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Value Structure and Dimensions

Empirical Evidence from the German World Values Survey

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Abstract

The paper examines the structure and dimensions of four value concepts included in the most recent German World Values Survey (WVS 2006). These value concepts are Inglehart's postmaterialism concept, a reduced version of the Schwartz Value Inventory (SVI), the concept of value synthesis by Klages & Gensicke, and Inglehart & Welzel's two-dimensional concept of secular rational and self-expression values. Relating the concepts to each other, we aim at detecting common patterns in individual-level value orientations. We find major similarities: The concepts by Schwartz and Klages & Gensicke form three common factors – two of them overlap with Inglehart's one-dimensional materialism/postmaterialism concept. In addition, our results suggest that Inglehart & Welzel's self-expression values are an underlying factor of Schwartz's value dimensions, balancing an increasing orientation towards individualism with an altruist orientation.

Key words: Value structure, value dimensions, value concepts

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INTRODUCTION

Value change is significant in more than one way. For once, it reflects socio-economic transitions as people adapt to new environments. Seen as a dependent variable, the evolution of "culturally fit" (Durham 1991) values allows us to make inferences on the factors that condition this change. On the other hand, changing values can also be treated as an independent variable. They guide the behavior of people and thereby influence the social, economic and political processes of entire societies.

It is a widely shared consensus of research in the field that we are witnessing an emancipative value change towards greater appreciation of human choice and equality (Welzel 2002). This change has been labeled as "postmaterial" (Inglehart 1977, 1990), "liberitarian" (Flanagan 1987; Flanagan and Lee 2003), "anthropocentric" (Bürklin, Klein & Ruß 1994, 1996) or as geared towards "self-actualization" (Klages 1984, 1988; Gensicke 1998, 2002).

This consensus notwithstanding, there is disagreement on how value change is best conceptualized and what its dimensions are. It is, therefore, the aim of this paper to relate the different value constructs to one another, both in theory and in the empirical basis. Data come from the German World Values Survey which was part of the latest wave of the World Values Surveys (WVS 2005-2007). Fieldwork was completed in May – June 2006, covering 2.064 respondents: 988 in West Germany and 1.076 in East Germany.¹

In a first step, the different value concepts represented in the most recent wave of the WVS and their operationalizations will be introduced. Second, we will empirically examine the value structure and dimensions within each concept in order to replicate the different approaches. Finally, we will relate the structures and dimensions of the different value concepts to each other in order to find common patterns in people's value orientations. Our findings suggest major similarities in the value structure of the concepts.

VALUE CONCEPTS IN THE WORLD VALUES SURVEYS

The general 2005-2007 surveys of the WVS include three major value concepts: Inglehart's concept of materialism/postmaterialism (1977), Inglehart & Welzel's concept of secular-rational and self-expression values (2005), and, for the first time, the value cir-

¹ The German WVS project is funded by the German Research Foundation (DFG No. WE 2266/6-1).

cle by Schwartz (1992, 1994). In addition, the German 2006 survey covers the concept of value synthesis as suggested by the German sociologists Helmut Klages and Thomas Gensicke (Klages 1984, 1988; Klages & Gensicke 2005).

Inglehart's Concept of Postmaterialism

Following Maslow's hierarchy of needs (1954), Inglehart (1977) has suggested that value orientations are organized hierarchically on a uni-dimensional continuum from material to postmaterial values. According to the – controversially discussed – postmaterialism hypothesis, value change is foremost a reflection of increased and proliferated affluence in a society that allows individuals to concentrate on postmaterial goals as material needs are largely uncontested. This leads to an increase of postmaterial values in post-modern societies (Scarborough 1995). Implied in this perspective is a clear notion of prioritization of value orientations. As people are continuously confronted with trade-offs, they make use of a hierarchized repertoire of values to minimize the necessary cognitive load of decision making (Rokeach 1973; Inglehart & Klingemann 1996).

Closely reflecting Maslow's pyramid of human needs, Inglehart's materialists have physiological needs and stress physical and economic security (Inglehart 1990: 131ff, 1997: 101-122). Postmaterialists, by contrast, strive for self-actualization, stress the aesthetic and the intellectual, and cherish belonging and esteem.

Inglehart's theory of value change is one that assumes a linear progression in discrete steps upwards of Maslow's pyramid. Once physiological lower-order needs are met and appear uncontested, individuals develop higher-order needs. Inglehart's concept is also reflected in his operationalization. From his assumption of a hierarchically organized value structure follows a ranking format for his battery of items in which participants are asked to rank statements pertaining to postmaterial and material values. For Inglehart the resulting ipsativity, the dependence of all items on one battery, is not a methodological problem but a conceptual necessity, as value change is a unidimensional continuum ranging from materialism to postmaterialism (Abramson, Ellis & Inglehart 1997; Inglehart & Abramson 1999).

Inglehart has developed from his conceptualization a typology of materialists and postmaterialists as well as two "mixed" types, the materialist postmaterialists and the postmaterialist materialists.

Despite the massive and robust body of evidence that Inglehart (1977, 1990, 1997) has provided for his postmaterialism thesis, it should be kept in mind that his tests are always methodologically and conceptually tied to his very epistemology: the assumption of one-dimensional hierarchy of needs along which value change occurs. Inglehart therefore has not and could not claim that other trajectories of value change do not exist.

The survey items for materialism/postmaterialism in the WVS 2005-2007 read as follows:

- V69. People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? (*Code one answer only under "first choice"*):
 V70. And which would be the next most important? (*Code one answer only under "second choice"*):

	V69	V70
	First choice	Second choice
A high level of economic growth	1	1
Making sure this country has strong defense forces	2	2
Seeing that people have more say about how things are done at their jobs and in their communities	3	3
Trying to make our cities and countryside more beautiful	4	4

- V71. If you had to choose, which one of the things on this card would you say is most important?
 V72. And which would be the next most important? (*Code one answer only under "second choice"*):

	V71	V72
	First choice	Second choice
Maintaining order in the nation	1	1
Giving people more say in important government decisions	2	2
Fighting rising prices	3	3
Protecting freedom of speech	4	4

- V73. Here is another list. In your opinion, which one of these is most important? (*Code one answer only under "first choice"*):
 V74. And what would be the next most important? (*Code one answer only under "second choice"*):

	V73	V74
	First choice	Second choice
A stable economy	1	1
Progress toward a less impersonal and more humane society	2	2
Progress toward a society in which Ideas count more than money	3	3
The fight against crime	4	4

In our operationalization of postmaterialism we rely on the reduced questionnaire (V71 and 72). The four value types are created as follows: Postmaterialists emphasize freedom of speech and giving people more say, whereas materialists stress the importance of maintaining order and fighting rising prices. The two mixed types show a preference for a postmaterialist item over a materialist one (materialist postmaterialists), or vice versa (postmaterialist materialists).

