Social Axioms as Mediators Between Culture-Level and Individual-Level Values

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Abstract
We offer empirical evidence for a new conceptual view on the interdependence of culture-level values and individual value preferences. A study of 291 sojourner students from 56 nationalities tests the hypothesis that social axioms fully mediate the relationship between culture-level and individual value preferences. Cultural values were operationalized with Schwartz's three culture-level value oppositions: embeddedness-autonomy, mastery-harmony, and hierarchy-egalitarianism. The measurement of social axioms follows the approach of Leung et al., whereas individual values focus on Hagan et al.'s second-order concept of hierarchic self-interest. The empirical support for our central hypothesis points to a necessity to refine theories on the relationship of social axioms and values, giving social axioms the role of a mediator in the process of transmitting a culture's prevalent values in value preferences of individuals.

Introduction

The question as to why and how certain cultural features persist across time has inspired an abundance of scientific work at least since de Lamarck's (1809/1914) *Philosophie zoologique*, in which he postulated the inheritability of acquired character properties. In a recent and comprehensive overview of studies from social science disciplines, Schönpflug (2009) points to the centrality of culturally framed transmission processes to the continuity of cultures. Psychologists and sociologists have contributed to the cultural transmission discourse (e.g., Allport, 1954; Kohn, 1983; Caspi & Elder, 1988), so did anthropologists (Mead, 1940) and biologists (Cavalli-Sforza, Feldman, Chen, & Dornbusch, 1982; Tomasello, 1990).

According to Cavalli-Sforza and Feldman (1981) and to Boyd and Richerson (1985), there are three distinguishable types of transmission. Vertical transmission results in intergenerational similarity by conveying traits from parents to their offspring; sometimes also vice versa as the studies of Ambert (1992) or Pinquart and Silbereisen (2004) show. Horizontal transmission propagates traits among members of the same generation, thus resulting in similarity among them.

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Oblique transmission, as the third distinguishable type, transports culturally prevalent traits between members of different generations who are not immediately genetically related, for example, teachers and their students.

All three types of transmission, though to a different extent, may be involved in the translation of cultural values into individual values, a process we examine here. But none of the three sketched transmission processes takes place in an isolated environment or only in individual brains. The members of a culture are in permanent exchange with the societal context through their peers, mass media, and educational or work groups. This context acts as a kind of similarization agent vis-à-vis the value preferences of the parties involved in a transmission process. Despite the scarcity of research on the influence of contextual effects on value internalization, there is some empirical evidence in support of this claim. Rindfuss, Liao, and Tsuya (1992) show that the broader societal context makes the value preferences of both parents and children similar to one another. Knafo (2003) finds that similarities between parent and offspring values are attributable to the context in which they live. Studies by Hadjar and Baier (2003), Baier and Hadjar (2004), Boehnke (2001, 2004), or Boehnke, Hadjar, and Baier (2007) render further support as to the similarization influence of the context.

Members of any given society are forced to develop their individual values in light of the value preferences cherished in their culture, institution (Yamagishi, Hashimoto, & Schug, 2008), or reference group. Harris (2006) speaks of a socialization system that shapes personality by helping individuals become members of a group and absorb the group's culture. This does not say that individuals necessarily set out to conform to the values of the given context. Whether they conform or attempt to distinguish themselves from the surrounding culture is likely to—in and by itself—differ across cultures. Both consensus seeking in line with the person-environment-fit hypothesis (Fulmer et al., 2010; Musiol & Boehnke, 2013) and need for distinction (discussed as early as 1948 by John Dewey) may play a role to different degrees in different contexts/cultures and to different degrees among individuals. Yet, the literature discussed above casts insufficient light on the actual process of internalizing values cherished in a given culture by its individual members.

The present article aims to offer an idea that may advance the state of research on the relationship between culture-level value preferences and individual values. In line with earlier conceptual considerations (Boehnke, 2001, 2004), we regard the modal value climate in a society, the *Zeitgeist*, as a measurable phenomenon that has an impact on individual values. To relax the assumption that all members of a culture position themselves vis-à-vis the *Zeitgeist* in the same way, we introduce social axioms, which are generalized individual beliefs and images of the human being (Leung & Bond, 2004) as a filtering force between prevalent culture-level value orientations and personal values.

