the students, than an organisational issue of how these aims fit into the already heavily packed curriculum.

Hence, this result suggests that the teachers' School Commitment and effective value education are highly related to each other - whatever the causal direction!

5.2 Limitations and Suggestions for Improvement

No research would be complete without a critical evaluation of the design, the instruments, the results, and perhaps a few suggestions of how they could have been improved.

First of all, I would like to make some general comments. It was very difficult to convince schools to cooperate in this study, and even more so to get the teachers to fill in the questionnaires. I am surprised that teachers always complain about the lack of values and the moral decay of today's youth, but then again for whatever reasons, are resistant when it comes to supporting research on these questions. Most of the schools denied my questionnaire, presumably because of lack of time, some openly admitted that research of this kind could be threatening for their reputation. Anonymity of all results was the only condition under which



some of the schools were prepared to participate. Another major obstacle in the process of finding cooperative schools was the fact that my questionnaires included religious questions. Some of the staff deemed that these questions are far too personal, and were not even prepared to fill in the questionnaire (which was treated anonymously) and just exclude the Religiosity questions. One of the teachers said: “I am not prepared to make any statement regarding my belief in God.” Another school refused to continue their participation after some teachers had realised that the questionnaire dealt with values. At the staff meeting they decided to withdraw their permission to further administer the questionnaires, arguing that research on values can in no wise be scientific, but certainly is promoted by a sect or other dubious movement. These and similar suspicious responses provided me with a lot of food for thought as to why people are so scared to reveal their values or religious beliefs. Probably, it is a protective measure, because in today’s society many people consider personal values and religiosity as very intimate topics - touching the sphere of taboos.

The analysis of the various school programmes showed that the schools indeed follow very different school philosophies, and educational programmes. This is not surprising, as they were selected to represent different school types. I visited each of the schools two times, and every time stayed there for one or two days. This gave me many opportunities to speak with staff and students, and get an impression of how strongly the written programme corresponds with the practices in the every day school life.

For the sake of validity, in my statistical analyses I only used the results obtained by the value questionnaires. They proved what I had seen myself: Despite the fact that some of the schools – merely based on their programmes – seemed to be similar to each other, when analysed more closely there were massive differences, not only in the overall ethos of the school, but also in the way the programme and underlying educational philosophy was applied.



For example, let us look at the two religious schools. To the outside observer they are both religious, and hence, the same. But in reality, the data demonstrated that in some aspects they differ as much as any other two schools differ from each other. Another example is that of the two schools belonging to the category “Landerziehungsheime”. Despite being founded on the same basic philosophy, except for their organisational structure, no similarities were found. Hence, one has to be cautious to judge a school just by the name or the programme they present.

Another limitation of this study is the selection effect. In any type of design where certain groups of people are compared to each other, it is impossible to completely exclude selection effects. In the case of the present study these effects could occur due to the diverse reasons of why and how the students were allocated to the specific schools, such as educational background, family situation, behaviour or learning difficulties, etc. Even though Regression analyses allow for certain predictors to be controlled, yet not all variables that influence a person’s personality and their values can be identified or controlled. This, however, is a very common problem in field research; therefore it is important to be aware of this matter and try to reduce the bias as much as possible.

Now, I will mention a few points that could have been improved with regard to the design of the study.

- 1. Measurement times:** It is possible that the timing for the two measurement points could have influenced the longitudinal results, as the beginning and the end of a school year have a very different momentum to them, wherefore a comparison of these two measurement times might have led to results that suffered from a bias due to timing. Possibly, at the beginning of the year the students were more excited and filled with



good resolutions than at the end of the year, when the pressure of final exams and report cards might have caused general exhaustion and possibly also disillusion about some of the ideals and values. This might explain why certain variables increased or decreased across the two measurement times. A study based on two measurement times, however, always suffers from possible flaws related to the choice of the measurement times. It is important to bear this in mind, but not to overestimate its effect.

- 2. Samples:** Not all students of each school participated in the study. Depending on organisational factors, such as exams, excursions, or other activities, some students could not fill in the questionnaires. This selection effect was not worrying, as it was unsystematic, not manipulated by either my or the teachers' choice, and was different for the two measurement times. The teachers' data had a greater risk of suffering from a selection bias; not only because those teachers who participated wanted to, i.e., were cooperative towards the study in general, but also in some schools I had permission to administer the questionnaires to the teachers during their staff meetings, whereas in other schools I had to administer and collect the questionnaires individually. Those schools with small teacher samples had to be excluded from the school by school comparisons of the teacher data.
- 3. Location of schools and nationality of students:** The frame of the present study did not allow for a greater amount of schools in order to measure rural-urban effects or the influences of the different states. The schools were chosen randomly, based on the diversity of their school programme and their willingness to cooperate. Obviously this could have lead to selection biases. The results, however, do not give that impression as, for example, all the non-religious schools did not show such differences that would



suggest that these depended on the states they are in (Baden-Württemberg, Hessen, Brandenburg, Berlin). The school programmes rather seem to have overshadowed these differences. For School 6 in specific, which was both the only public day school and the only school located in Eastern Germany, it was difficult to determine whether the results were a consequence of the fact that it is a regular public school, or that the students mainly came from a strongly atheistic background. Here, it is also important to bear in mind the possibility of selection effects. As religiosity has been controlled for, atheism should not be a confounding variable.

McCartin and Freehill (1986) found differences that were related to distinctions between schools on a composite dimension that included ethnicity, SES, and rural/urban factors. Fewer significant distinctions were found for religiously affiliated schools compared to public schools. These authors, however, did not use the Schwartz value questionnaire. Boehnke, Dettenborn, Horstmann, and Schwartz (1994) compared the differences of values in students and teachers of the former East and West Germany. They found that the differences between teachers and students were larger than those between East and West. Schwartz (1992) found that the structure of values is nearly universal, but not its relative importance for an individual culture. This means that not any single value structure necessarily can be considered universal, as the found structure stemmed from a prototype of samples from very diverse cultural, linguistic, geographic, religious, and racial groups.

Hence, using this instrument it should not have been a problem that the schools that participated in this study were located in different states. The universality of the model also explains why it was possible to use samples that consisted of both German and international students.



4. Instrument: Schwartz' Portraits Value Questionnaire 40 (2000) certainly was a very good instrument to measure value priorities. However, I would like to mention one point with regard to his theoretical model. Obviously the contrasts and compatibilities have been confirmed in many studies. And yet, it is difficult to understand why according to this model, for example, Achievement and Benevolence are necessarily contrasting values. This probably can only be comprehended when the individual items constituting these scales, as well as their definitions according to Schwartz (1992), are considered. Also, his theory does not claim to be applicable on the individual personality level, but rather constitutes a model for a *Universal Structure of Human Values*. But in general, Schwartz' theory does not explain on a content level, why certain value priorities are contrasting, and others are compatible.

5. Internal consistencies: An analysis of the internal consistencies of the ten scales showed that the value priorities Tradition ($\alpha I = .45$, $\alpha II = .51$) and Self-Direction ($\alpha I = .54$, $\alpha II = .59$) had rather low Cronbach's alpha coefficients compared to the other scales. The MDS solution also indicated this, as at Time 1 the only three items that did not fit the ideal structure all stemmed from the Tradition and the Self-Direction scales. At Time 2 Benevolence and Universalism could have been combined into one region only; in this case the only item out of place would have been a Tradition item.