Klages & Gensicke's Value Concept

In contrast to Inglehart, the German social scientist Klages has argued that societal differentiation, increasing complexity and bureaucratization are at the root of a value change (Klages 1983, 1984, 2002; Klages & Gensicke 1993, 2005). As a consequence, institutions no longer fit the attitudes and expectations of the individuals. Values like duty, discipline, diligence, loyalty, achievement, and subordination form a value dimension that Klages dubbed "obligation and convention". According to Klages, these values

support societal integration. They give way to values that aim at self-fulfillment and self-actualization and a distancing from authority – all having a disintegrating effect. In general, this process is driven by a dissonance between individuals and institutions. In contrast to Inglehart, Klages' conception of values is multi-dimensional. Individuals may hold conflicting values (Klages 2002).

Based on a cross tabulation of these two dimensions, "obligation and convention" and self-actualization, Klages (1984, 1993) describes four value types: conservative conventionalist, active realists, the disadvantaged and disillusioned, and nonconformist idealists. Conservative conventionalists rank high on "obligation and convention" and low on self-actualization whereas non-conformist idealists rank low on "obligation and convention" but high on self-actualization. Disadvantaged and disillusioned types rank low on both dimensions, while active realists rank high on both dimensions. The latter type combines the emancipatory benefits of "creativity and commitment" with integrative "obligation and convention" values. According to Klages, active realists are therefore best equipped to meet the challenges of postmodern societies.² Conversely, Klages expects that self-actualization values undermine institutions if not balanced by integrative orientations (i.e. values of "obligation and convention").

Recently, Klages & Gensicke (2005) have adapted the initial concept and integrated a third dimension of "hedonism and materialism".

The survey items for the Klages & Gensicke concept in the German WVS 2006 read as follows:

People have different goals for their lives that guide their behavior. Think of what you want to attain in your life. How important are the following things for you personally? Please use the following scale: 1 means "very unimportant" and 7 "very important".

	Very unimportant					Very important	
To respect law and order	1	2	3	4	5	6	7
To have a high standard of living	1	2	3	4	5	6	7
To be powerful and have an influence	1	2	3	4	5	6	7
To develop one's own imagination and creativity	1	2	3	4	5	6	7
To seek security	1	2	3	4	5	6	7
To help marginalized people	1	2	3	4	5	6	7
To assert one's needs against others	1	2	3	4	5	6	7
To be industrious and ambitious	1	2	3	4	5	6	7
To tolerate dissenting opinions	1	2	3	4	5	6	7
To get involved politically	1	2	3	4	5	6	7
To enjoy the good things in life, to spoil oneself	1	2	3	4	5	6	7
To always fulfill one's duties	1	2	3	4	5	6	7

A description of the operationalization of Klages & Gensicke's concept follows in the empirical section (Table 1).

² Roßteutscher (2004), by contrast, could show that individuals who hold conflicting values are not superior to those with clear value priorities as Klages (2002) suggests. Rather, a value synthesis leads to helplessness and conformity.

Schwartz's Value Circle

Schwartz's cross-cultural psychological approach is located between these two positions (Schwartz 1992; 1994; 1999). While Schwartz shares Inglehart's stress on value priorities, his conceptualization is more complex than a simple dichotomy. Rather than a one-dimensional scheme, he proposes a multidimensional value space with several continuous dimensions which he usually represents in a multi-dimensionally scaled "value circle", including values such as security, power, tradition, self-direction, hedonism or achievement. In total, Schwartz identifies ten different values which can be summarized in two fundamental polarities along which these values cluster: egoism versus altruism (in Schwartz's terminology: self-enhancement vs. self-transcendence) and conformism versus individualism (conservation vs. openness to change). The first dimension includes values such as power and achievement (egoism) and benevolence and universalism (altruism); stimulation and self-direction (individualism) and security and conformity (conformism) form the second dimension.

Despite his support for a prioritization of values, Schwartz has chosen rating as a format for his survey instruments, largely for pragmatic reasons. Rating allows him to ask more questions at the same time and maximizes variance that is necessary for multidimensional scaling.

Regarding the content, Schwartz's battery is very similar to the Speyer value inventory (Klages & Gensicke 2005). In contrast to its largely German counterpart, it has been validated in a large number of countries and is particularly established in cross-cultural research.

The WVS 2005-2007 includes a shortened version of the Schwartz Value Inventory (SVI), one item corresponding to one of the ten Schwartz values:

Now I will briefly describe some people. Using this card, would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? (*Code one answer for each description*):

	Very much like me	Like me	Somewhat like me	A little like me	Not like me	Not at all like me
V80. It is important to this person to think up new ideas and be creative; to do things one's own way.	1	2	3	4	5	6
V81. It is important to this person to be rich; to have a lot of money and expensive things.	1	2	3	4	5	6
V82. Living in secure surroundings is important to this person; to avoid anything that might be dangerous.	1	2	3	4	5	6
V83. It is important to this person to have a good time; to "spoil" oneself.	1	2	3	4	5	6
V84. It is important to this person to help the people nearby; to care for their well-being.	1	2	3	4	5	6
V85. Being very successful is important to this person; to have people recognize one's achievements.	1	2	3	4	5	6
V86. Adventure and taking risks are important to this person; to have an exciting life.	1	2	3	4	5	6
V87. It is important to this person to always behave properly; to avoid doing anything people would say is wrong.	1	2	3	4	5	6
V88. Looking after the environment is important to this person; to care for nature.	1	2	3	4	5	6
V89. Tradition is important to this person; to follow the customs handed down by one's religion or family.	1	2	3	4	5	6

Inglehart & Welzel's Concept of Secular-Rational and Self-Expression Values

Welzel & Inglehart have suggested a two-dimensional value space, well established through empirical analysis of previous waves of the World Values Surveys (as an overview, see Inglehart & Welzel 2005). Building on the postmaterialism hypothesis (Inglehart 1977, 1990, 1997) they suggest that the transition from material to postmaterial orientation is but one specific manifestation of a more overarching value change towards more human emancipation. According to Inglehart & Welzel (2005), emancipation happens subsequently on two dimensions, reflecting different stages of modernization. Modern societies with industry-dominated economies are largely characterized by secular-rational beliefs (rather than traditional ones). Postmodern societies, in which the service sector becomes ever more important, typically have high aggregate scores on "self-expression" (as opposed to survival) values.