Boehnke (2009) proposes that values and social axioms should be seen as two aspects of what early German humanistic psychology has called *Weltanschauung* (worldview). Assessing social axioms means measuring the degree to which individuals subscribe to certain beliefs about the nature of the human being and of human interaction. They reflect a person's view as to how human life in this world *is*. Social axioms can be seen as innate subjective truths that people acquire early on in their lives through implicit learning processes. To quote Bond (2008) referencing William James (1896),

> We possess "the will to believe," . . . because each human needs to render the "great blooming, buzzing confusion" of sensate experience manageable by structuring his or her world through thought. Each person needs to figure out how and why things happen so that events may be predicted, controlled, and explained, "we must know the truth." (p. 320)

Assessing value preferences of an individual means measuring the *ought*-component of a person's worldview. Values reflect what a person thinks how the world *should* be, not how it is at

present. They are not subjective truths, but subjective ideals and act as guiding principles for people's lives (Schwartz, 1992). Unlike Leung et al. (2007), who see values and social axioms as concomitant concepts, we see social axioms as predecessors of individual value preferences. Only when individuals have been able to make sense of "the 'great blooming, buzzing confusion' of sensate experience" around them through structuring the world on the basis of their beliefs, will they be able to realize their ideals and how the world around them should be structured.

Our central conceptual assumption is that the prevalent value climate of a culture—representing "the world out there," the sensate experience to which an individual is subjected when born into a culture—is first assessed by individuals on the basis of their beliefs (social axioms) about the nature of human beings. Only once the world is sufficiently structured can individual value preferences be articulated. We expect no direct relationship between culture-level and individual-level values, once we introduce individual beliefs as a mediator. Moreover, we expect that the inclusion of social axioms adds to the explanation of differences between individual value preferences.

We offer empirical evidence on these propositions that was obtained from sojourner students of 56 nationalities at the authors' university in Germany. The sample can be seen as a microcosm of the world. It allows for testing an individual-level psychological model that can nevertheless encompass culture-level value preferences as predictors.

Theory

Prevalent Value Climate

Romney (1999) proposes a mathematical definition of the cultural context by relating the members of a culture to the modal scores of society on relevant variables. Similar to Romney's constructivist approach, Boehnke (2001, 2004) suggests the *Zeitgeist* to be an important characterization of the broader context. The concept of *Zeitgeist* finds its origins in the works of Hegel and stands for the modal value climate of a society. It is an empirical phenomenon that has a measurable influence on individual value preferences. In more concrete terms, the *Zeitgeist* can be expressed as the mean of preferences for a certain value in a given society at a given time. In that, Boehnke sees the *Zeitgeist* as a constant for a pertinent society in a certain time period, but individual members may still perceive it differently or internalize it to a different degree. Here we attempt to uncover to what extent people endorse values that are cherished in a society and which individual beliefs translate the modal value climate into individual value preferences.

How does one measure the *Zeitgeist*? In the last two to three decades, at least three theories have evolved that allow us to not only categorize cultures according to conceptual considerations but also measure the degree to which cultures cherish certain values. In other words, we endeavor to measure culture on the grounds of prevalent value preferences. All three theories base their elaborations on a voluminous body of data on value preferences of individuals from around the world. The first such theory was introduced by Hofstede (1980, 2001). It distinguishes cultures along originally four, later five, and currently six (Hofstede, Hofstede, & Minkov, 2010) dimensions: power distance, individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence versus restraint.

The second theory of measuring culture is based on ideas of Inglehart (1997). It sees two orthogonal bipolar dimensions at work in distinguishing cultures: traditional versus secular rational values and survival versus self-expression values.

