

Personal Values and Relational Models

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Abstract

In this study, the comprehensive value research by Schwartz (e.g. 1992) was linked to Fiske's relational models theory (RMT, e.g. Fiske, 1991). A sample of 297 people answered the personal values questionnaire (PVQ), the modes of relationship questionnaire (MORQ) and the relationship profile scale (RPS) in a web-based online survey. As hypothesized, the set of 10 values correlated in a systematic manner—according to the circular structure of personal value systems—with both trait-like construal of and motivational investment in the relational models communal sharing (CS), authority ranking (AR) and market pricing (MP). Further research concerning a person–environment value congruency approach to predict well-being is suggested combining the two research traditions. Copyright © 2008 John Wiley & Sons, Ltd.

Key words: personal values; relational models theory; personal values questionnaire (PVQ); modes of relationships questionnaire (MORQ); relationship profile scale (RPS)

INTRODUCTION

'(...) the concept of values, more than any other, is the core concept across all social sciences. It is the main dependent variable in the study of culture, society and personality, and the main independent variable in the study of social attitudes and behavior'. Milton Rokeach (1973, p. ix)

What is fundamentally important to people is likely to function as criterion for the evaluation of actions, people and events. One fruitful way of looking at what is fundamentally important to someone is from the perspective of values. This concept has yielded a considerable theoretical and empirical work (see e.g. Hitlin & Piliavin, 2004; Schwartz, 1992; Seligman, Olson, & Zanna, 1996, for overviews).

Drawing on this research, personal value priorities have been shown to be good predictors for a variety of attitudes, behaviours and other variables, for example, attitudes towards gender relations (Feather, 2004), consumer behaviour (Grunert & Juhl, 1995),

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voting (Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006), religiosity (Roccas, 2005) or personality (Roccas, Sagiv, Schwartz, & Knafo, 2002).

However, relatively little is known about the relationship between personal value priorities and the way people perceive, construe and commit themselves to their social environment. It is widely accepted that people are fundamentally sociable and generally organize their lives in terms of their relationships (*cf.* Brewer, 2004, for a review). Thus, if values are as important as Rokeach claims in the opening statement, the personal value preferences should become manifest in the way people approach other people in relationships. To our knowledge, only one study has empirically tested this assumption, restricting the relationship aspect to the preference for a specific kind of romantic partner (Goodwin & Tinker, 2002). But how do personal values relate to the type of relationships people prefer *in general*? It is difficult to answer this question, since the variety of human relations is enormous. There have been many attempts to reduce this variety to a few basic forms of human relations. The *Relational Models Theory* (RMT) by Alan P. Fiske (1991, 1992) is one of these attempts. It proposes that people perceive, construe and organize relationships according to just four basic models—named *communal sharing* (CS), *authority ranking* (AR), *market pricing* (MP) and *equality matching* (EM). Following this line of research, Realo, Kästik, and Allik (2004) showed modest correlations between at least one value type—collectivism—and the relational models. Roccas and McCauley (2004) recently proposed a set of hypotheses, linking the RMT not only to one value type but to 10 dynamically related basic human values (as suggested by comprehensive research by Shalom H. Schwartz, e.g. 1992).

In the present study, we empirically test Roccas and McCauley's (2004) hypotheses. While adopting a procedure similar to the one used by Roccas et al. (2002) to link personal values to the big five personality factors, we take into account the dynamic structure of value types and insofar go beyond Roccas and McCauley's hypotheses. Before discussing the hypotheses, we briefly review the concept of values, notably the value theory developed by Schwartz, as well as the RMT by Fiske.

VALUES

As the opening statement by Rokeach indicates, values occupy a central position in social sciences (although this is not often acknowledged in introductory textbooks, see Rohan, 2000). In this study, we use the value theory developed by Schwartz and colleagues (for a recent overview see e.g. Schwartz, 2007), since it is the conceptually most elaborated one and has extensively been tested empirically. It defines values as desirable, transsituational concepts or beliefs concerning goals. These goals vary in their importance as guiding principles in people's lives. Thus, the primary content aspect of a value is the type of goal or motivational concern it expresses. Schwartz derives 10 motivationally distinct types of values: *self-direction*, *universalism*, *benevolence*, *tradition*, *conformity*, *security*, *power*, *achievement*, *hedonism* and *stimulation* (see Table 1 for definitions). According to Schwartz, these value types represent three universal requirements of human existence—the needs of individuals as biological organisms, the requisites of coordinated social interaction and the survival and welfare needs of groups—and thus have crucial survival significance. Values are seen as distinct from attitudes in so far that they transcend objects and situations and are more central to one's personality than attitudes. And values are seen as distinct from traits in so far that they are enduring goals, whereas traits are enduring

Table 1. Definitions of value types in term of the goals and single values that represent them

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

Note: Adapted from Schwartz and Boehnke (2004).

dispositions (values describing 'what people consider important' rather than 'what people are like', Roccas et al., 2002, p. 790).

The value types in Schwartz's theory are dynamically related since the behavioural implications of the underlying goals are either compatible or conflicting. For example, striving for power, that is, social status, prestige and control or dominance over people and resources, is likely to be conflicting with benevolence, which emphasizes the preservation and enhancement of the welfare of other people. The total pattern of compatibilities and conflicts among the value types yields the circular structure depicted in Figure 1. The closer value types are located around the circle, the more compatible they are, and, correspondingly, the more distant, the more conflicting they are. From this structure, it follows that the whole set of 10 value types relates to other variables in an integrated manner, that is the correlations with another variable will decrease monotonically in both directions of the circle from the most strongly related value type to the least related or even negatively related one.