The change from traditional to secular-rational value orientations largely reflects the process of Enlightenment, in which superstition and religion are replaced by rationality as the dominant mass orientation. Decisions, political rule and meaning-making are no longer based on systems of belief, but are systematically scrutinized by the faculty of human reason.

The change from survival to self-expression values reflects the development towards what is often referred to as post-industrialism. This transition is typically undergone only when a society has accumulated so many resources (typically through industrialization) as to achieve unprecedented levels of (distributed) affluence. Self-expression values emerge in societies in which survival can be taken for granted. Rather than mere physical security, subjective well-being, self-expression and quality of life are valued. The self-expression syndrome is more than just a continuation of rationalization and secularization – when modernity is achieved, human development, according to Inglehart & Welzel (2005), moves into a different direction, transcending the old contrast. Inglehart & Welzel argue that it is those highly emancipative, postmaterial, self-expressionist value orientations that are most conducive to effective, rather than formal, democracy.

To operationalize the two value dimensions, Inglehart & Welzel (2005: 51) perform a factor analysis based on five single components for each dimension. Indicators of self-expression orientations include: liberty aspirations (postmaterial orientations), justification of homosexuality, willingness to sign a petition, perceived choice over one's life and interpersonal trust, whereas low or negative scores on all of which reflect a survival-oriented mindset. Indicators of traditional value orientations include: religiousness, feelings of national pride, greater respect for authority, rejection of divorce and a focus on values of obedience rather than independence in the raising of children. Negative scores on these indicators indicate secular-rational mindsets.

The components which construct Inglehart & Welzel's dimension of "survival vs. self-expression" values are based on the following items in the WVS 2005-2007:

Now I'd like you to look at this card. I'm going to read out some forms of political action that people can take, and I'd like you to tell me, for each one, whether you have done any of these things, whether you might do it or would never under any circumstances do it (*read out and code one answer for each action*):

		Have done	Might do	Would never do
V96.	Signing a petition	1	2	3

Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between, using this card. (*Read out and code one answer for each statement*):

		Never justifiable								Always justifiable	
V202.	Homosexuality	1	2	3	4	5	6	7	8	9	10

V23. Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people? (*Code one answer*):

- 1 Most people can be trusted.
- 2 Need to be very careful.

V46. Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "no choice at all" and 10 means "a great deal of choice" to indicate how much freedom of choice and control you feel you have over the way your life turns out (*code one number*):

No choice at all					A great deal of choice				
1	2	3	4	5	6	7	8	9	10

V69. People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? (*Code one answer only under "first choice"*):

V70.	And which would be the next most important? (<i>Code one answer only under "second choice"</i>):	V69	V70
		First choice	Second choice
	Seeing that people have more say about how things are done at their jobs and in their communities	3	3

V71. If you had to choose, which one of the things on this card would you say is most important? (*Code one answer only under "first choice"*):

V72.	And which would be the next most important? (<i>Code one answer only under "second choice"</i>):	V71	V72
		First choice	Second choice
	Giving people more say in important government decisions	2	2
	Protecting freedom of speech	4	4

The components for "traditional vs. secular-rational" values read as follows:

V187. Independently of whether you attend religious services or not, would you say you are (*read out and code one answer*):

- 1 A religious person
- 2 Not a religious person
- 3 An atheist

Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five! (*Code five mentions at the maximum*):

		Mentioned	Not mentioned
V12.	Independence	1	2
V21.	Obedience	1	2

Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between, using this card. (*Read out and code one answer for each statement*):

		Never justifiable								Always justifiable	
		1	2	3	4	5	6	7	8	9	10
V187	Divorce										

V209. How proud are you to be [**German**]? (*Read out and code one answer*):

- 1 Very proud
- 2 Quite proud
- 3 Not very proud
- 4 Not at all proud
- 5 I am not [**German**]

I'm going to read out a list of various changes in our way of life that might take place in the near future. Please tell me for each one, if it were to happen, whether you think it would be a good thing, a bad thing, or don't you mind? (Code one answer for each):

		Good	Don't mind	Bad
		1	2	3
V78.	Greater respect for authority			

THE VALUE CONCEPTS IN EMPIRICAL ANALYSES

Klages & Gensicke Internally

Table 1 presents a factor analysis of the twelve items developed by Klages & Gensicke (2005). Notably, this analysis of the World Value Surveys data from Germany confirms recent findings by Klages & Gensicke (ibd.). We find a similar value structure with three factors: "obligation & convention", "creativity & self-actualization" and "hedonism & power". While the overall pattern of factor loadings is consistent over East and West, the rankings of the individual loadings differ between the two parts of Germany. In addition, there are significant secondary loadings. For example, "to help marginalized people" is part of the "creativity & self-actualization" factor in both East and West, but for East Germans this solidarity orientation is also perceived as an obligation, probably reflecting the communist legacy in East Germans' value orientations.

Table 1. Factor Analysis: Klages & Gensicke (12 items) internally, comparing East and West Germany (WVS 2006)

Value Orientations: Personal Goals in Life	Obligation & Convention		Hedonism & Power		Creativity & Self-actualization	
	West	East	West	East	West	East
To be industrious and ambitious	.771	.756	.220	.232	.156	.107
To always fulfill one's duties	.761	.793	.139	.118	.088	.054
To seek security	.739	.723	.079	.280	.170	.089
To respect law and order	.721	.748	-.012	.017	.014	.019
To have a high standard of living	.166	.228	.762	.730	-.025	-.151
To be powerful and have an influence	-.160	-.071	.728	.727	.047	.112
To assert one's needs against others	.224	.215	.597	.539	.131	.062
To enjoy the good things in life, to spoil oneself	.144	.142	.484	.601	.184	.132
To help marginalized people	.117	.429	.043	-.097	.730	.589
To tolerate dissenting opinions	.206	.153	-.047	-.011	.651	.648
To develop one's own imagination and creativity	.223	.471	.177	.197	.633	.427
To get involved politically	-.219	-.269	.225	.206	.623	.639
Marginal Variance explained	21%	24%	16%	16%	16%	12%

Germany West: Cumulative variance = 52.2%, n = 910, Bartlett's Test of Sphericity significant at .000 level
 Germany East: Cumulative variance = 52.3%, n = 1004, Bartlett's Test of Sphericity significant at .000 level
 Rotated component matrix. Presetting on three factors.

Schwartz Internally

Table 2 presents our attempt to replicate Schwartz's value structure based on a reduced version of the SVI. The original value circle with ten values can be summarized in two dimensions. However, we find three dimensions in the value orientations of East and West Germans which we label "excitement", "care-take" and "security and conformity".