The current article makes use of a third theory proposed by Schwartz (2006). Schwartz's culture-level theory of values regards cultures as differing along three dimensions. The first dimension contrasts embeddedness to affective and intellectual autonomy. Whereas in cultures high on embeddedness individuals seek the best possible fit with their relevant collectives, in

cultures high on autonomy individuals seek their own good fortune. The second dimension taps the opposition between mastery and harmony. Cultures high on mastery are typically characterized by individuals who attempt to modify the given life-context at their own deliberation, whereas cultures high on harmony have individuals who rather try to fit in with natural life circumstances. The third dimension of Schwartz's theory juxtaposes hierarchy to egalitarianism. Individuals in cultures high on hierarchy tend to accept the given hierarchic social order as opposed to individuals in cultures high on egalitarianism where all are assumed to be entitled to equal rights.

Individual Values

A great number of approaches attempt to measure personal value preferences. The currently most influential school is the one relying on Schwartz (1992). The present research, however, adopts Schwartz's thinking to analyze culture-level value preferences. There would be a certain degree of tautology, if we were to also use Schwartz values for the individual level, because the culture-level value dimensionalization of Schwartz rests on an aggregation of individual-level data. Like Hofstede, but unlike Inglehart, Schwartz sees individual-level and culture-level values as non-isomorphic. The value structure across individuals is different from the value structure across cultures. Nevertheless, they are empirically (stochastically in technical terms) entangled.

To avoid such a tautology, we use a different, though narrower, conceptualization of personal value preferences, namely hierarchic self-interest (HSI; Hagan, Rippl, Boehnke, & Merkens, 1999). HSI emphasizes a hierarchy-accepting pursuit of own interests. In that, it resembles Sidanius and Pratto's (1999) social dominance orientation. HSI forms a value syndrome of five first-order value orientations: individualism, materialism, social comparison, Machiavellianism, and acceptance of social inequality. Individualism closely relates to the ideas of Hui and Triandis (1986) and places the focus on conceptions of the self as to how independent and free from reliance on others actors see themselves. Materialism has been derived from the materialism-postmaterialism concept of Inglehart (1977) and taps on individual dispositions that favor hierarchies of material successes and achievements. Social comparison stems from Festinger's (1954) social comparison theory of self-conceptualization. It refers to the need of individuals to evaluate their abilities in social comparisons with relevant reference groups. Machiavellianism originates from the individual-level equivalent of Christie and Geis (1970) and extends the thematic scope of HSI to individual inclinations to put one's own goals through against the interests of others. Acceptance of social inequality completes HSI. The reason for its inclusion becomes evident from the assertion that those who already have the most also have the most to gain from accepting inequality (Parkin, 1972).

As such, HSI represents a measure of the internalization of capitalist values: metaphorically speaking, an elbow mentality. It is a dominance ideology that refers to the striving for success in all areas of life by performing better than others and outperforming rivals. With the tendency of modern industrial societies to be highly competitive, such a dominance orientation is strongly tied to the core logic of free market capitalism (Hadjar, 2004). HSI encompasses power and achievement values, thereby being a proxy measure of self-enhancement, a higher order value type in the circumplex of Schwartz's individual values (Schwartz & Boehnke, 2004). Despite this correspondence, HSI has narrower value coverage than the Schwartz dimensionalization.

Social Axioms in a Two-Step Internalization Process

The literature discussed above suggests that the *Zeitgeist* can affect the value system of every individual. This is due to the fact that cultural transmission does not take place in an isolated environment or even solely in the brain as in Descartes' *cogito ergo sum* (Bond, 2008), but rather

in constant exchanges with the broader societal context. However, does this occur for everybody to the same extent? Following Grusec and Goodnow's (1994) two-step process of internalizing values, we assume that every individual perceives the *Zeitgeist* (Step 1: Perception), but internalizes it only to the extent that is compatible with their own belief system (Step 2: Reaction). To understand the modal value climate in a society and eventually internalize it in one way or another, individuals need to maneuver between conformity and distinction, a process described by French sociologist Pierre Bourdieu (1984). This positioning of the self we assume to be largely guided by a need for structure as spelt out by Dewey (1948).