A closer look at the questions of these two scales may provide some clues as to why they reached rather low internal consistencies. The four items of the Tradition scale include four topics: Contentment with what you have; living according to religious beliefs; keeping up traditional and cultural customs; being humble and modest. Especially the item TR 25, which relates to traditional customs seems to have been a specific problematic item. It fell out of place at both measurement times. From a content, as well as a MDS point of view it may fit better into the Security scale than



the Tradition scale, at least for the student sample. The Self-Direction scale also covers four topics that do not necessarily seem to fit together: Creativity, free decision-making, curiosity, and independence. Perhaps these items need to be slightly reformulated, especially when used for young subjects.

For the teacher samples, however, these two scales had higher internal consistencies, with similar values as all the other scales. Hence, it seems that the scales Tradition and Self-Direction were understood much more coherently by the teachers than by the students. This could be improved, if the questionnaire is to be useful for subjects of different age groups.

- 6. Grouping of schools:** A critical look at the vast amount of results may suggest that it would have been easier if the schools were combined into two or three groups, e.g., by separating religious and non-religious schools, or public and private schools. But statistical analyses did not allow this grouping. Despite the fact that some of the schools seemed very similar in their constellation of value priorities, yet, the profiles were too different as to permit a combination of schools without paying the price of over-simplicity. And yet it is interesting how the extreme ends of the lowest and highest value priorities were identical in all the non-religious schools.
- 7. Directors:** The interviews with the directors could have possibly been designed in a different way in order to receive more objective information through them. However, these interviews have shown that school directors are not a very valid source of information.



8. Actions: The value priorities measured in my study in no way indicate whether the subjects transfer these values into their behaviour, or not. Hence, from these results no conclusions about moral or ethical behaviour can be drawn. According to Rokeach (1973), values can be predictive of various kinds of gross behaviour. In order to make more specific predictions, however, it would be necessary to explore, which value priorities become activated in which specific situations and how this process depends on the object that the behaviour is directed to. In this way, it would be possible to understand, whether and how certain value priorities are implemented in a particular situation.

5.3 Practical Implications

This study confirms that Schwartz' theoretical model of a Universal Structure of Human Values can be considered *universal*. Hence, this model can be recommended to be used more intensely for further studies regarding values. The Portraits Value Questionnaire 40 seems to be quite a reliable instrument for this purpose.

The main difference between non-religious and religious schools was that the students of non-religious schools valued Hedonism as highest priority, and Tradition as lowest, whereas the students of the religious schools scored lowest on Power and highest on Benevolence/Self-Direction. These results could lead to a number of implications. On the one hand, they could influence the parents' decision making process with regard to the choice of school for their child, and on the other hand, the knowledge of which value priorities are upheld in which school could be used when curricula are designed with the purpose of not only conveying academic knowledge but also teaching the students specific values. In this way not every school would need to invent the wheel again.



Even though throughout the year the value priorities of the students were rather stable, some changes *did* occur. In most cases these changes were more strongly predicted by the students' religiosity or non-religiosity than by the type of school they attended. This implies that – depending on the values one desires to teach – it may be important to further evaluate the effects of being religious, and the consequences of religious and spiritual education rather than merely focusing on value education programmes that are completely detached from any religious values.

Purpel (1999) claims that all education must be based on spiritual and religious principles. This might be a possible conclusion but I believe that not *all* spiritual and religious principles necessarily are conducive to the education of those values that are constructive for the well-being of the individual, as well as the progress of society as a whole. Furthermore, according to the principle of religious freedom and the acceptance of religious diversity, not one single religion and its values should be taught at school.

I agree with Fowler (1999) who demands that the new millennium is bringing strong evidence for the increased significance of research on the central role and changing shapes of adolescent faith and religion. I suggest that the influence of religiosity on the value development of students needs to be examined in much more detail, and counterbalanced with the programmes of the schools. Clear distinctions need to be made between the internalised, the organised, the personal, the spiritual, and the social aspects of the students' religiosity.

The high positive correlations between school commitment and religiosity suggest that religiosity leads to higher school commitment. It would be interesting to examine which aspects of religiosity lead to higher school commitment, and whether this could have any



implications for the school. Perhaps it would be possible to teach certain religious values at school in order to obtain higher school commitment.

Many authors (Cartledge & Milburn, 1978; Campbell & Bond, 1982; McClelland, 1982; Uhl, 1996; Wächter, 1997; Giesecke, 1999) have found how important the exemplary role of teachers is. The results of my study confirm these findings. Higher student-teacher similarity, School Commitment, and Academic Achievement all related positively with each other. This shows how important the fit between students and teachers is. Similar to many successful approaches in organisational psychology, perhaps it would be useful to use the Person Profile Fit technique more often in the school setting. Higher levels of fit may on the one hand result in greater job satisfaction for the teachers, and on the other hand, achieve more school commitment from the side of the students.

Even though the direction of the correlation between the student-teacher similarity and school commitment remains unclear, yet, from the perspective of the teacher, the only variable that can be influenced is that part of School Commitment that has to do with a good student-teacher relationship. Certainly raising scores in this aspect of the educational process, raises the chance that the students perform better academically and benefit from the exemplary role of their teachers. Also satisfaction with life increases with increased School Commitment and Academic Achievement.

As a consequence, I suggest to implement even more focussed teacher training programmes which aim at training teachers how to face challenges in their classrooms, how to improve the student-teacher relationship and how to appropriately choose and teach values. I agree with McClelland (1982) who demands staff development workshops for teachers to learn how to effectively implement the programmes that work best for promoting moral maturity.



One challenging result of this study was that it showed how different students are from what their schools would like them to be. This makes me believe that it would be useful for every school to regularly evaluate their programme by measuring their students' value priorities and their change. In this way schools can develop programmes or projects in order to possibly align their aims with reality. Or, if the schools are content with their profile, they can use this in order to advertise their school to the parents. In general, more objective comparisons of schools are needed.

5.4 Suggestions for Future Research

As always, the list of suggestions for the future could be stretched eternally. Based on the above discussion of the results and the limitations of my study I will now mention a few points that could be considered the next steps.

Firstly, I suggest a repeat study should be made with a similar design across a longer span of time. This way it would become possible to obtain more accurate results with regard to the stability and the change of values, as well as the factors that influence this development. Ideally, the measurements would comprise more than just two times in order to observe the patterns of change. Also, for the above mentioned reasons, I would recommend to use similar points in the school year (i.e., always the beginning). A truly longitudinal design could even shed light on the question how values develop across the life span, and which factors/events cause them to change.

Secondly, it may be useful to design a similar study on a broader level with more schools participating. Perhaps the schools could be selected in such a way that there are sufficient representatives to allow grouping (e.g., religious schools, public schools, private schools,



etc.). In this way one would not need to speculate about reasons for certain effects based on one school programme only, but could much easier formulate interpretations based on similarities that are attributed to all the schools within the same group. Consequently the results could be applied more broadly.

Thirdly, it would be useful to include multi-level analyses, top down from the directors via the teachers to the students. For this, it would be necessary to exactly allocate the teachers to the students. The advantage of this procedure would be that one could measure the exact influence of individual teachers and their value priorities on their students rather than just using the measure for the average teacher. This could possibly give further insight on the question of teachers as role models.