Not all of the ten items, however, load unambiguously on one factor (such as tradition or creativity). As in the Klages & Gensicke analysis, the factor loading matrix displays significant secondary loadings.

Table 2. Factor Analysis: Schwartz (10 items) internally, comparing East and West Germany (WVS 2006)

Value Orientations Similarity with persons	Excitement		Caretake		Security & Conformity	
	West	East	West	East	West	East
Adventure and taking risks are important to this person; to have an exciting life.	.750	.673	-.079	-.021	-.230	-.405
Being very successful is important to this person; to have people recognize one's achievements.	.693	.677	.177	.158	.179	.155
It is important to this person to be rich; to have a lot of money and expensive things.	.676	.704	-.362	-.359	.230	.057
It is important to this person to have a good time; to "spoil" oneself.	.669	.649	.149	.138	-.051	-.056
It is important to this person to think up new ideas and be creative; to do things one's own way.	.490	.446	.369	.442	-.342	-.192
Looking after the environment is important to this person; to care for nature.	.146	.058	.807	.726	.023	.274
It is important to this person to help the people nearby; to care for their well-being.	.093	.044	.776	.788	-.033	.017
Tradition is important to this person; to follow the customs handed down by one's religion or family.	-.165	-.105	.570	.439	.305	.498
Living in secure surroundings is important to this person; to avoid anything that might be dangerous.	-.142	-.097	-.025	-.032	.776	.793
It is important to this person to always behave properly; to avoid doing anything people would say is wrong.	.192	.078	.174	.141	.772	.786
Marginal Variance explained	23%	21%	19%	17%	16%	18%

Germany West: Cumulative variance = 58%, n = 883, Bartlett's Test of Sphericity significant at .000 level
Germany East: Cumulative variance = 56%, n = 1047, Bartlett's Test of Sphericity significant at .000 level
Rotated component matrix.

Klages & Gensicke Combined with Schwartz

Is there a common underlying structure in the two value concepts that are both based on rating scales? In order to examine this question with our German subsample, Table 3 gives the result of a comprehensive factor analysis of all the ten items that underlie the Schwartz construct and the twelve items that have been developed by Klages & Gensicke.

Table 3. Factor Analysis: Schwartz (10 items) and Klages & Gensicke (12 items), comparing East and West Germany (WVS 2006)

Value Orientations: Similarity with persons described below. (Schwartz) Importance as a personal goal in life... (Klages and Gensicke)	West: 1 / East: 2 Excitement (S) / Hedo-Pow (K&G)		West: 2 / East: 1 Sec. & Conf. (S) / Obl. & Conv. (K&G)		West: 3 / East: 3 Caretake (S) / Self-Act. (K&G)	
	West	East	West	East	West	East
S It is important to this person to be rich; to have a lot of money and expensive things.	.663	-.546	.030	.214	.324	.025
S Adventure and taking risks are important to this person; to have an exciting life.	.654	-.438	.324	.484	.083	.312
S Being very successful is important to this person; to have people recognize one's achievements.	.652	-.387	-.034	.005	-.115	.487
S It is important to this person to have a good time; to "spoil" oneself.	.628	-.415	.035	.120	-.093	.402
KG To have a high standard of living.	.598	-.604	-.208	-.216	-.010	-.103
KG To be powerful and have an influence.	.529	-.508	-.029	-.045	-.043	.019
KG To enjoy the good things in life.	.525	-.578	-.093	-.074	-.161	.155
KG To assert one's needs against those of others.	.484	-.554	-.242	-.211	-.126	-.007
KG To always fulfill one's duties.	.067	-.219	-.757	-.749	-.167	.037
KG To strive for security.	.046	-.359	-.726	-.684	-.159	.002
KG To be industrious and ambitious.	.218	-.346	-.701	-.662	.171	.080
KG To respect law and order.	-.144	-.133	-.679	-.671	-.124	.035
S Living in secure surroundings is important to this person; to avoid anything that might be dangerous.	-.074	.171	-.615	-.519	.186	-.126
S It is important to this person to always behave properly; to avoid doing anything people would say is wrong.	.148	.160	-.484	-.533	.009	.092
S It is important to this person to help the people nearby; to care for their well-being.	.028	.187	-.104	-.218	-.669	.657
S Looking after the environment is important to this person; to care for nature.	.045	.269	-.035	.269	-.669	.570
KG To help marginalized people.	-.026	-.042	-.144	-.462	-.654	.321
KG To develop one's own imagination and creative potential.	.277	-.384	-.077	-.312	-.561	.388
KG To get involved politically.	.100	-.011	.079	.036	-.519	.381
KG To tolerate dissenting opinions.	.020	-.167	-.073	-.175	-.449	.242
S It is important to this person to think up new ideas and be creative; to do things one's own way.	.407	-.120	.202	.142	-.446	.646
S Tradition is important to this person; to follow the customs handed down by one's religion or family.	-.199	.346	-.255	-.377	-.378	.222
Marginal Variance explained	17%	13%	14%	18%	10%	9%

S=Schwartz item, KG=Klages & Gensicke item.

Germany West: Cumulative variance = 41%, n = 988, Bartlett's Test of Sphericity significant at .000 level

Germany East: Cumulative variance = 39%, n = 1076, Bartlett's Test of Sphericity significant at .000 level

Rotated component matrix. Presetting on three factors.

An original factor analysis yielded five (West Germany) and six (East Germany) rotated factors respectively. Few, if any, reasonable patterns could be discerned from that factor structure. In a second step, the analysis on three factors yields the structure displayed here. Again, the factor loadings show various substantial secondary loadings.

The factor analysis in Table 3 yields inconsistent loadings for the Schwartz items "creativity" and "tradition" as was to be expected based on the Schwartz analysis in the

table above. Also the Klages & Gensicke item "solidarity, help marginalized people" yields ambiguous loadings, a finding consistent with a high respective secondary loading in the internal analysis for East Germany. These qualifications notwithstanding it appears, however, that Klages & Gensicke's (2005) recent conceptual revision including the "hedonism & power" dimension now is roughly equivalent to Schwartz's threefold dimensionality. Schwartz's "excitement" dimension closely resembles the newly-added "hedonism & power" items in Klages & Gensicke's battery. Similarly, "security & conformity" (S) and "obligation & convention" (K&G) as well as "caretake" (S) and "self-actualization" (K&G) appear to be close equivalents.

Table 4 presents the results of a consolidated factor analysis that has been calculated from the scores of the six factors identified above.