Social axioms, constituting generalized beliefs and images of the nature of the human being, seem a good candidate for an agent in the production of—cognitive—structure in a cultural context. The nature of human beings is at the basis of a great body of psychological thinking. Rarely, however, have beliefs about the nature of the human being been the topic of empirical research. German humanistic psychology of the early 20th century, to which work on the topic can be traced back, did not engage in empirical research comparable with a current-day understanding. In a very productive recent elaboration, however, differences in people's images of the human being *(Menschenbild)* have been conceptualized along the lines of social axioms. This approach distinguishes five images of the human being (Leung & Bond, 2004). The first social axiom, social cynicism, reflects a negative view of the human nature, mistrust of social institutions and disregard of ethical means for achieving an end. Reward for application stands for a belief that effort and knowledge will lead to positive ends, whereas social complexity depicts a belief that human behavior flexibly adapts to different life-contexts. The fourth social axiom, religiosity, is a belief in the existence of supernatural forces coupled with a positive view of religious institutions. Fate control reflects a belief that life events are predetermined; yet, alterable within limits. Fate control has recently been subdivided into fate determinism (a belief that one's course of life is determined a priori) and fate alterability (a belief that if one has sufficient insights into the predetermined fate, one can alter "the odds") by Leung et al. (2011).

Hypotheses

We offer two propositions for understanding culture's impact on the formation of individual value orientations.

> **Proposition 1:** The prevalent value climate of a culture impacts images of the human being among individuals who were brought up in that culture.

At the same time, we assume that images of the human being are, in addition to culture's influence, strongly shaped by personal experiences and backgrounds.

> **Proposition 2:** Depending on what one thinks about how fellow human beings are (images of the human being), individuals develop their personal value orientations.

We thus aim to show that the process of value transmission can be better understood if one takes an individual's *Menschenbild* into account. The goal of our study is to test this mechanism. It is not our intention to test concrete associations between specific cultural values, social axioms, and first-order components of HSI. Nevertheless, we provide here a few examples to illustrate the proposed mechanism.

To begin with, in societies that emphasize autonomy over embeddedness, the pursuit of self-interest is likely to be stronger because an emphasis on autonomy motivates people to seek their own good fortune. This direct relationship between the cultural climate and individual values can be explained away, so-to-speak, by taking into account the belief in reward for application.

Individuals who live in a culture that cherishes personal effort to achieve certain goals may tend to believe that their efforts would be accordingly rewarded, which in turn is likely to result in higher acceptance of inequalities and higher endorsement of individualism. In cultures that cherish hierarchy over egalitarianism, Machiavellian orientations are likely to be more pronounced. In hierarchy-accepting cultures, people are not assumed to have equal rights, but rather have to push their way through in any possible way. This direct relationship between the cultural climate and personal value orientations can be explained away by social cynicism: Where hierarchy is preferred over egalitarianism, individuals are likely to hold negative views of the human nature and to mistrust social institutions. Such a view of the human being could then lead individuals to push their way through to achieve a goal, that is, to be more self-interested. As to cultures preferring mastery to harmony, an emphasis on modifying the life-context at one's own deliberation may foster a pursuit of individualistic and inequality-accepting values. This direct relationship between the cultural climate and the personal value orientations can be explained away by social complexity: Modifying the life-context rather than seeking fit in its natural circumstances is likely to form a view that human behavior is flexible with respect to different contexts which in turn is likely to relate to stronger HSI.

Method

Sample

We use data from sojourner students of 56 nationalities. The study was conducted in 2007 and 2008 among 291 bachelor students from natural sciences, engineering, social sciences, and humanities at the authors' university in Germany. Participants were on average slightly above 20 years of age. Age was measured in three categories: 20 years and below (232 students), 21 to 30 years (57 students), and 31 years and higher (2 students). Both genders were equally represented: 49.7% men, 50.3% women.

About one quarter of the students came from Germany. The groups of Romanian, Bulgarian, Nepali, and U.S. students each made up more than 5% of the sample. Any other country made up at most some 3% of the sample. Most cultures (26) were represented by one student. Table A1 of the appendix lists the number of students from each country of origin.

Instruments

Participants in the study filled in a 125-item social axioms battery obtained from the authors of the Social Axioms scale (Leung & Bond, 2004) as well as a 10-item HSI instrument (Rippl, Baier, & Boehnke, 2007). Both have a Likert-type response format ranging from 1 to 5.