Note that the model does not require the values to be equally spaced on the circumference of the circle (hence termed quasi-circumplex, *cf.* Guttman, 1954) and that the latest version of the model locates the value type tradition outside of conformity instead of between conformity and benevolence (Schwartz, 1992; Schwartz & Boehnke, 2004).

Relationships among the 10 value types can be summarized in terms of four higher-order value types on two bipolar dimensions: Openness to change (combining stimulation and

In AR, people refer to their position in a hierarchy. The relationship is organized in asymmetrical terms with higher ranked individuals authorized to command and dominate but also expected to protect, and lower ranked individuals expected to defer, obey and show loyalty and respect. The higher a person's rank, the more he or she receives, but also the more he or she holds responsibility to provide for the inferiors who are in need. It has proven useful to split the AR model into a superior (AR_{sup}) and a subordinate variant (AR_{sub}), since they differ in their motivational implications (Hupfeld, 2005a; Roccas & McCauley, 2004).

In MP, people refer to proportionality. MP relationships are organized in terms of ratios and rates, which can concern utility, efficiency, effort, merit or anything else. Examples of interactions governed by MP are those oriented towards prices, wages, commissions, taxes or the like, money thereby being the prototypical medium. Social transactions in MP relationships are framed as rational calculations of cost and benefit. Each person gets his or her part according to a quota (e.g. the more someone has contributed to a project, the more payment he or she will get or the more someone has tried hard doing his job, the more she or he will be rewarded).

Finally, in EM, people keep track of imbalances between them. The relationship is organized according to rules of turn-taking, tit-for-tat, reciprocity, distribution of equal shares and democratic voting. Everyone gets the same shares, regardless of need, desire or usefulness.

A specific relationship can be governed by just one or alternatively by a combination of these relational models. Nevertheless, each relational model is often implemented in typical kinds of relationships, that is, CS in romantic relationships and close friendship, AR in military hierarchies, seniority systems and hierarchically organized companies, MP in business relations and EM in the framework of democratic voting or in games as well as in relations to more distant acquaintances (Fiske & Haslam, 2005; Hupfeld, 2005a).

Taken together, the RMT makes the basic structural claim that there are just the four models reviewed above governing social relationships and that these models are best understood as discrete and incommensurable categories rather than as dimensional continua. Moreover, the theory is expected to account for social cognition phenomena as well as for behaviour.

Indeed, RMT has received considerable empirical support with regard to both its structural claims and its explanatory power for interpersonal cognition and behaviour (see e.g. Haslam, 2004, and Hupfeld, 2005a, for recent overviews). For example, when people freely classify their relationships or freely recall a list of their acquaintances, they tend to group them corresponding to the relational models (Fiske, 1995; Haslam & Fiske, 1992). Furthermore, when people confuse one acquaintance with another or when they seek an alternative to an unavailable interaction partner, they tend to substitute someone with whom they have a relationship organized according to the same relational model (Fiske & Haslam, 1997; Fiske, Haslam, & Fiske, 1991).

Relatively little research has, however, addressed the question of individual differences in the implementation of the relational models. People may 'differ in a systematic, trait-like manner in their tendencies to employ the models in making sense of their interpersonal worlds' (Haslam, 2004, p. 44). Indeed, there is evidence from studies in the domain of psychopathology and personality that suggests the usefulness of such an approach (Allen, Haslam, & Semadar, 2005; Caralis & Haslam, 2004; Haslam, Reichert, & Fiske, 2002).

For example, the more people's tendencies to construe their relationships in terms of CS (relative to other models), the higher were their ratings on agreeableness and

conscientiousness, and the lower they were on neuroticism (Caralis & Haslam, 2004). The opposite was the case for people's tendencies to construe their relationships in terms of AR (relative to other models). *Construal* hereby refers to the extent people find the different relational models true of their actual social environment. It thus reflects the average implementation of the relational models when thinking of a sample of *concrete* relationships.

Another way of looking at individual differences in the implementation of relational models is to assess how much importance people place on the different relational models *in abstracto* (we will refer to this as 'motivational investment', as introduced by Haslam et al., 2002). Caralis and Haslam (2004) found that the more importance was ascribed to CS relationships the higher were the ratings on extraversion and agreeableness, whereas the more importance was ascribed to AR relationships the lower were the ratings on openness and agreeableness.

In this study, we focus exactly on these individual differences regarding the cognitive construal of, and the motivational investment in the specific types of relationships and link them to value research.

LINKS BETWEEN PERSONAL VALUES AND RELATIONAL MODELS

If both personal values and relational models play such a fundamental role in people's life, they are likely to be related to each other in some way. Fiske himself devoted a chapter of his first formulation of the RMT to motives relating to the four relational models (Fiske, 1991), even though restricting the former to affiliation/intimacy, power, achievement and equality motives. Roccas and McCauley (2004) recently proposed an integration of the RMT and the value theory by Schwartz (1992). Based on Fiske, they postulate an influence in both directions between personal value priorities and relational models, putting forward the four following mechanisms explaining this bi-directional causal influence.

Personal value priorities influencing relational models implementation

Opportunity

Each relational model offers the opportunity to express and fulfil only a subset of values. Accordingly, individuals may be more motivated to engage in a relationship that allows for the expression and fulfilment of the individual's most important values. For example, a person placing great importance on ambition, success, capability and influence (achievement values) will tend to engage more often and with more ease in MP relationships than in CS relationships.