Table 4. Factor Analysis: Factors for Schwartz (three factors) and Klages & Gensicke (three factors), comparing East and West Germany (WVS 2006)

		1		2		3	
		West	East	West	East	West	East
Schwartz:	Excitement	.858	.866	.003	.007	-.073	-.074
Klages / Gensicke:	Hedonism & Power	.852	.863	-.022	-.012	.084	.061
Klages / Gensicke:	Self-Actualization & Creativity	-.009	-.005	.830	.834	-.175	-.172
Schwartz:	Caretake	-.009	.001	.826	.834	.142	.151
Klages / Gensicke:	Duty & Convention	-.057	-.090	.153	.159	.815	.817
Schwartz:	Security & Conformity	.070	.078	-.188	-.179	.810	.817
Marginal Variance explained		25%	24%	24%	23%	23%	22%

Germany West: Cumulative variance = 73%, n = 988, Bartlett's Test of Sphericity significant at .000 level
Germany East: Cumulative variance = 39%, n = 1076, Bartlett's Test of Sphericity significant at .000 level
Rotated component matrix.

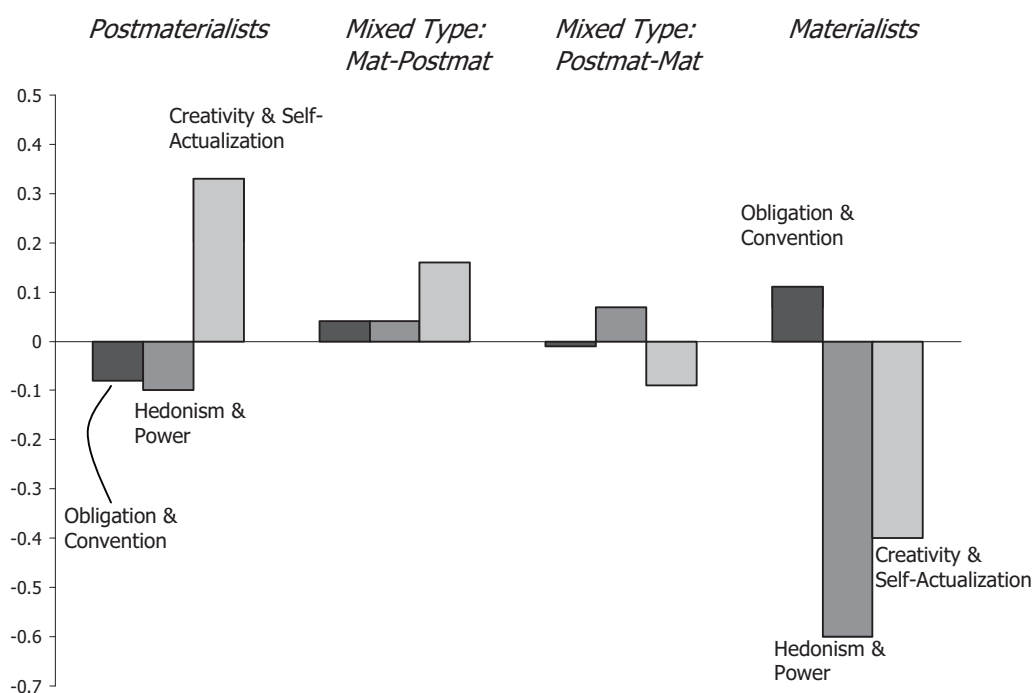
The consolidated factor analysis confirms the previous pattern. Taken together the consolidated factors, comprising of one Klages & Gensicke and one Schwartz factor each, explain 62% and 65 % of the total variance observed for East and West Germany, respectively. On the consolidated level, the results appear even more robust.

Overall, the two value concepts included in the most recent German WVS that are based on rating formats, Klages & Gensicke's concept of a value synthesis as well as Schwartz's value circle, reveal a common value structure. Klages & Gensicke's "hedonism & power" factor corresponds to Schwartz's "excitement" factor including elements of personal wealth, enjoyment and success. "Self-actualization & creativity" (Klages & Gensicke) and "caretake" (Schwartz) form another common factor, emphasizing mutual help, creativity and political activism. Finally, Klages & Gensicke's "duty & convention" is equivalent to Schwartz's "security & conformity", focusing on law and order, security, and proper behavior. To extend the analyses, Inglehart's concept of postmaterialism will be included in the next step of the analysis, addressing the question which of the factors identified in the previous analysis bears resemblance to the postmaterialism-materialism dichotomy.

Klages & Gensicke and Inglehart (4 Types)

With Inglehart's one-dimensional concept of material vs. postmaterial values a third value concept is introduced. Figure 1 shows the mean factor scores on the Klages & Gensicke dimensions of "creativity & self-actualization", "obligation & convention" and "hedonism & power" over four types derived from Inglehart's postmaterialism battery (postmaterialists, materialists and two mixed types) in West Germany.

Figure 1. Mean factor scores of Klages & Gensicke (three dimensions) for Inglehart's four value types (West Germany, WVS 2006)



Postmaterialists show the highest score with respect to "creativity & self-actualization". Individuals classified as mixed types score lower or even negatively, whereas materialists show clearly a strong rejection of such values. For West Germany, this suggests that Klages & Gensicke's measure of self-actualization is a rough equivalent of Inglehart's postmaterialism phenomenon.

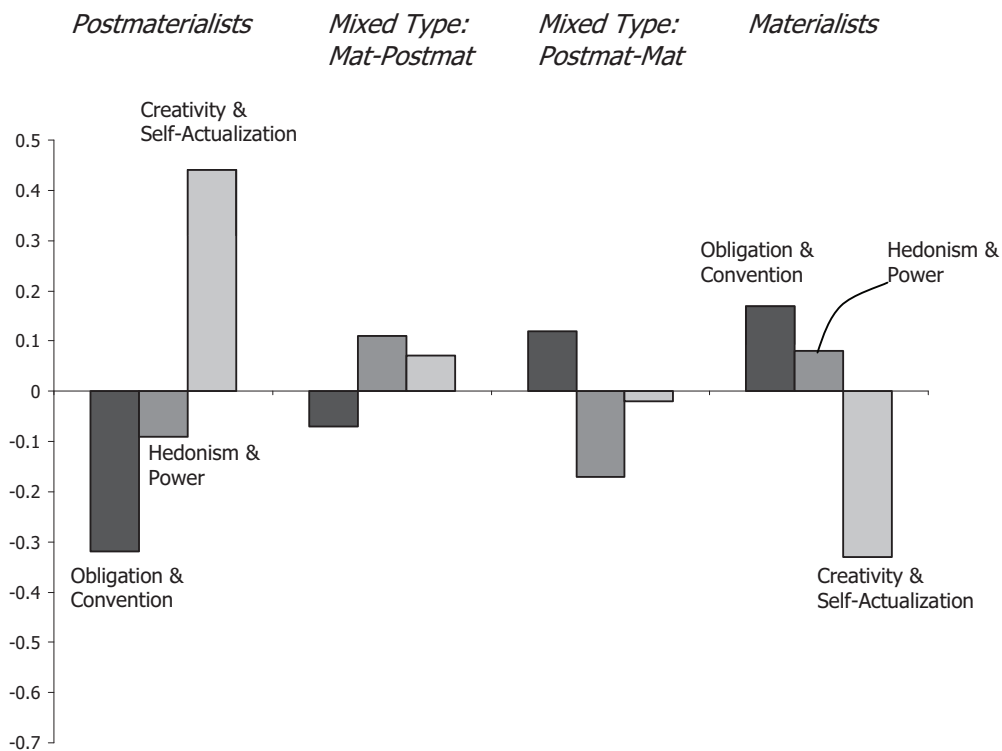
The opposite pattern holds for "obligation & convention" on which postmaterialists score lowest, followed by mixed types and materialists, again in rough equivalence to Inglehart's assumed value dimension (here: materialism). However, the magnitude of the effect is much lower.