Data on culture-level values were acquired from the data archive of Shalom Schwartz via personal communication in August 2011. Every sojourner student in the sample had a score for his or her country of upbringing's position on the seven culture-level value components. These were reduced to scores for the three dimensions of embeddedness versus autonomy, mastery versus harmony, and hierarchy versus egalitarianism by first arithmetically averaging the two autonomy scores, and then subtracting the combined autonomy score, the harmony score, and the egalitarianism score from their counter-poles: embeddedness, mastery, and hierarchy, respectively. Students with dual citizenship were assigned the average of the respective scores for their two countries of affiliation. For nationalities for which no scores were available from Schwartz's research, scores were interpolated geographically with reference to the map published by Schwartz (2006; see also Boehnke, Lietz, Schreier, & Wilhelm, 2011). The scores along with details on the interpolation are given in Table A1 of the appendix.

Missing data on the questionnaire items were handled using substitution with the mean, as the percentage of missing values nowhere exceeded even 3%.

For each social axiom we selected items on the basis of principal component analyses in the pooled, pan-cultural, sample. Items that loaded .50 or more on the first unrotated factor were averaged for every participant in the sample (see Table A2 of the appendix for a list of items). Such an approach is no longer standard practice in cross-cultural research, but the nature of the data does not enable us to perform a multigroup invariance test. Instead, we refer to a study of Leung et al. (2011) that uses our international data together with data from 11 countries from all over the world to show the cross-cultural stability of the social axioms.

HSI is a second-order construct that encompasses five first-order scale scores composed of two items each: individualism, materialism, social comparison, Machiavellianism, and acceptance of social inequality (see Table A3 of the appendix for a list of items). As this instrument does not lend itself to classic consistency analysis, we conducted a confirmatory factor analysis in AMOS 19 (Arbuckle, 2010). After adding two additional first-order factor error correlations and two additional item error correlations, the goodness-of-fit of the postulated structure of an equal contribution of the five first-order factors to the second-order factor (imposed via equality constraints on the loadings) was $\chi^2(29, N = 291) = 34.200$, $p = .232$, $\chi^2/df = 1.179$, Goodness-of-Fit Index (GFI) = .977, Tucker-Lewis Index (TLI) = .981, root mean square error of approximation (RMSEA) = .025. Prior to these empirical modifications goodness-of-fit coefficients also did not exceed traditional threshold values.

Analyses

The best suited analytical framework for our study is the multilevel design. Due to the data—most cultures being represented by one student only—we treat culture-level values as individual-level data (disaggregation). We conduct mediation analyses in the structural equation modeling framework of Mplus (Muthén & Muthén, 1998-2011) with a robust maximum likelihood estimator and a cluster correction for the inherent nesting in the data. The cluster correction assumes that observations remain independent across the clusters (nationalities), but not necessarily within. It produces unbiased, cluster-corrected, estimates for the standard errors (Froot, 1989; Williams, 2000).

Our analytical strategy for the mediation analyses follows the logic of Zhao, Lynch, and Chen (2010). Their approach deviates from the classical mediation framework of Baron and Kenny (1986) in allowing for partial mediation effects even if there is initially no association between the predictor and outcome variables. There may be an insignificant direct effect, but a significant indirect effect through the mediator variable, both of which are contained in the total effect, initially observed to be insignificant. Yet, we consider essential the existence of significant relationships between the predictor and the mediator on one hand, and the mediator and the outcome on the other. We first establish the direct relationship between culture-level values and individual value preferences. In a second step, we explore which social axioms are influenced by the three culture-level values. We then take only these social axioms that were found to be significantly associated with culture and test to what extent they influence HSI. Finally, we specify a mediation model for the effect of the three culture-level values on HSI as channeled through the social axioms that are associated with both the predictor and outcome variables. To assess mediation effects, we estimate the size and probability of the indirect effect through each social axiom (no standardized estimates).