Norms

Relational models can also be seen as sets of expectations and prescriptions. Holding incompatible values and acting in accordance with them may lead to violation of these norms, which in turn may lead to punishment, neglect or even ostracism by the partner in a specific relationship. Avoidance of relationships governed by this specific model might be the result. For example, a person attaching importance to power values like authority, wealth or the preservation of the public image is likely to offend a partner in a CS relationship and consequently suffer from social sanctions. As a result, this person might engage in fewer CS relationships than in others.

Relational models implementation influencing personal value priorities

Inference

Persons acting according to an established behavioural pattern may deduce their values from their own behaviour. In self-perception, they may come to the result that values that are most salient in their social context are important to them. For example, a person with many relationships organized in terms of MP (e.g. a salesman) may deduce from his or her social interactions that achievement values (e.g. success through demonstrating competence) are very important to him or her.

Dissonance reduction

Persons may also experience dissonance if their values do not correspond to a relational model standard in their social context, which may cause psychological discomfort or even threaten their self-esteem. In order to reduce this dissonance they might try to adapt their value preferences. For example, a membership in an institution organized very hierarchically (i.e. AR) may cause dissonance leading to a shift of the emphasis onto social power and authority even outside the institution.

Hypotheses

Taken for granted that a relationship between personal values and relational models does exist, the question of *how* they relate to each other remains. In the following, a set of hypotheses is presented that proposes an answer to this question (see Roccas et al., 2002, for a similar procedure for linking personality factors to values). It is hypothesized that each relational model is compatible with the motivational goals of some values and incompatible with the goals of other values. First, hypotheses concerning the strongest positive and negative correlations between each relational model and the 10 value types are derived, following Roccas and McCauley (2004). Second, in each case an integrated hypothesis that predicts the order of the correlations between value types and relational models is proposed. The order of the correlations follows from the circular value model (see Figure 1), that is, the strongest positive correlation takes rank 1 (or, if two or three adjacent value types are hypothesized to show equally strong positive correlations, their ranks are tied as 1.5 or 2, respectively), the next adjacent value types in both directions around the circle take the next following ranks (e.g. 2 and 3 tied as 2.5), and so forth. Since hedonism shares some elements of both openness to change and self-enhancement its rank is not tied with other value types, and since tradition is located outside of conformity both of them always take the same rank.

Haslam and colleagues (2002) proposed that individual differences in the implementation of the relational models can be viewed from two complementary perspectives, that is construal of and motivational investment in relational models. Thus, scoring high on a specific model henceforth refers alternatively to the extent someone finds this model true of his or her actual social environment (relatively to the other models and averaged over a sample of concrete relationships) and to the importance that he or she places on this relational model (when faced with an abstract description of it).

Communal sharing

Engaging relationships in terms of CS is most compatible with *benevolence* values, since it is characterized by affiliation, intimacy, mutual identification (Fiske, 1991; Fiske &

Haslam, 2005), concern for others with whom one is in frequent contact (Roccas & McCauley, 2004), belonging together, emotionality and confidence (Hupfeld, 2005a). Individuals who score high on CS tend to also give high priority to *universalism* values, since the common for universalism values is securing the welfare of all people and the whole natural world (Roccas & McCauley, 2004). Note that Roccas and McCauley point to a possible tension between particularistic and universalistic caring.

In contrast to benevolence and universalism, CS relationships are incompatible with *achievement* and *power* values, since the motivational goal of these value types is to pursue one's own interests even at the expense of others (Roccas & McCauley, 2004).

Combining these hypotheses with the circular value structure leads to the integrated hypothesis that predicts the order of the correlations between CS and the 10 value types from the most positive ones to the most negative ones as follows: Benevolence and universalism (tied as 1.5); self-direction, conformity and tradition (tied as 4); stimulation and security (tied as 6.5); hedonism (8) and achievement and power (tied as 9.5).

Authority ranking superior role

As the name indicates, in AR relationships, the ranking aspect (higher, better and more powerful) is central (Fiske & Haslam, 2005; Roccas & McCauley, 2004). Fiske (1991) also points to the dominance motivation aspect and Hupfeld (2005a) shows a relationship to self-perceived assertiveness and supremacy. Thus, in people who score high on AR_{sup}, *power* and *achievement* values are most pronounced.

Roccas and McCauley (2004) call attention to the fact that the AR model according to Fiske includes responsibility and pastoral care for subordinates, whereas this aspect is not included in Schwartz' power values construct but rather in the structurally opposed benevolence values construct. Roccas and McCauley thus suggest that the AR_{sup} model tempers power values with benevolence values. Furthermore, they make no assumptions concerning the relation to universalism values. We, however, predict a negative relationship to both *benevolence* and *universalism* following the structural claims of Schwartz' model that predicts a sinusoid curve relating the model with every other variable. Whereas the negative relation to universalism seems obvious to us (equality being conflicting with hierarchy and asymmetry), the negative relation to benevolence is indeed arguable on conceptual ground. Research by McClelland (e.g. McClelland & Boyatzis, 1982) gives, however, some empirical support for our assumption of incompatibility of benevolence with AR_{sup}, since a too high expression of affiliation motives seems to interfere with effective leadership.

Concerning the integrated hypothesis, we thus predict the following order of the correlations with AR_{sup}: Power and achievement (tied as 1.5); hedonism (3); stimulation and security (tied as 4.5); tradition, conformity and self-direction (tied as 7) and benevolence and universalism (tied as 9.5).