In this context it would also be interesting to more deeply explore the reciprocal relations between teachers and students. Most probably, not only the teachers influence their students, but also the students influence their teachers in the values they hold.

Fourthly, I believe that the consequence of being religious and/or attending religious schools should be examined more in detail. For that, a larger number of schools based on different religious movements and educational principles should be selected and further analysed. This could give further insights as to how much of value education is influenced by being religious, or by attending a religious school. It would be of advantage to use measures that allow a comparison of these results with the results from non-religious schools in order to be able to explore whether the results are related to the type of school or to the fact that a student is religious. If being religious has an impact on a certain development of value priorities within a student it would be necessary to investigate which forms of religiosity (extrinsic, intrinsic, etc.) are responsible for this effect. In this context it would be interesting to further investigate why the religiosity of the students decreased in the course of the year. If attending



a religious school is the cause for a certain form of development, one needs to explore which parts of the schooling are responsible for this effect, such as the curriculum, the staff, the rules, or the general ethos. In order to find valid results it is also necessary, however, to examine the differences of the religious schools.

Fifthly, research on the religiosity of students and teachers could shed more light on the question whether students in general are more religious than their teachers. This would be important in order to understand more about the transfer of religious values from the teachers to the students. Does this transfer follow the same principles as the transfer of other value priorities?

Furthermore, the concept of school commitment needs to be explored more thoroughly. What are the causes for high or low school commitment, and how does school commitment influence the value education process in detail? It also needs to be further elaborated how school commitment changes in the course of one school year, and across the whole school time of a student. These changes need to be related to age.

It is further necessary to investigate how school commitment can be promoted in order to achieve a better fit between the students and their teachers/schools. In this way the whole educational process, on both an academic and a value education level could be more efficient. Depending on these results, perhaps a consequence for a teacher would be to put more effort into fostering school commitment within the students in order to have better functioning classrooms and to be able to better fulfil the demands of the curriculum, as well as the educational expectations of the school and the parents – let alone, to be more content with oneself as a teacher.



Last, but not least, all research on value education would benefit from more measures that evaluate the behavioural consequences that any specific value priority has. Hence, I propose that instruments are designed that measure both the value priorities, as well as – which obviously is much more difficult – the consequent behaviour patterns. It is important to consider both, in order to find out whether it is possible to make behaviour predictions based on people's value priorities. Possibly, certain value configurations go hand in hand with stronger tendencies to answer according to social desirable norms. How do these tendencies reflect on a behaviour level?

5.5 Conclusions

The purpose of this study was to explore the value priorities of students and examine whether they differed depending on the type of school the students attended. Furthermore, the aim was to investigate how the value priorities changed in the course of one year, and which factors were responsible for this change. Lastly, the student-teacher similarity was related to the students' school commitment. The main results shall be briefly listed in the following:

1. At both measurement times Schwartz' (1992) *Universal Structure of Human Values* was replicated with the student samples of my study.
2. The students' value priorities were significantly different in the eight measured schools. A major distinction was found between the religious and the non-religious schools. The students of the two religious schools valued Power as lowest priority, and Benevolence or Self-Direction as highest. The students of the six non-religious schools, however, valued Tradition as lowest priority and Hedonism as highest.



3. The change of the value priorities Conformity, Hedonism, and Universalism was predicted by both Religiosity and the type of school. The change of Power, Tradition, Benevolence, and Achievement, however, was predicted by Religiosity only.
4. At both measurement times girls yielded significantly higher scores on Benevolence and Universalism, whereas boys scored higher on Security, Achievement, and Power.
5. At both times the results showed highly significant positive correlations between School Commitment and Religiosity, with a possible causal direction from Religiosity at Time 1 to School Commitment at Time 2.
6. In three out of four schools student-teacher similarity correlated positively with School Commitment; across all schools it correlated positively with Academic Achievement.

Hopefully, these results have made a contribution to the better understanding of and the research in the field of value education.

6. Summary



“In science the credit goes to the man who convinces the world, not the man to whom the idea first occurs.”

Sir Francis Darwin
(1848 – 1925)



Most studies in the field of value education evaluate the effects of programmes that are designed to teach values. The purpose of this study was to explore the value priorities of youth as they naturally occur in different school settings without any form of intervention, and to investigate how they changed in the course of one year with regard to a number of factors that were related to this change. In my study I focused on the following questions:

1. Can the *Universal Structure of Human Values* by Schwartz (1992) be replicated in a student sample?
2. Do students attending different school types have different value priorities?
3. Do students' value priorities change in the course of one year?
4. How are their value priorities related to age and gender?
5. How is the students' religiosity related to their value priorities?
6. Are value priorities, religiosity, age, and gender related to school commitment and its change?
7. How do the students' duration of school attendance, their academic achievement, and their satisfaction with life relate to their value priorities and their change?
8. Which value priorities do teachers have?
9. Do value priorities of teachers and students correspond?
10. How realistic is it to practice value education in every day classroom settings?

Eight schools with very diverse programmes participated in this study. At two measurement times, I measured the value priorities of the students ($N = 1541$ at Time 1; $N = 1278$ at Time 2) and the teachers ($N = 168$ at Time 1; $N = 94$ at Time 2), once at the beginning and once at the end of the school year 2000/2001. 811 students and 55 teachers participated at both times. The following three instruments were used for students and teachers at both times: Portraits Value Questionnaire 40 (2000), Duke Religion Index (1999), and a few School Commitment questions. The participants also answered some general questions regarding age, gender, etc.



Furthermore, the students at Time 2 filled in the satisfaction-with-life-scale, and some questions regarding their academic achievement and their parents' degrees. The teachers, moreover, received a questionnaire about the desirability and realisation of educational aims. At the second time, the directors of the schools were also interviewed concerning their school and its aims. Statistical analyses yielded the following results:

1. The *Universal Structure of Human Values* was replicated at both measurement times.
2. Students of different schools clearly had different value priorities. The main differences were found between religious and non-religious schools. Students of the former valued Power as lowest priority and Benevolence/Self-Direction as highest. Students of the latter valued Tradition as lowest priority and Hedonism as highest.
3. Most of the students' value priorities changed during the course of the year. Benevolence and Universalism decreased, whereas Achievement and Power increased. The changes in Conformity, Hedonism, and Universalism were predicted by Religiosity, as well as the types of school. The changes in Power, Tradition, Benevolence, and Achievement, however, were predicted by Religiosity only.
4. Age related positively to Self-Direction, Achievement, and Power, but negatively to Hedonism and Stimulation. Girls scored higher on Benevolence and Universalism, whereas boys had higher scores on Self-Direction, Achievement, and Power.
5. Religiosity decreased in the course of the year. It related positively to those value priorities, which are located in the *Self-Transcendence/Conservation* regions of the Schwartz (1992) model, and negatively to those, which are in the *Self-Enhancement/Openness to Change* areas.
6. At Time 2, girls scored higher on School Commitment than boys. At both times the correlations between School Commitment and Religiosity were highly significant and positive. The results suggested that the causal direction is from Religiosity at Time 1 to School Commitment at Time 2.