Results

Before we present the results of the mediation analyses, we offer descriptive information for all variables used. Table 1 documents means, standard deviations, and minimum and maximum scores. In parentheses the same coefficients are given in aggregation for the 56 different cultural

Table 1. Descriptive Information.

	M	SD	Min	Max
Dependent				
Hierarchic self-interest	2.87 (2.89)	0.51 (0.39)	1.40 (1.80)	4.70 (3.60)
Cultural values				
Embeddedness vs. autonomy	−0.27 (−0.08)	0.82 (0.69)	−1.56 (−1.56)	1.31 (1.31)
Hierarchy vs. egalitarianism	−2.32 (−2.23)	0.67 (0.61)	−3.63 (−3.63)	−0.74 (−0.74)
Mastery vs. harmony	−0.16 (−0.09)	0.36 (0.34)	−0.67 (−0.67)	0.63 (0.63)
Social axioms				
Social cynicism	3.01 (2.98)	0.55 (0.39)	1.13 (2.19)	4.63 (4.00)
Reward for application	3.88 (3.92)	0.55 (0.39)	2.22 (2.56)	5.00 (4.78)
Social complexity	4.11 (4.08)	0.47 (0.31)	2.38 (3.12)	5.00 (4.63)
Fate determinism	2.59 (2.61)	0.75 (0.59)	1.00 (1.20)	4.80 (3.60)
Fate alterability	2.71 (2.63)	0.65 (0.40)	1.00 (1.50)	4.25 (3.50)
Religiosity	3.13 (3.15)	0.76 (0.70)	1.14 (1.29)	5.00 (4.71)

Note. Values outside parentheses refer to the respective estimates for *n* = 291 (individuals). Values in parentheses refer to the respective estimates with the aggregated data for *n'* = 56 (nationalities). Min = minimal observed score; Max = maximal observed score.

Table 2. Regression of HSI on Cultural Values.

	HSI
Embeddedness vs. autonomy	.049
Hierarchy vs. egalitarianism	.274**
Mastery vs. harmony	−.153**
R^2	.062

Note. Standardized regression coefficients. HSI = hierarchic self-interest.
*p < .10, two-tailed. **p < .05, two-tailed. ***p < .01, two-tailed.

backgrounds. For the calculation of these coefficients, individual scores were averaged within country before the 56 culture-specific scores were used to calculate central tendency and variability.

For the majority of the variables, empirical means differed by less than a standard deviation—often by less than half a standard deviation—from the expected score, that is, the implied mid-point of the response scale. Participants came from cultures high on egalitarianism more often than from cultures high on hierarchy. The sample exhibited scores above the implied mean of the scale for the social axioms reward for application and social complexity.

Table 2 documents the direct, unmediated effects of culture-level value preferences on HSI. We find no association between embeddedness versus autonomy and HSI (β = .05, *p* = .62), but significant influences of hierarchy versus egalitarianism (β = .27, *p* < .05) and mastery versus harmony (β = −.15, *p* < .05). It appears that individuals tend to be more self-interested in cultures that emphasize hierarchy over equality and, interestingly, in cultures that emphasize harmony over mastery.

In a next step, we check which social axioms are related to the three culture-level values. This tests our first hypothesis that the value climate of a student's culture of upbringing predicts his or her support for certain social axioms. Table 3 documents the standardized estimates of this analysis after the model was trimmed off the insignificant associations.

Table 3. Regression of Social Axioms on Cultural Values.

	Social cynicism	Reward for application	Social complexity	Fate determinism	Fate alterability	Religiosity
Embeddedness vs. autonomy			−.37***		−.19**	.58***
Hierarchy vs. egalitarianism	.13**	.23***		.22***	.21**	−.34***
Mastery vs. harmony	−.12***		.10**			
R^2	.01	.05	.11	.05	.02	.15

Note. Standardized regression coefficients; empty cells refer to insignificant associations.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed.

Table 4. Regression of HSI on Social Axioms.

	HSI
Social cynicism	.20***
Reward for application	.26***
Social complexity	−.26***
Fate determinism	.15***
Fate alterability	.08*
Religiosity	−.07
R^2	.19

Note. Standardized regression coefficients. HSI = hierarchic self-interest.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed.