Authority ranking subordinate role

Individuals that score high on AR_{sub} tend to place importance on *tradition* and *conformity* values, since these values share the motivational goals of submitting the self to external expectations (Roccas & McCauley, 2004) and behaving in conformity with the wishes of a leader (Fiske, 1991). Furthermore, AR relationships usually offer material and social welfare for the subordinate concurrently claiming responsibility from the superior (Fiske, 1991; Roccas & McCauley, 2004). Because *security* values emphasize safety and stability, AR_{sub} is also compatible with these values.

On the other hand, deferring, obeying as well as showing loyalty and respect involves goal-submission and is thus incompatible both with independent choices and excitement and novelty seeking (Roccas & McCauley, 2004). Consequently, AR_{sub} contrasts with *self-direction* and *stimulation* values.

Hence, we predict the following order of the correlations with AR_{sub}: Conformity, tradition and security (tied as 2); power and benevolence (tied as 4.5); achievement and universalism (tied as 6.5); hedonism (8) and stimulation and self-direction (tied as 9.5).

Market pricing

In MP relationships people refer to ratios concerning value, utility, efficiency, effort, merit and so forth. Since *power* and *achievement* values emphasize self-enhancement relative to others (encompassing wealth, ambitiousness, influence and the preservation of one's public image), giving priority to these values will be associated with high values in MP (Fiske, 1991; Roccas & McCauley, 2004).

Consequently, MP relations are incompatible with expressing concern for others. Protection of the welfare of other people at the expense of clear cost-benefit rules will be seen as unfair or unprofessional. Thus, people scoring high on MP will also tend to score low on *universalism* and *benevolence* values (Roccas & McCauley, 2004).

Therefore, the integrated hypothesis predicts the following order: Achievement and power (tied as 1.5); hedonism (3); stimulation and security (tied as 4.5); tradition, conformity, and self-direction (tied as 7) and benevolence and universalism (tied as 9.5).

Equality matching

In EM relationships, people keep track of the imbalances between each other and act in terms of turn-taking both for good and evil. This seems to match very well with universalism values, since the emphasis in these values is on equality and social justice. However, Roccas and McCauley (2004) claim that this holds only when comparing EM with AR, whereas comparing EM with CS relations makes other values salient as distinctive elements (e.g. power and achievement values, because of them limiting the help received by those in need). We agree that, unlike the other relational models, which are easily mapped to value types, the case of the EM model is more complex. That is, EM can indeed have strong relations with values but these relations depend very much on the particular situation. We therefore do not make any assumptions regarding the EM–value types relationship.

METHOD

Participants and procedure

The study was conceived as a web-based online survey in German (eRes online tool, Schmutz, 2004). Data gathered by Internet methods have been shown to be equivalent in most respects to data obtained by traditional methods (see Gosling, Vazire, Srivastava, & John, 2004). Since we were interested in a preferably heterogeneous sample, for example regarding age and professional occupation, we recruited participants with two different methods. First, we posted a link to the entry web page on the survey web sites or web experiment lists of the psychological departments of the universities of Basel, Bern and Zurich (Switzerland). Second, we sent the link to the entry web page directly to a list of

potential participants (students and non-students) interested in taking part in psychological experiments gathered by the first author. The latter participants were asked to take part in the survey and also to possibly forward the request to other people.

Four hundred thirty-five persons participated, of whom 297 reached the end of the survey. Accordingly, the dropout rate was 32%, which is commonly found in web-based surveys (Musch & Reips, 2000). Participants (207 female, 87 male, 3 without specification of sex) ranged from 16 to 67 in age ($M = 28.91$, $SD = 9.46$). Most of them were Swiss or German (88 and 9%, respectively) with a variety of professional occupations, including bakers, dressmakers, clerks, teachers, lawyers, psychologists and many others (only 16 students without professional occupation). Multiple submission to the survey was controlled by not allowing the same Internet Protocol (IP) address to access the survey repeatedly.

Participants could voluntarily provide an e-mail address to get an individual feedback. In the feedback letter they were debriefed and asked to answer some of the questions a second time in order to provide data for retest reliability (with respondents receiving a personal identity code to insure the matching of their two sets of responses). Eighty-seven participants (29%) completed this second survey 2 months after the first one (55 female, 31 male, 1 without specification of sex; mean age 28.88 years, $SD = 9.34$).

Instruments¹

Personal values

The importance that respondents attributed to each of the 10 value types was measured with a German translation (Bubeck & Bilsky, 2004) of a short version of the personal values questionnaire (PVQ, Schwartz, 2003; Schwartz, 2007; see Schwartz, Melech, Lehmann, Burgess, Harris, & Owens, 2001, for the development of the original 40-item version). The PVQ is a shorter, more concrete, and cognitively less complex version of the Schwartz values survey (SVS) and is thus suitable for a larger part of the population, showing at the same time comparable properties to the SVS (e.g. Lindeman & Verkasalo, 2005; Schwartz, 2003; Schwartz et al., 2001). The PVQ includes brief verbal portraits of 21 different people. Each portrait describes a person's goals that point to the importance of a single value. Participants had then to answer the question 'how much is this person like you'? (from *not like me at all* to *very much like me* on a seven-point Likert scale). One example aiming at the hedonism value type is: 'Having a good time is important to him. He likes to "spoil" himself'. Asking this way rather than asking to rate abstract value concepts (e.g. 'pleasure') allows for a more implicit approach to values (Schwartz, 2003, 2007; Schwartz et al., 2001). There were two items for each value type, except for universalism, where there were three items, since the conceptual definition of universalism is broader.