"Hedonism & power" shows no clear pattern, suggesting that it taps a dimension that has no close equivalent in Inglehart's concept. It includes indicators such as having

a high living standard, being influential and enjoying life. Scores for mixed types and postmaterialists differ only unsubstantially around the middle point. Only materialists, quite counter-intuitively, have a clear, negative mean factor score on "hedonism & power".

Figure 2 plots mean factor scores of the three Klages & Gensicke dimensions over four Inglehart types in East Germany. The pattern for "obligation & convention" and "creativity & self-actualization" is roughly the same as in West Germany, albeit with sharper overall differences, especially with regards to "obligation & convention". Postmaterialists are again most likely to endorse self-actualization and creativity values and reject obligation and convention items, while the opposite picture holds for materialists. The mixed types show medium scores for both factors, making for a smooth transition between the two extreme types.

Figure 2. Mean factor scores of Klages & Gensicke (three dimensions) for Inglehart's four value types (East Germany, WVS 2006)



Hedonist and materialist values, again, are suggested to have no close empirical equivalent in Inglehart's types. Postmaterialists are marginally less likely to endorse hedonist or materialist positions, but more likely (!) than the postmaterialist materialist mixed type. In contrast to West Germany, materialists do not strongly reject hedonist and materialist values but show mild acceptance.

Schwartz and Inglehart (4 Types)

Figure 3. Mean factor scores of Schwartz (three dimensions) for Inglehart’s four value types (West Germany, WVS 2006)

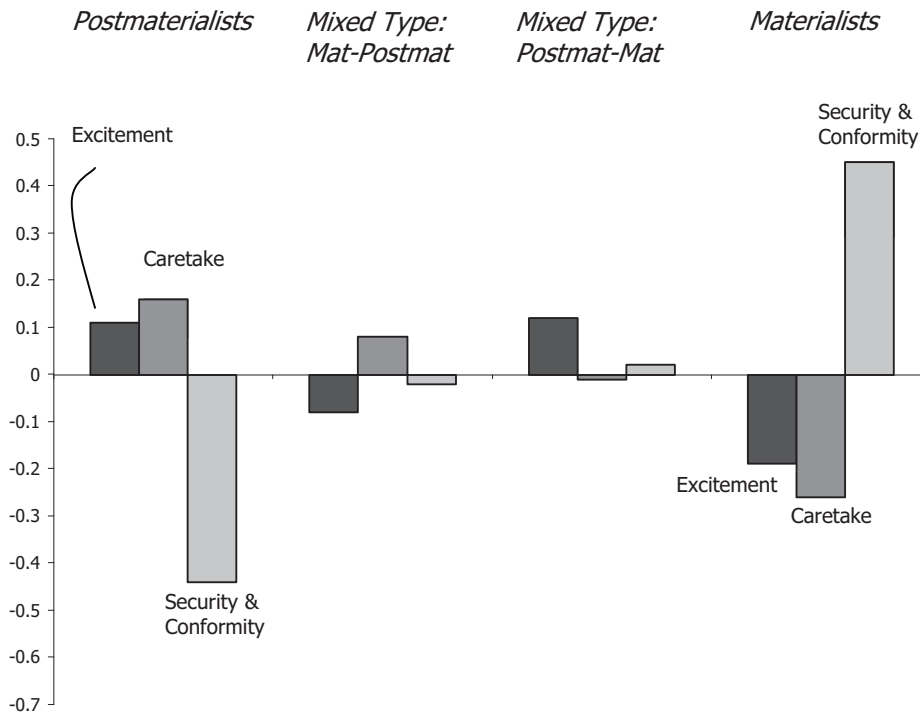
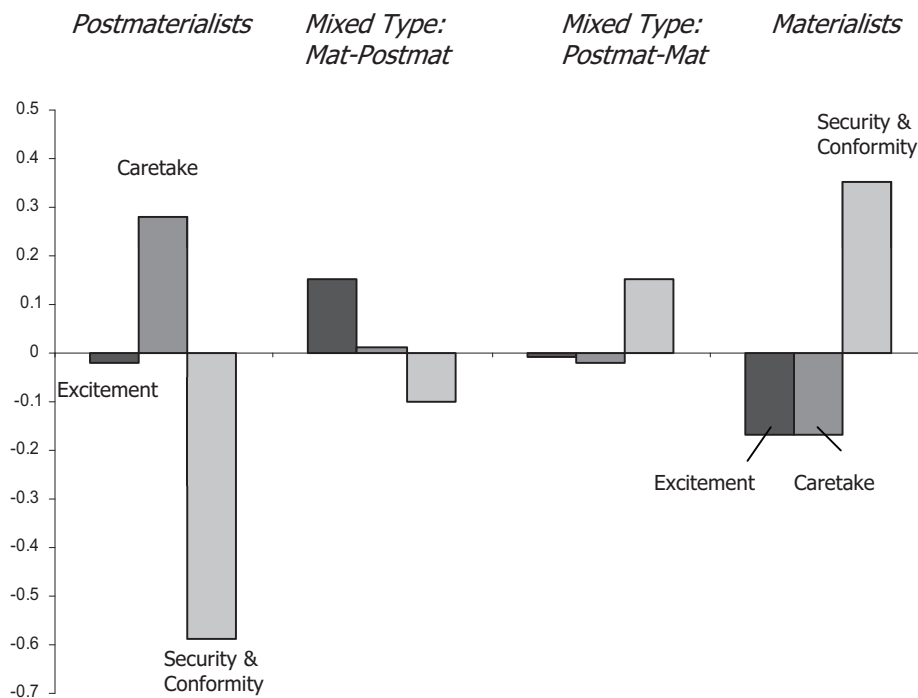