Keeping in mind the bipolarity of Schwartz's culture-level value dimensions, we summarize findings on their relationship with the five social axioms as follows. Students from cultures higher on embeddedness, as opposed to autonomy, had lower preferences for social complexity ($\beta = -.37$, $p < .01$), a lower belief in fate alterability ($\beta = -19$, $p < .05$), but a higher one in religiosity ($\beta = .58$, $p < .01$). Students from cultures higher on hierarchy, as opposed to egalitarianism, exhibited a higher endorsement of beliefs in social cynicism ($\beta = .13$, $p < .05$), reward for application ($\beta = .23$, $p < .01$), fate determinism ($\beta = .22$, $p < .01$), fate alterability ($\beta = .21$, $p < .05$), but surprisingly lower scores on religiosity ($\beta = -34$, $p < .01$). With respect to the third cultural value dimension, students from cultures higher on mastery, as opposed to harmony, had lower preferences for social cynicism ($\beta = -0.12$, $p < .01$), but a stronger endorsement of social complexity ($\beta = .10$, $p < .05$). With the exception of religiosity, culture-level values account for only a small portion of the variability in social axioms.

Table 4 documents results for the influence of social axioms on HSI. Social cynicism and reward for application were positively related to HSI ($\beta = .20$, $p < .01$ and $\beta = .26$, $p = .01$, respectively), whereas social complexity was related negatively ($\beta = -.26$, $p < .01$). In addition, fate determinism and fate alterability were positively related to HSI ($\beta = .15$, $p < .01$ and $\beta = .08$, $p < .10$, respectively). Religiosity was unrelated to HSI, so it will not be included in the mediation model.

We finally come to the test of our second proposition that, once accounted for, social axioms explain away the direct impact of culture on HSI. Putting together the insights we obtained as to which culture-level value impacts which social axioms and which of the latter influence HSI, we specified a mediational structural equation model. Table 5 documents support for the assumption that the impact of culture-level values on HSI is fully mediated by social axioms.

Table 5. Regression of HSI on Cultural Values and Social Axioms.

	HSI
Cultural values	
Embeddedness vs. autonomy	−.07
Hierarchy vs. egalitarianism	.18
Mastery vs. harmony	−.09
Social axioms	
Social cynicism	.19***
Reward for application	.23***
Social complexity	−24***
Fate determinism	.12**
Fate alterability	.07*
R^2	.19

Note. Standardized regression coefficients. HSI = hierarchic self-interest.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed.

The two significant predictors of HSI as shown in Table 2, hierarchy versus egalitarianism and mastery versus harmony, lose their significance. There is an indirect effect of embeddedness versus autonomy that flows through social complexity and fate alterability ($b = .06$, $SE = .02$, $p < .01$). Here we can speak of a competitive indirect effect with respect to the direct one as they have different signs (see Table 5). There is an indirect effect of hierarchy versus egalitarianism that is channeled through social cynicism, reward for application, fate determinism, and fate alterability ($b = .09$, $SE = .02$, $p < .01$). This is an example of an indirect effect that is complementary to the direct one as their signs correspond. We observe also a complementary indirect effect of mastery versus harmony that flows through social cynicism and social complexity ($b = −.07$, $SE = .03$, $p < .01$).

The cultural value climate alone (see Table 2) is able to explain only 6% of the variation in individual value preferences. The inclusion of social axioms not only redirects the effect of culture, but also expands our understanding on the internalization process of individual value orientations ($R^2 = .19$).

Discussion

In the present study, we aimed to shed more light on the transmission of value preferences. It was suggested that the way a member of a culture believes the world *should* be (as reflected in his or her value preferences) does not directly originate from the prevalent value climate of the pertinent culture. Rather, so we argued, the latter are filtered by images of the human being (views of how the world *is*) and operate in this way as transmitters of the prevailing cultural climate.

The presented evidence renders support for our proposition. The direct associations between the cultural values that are characteristic of a person's culture of upbringing and his or her own value orientations were no longer found, once the *Menschenbild* was taken into account. Whether, for example, a person lives in a culture that emphasizes embeddedness rather than autonomy influences to what extent she or he sees the human beings as adaptive to different social contexts, which in turn determines how much of an elbow mentality she or he would find appropriate.