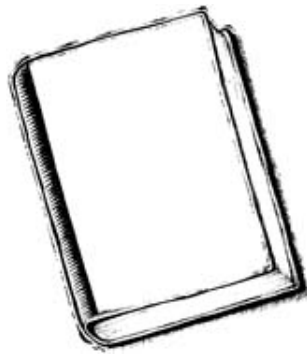


7. Academic Achievement related positively to School Commitment, Parents' Degree, Conformity, Universalism, and Self-Direction, whereas it related negatively to Stimulation and Hedonism. Girls scored higher on Academic Achievement than boys. The results for the variables Duration of School Attendance, as well as Satisfaction with Life were less notable.
8. At both times the School Commitment of teachers related positively to Security and Universalism.
9. In two out of four schools the students were more religious than their teachers. Person Profile Fit measures between students and teachers correlated positively with student School Commitment in three out of four schools. Overall, they correlated positively with Academic Achievement.
10. School Commitment of teachers related more positively to the scale representing the realisation of educational aims than to the one representing the desirability of these aims.

The results demonstrated that the students of different school types had diverse value priorities, which may in some ways be related to their programmes. This could have numerous practical implications with regard to curriculum design and evaluation. It seems, that the students' religiosity related even stronger to their value priorities and their change, than did the type of school they attended. As religiosity was responsible for an increase in school commitment, perhaps, teaching certain religious values could help strengthen school commitment amongst students. The results also suggest that the teacher's function as a role model should not be underestimated.

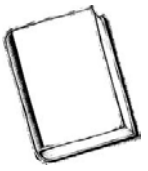
In order to further contribute to the field of value education, more research is needed with regard to those factors that influence student value priorities, such as type of school, religiosity, and school commitment.

7. References

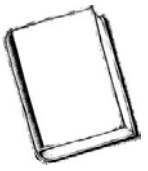


“Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information on it.”

Samuel Johnson
(1709 - 1784)



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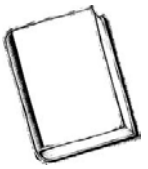
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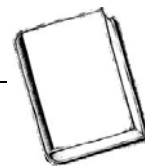
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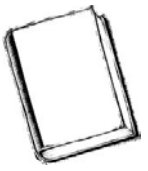
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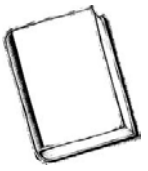
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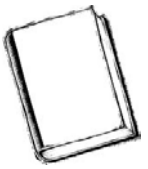
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Appendix





A1. Value Questionnaire for Students (Time 1, Male Version)

Capital letter of your first name: _____

Capital letter of your surname: _____

Capital letter of your mother's first name: _____

Capital letter of your father's first name: _____

Day of your birthday: _____

Gender: female male

Age: _____ years

Grade/Level: _____

When did you come to this school? month _____ year _____

Here we briefly describe some people. Please read each description and think about how much each person is or is not like you. Put an X in the box to the right that shows how much the person in the description is like you.

Thank you for your cooperation!



HOW MUCH LIKE YOU IS THIS PERSON?	very much like me	like me	some- what like me	a little like me	not like me	not like me at all
1. Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. It is important to him to be rich. He wants to have a lot of money and expensive things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It's very important to him to show his abilities. He wants people to admire what he does.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. He thinks it is important to do lots of different things in life. He always looks for new things to try.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. He thinks it's important not to ask for more than what you have. He believes that people should be satisfied with what they have.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. It's very important to him to help the people around him. He wants to care for their well-being.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Being very successful is important to him. He likes to impress other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. He likes to take risks. He is always looking for adventures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. It is important to him to be in charge and tell others what to do. He wants people to do what he says.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. He strongly believes that people should care for nature. Looking after the environment is important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Being religious is important to him. He tries hard to follow his religious beliefs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



HOW MUCH LIKE YOU IS THIS PERSON?	very much like me	like me	some- what like me	a little like me	not like me	not like me at all
21. It is important to him that things be organized and clean. He really does not like things to be a mess.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. He believes all the world's people should live in harmony. Promoting peace among all groups in the world is important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. He thinks it is important to be ambitious. He wants to show how capable he is.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Enjoying life's pleasures is important to him. He likes to 'spoil' himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. It is important to him to respond to the needs of others. He tries to support those he knows.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. He believes he should always show respect to his parents and to older people. It is important to him to be obedient.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. He likes surprises. It is important to him to have an exciting life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. He tries hard to avoid getting sick. Staying healthy is very important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Getting ahead in life is important to him. He strives to do better than others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Forgiving people who have hurt him is important to him. He tries to see what is good in them and not to hold a grudge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. It is important to him to be independent. He likes to rely on himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Having a stable government is important to him. He is concerned that the social order be protected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. It is important to him to be polite to other people all the time. He tries never to disturb or irritate others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. He really wants to enjoy life. Having a good time is very important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. It is important to him to be humble and modest. He tries not to draw attention to himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. He always wants to be the one who makes the decisions. He likes to be the leader.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. It is important to him to adapt to nature and to fit into it. He believes that people should not change nature.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



And now a few more questions for you to tick:

- | | | | |
|-------------------------------------------------|------------------------------|------------------------------------|-----------------------------|
| 1. Do you enjoy going to school? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 2. Do you enjoy learning? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 3. Do you feel safe at school? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 4. Do you like your teachers? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 5. Are your teachers examples for you? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 6. Do you think your teachers are working hard? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 7. Do you believe in God? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 8. What is your nationality? | _____ | | |
| 9. What is your religion? | _____ | | |
| 10. What do you want to be in life? | _____ | | |

11. How often do you attend church or other religious meetings?

- more than once a week
- once a week
- a few times a month
- a few times a year
- once a year or less
- never

12. How often do you spend time in private religious activities, such as prayer, meditation, or Bible study?

- more than once a day
- daily
- two or more times a week
- once a week
- a few times a month
- rarely or never

13. In my life, I experience the presence of the Divine (i.e. God).

- definitely true of me
- tends to be true
- unsure
- tends *not* to be true
- definitely *not* true

14. My religious beliefs are what really lies behind my whole approach to life.

- definitely true of me
- tends to be true
- unsure
- tends *not* to be true
- definitely *not* true

15. I try hard to carry my religion over into all other dealings in life.

- definitely true of me
- tends to be true
- unsure
- tends *not* to be true
- definitely *not* true

THANK YOU FOR YOUR COOPERATION!



A2. Second Part of Questionnaire for Students (Added at Time 2)

Would you please answer these last questions:

1) Which class do you belong to? a b c d e f
(ignore if your school has only one class per grade)

2) Are you a boarding student or a day student?

3) Below are five statements that you may agree or disagree with. Please indicate your agreement with each sentence by marking the appropriate box. Please mark only one box per statement.

	strongly disagree	slightly disagree	partly agree	mainly agree	strongly agree
1. In most ways my life is close to my ideal.					
2. The conditions of my life are excellent.					
3. I am satisfied with my life.					
4. So far I have gotten the important things I want in life.					
5. If I could live my life over, I would change almost nothing.					

4) Which grade did you receive last semester in the following subjects: Maths ___ English ___

5) Which grade did you receive last year in the following subjects: Maths ___ English ___

6) How many books do your parents have at home?

none 1-10 11-50 51-100 101-250 251-500 more than 500

7) Please mark which school or university degree your parents have.