Since respondents may differ systematically in their tendencies to report that values are important to them (some using only the middle of the scale, others reporting all values as highly important to them) and since we were interested in the *relative* importance of values, answers were corrected for response tendencies by centring each person's responses on his or her own mean (as proposed by Schwartz, 2003, 2007).

Relational models construal

We used a German adaptation of the modes of relationship questionnaire (MORQ, Haslam & Fiske, 1999) to assess people's relative tendencies to construe a sample of their personal

¹The German translations and adaptations of the MORQ and RPS are available from the authors on request.

relationships in terms of the different relational models. Hupfeld (2005a) provides a German translation, adaptation and validation of the MORQ, of which we used the five items with the highest factor loading of each of the four relational models to construe five vignettes (splitting AR into a superior and a subordinate variant). For example, the resulting vignette for AR_{sup} read: 'I am "the boss" in this relationship. I may make more decisions than the other. I am entitled to more, at the same time I support and cultivate the other. I am also the one who bears the responsibility'. Vignettes and multi-item-scales for assessing relational models have shown a very high convergent validity (Hupfeld, 2005b). Participants were asked to think of (a) their partner or best friend, (b) their supervisor, (c) a subordinate, (d) a business partner and (e) an acquaintance. They then had to rate how true each of the five vignettes was with regard to the relationship to each of these persons (from *not true at all of this relationship* to *very true of this relationship* on a seven-point Likert scale). This procedure, adapted from the one used by Caralis and Haslam (2004, who used 20 acquaintances freely listed) or Hupfeld (2005a, who used a list of 15 persons from typical relationships in terms of relational models), allows for capturing a wide range of relationships in a short time. The score for each relational model was calculated as the mean of all five responses (partner or best friend, supervisor, subordinate, business partner and acquaintance) for this specific model. Finally, because the MORQ is a measure of a person's preference for the implementation of some relational models over others, that is, a relative measure, the scores were ipsatized (scores calculated as deviations from the person's mean score for all models, see Caralis & Haslam, 2004).

Relational models motivational investment

To assess the participants' motivational investment in the different relational models the relationship profile scale (RPS, Haslam et al., 2002) was used. While the MORQ assesses the extent to which people find the different relational models true of their actual social environment (i.e. their average implementation of the relational models when thinking of a sample of *concrete* relationships) the RPS offers a complementary perspective on relational tendencies, since people might construe their present relationships in terms of certain relational models, but be motivated for different ones (i.e. place different importance on relational models *in abstracto*). Participants read the same vignettes as for the MORQ and had then to answer questions like 'how important is it to you to have relationships of this kind'? (from *not important at all* to *very important*, on a seven-point Likert scale, see Haslam et al., 2002).

RESULTS

Means and standard deviations for all variables are presented in Table 2. In the following, results for personal values, relational models and links between personal values and relational models are discussed separately.

Personal values

The internal reliabilities for the value type scales were within the range commonly observed for value types measured by the SVS and the PVQ (Schmitt, Schwartz, Steyer, & Schmitt, 1993; Schwartz, 2003, 2007), that is, a Cronbach's α of .36 for self-direction, .51 for universalism, .56 for benevolence, .36 for tradition, .58 for conformity, .57 for security,

Table 2. Means and standard deviations (SD) for all scales (value types, relational models construal and motivational investment)

Scales	Mean	SD
Value types		
Self-direction	5.58 _b	0.99
Universalism	5.58 _b	0.98
Benevolence	5.82 _a	0.98
Tradition	3.52 _f	1.24
Conformity	3.30 _f	1.27
Security	3.90 _e	1.29
Power	3.49 _f	1.05
Achievement	4.71 _{c,d}	1.32
Hedonism	4.85 _c	1.33
Stimulation	4.53 _d	1.27
Relational models construal		
Communal sharing	4.17 _a	1.04
Authority ranking superior role	2.66 _c	0.99
Authority ranking subordinate role	3.01 _b	0.95
Market pricing	2.92 _b	0.99
Equality matching	4.30 _a	1.15
Relational models motivational investment		
Communal sharing	5.30 _a	1.07
Authority ranking superior role	2.88 _c	1.32
Authority ranking subordinate role	2.91 _c	1.14
Market pricing	2.26 _d	1.06
Equality matching	4.44 _b	1.50

Note: All ratings were made on seven-point scales (from 1 to 7, the higher the more perceived resemblance with value portraits, the more construal of ones relationships in terms of the specific model, and the more importance placed on the specific models, respectively). All ratings are uncorrected for response tendencies. Means within the same constructs that do not share subscripts differ at $p < .05$ (Bonferroni corrected).

.23 for power, .74 for achievement, .81 for hedonism and .71 for stimulation. The low or moderate reliabilities reflect the fact that 'the items were selected to cover the different conceptual components of the [value types], not to measure a single concept redundantly' (Schwartz, 2003, p. 277). Moreover, each of the indexes is based on only two or three items.

Our sample preferred benevolence values over self-direction and universalism, followed by hedonism, achievement, stimulation, security, tradition, power and conformity, $F(3.50, 1035.13) = 177.41$, $p < .001$ (see Table 2 for *post hoc* comparisons).

Testing the structure of value types with multidimensional scaling (MDS, with SYSTAT 10 for Windows) yielded a perfect quasi-circumplex structure (*cf.* Figure 2, Kruskal stress = 0.16, RSQ = 0.84),² with only tradition not located outside of conformity as hypothesized, but between benevolence and conformity.