Figure 3 visualizes the mean levels of three dimensions of Schwartz’s value circle over four Inglehart types in West Germany. The dimensions of “security & conformity” as well as “care-take” provide a relatively clear picture. Postmaterialists are most likely to endorse care-take values, mixed types are less likely and materialists are most likely to reject those values, while the opposite pattern holds for security and conformity items, suggesting overall that both dimensions are rough equivalents of the one-dimensional “postmaterialist” and the “materialist” configuration that Inglehart has suggested. The excitement dimension, much like “hedonism and power” from Klages & Gensicke’s battery, shows no clear picture. Postmaterialists are most likely to stress excitement values, while materialists are considerably less likely to do so. The mixed types do not fit into this trend and overall differences remain relatively small, suggesting that Inglehart’s materialist-postmaterialist polarity does not fully capture the variance of Schwartz’s excitement dimension.

Figure 4. Mean factor scores of Schwartz (three dimensions) for Inglehart's four value types (East Germany, WVS 2006)



The results for East Germany (Figure 4) are roughly in line with West Germany for care-take and security & conformity values with postmaterialists most likely to endorse care-take values and reject security & conformity, and the opposite picture for materialists while the mixed types are ranking monotonously somewhere in between. It appears that in East Germany Inglehart's four types capture much of the variance within Schwartz's dimensions of security and conformity as well as care-take.

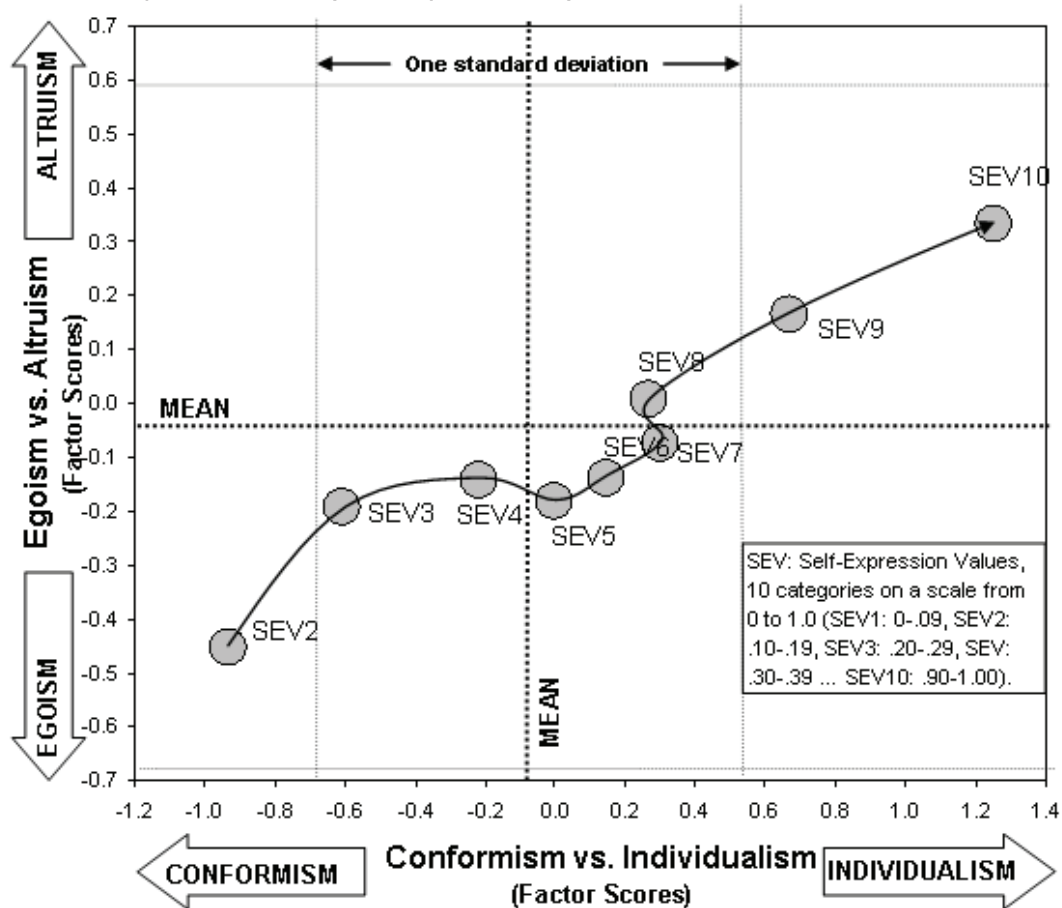
The "excitement" dimension, again and much like in West Germany, provides only inconclusive results. Postmaterialists appear to be equally divided or undecided when it comes to excitement values, while material postmaterialists display considerable endorsement of excitement values.

Schwartz and Inglehart & Welzel (Self-Expression Values and Secular-Rational Values)

In a final step we want to link Inglehart & Welzel's two-dimensional concept of secular-rational values and self-expression values with the two major dimensions of Schwartz's value concept. As Inglehart & Welzel (2005) have argued, the emergence and increase of self-expression values are closely linked to processes of individualization, producing (at least potentially) cross-cutting results with regard to the role of the individual in her

social environment. On the one hand, individuals tend to focus on self-actualization which goes at the expense of traditional forms of communities. Flanagan & Lee (2003: 267), for example, note that while postmodernist libertarians hold more assertive and participatory orientations towards politics, they suffer from an erosion of “willingness to make sacrifices for other individuals, groups, or even their nation”. Their alienation and actions following from that are “based on their own narrowly defined self-interest” (ibid.). On the other hand, others state that individualistic values give rise to more equality, generalized trust, and tolerance – all of which cut through traditional group boundaries (Welzel 2010: 153). In this sense, individualization does not mean erosion of group ties per se but rather more individual freedom in forming and keeping social ties. Belonging to a group, for example, becomes no longer a question of survival but of choice (Beck 2002).