	<i>mother</i>	<i>father</i>
<i>No high school graduation</i>	_____	_____
<i>High school graduation</i>	_____	_____
<i>University degree</i>	_____	_____

THANK YOU FOR YOUR COOPERATION!



A3. Value Questionnaire for Teachers (Time 1, Male Version)

Capital letter of your first name: _____

Capital letter of your surname: _____

Capital letter of your mother's first name: _____

Capital letter of your father's first name: _____

Day of your birthday: _____

Gender: female male

Age: _____ years

Subjects: _____

When did you come to this school? month _____ year _____

Here we briefly describe some people. Please read each description and think about how much each person is or is not like you. Put an X in the box to the right that shows how much the person in the description is like you.

Thank you for your cooperation!



HOW MUCH LIKE YOU IS THIS PERSON?	very much like me	like me	some- what like me	a little like me	not like me	not like me at all
1. Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. It is important to him to be rich. He wants to have a lot of money and expensive things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It's very important to him to show his abilities. He wants people to admire what he does.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. He thinks it is important to do lots of different things in life. He always looks for new things to try.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. He thinks it's important not to ask for more than what you have. He believes that people should be satisfied with what they have.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. It's very important to him to help the people around him. He wants to care for their well-being.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Being very successful is important to him. He likes to impress other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. He likes to take risks. He is always looking for adventures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. It is important to him to be in charge and tell others what to do. He wants people to do what he says.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. He strongly believes that people should care for nature. Looking after the environment is important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Being religious is important to him. He tries hard to follow his religious beliefs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



HOW MUCH LIKE YOU IS THIS PERSON?	very much like me	like me	some- what like me	a little like me	not like me	not like me at all
21. It is important to him that things be organized and clean. He really does not like things to be a mess.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. He believes all the world's people should live in harmony. Promoting peace among all groups in the world is important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. He thinks it is important to be ambitious. He wants to show how capable he is.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Enjoying life's pleasures is important to him. He likes to 'spoil' himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. It is important to him to respond to the needs of others. He tries to support those he knows.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. He believes he should always show respect to his parents and to older people. It is important to him to be obedient.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. He likes surprises. It is important to him to have an exciting life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. He tries hard to avoid getting sick. Staying healthy is very important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Getting ahead in life is important to him. He strives to do better than others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Forgiving people who have hurt him is important to him. He tries to see what is good in them and not to hold a grudge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. It is important to him to be independent. He likes to rely on himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Having a stable government is important to him. He is concerned that the social order be protected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. It is important to him to be polite to other people all the time. He tries never to disturb or irritate others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. He really wants to enjoy life. Having a good time is very important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. It is important to him to be humble and modest. He tries not to draw attention to himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. He always wants to be the one who makes the decisions. He likes to be the leader.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. It is important to him to adapt to nature and to fit into it. He believes that people should not change nature.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



And now a few more questions for you to tick:

- | | | | |
|----------------------------------------------------------|------------------------------|------------------------------------|-----------------------------|
| 1. Do you enjoy going to school? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 2. Do you enjoy teaching? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 3. Do you feel safe at school? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 4. Do you like your students? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 5. Do you think your students see you as an example? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 6. Do you think your students realize how hard you work? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 7. Do you believe in God? | <input type="checkbox"/> yes | <input type="checkbox"/> sometimes | <input type="checkbox"/> no |
| 8. What is your nationality? | _____ | | |
| 9. What is your religion? | _____ | | |
| 10. How long have you been a teacher? | _____ | | |

11. How often do you attend church or other religious meetings?

- more than once a week
- once a week
- a few times a month
- a few times a year
- once a year or less
- never

12. How often do you spend time in private religious activities, such as prayer, meditation, or Bible study?

- more than once a day
- daily
- two or more times a week
- once a week
- a few times a month
- rarely or never

13. In my life, I experience the presence of the Divine (i.e. God).

- definitely true of me
- tends to be true
- unsure
- tends *not* to be true
- definitely *not* true

14. My religious beliefs are what really lies behind my whole approach to life.

- definitely true of me
- tends to be true
- unsure
- tends *not* to be true
- definitely *not* true

15. I try hard to carry my religion over into all other dealings in life.

- definitely true of me
- tends to be true
- unsure
- tends *not* to be true
- definitely *not* true

THANK YOU FOR YOUR COOPERATION!



A4. Educational Aims Questionnaire for Teachers

Capital letter of your first name: _____

Capital letter of your surname: _____

Capital letter of your mother's first name: _____

Capital letter of your father's first name: _____

Day of your birthday: _____

Gender: female male

Age: _____ years

Work experience: approx. _____ years

Religion: _____





For every named educational aim please tick how desirable you personally find it – no matter how successful you are with its realization.

<i>Aim</i>	<i>How desirable do I find this aim:</i> <i>1 - not at all</i> <i>2 - barely</i> <i>3 - mediocre</i> <i>4 - very</i> <i>5 - extremely</i>
1. To observe the lesson plan	1----2----3----4----5
2. To act in accordance with specialized knowledge	1----2----3----4----5
3. To try to be objective	1----2----3----4----5
4. To maintain the educational standards of the school	1----2----3----4----5
5. To maintain classroom discipline	1----2----3----4----5
6. To support every student individually	1----2----3----4----5
7. To strive for justice	1----2----3----4----5
8. To be popular amongst the students	1----2----3----4----5
9. To fulfil the educational duties even beyond the classroom	1----2----3----4----5
10. To create a trusting relationship with the student	1----2----3----4----5
11. To gain the respect and esteem of colleagues	1----2----3----4----5
12. In some areas to be an example for the student	1----2----3----4----5
13. To comprehend the student's actions as well as his/her personality	1----2----3----4----5
14. To create respect for the teacher in the students	1----2----3----4----5
15. To act in accordance with educational-psychological knowledge	1----2----3----4----5
16. To gain the respect and esteem of parents	1----2----3----4----5
17. To promote self-esteem in the student	1----2----3----4----5
18. To promote ambition in the student	1----2----3----4----5



19. To promote diligence and willingness to perform in the student	1---2---3---4---5
20. To promote autonomy and independence in the student	1---2---3---4---5
21. To encourage the student towards discipline and order	1---2---3---4---5
22. To convey to the student good specialized knowledge in specific (my) subjects	1---2---3---4---5
23. To promote creativity and imaginative performance within the student	1---2---3---4---5
24. To educate the student towards a critical attitude	1---2---3---4---5
25. To convey to the student respect for established norms and values	1---2---3---4---5
26. To promote social competence in the student	1---2---3---4---5
27. To convey good general knowledge to the student	1---2---3---4---5
28. To create interest in the subject	1---2---3---4---5
29. To promote idealism and commitment for higher goals in the student	1---2---3---4---5
30. To promote realistic self-appraisal in the student	1---2---3---4---5
31. To educate the student towards systematic, logical thinking	1---2---3---4---5
32. To educate the student towards cooperation and helpfulness	1---2---3---4---5
33. To diminish self-centredness in the student	1---2---3---4---5
34. To educate the student towards sincerity and honesty	1---2---3---4---5
35. Not to create fear in the student	1---2---3---4---5
36. To awaken joy for learning in the student	1---2---3---4---5
37. To promote tolerance towards minorities and disadvantaged people in the student	1---2---3---4---5
38. To show the students that they are loved	1---2---3---4---5

Thank you very much. And now would you please continue with the following two pages.