²Kruskal Stress is an index of the mismatch between transformed proximities (based on the correlation matrix) and the corresponding distances (Borg & Groenen, 1997; Davidson & Sireci, 2000). Low Stress indicates better fit (Stress values ranging from 0 to 1). RSQ is the squared multiple correlation between the transformed proximities and the distances, and interpretable as 'the proportion of variance in the transformed proximities accounted for by the distances' (Davidson & Sireci, 2000, p. 335). High RSQ-values indicate better fit.

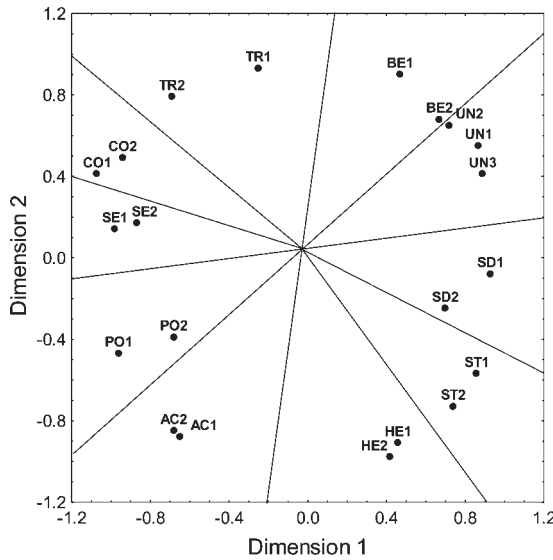


Figure 2. Two-dimensional monotonic scaling (MDS) for the 21 value items of the short version of the portrait values questionnaire (PVQ, Schwartz, 2003) measuring self-direction (SD1, SD2) universalism (UN1, UN2, UN3), benevolence (BE1, BE2), tradition (TR1, TR2), conformity (CO1, CO2), security (SE1, SE2), power (PO1, PO2), achievement (AC1, AC2), hedonism (HE1, HE2) and stimulation (ST1, SD2) values; Kruskal stress = 0.16, RSQ = 0.84.

Relational models

Retest reliabilities for the MORQ (i.e. relational models construal) after two months were moderate (.52 for CS, .67 for AR_{sup}, .54 for AR_{sub}, .62 for MP and .51 for EM). The internal reliabilities for the RPS (i.e. relational models motivational investment) were good for AR_{sup} (.78), MP (.69) and EM (.84), and low for CS (.41) and AR_{sub} (.48).

Our participants construed a sample of their relationships more according to EM and CS than according to AR_{sub} and MP, followed by AR_{sup}, $F(6.50, 1924.73) = 209.17, p < .001$. On the other hand, they placed most importance on CS, followed by EM, AR_{sub}, AR_{sup} and MP, $F(3.68, 1081.96) = 318.00, p < .001$ (see Table 2 for *post hoc* comparisons).

The MORQ subscales correlated significantly with the corresponding RPS scales, with .34 for CS, .47 for AR_{sup}, .21 for AR_{sub}, .31 for MP and .39 for EM ($ps < .01$). As can be seen in Figure 3, the relationship between the respective construal and motivational investment scales could also be shown using MDS (Kruskal stress = 0.15, RSQ = 0.85). Thus, relational models construal and motivational investment—although conceptually and empirically separable perspectives—seem to point at a same global tendency to implement one’s relationships in a specific manner.

Links between personal values and relational models

Table 3 presents the correlations between the 10 value types and the relational models. Although the correlations were relatively low, all hypothesized relationships were confirmed ($ps < .05$ or $< .01$), except the relationship between tradition/security and AR_{sub}. All significant correlations emerged both for the relationship to relational models construal and motivational investment. EM—for which we did not hypothesize a

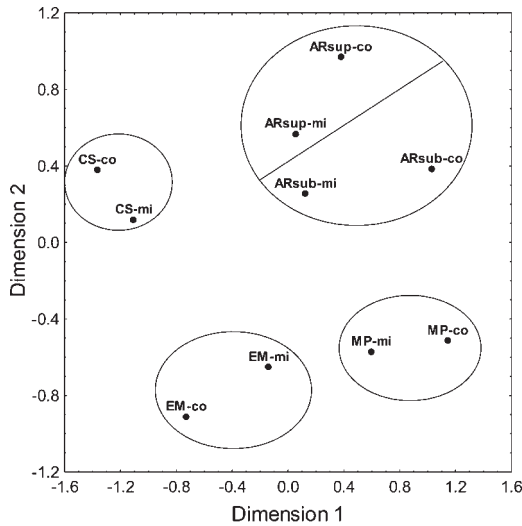


Figure 3. Two-dimensional monotonic scaling (MDS) for the scales of the modes of relationship questionnaire (MORQ, Haslam & Fiske, 1999) measuring trait-like relative tendencies to construe one's relationships according to communal sharing (CS-co), authority ranking superior role (ARsup-co), authority ranking subordinate role (ARsub-co), market pricing (MP-co) and equality matching (EM-co), respectively, and for the scales of the relationship profile scale (RPS, Haslam et al., 2002) measuring the motivational investment in such kinds of relationships (CS-mi, ARsup-mi, ARsub-mi, MP-mi and EM-mi); Kruskal stress = 0.15, RSQ = 0.85.