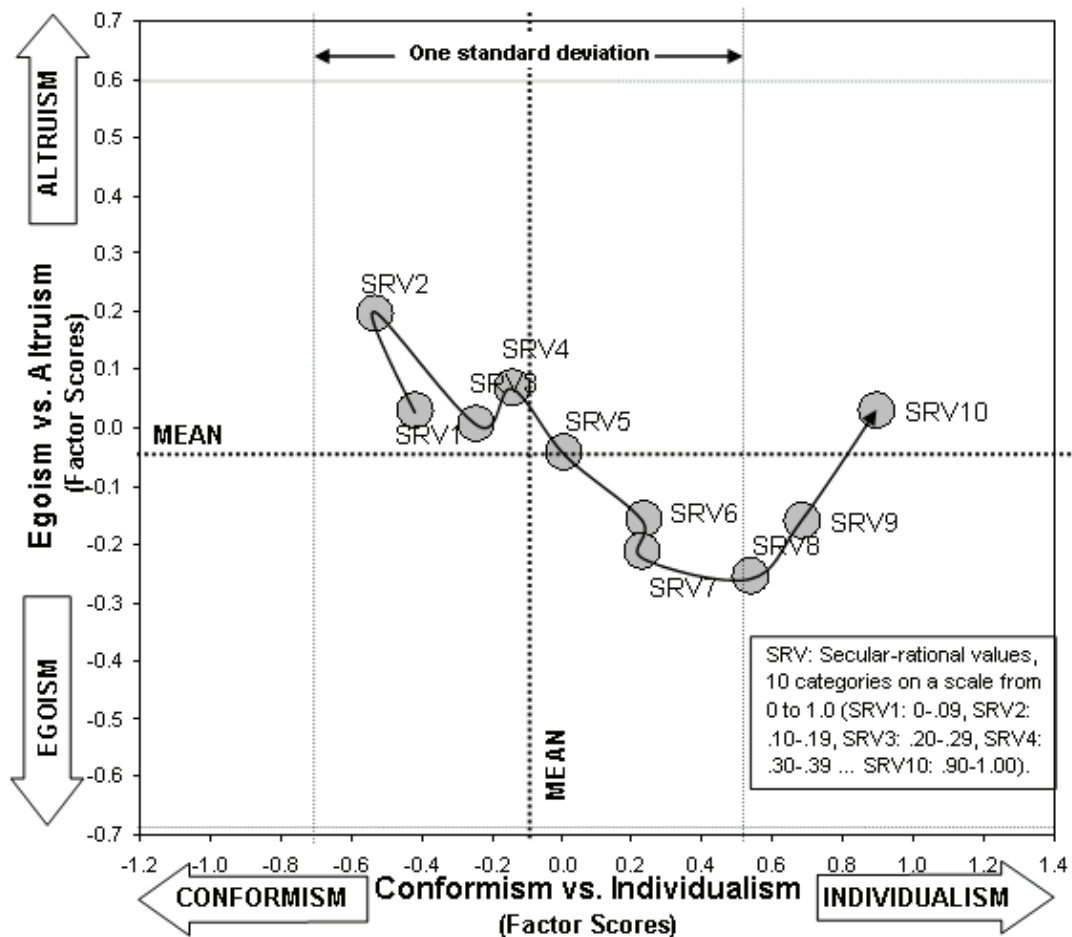
Figure 5. Mean factor scores on two Schwartz dimensions over ten categories of deciles of self-expression values (Germany WVS 2006)



We are, therefore, interested in how self-expressive as well as secular-rational value orientations relate to the two Schwartz dimensions of altruism (as opposed to egoism) and individualism (as opposed to conformism). Combining data from East and West Ger-

many, Figure 5 plots mean factor scores on these two Schwartz dimensions³ over ten categories of deciles of self-expression values, ranging from weak to strong. The graph suggests that individuals who score high on individualism and altruism also score high on self-expression values. It thereby seems likely that self-expression values are neither a full equivalent of either of the two constructs nor that they exclusively foster individualism at the expense of altruism. Much rather, the evidence suggests that self-expression values are an underlying factor that combines an increasing orientation towards individualism with an orientation towards altruism, that is, an individualist, but human-centric rather than ego-centric orientation.

Figure 6. Mean factor scores on two Schwartz dimensions over ten categories of deciles of secular-rational values (Germany WVS 2006)



³ The Schwartz dimensions are based on a factor analysis with eight Schwartz values (for an overview see page 62). The items V83 ("It is important to this person to have a good time; to "spoil" oneself.") and V89 ("Tradition is important to this person; to follow the customs handed down by one's religion or family.") were excluded. To replicate the two Schwartz dimensions we transformed the items before conducting the factor analysis.

How are secular-rational values linked with the two major Schwartz dimensions? We do not expect to find major correlations: As secular-rational values mean secularization but not emancipation of authority, the Schwartz polarity of conservation (here: conformism) and openness to change (here: individualism) should not be affected when authority beliefs shift from religious to secular sources. A similar expectation can be formulated for the dimension egoism vs. altruism (in Schwartz's terminology: self-enhancement and self-transcendence). Figure 6 illustrates how secular-rational values relate to the two Schwartz dimensions. As anticipated, secular-rational values vary little along the egoism-altruism axis, and if, it can be interpreted as a U shaped curve: SRV 6 through SRV 9 show the lowest association with altruism. The differences along the conformism-individualism axis are more pronounced: With higher secular-rational values, people's emphasis shifts almost continuously from conformism to individualism. The difference between high and low deciles of secular-rational values, however, is less pronounced than between high and low self-expression values.

CONCLUSION

In this paper we examined a common underlying structure of Inglehart's materialism/postmaterialism dichotomy (1977, 1990), the concept of self-expression and secular-rational values (Inglehart & Welzel 2005), Schwartz's reduced version of the value circle (Schwartz 1994, 1999), and the concept of value synthesis advocated by Klages & Gensicke (2005).

We found a congruent factor structure with regard to Klages & Gensicke's value orientations and Schwartz's value circle, the two concepts that are implemented using a rating scale. Klages & Gensicke's value structure, consisting of the three factors hedonism and power, creativity and self-actualization, and obligation and convention could be mapped to three factors that have been derived from Schwartz's value circle: excitement, care take, and security. We have found no substantial differences in the factor structures for East Germany and West Germany.

Inglehart's materialists rank high on obligation, convention and security values, whereas postmaterialists show a strong emphasis on creativity, self-actualization, and care-take. The third dimension, found in the two rating formats (hedonism, power and excitement), has no equivalent in Inglehart's dichotomy, suggesting that this one-dimensional concept falls short in tapping a major dimension of people's value orientations.

Finally, we were able to show that in particular self-expression values are positively correlated with both of Schwartz's dimensions of individualism and altruism, but that none of them is completely equivalent to self-expression values. We conclude, therefore, that self-expression values balance an increasing orientation towards individualism with an altruist orientation, shifting the focus from an ego-centric to a human-centric orientation.

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