For every named educational aim please tick how successful you are with the realization of this aim during your lessons.

<i>Aim</i>	<p><i>How successful am I with the realization of this aim during my lessons:</i></p> <p><i>1 - not at all</i> <i>2 - barely</i> <i>3 - mediocre</i> <i>4 - very</i> <i>5 - extremely</i></p>
1. To observe the lesson plan	1---2---3---4---5
2. To act in accordance with specialized knowledge	1---2---3---4---5
3. To try to be objective	1---2---3---4---5
4. To maintain the educational standards of the school	1---2---3---4---5
5. To maintain classroom discipline	1---2---3---4---5
6. To support every student individually	1---2---3---4---5
7. To strive for justice	1---2---3---4---5
8. To be popular amongst the students	1---2---3---4---5
9. To fulfil the educational duties even beyond the classroom	1---2---3---4---5
10. To create a trusting relationship with the student	1---2---3---4---5
11. To gain the respect and esteem of colleagues	1---2---3---4---5
12. In some areas to be an example for the student	1---2---3---4---5
13. To comprehend the student's actions as well as his/her personality	1---2---3---4---5
14. To create respect for the teacher in the students	1---2---3---4---5
15. To act in accordance with educational-psychological knowledge	1---2---3---4---5
16. To gain the respect and esteem of parents	1---2---3---4---5
17. To promote self-esteem in the student	1---2---3---4---5



18. To promote ambition in the student	1---2---3---4---5
19. To promote diligence and willingness to perform in the student	1---2---3---4---5
20. To promote autonomy and independence in the student	1---2---3---4---5
21. To encourage the student towards discipline and order	1---2---3---4---5
22. To convey to the student good specialized knowledge in specific (my) subjects	1---2---3---4---5
23. To promote creativity and imaginative performance within the student	1---2---3---4---5
24. To educate the student towards a critical attitude	1---2---3---4---5
25. To convey to the student respect for established norms and values	1---2---3---4---5
26. To promote social competence in the student	1---2---3---4---5
27. To convey good general knowledge to the student	1---2---3---4---5
28. To create interest in the subject	1---2---3---4---5
29. To promote idealism and commitment for higher goals in the student	1---2---3---4---5
30. To promote realistic self-appraisal in the student	1---2---3---4---5
31. To educate the student towards systematic, logical thinking	1---2---3---4---5
32. To educate the student towards cooperation and helpfulness	1---2---3---4---5
33. To diminish self-centredness in the student	1---2---3---4---5
34. To educate the student towards sincerity and honesty	1---2---3---4---5
35. Not to create fear in the student	1---2---3---4---5
36. To awaken joy for learning in the student	1---2---3---4---5
37. To promote tolerance towards minorities and disadvantaged people in the student	1---2---3---4---5
38. To show the students that they are loved	1---2---3---4---5

Thank you very much for your cooperation!

**A5. Scoring Key for PVQ 40 Value Scales According to Schwartz (2000)**

Scale	PVQ 40 Item Number
Security	5, 14, 21, 31, 35
Conformity	7, 16, 28, 36
Tradition	9, 20, 25, 38
Benevolence	12, 18, 27, 33
Universalism	3, 8, 19, 23, 29, 40
Self-Direction	1, 11, 22, 34
Stimulation	6, 15, 30
Hedonism	10, 26, 37
Achievement	4, 13, 24, 32
Power	2, 17, 39



A6. Interview with Directors

Briefly describe the aim of your school.

- Which values do you try to convey in your school? List some main values in order of priority.
- In which ways do you convey these values?
- Are there any voluntary or obligatory school subjects or school events that have the purpose of conveying values? If yes, then which ones?
- Are there any voluntary or obligatory school projects that have the purpose of conveying values? If yes, then which ones?
- Which values do you believe are important for your teachers? How do they convey them?
- Are there any meetings, in which ethical and moral education is discussed and elaborated with the teachers?
- Do you think that your students undergo change at your school? If yes then in which direction and why?
- Which behaviour rules do you have at your school? How are they implemented?
- Do you have obligatory religion or ethics classes at your school?
- Do you think that your students come from a specific socio-economic or educational background? What motivates parents to send their children to your school?
- How would you judge the student-teacher relationship?
- In your wishful thinking, how should a student be when he leaves your school?
- How can the school contribute towards this? Which aspect of personality development do you consider as especially important at your school?*
- Independent thought and action (SD)
- Good behaviour, courtesy and respect (CO)
- Fun and joy of life (HE)
- Success and recognition (AC)
- Human virtues such as care, helpfulness and loyalty (BE)
- Leadership qualities and the pursuit of a high social position (PO)
- Striving after security, stability and order (SE)
- Modesty, humility and contentment, as well as religiosity (TR)
- Concern for the welfare of all mankind and nature (UN)
- Search for an eventful life and openness for new things (ST)
- How much do you think your students enjoy going to school?*
- Do they enjoy learning?*
- How satisfied do you think are your students with their lives?*

* Scales from 1 to 5, from low to high agreement.



A7. Summary of Interviews with Directors of All Schools

School	Aims	Values	Measures to convey values	Courses to convey values
1	Academic competence, social competence	Discipline, respect, order, honesty, trustworthiness	System of rules and consequences, tutorial classes	Obligatory Ethics classes, voluntary discussion groups
2	Re-integrate academically weak students into public school system	Honesty, openness, commitment, cooperation in the community	Large gatherings, reprimanding behaviour lapses	None
3	Academic knowledge, social skills, fulfil social services, ecological awareness	Tolerance, respect, courtesy, social competences, conflict resolution, prepare for professional life	Common activities, gatherings to discuss problems and issues, practical and technical courses	Philosophical colloquium to introduce the school's values
4	Holistic education in- and outside of the classroom	Democracy, respect, openness, critical thinking	Give students voting rights in democratic processes, encourage life-long learning	Obligatory Religion classes and school services, voluntary social services
5 upper grades	High school graduation, convey school philosophy	Honesty, diligence, cooperation	Family units in boarding situation, teachers should convey values	Religion classes, weekly assemblies
5 lower grades	Human and academic education parallel, but mainly human education	Social skills, respect for life and nature, self-esteem, human dignity	Offer domains outside of class where students can develop/show competence and strengthen self-esteem	Obligatory Ethics and Religion classes, weekly assemblies
6	Prepare for university, sound general knowledge, self-regulated study and life skills	Willingness to work hard, cooperation, tolerance, and acceptance of other cultures	International student exchange programmes	Obligatory LER classes (Life skills, Ethics, Religion) in grades 7 and 8
7	Serve the missionary kids in Europe and Northern Africa	Biblical principles, Jesus being the only redeemer	Integrate biblical principles across all subjects, all staff are missionaries	Obligatory Bible classes
8	Educate ethically, morally, and academically; strive for excellence in all things	Honour, responsibility, respect, leadership qualities, commitment	Weekly assemblies, social service projects, discussion groups, dance and theatre groups	Social Behaviour classes, Ethics classes, World Religion classes, tutorial classes, discussion classes in dormitory