Table 3. Correlations between the 10 values types and the relational models (construal and motivational investment)

RM	Value types										
	SD	UN	BE	TR	CO	SE	PO	AC	HE	ST	I. H.
CS											
Construal	.05	.17**	.27**	.04	-.04	-.06	-.27**	-.20**	.03	.10*	.82**
Investment	-.06	.27**	.34**	.01	-.08	-.12*	-.29**	-.14**	.13*	.05	.67*
AR _{sup}											
Construal	.11*	-.19**	-.18**	-.11*	.00	.00	.31**	.15**	-.12*	.01	.73**
Investment	.09	-.17**	-.14*	-.09	.06	-.08	.33**	.17**	-.13*	.05	.67*
AR _{sub}											
Construal	-.12*	.02	-.05	.04	.14**	.06	-.07	.04	.05	-.13*	.68**
Investment	-.12*	-.07	.03	-.08	.19**	.02	-.10*	.12*	-.06	-.10*	.58*
MP											
Construal	-.04	-.10*	-.18**	.03	-.08	.05	.21**	.12*	.02	-.06	.85**
Investment	-.03	-.10*	-.18**	.08	-.03	-.01	.18**	.12*	-.03	.05	.69*
EM											
Construal	-.00	.06	.10*	-.01	-.01	-.03	-.12*	-.05	.02	.06	—
Investment	-.09	-.12*	-.07	.08	.09	.16**	.01	-.07	.03	-.07	—

Note: RM = relational models, SD = self-direction, UN = universalism, BE = benevolence, TR = tradition, CO = conformity, SE = security, PO = power, AC = achievement, HE = hedonism, ST = stimulation, CS = communal sharing, AR_{sup} = authority ranking superior role, AR_{sub} = authority ranking subordinate role, I. H. = integrated hypotheses (Spearman *r*). Hypothesized correlations are in bold. *N* = 297, except CS investment and AR_{sub} investment *N* = 296.

p* < .05; *p* < .01 (1-tailed).

systematic relationship with value types—correlated negatively with power (construal) and universalism (motivational investment), and positively with security (motivational investment).

Moreover, all integrated hypotheses that linked the whole set of value types according to its structural order to the relational models were confirmed (Spearman r , $ps < .05$ or $< .01$).

DISCUSSION

The aim of this study was to test the relationship between a whole set of universal value types according to comprehensive research by Schwartz (e.g. Schwartz, 1992) and the relational models proposed by Fiske (1991, 1992).

In line with Schwartz' considerable empirical evidence in over 60 countries (see e.g. Schwartz, 2007), but contrary to some studies in German-speaking countries (Hinz et al., 2005; Mohler & Wohn, 2005), we found the data of our German-speaking sample to fit Schwartzs' model perfectly, with only tradition values not located outside of conformity values but between conformity and benevolence values. The latter finding corresponds to an earlier formulation of Schwartz' value model that had been rejected for slightly poorer fit in confirmatory factor analysis (*cf.* Schwartz & Boehnke, 2004).

The set of universal values was related to the relational models in the hypothesized manner both for the construal of a sample of actual relationships and for the motivational investment in the specific types of relationships (both conceptualized as relatively stable, trait-like patterns).

That is, the more a person organizes his or her relationships around something important shared with others and thus sees these others as equivalent (and the more he or she finds relationships of this kind important, i.e. CS), the more he or she will give priority to benevolence and universalism values and the less to power and achievement values.

The contrary holds for AR superior role and MP: The more a person organizes his or her relationships in hierarchical ways—being the dominating part—or according to ratios (and the more he or she finds relationships of this kind important), the more he or she will give priority to power and achievement values and the less to universalism and benevolence values.

In what concerns AR subordinate role, the more a person organizes his or her relationships in a hierarchical way—being the lower-ranked person—(and the more he or she finds relationships of this kind important), the more he or she will give priority to conformity values and the less to self-direction and stimulation values.

The hypothesized relation of AR_{sub} to tradition and security values was not confirmed, neither for construal of nor for motivational investment in such relationships. That is, on average, people who tend to defer, obey and show loyalty and respect to a hierarchically higher counterpart do neither strive for more respect, commitment and acceptance of customs nor for more safety and harmony.

No predictions were made for the relation between EM and values, since the organization of relationships in terms of turn-taking is dependent on the situation. Indeed, we found no systematic relationships between EM and values.

The following four interesting points should be emphasized:

First, Roccas and McCauley (2004) point to a possible tension between *local, particularistic caring* and *universalistic caring* in CS relationships. According to this, one

could also hypothesize a negative relationship between universalism values and CS. We, however, found the opposite, as predicted from the structural value model. Thus, cognitively constructing one's relationships according to CS and being motivated to invest in this kind of equivalence relationship seems *not* to be conflicting with the goal of protection for the welfare of *all* people and nature.

Second, Fiske's (1991, 1992) conceptualization of AR includes responsibility and pastoral care for subordinates. Thus, one could hypothesize a positive relationship between AR_{sup} and benevolence values. We rather found a negative relationship as predicted from the structural claims of Schwartz' value model. That is, on average, being dominant seems *not* to go together with striving for the preservation and enhancement of the welfare of other people—even though the participants were explicitly reminded of some possible duties associated with this dominance.