A7. Summary of Interviews with Directors of All Schools - continued

School	Projects to convey values	a) Teachers' values b) How conveyed	Teacher training to convey values	a) Have the students changed b) Why
1	Projects in Ethics class	a) Respect, courtesy b) Talks, Ethics	Every fortnight, plus "educational days"	a) Yes, in small steps b) A lot of efforts
2	Weekly tutorial classes, German teachers discuss personal goals	a) See school values b) Reprimanding lapses	None	a) Academic and social progress b) Work in small groups
3	None	a) Ecological awareness, conflict resolution b) Through personal values and teachers' example	Teacher conference, once per year training days	a) Negatively b) Influences of environment, society, new students coming from destroyed families
4	Courses beyond regular class time	Respect, democratic structures with the purpose of implementing peace	Weekly conferences, seminars, especially regarding the issue of drugs	b) Intense living together, effort to ensure everybody's welfare
5 upper grades	Grade 10: obligatory drug prevention programme, teaching values and norms	a) Honesty, diligence b) Through verbal communication	None	a) After 3 to 4 years students learn that there are higher values than money
5 lower grades	Humanitarian project financed through fines paid by students	a) Honesty, openness, perseverance, lack of self-centredness b) Through example	Daily teachers' conference, once per week educational conference, once per month supervision	a) Higher self-esteem, more consistent academic performance, less learning disabilities b) Understanding that learning can be fun, in- and outside of the classroom
6	Projects about topics, such as health, drug prevention, and racism	a) Study skills, courtesy, punctuality, tolerance b) Through example	None	a) Negatively b) Influences of society and new students
7	Once per year missionary trip, obligatory social services	Teachers are missionaries, want to teach the Gospel	Weekly conferences	a) Most students grow closer to God and Jesus b) Through example of teachers
8	Obligatory social services, voluntary dance and theatre group about social issues and values	Teachers convey school philosophy and values, such as respect through example	Weekly teacher conferences, thrice a year teacher training seminar about school philosophy and value education	a) Stronger moral and ethical values b) Implementation of school philosophy



A7. Summary of Interviews with Directors of All Schools - continued

School	Rules Implementation	Religion/ Ethics classes	a) Parents' SES b) Why this school	Student-teacher relationship
1	Clear reward and punishment system	Obligatory Ethics classes, no religion classes	a) All social classes b) Educational problems	Quite good, with exceptions, trusting relationship
2	Clear reward and punishment system, school counsellor	None	a) High middle class b) Academic failure, parents have no time for education	Very good
3	Clear reward and punishment system	Grades 7 and 8: voluntary Protestant Christian classes	a) Mainly middle class b) Parents have no time for education; good programme and location	Mainly positive; small classes allow personal supervision
4	Rules and consequences designed by teachers and students together	Obligatory religion classes	a) Mixed social class, 2/3 of students paid by parents, 1/3 by state b) New opportunity after failure in public school, without fears	Very good, because teachers equal educators, therefore good relationships are unavoidable
5 upper grades	No catalogue of rules and consequences, verbal communication of rules, disciplinary measures on individual level	Obligatory religion classes	a) 90% high social class, 10% state supported b) Children of ex-students, parents abroad, single children, protection from society	Very good
5 lower grades	Rules designed under the participation of students, implemented in the family units through conviction	Grade 10: Ethics obligatory, younger grades obligatory catholic or protestant religion classes	a) 80% paid by parents, 20% state supported b) Academic failure, parents divorced, single children, protection from society	Teacher-Student ratio 1:5, therefore emotional bonds and trustful relationships possible
6	General school rules	None	a) Mixed, slightly left-winged b) High school graduation	Quite good
7	Clear system of rules and consequences implemented through teachers	Bible classes	a) Mostly upper/middle class b) Only few European boarding schools for missionary kids, good reputation	Very good, close, loving and respectful
8	Rules hand in hand with school's values; clear set of rules and consequences	Obligatory Ethics classes, Social Behaviour, World Religions; Bahá'í Studies only obligatory for Bahá'í students, voluntary for others	a) Mixed social class b) Good moral and ethical values, improvement of English	Extraordinary good especially outside of the classroom; in classroom very good with some teachers, could be improved with others



A7. Summary of Interviews with Directors of All Schools - continued

School	Wish for students	School's contribution	Values of school		Enjoy school	Enjoy learning	Student SWL
1	Manage their lives, make sensible decisions, common knowledge	Convey knowledge and social competences	SD 4 CO 4-5 HE 3 AC 5 BE 5	PO 4 SE 5 TR 3-4 UN 5 ST 4	3	No	2
2	<i>Academically able to return to state school, ability to cooperate with others</i>	Very large, as students spend day and night at the school	SD 4 CO 4 HE 4 AC 3 BE 4	PO 2 SE 3 TR 3 UN 4 ST 4	3	Yes	4
3	Be prepared for university and professional life, fulfil expectations of society and world economy, be able to communicate and cooperate, social skills, tolerance towards minorities	Complementary to parents' education, cooperation with parents necessary	SD 5 CO 5 HE 4 AC 5 BE 5	PO 3 SE 4 TR 4 UN 5 ST 4	3	Mainly yes	3
4	Be a humanist, have strong democratic values, respect for others, less self-centredness, more openness, sound common knowledge	Show expectations, confront rather than ignore, develop connection to reality, search for solutions, good communication	SD 5 CO 3 HE 4 AC 3 BE 5	PO 3 SE 3 TR 4 UN 5 ST 4	4	Yes	3
5 upper grades	To be better than they were upon arrival	Teach educational principles through the concept that teachers equal educators	SD 4 CO 5 HE 4 AC 4 BE 5	PO 4 SE 4 TR 3 UN 4 ST 5	4	Yes	4
5 lower grades	They must be able to work and love	Be a model and fulfil duties that serve the community by demonstrating a lot of emotions and effort	SD 5 CO 4 HE 4 AC 5 BE 5	PO 3 SE 4 TR 3 UN 4 ST 5	4	Average	3
6	Tolerance, ability to study, manage their lives despite of all the ups and downs	Develop competences	SD 4 CO 4 HE 4 AC 4 BE 4	PO 3 SE 3 TR 3 UN 4 ST 4	3	Average	3
7	Become a steadfast and mature Christian who believes in the Word of God and carries it everywhere	Bible classes, assemblies, missionary trips, integration of biblical principles into academic curriculum and every day life	SD 4 CO 5 HE 5 AC 4 BE 4	PO 4 SE 4 TR 5 UN 5 ST 3	4	Yes	4
8	To have internalised the above mentioned five values: honour, responsibility, respect, leadership qualities, commitment	Through curriculum and extra-curricular programme, through daily behaviour towards students	SD 4 CO 5 HE 3 AC 4 BE 5	PO 4 SE 4 TR 5 UN 5 ST 4	4-5	Yes	4



A8. Factors Extracted from Desirability Scale at Time 1, Compared with Original

Factors ($N = 158$)

Solution resulting from this study at Time 1				Corresponding Solution postulated by authors		
Factor and Topics	Item numbers	Loadings	Explained variance	Factor and suggested title	Item numbers*	Explained variance
1	10	.740	25.04%	3	3, 28,	8.7%
Education, promoting joy for learning process, good relationship with students	9	.718		Objectivity and academic neutral orientation	2, 27,	
	12	.648			7, 4	
	13	.643				
	38	.618				
	36	.546				
	6	.530				
2	26	.692	8.98%	1	17, 37,	20.5%
Promoting tolerance, social competence, and independent thinking	37	.648		Promoting personality and education towards tolerant social behaviour	32, 26,	
	20	.614			23, 29,	
	24	.584			10, 33,	
	17	.572			13, 34,	
	30	.567			24, 20,	
	32	.559			35	
	7	.549				
3	31	.710	6.70%	2	21, 19,	10.0%
Promoting logical thinking, discipline, and high achievement	22	.669		Work virtues and orientation at rather conservative educational aims	22, 31,	
	27	.572			14, 25,	
	4	.561			5	
	5	.527				
4	8	.579	4.55%	4	8, 11,	7.8%
Acting according to social desirability, promoting norms and values	11	.552		Striving for social desirability and affection	14	
	15	.548				
	25	.547				
	21	.533				
Total explained variance			45.27%			47.0%

* Bold item numbers indicate congruity between items in both factor solutions



A9. Factors Extracted from Desirability Scale at Time 2, Compared with Original

Factors (N = 91)

Solution resulting from this study at Time 2				Corresponding Solution postulated by authors		
Factor and Topics	Item numbers	Loadings	Explained variance	Factor and suggested title	Item numbers*	Explained variance
1	31	.772	26.91%	1	17, 37,	20.5%
Promoting logical thinking, social behaviour, academic knowledge, as well as creative, idealistic and balanced personality	30 32 27 24 29 23 13	.728 .600 .593 .572 .506 .501 .501		Promoting personality and education towards tolerant social behaviour	32 , 26, 23 , 29 , 10, 33, 13 , 34, 24 , 20, 35	
2	14	.654	6.93%	2	21 , 19,	10.0%
Promoting discipline, good relationship with students, respect; striving for social desirability	10 21 5 12 11 9	.634 .621 .618 .609 .580 .538		Work virtues and orientation at rather conservative educational aims	22, 31, 14 , 25, 5	
3	37	.690	6.37%	3	3 , 28,	8.7%
Being objective; promoting tolerance and justice	35 7 3	.671 .626 .605		Objectivity and academic neutral orientation	2, 27, 7, 4	
4	4	.744	5.41%	4	8, 11,	7.8%
Promoting sound academic achievement, following academic and educational principles	1 2 22 15	.709 .644 .575 .538		Striving for social desirability and affection	14	
Total explained variance			45.62%			47.0%

* Bold item numbers indicate congruity between items in both factor solutions



A10. Factors Extracted from Realisation Scale at Time 1, Compared with Original

Factors (N = 154)

Solution resulting from this study at Time 1				Corresponding Solution postulated by authors		
Factor and Topics	Item numbers	Loadings	Explained variance	Factor and suggested title	Item numbers*	Explained variance
1	32	.753	35.51%	1	13, 33 ,	18.6%
Promoting social values, tolerance, norms, and academic knowledge	37	.730		Effort to promote personality and social behaviour	17, 34 ,	
	33	.707			32 , 10,	
	26	.695			6, 37 ,	
	29	.679			35, 7,	
	27	.586			38	
	38	.572				
	34	.538				
	25	.535				
	28	.528				
2	13	.676	6.28%	3	27, 29,	9.2%
Promoting ambition, creativity, justice, independence; acting according to academic and educational principles	18	.618		Acting according to rather conservative academic and educational aims	19, 18	
	23	.600				
	15	.600				
	20	.536				
7	.501					
3	8	.699	4.61%	2	11 , 16 ,	10.2%
Promoting good relationship with students, striving for social desirability	10	.681		Striving for social desirability and affection	8 , 14 ,	
	9	.610			25	
	11	.533				
	16	.522				
	12	.501				
14	.496					
4	22	.645	4.12%	4	21, 5,	7.5%
Conveying sound academic knowledge, promoting logical thinking	4	.608		Effort to achieve disciplined learning process in the classroom	1	
	1	.594				
	31	.569				
	28	.556				
Total explained variance			50.52%			45.5%

* Bold item numbers indicate congruity between items in both factor solutions



A11. Factors Extracted from Realisation Scale at Time 2, Compared with Original

Factors (N = 90)

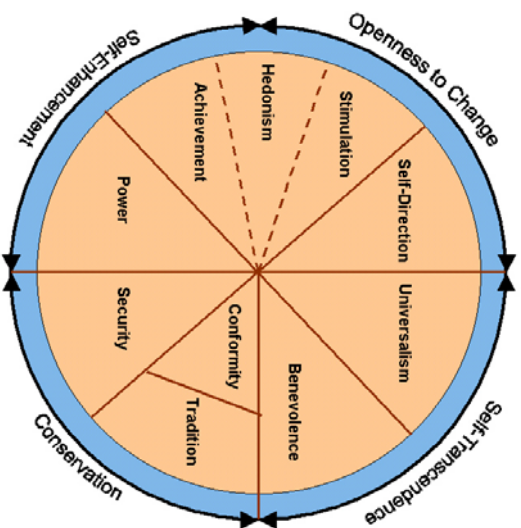
Solution resulting from this study at Time 2				Corresponding Solution postulated by authors		
Factor and Topics	Item numbers	Loadings	Explained variance	Factor and suggested title	Item numbers*	Explained variance
1	32	.822	37.38%	1	13, 33 ,	18.6%
Promoting social behaviour, balanced personality, idealism, norms, values, logical thinking, academic knowledge, and tolerance	33 30 34 29 25 27 38 31 37 26 4	.786 .704 .695 .671 .658 .629 .603 .599 .588 .572 .504		Effort to promote personality and social behaviour	17, 34 , 32 , 10, 6, 37 , 35, 7, 38	
2	17	.679	6.79%	3	27, 29,	9.2%
Promoting self-esteem, justice, objectivity, creativity; acting according to educational aims	7 6 3 15 23	.617 .602 .589 .562 .532		Acting according to rather conservative academic and educational aims	19, 18	
3	9	.670	5.07%	4	21, 5 ,	7.5%
Promoting discipline, respect, good relationship with students; striving for social desirability	12 5 1 11 38 10	.606 .587 .575 .535 .525 .501		Effort to achieve disciplined learning process in the classroom	1	
4	8	.715	4.68%	2	11, 16,	10.2%
good relationship with students, respect, empathy; conveying academic knowledge	22 14 10 2 13	.606 .599 .590 .565 .513		Striving for social desirability and affection	8 , 14 , 25	
Total explained variance			53.92%			45.5%

* Bold item numbers indicate congruity between items in both factor solutions

Value Education of Youth

School	Public/ private	Boarding/ day students	Religious/ non-religious	Main principles and values	Amount of high school students
1	private	both	non-religious	order, social skills, autonomy, responsibility	91
2	private	boarding	non-religious	"rehabilitation" of academically weak students	147
3	public	both	non-religious	music, arts, sports	190
4	private	boarding	non-religious	democracy; liberal, and humanistic values	235
5	private	boarding	non-religious	high academic standard, self-confidence, good behaviour	164
6	public	day	non-religious	good academic knowledge, cultural openness, tolerance	826
7	private	boarding	religious	biblical values, high moral standards	271
8	private	both	religious	religious tolerance, world peace, virtues, moral values	106

Value Education of Youth



SE	Security
CO	Conformity
TR	Tradition
BE	Benevolence
UN	Universalism
SD	Self-Direction
ST	Stimulation
HE	Hedonism
AC	Achievement
PO	Power