Third, as hypothesized, the relationship of AR_{sup} and MP to value types did not differ, neither for construal of, nor for motivational investment in the two relational models, whereas AR_{sup} and AR_{sub} did. On the one hand, this validates the proposition to split AR_{sup} and AR_{sub}, since the two sub-models really seem to have different motivational implications. On the other hand, it raises the question of the separability of AR_{sup} and MP, at least when considered as trait-like patterns. Fiske (1991) proposed that the implementation of AR relationships is predominantly motivated by power, whereas achievement is the core motivation for the implementation of MP relationships. We, however, did not find this pattern of relationships in our sample (*cf.* Table 3). Since our results are not predicted by RMT and since Hupfeld (2005a) found some differences between the two models concerning self-perceived single-mindedness, assertiveness and supremacy in the respective relationships, the motivational differences of AR_{sup} and MP should be further investigated.

Fourth, our results show that the different relational models are linked to three of four value quadrants (i.e. CS to self-transcendence, AR_{sub} to conservation and AR_{sup} and MP to self-enhancement; see Figure 1). Interestingly, no relational model is linked to the value quadrant 'openness to change' (i.e. hedonism, stimulation and self-direction). Roccas and McCauley have speculated about a 'null relationship model' linked to these values. They point to the possibility that no social relationship is perceived or strived for at all (see also Fiske, 1991). 'The null model is likely to be my relation with the stranger coming out of the subway as I go in. For most Americans, the null model is their relationship with distant unknown groups as Laplanders, Fijians, and Azerbaijanis' (Roccas & McCauley, 2004, p. 274). It is an open question of what this null model would mean for individual differences in the implementation of relational models.

In sum, by linking Schwartz' value model to the RMT by Fiske, we could show modest but systematic associations between value types and relational models. These findings emerged for two measures of the relational models capturing different aspects of the models—construal and motivational investment—both conceptualized as relatively stable, trait-like patterns. These findings also meet the claim that the whole set of 10 value types should relate to most other variables in an integrated manner. Importantly, using the well validated RMT, and in such reducing the plethora of possible categorizations of relationships, allowed to extend the predictive validity of personal values. This shows the so far understudied importance of types of goals or motivational concerns (as represented

by values) for the implementation of the relational models. Furthermore, we added to the research on individual differences in the use of the relational models, which is 'plainly in its infancy' (Haslam, 2004, p. 47), but has been shown promising in making sense of interpersonal tendencies associated with psychopathology and normal personality.

Limitations

The results presented here do not offer any answer to the direction and mechanisms (e.g. opportunity, norms, inference or dissonance reduction) of the causal influence between personal values and implementation of relational models. This should be further investigated with longitudinal data. Since the structural complexity predicted by Schwartz' model seems to emerge already at an early age (Bubeck & Bilsky, 2004; Schwartz et al., 2001) and since relational models are also likely to be learnt quite early in childhood (Fiske, 1991), a broad developmental perspective will be needed for such an undertaking.

Further limitations are due to psychometric properties of the measure of the motivational investment (i.e. the RPS), which were only moderate (mean internal reliability of .64). Nevertheless, we were able to find a stable pattern of associations, and if the unreliability of the measures is taken into account, the magnitude of the associations might have been even larger. In any case, measures of individual differences in relational models motivational investment will have to be optimized.

Furthermore, the modest retest reliabilities of the relational models' construal measure (MORQ, mean retest reliability of .57 after two months) may raise the question of how stable the cognitive representations of a set of relationships in terms of relational models really are. However, these moderate retest reliabilities may also stem from the relatively small sample of relationships (i.e. five) people had to rate compared to earlier investigations (20 and 15/10, in Caralis & Haslam, 2004, and Hupfeld, 2005a, respectively). Hupfeld reports a retest reliability mean of .68 after three months, concurrently showing sensibility of the scale to reported changes in relationship character (i.e. a mean retest reliability of .81 when taking into account only those relationships reported as *not* having changed). Since the percentage of changed relationships was 25% (predominantly EM and MP relationships, see Hupfeld, 2005a), it may indeed be important to have a sample of relationships large enough to measure stable individual differences in relational models implementation.

Further research

Although we are not able to give evidence for the direction of causal influence in personal values and relational models in this study, we have reviewed some potential mechanisms for both causal directions. The change of relational models implementation because of norms as well as the change of value priorities because of dissonance reduction builds on some form of psychological discomfort. Thus, the interaction of values and relational models may play an important role in actual well-being.

Indeed, for the value-well-being association, evidence was found for both a healthy value perspective and a person-environment value congruency perspective (see Sagiv, Roccas, & Hazan, 2004, for a review): The healthy value perspective suggests that 'holding certain values or goals is likely to lead to positive well-being, while holding other values or goals may undermine well-being' (Sagiv et al., 2004, p. 68). This view is partly supported by research drawing on the self-determination theory, showing that values deriving from

intrinsic motives are positively related to well-being, whereas values deriving from extrinsic motives are negatively related to well-being (e.g. Kasser & Ryan, 1996). On the other hand, the person–environment value congruency perspective suggests that ‘it is the congruency between personal values and the values prevailing in the environment that leads to a positive sense of well-being’ (Sagiv et al., 2004, p. 68), and not merely the value priorities *per se*. This view has also repeatedly been supported empirically, the value congruency explaining additional variance in well-being (e.g. Oishi, Diener, Suh, & Lucas, 1999; Sagiv & Schwartz, 2000) or stress (e.g. Bouckennooghe, Buelens, Fontaine, & Vanderheyden, 2005).

According to this second perspective, well-being might be promoted by engagement in relationships organized in a way that is compatible with one’s values. Combining Schwartz’ value model and the RMT offers an appealing way to further test this approach, since the RMT reduces the variety of relationships to a few basic models. Knowing which value types were related empirically to which relational model on trait and motivational level may prove to be useful for such a research project.

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