However, evidence is not as strong as desired. Whereas a considerable portion of the individual value preferences is accounted for by culture and more so by social axioms, a rather negligible share of the individual differences in social axioms can be attributed to the cultural climate. One reason for this may be technical as a good portion of the sample is made up by few nationalities—Germany, Romania, Bulgaria, Nepal, and the United States—whose representatives may be quite different from each other as to the endorsement of social axioms, but were assigned the same cultural value scores. The clustering correction that we applied only affects the standard errors, which has consequences for the effects' significance; yet, the slopes remain unaffected. This is to say that if we had data from a sufficient number of representatives per nationality that would allow for multilevel analysis, the association between the prevalent cultural climate and social axioms would in all likelihood be much stronger.

The studied sojourner students may not be representative exemplars of their culture of upbringing. Little is known about who from a specific cohort becomes a sojourn tertiary education student in every country represented in the present study, and who heads for the university of the authors, in particular. Alternatively, one could argue that when acting in highly diverse multicultural environments, people tend to suppress culturally shaped idiosyncrasies. As a result, what remains to matter for the individual value preferences is one's own *Menschenbild*, which is influenced only to a negligible extent by one's origins. Future research should aim to find what is behind the formation of the images of the human being, besides the culture of upbringing.

Our measurement of the culture-level value climate may be confounding nationality and socialization particularly in the case of participants with dual citizenship. We do not believe that nationality is totally unrelated to culture. Some participants in the study may indeed only have the citizenship of a country without having ever lived there, but their parents from whom they acquired it are quite likely to have transmitted parts of the culture as studies on parent–child value similarity show. It remains questionable which of the two countries of origin has left a stronger impact on the perception of cultural values. We chose to take the average of the cultural values in case of double citizenship. Future research could think of a weighting scheme with respect to a self-report measure by the participants as to which culture they feel closer to. Alternatively, participants can be asked about their own perceptions of the cultural values that are prevalent in their culture of origin.

The current article proposed and demonstrated that it is necessary to identify a filtering force, like social axioms, to better understand how and to what extent prevalent cultural values become individual value orientations. We hope that our research would inspire future studies to identify other filtering agents.

Conclusion

The study shows that merely linking culture-level value preferences and individual-level value preferences may not be enough to understand the transmission of cultural values, or in simpler terms, to understand how values cherished in a given culture become the values of the individuals belonging to the culture. How people see others, the individuals' *Menschenbild* in terms of classical German humanistic psychology, may be acting as the missing link of cultural transmission. The empirical evidence presented here suggests that the value climate of one's culture of upbringing does not directly determine one's (individual) value preferences but that it sets the stage for culturally fitting images of the human being. These in turn manifest themselves in individual value preferences. Such a notion would support long-forgotten assertions of early 20th century psychology (see Spranger, 1928, and Gordon Allport, 1937) that the worldview (*Weltanschauung*) of a person consists of one's values and conceptions of how other people truly are, which go hand-in-hand in personality formation.

Appendix

Table A1. Scores on Cultural Values and Number of Participants (*n*) Per Nationality.

Nationality	Embeddedness vs. autonomy	Hierarchy vs. egalitarianism	Mastery vs. harmony	*n*
Single citizenship				
Albania[1]	−0.03	−2.48	−0.02	2
Armenia[2]	0.14	−1.93	−0.15	2
Austria	−1.49	−3.14	−0.39	1
Azerbaijan[3]	0.33	−1.72	−0.03	2
Belarus[4]	0.03	−1.70	0.09	2
Brazil	−0.27	−2.52	−0.10	1
Bulgaria	−0.01	−1.45	−0.11	24
Canada[5]	−1.10	−2.91	0.05	4
China	0.00	−0.74	0.63	4
Colombia	−0.10	−1.79	0.37	1
Czech Republic	−0.46	−2.23	−0.52	1
Ethiopia	1.27	−2.07	−0.40	7
France	−1.56	−2.84	−0.49	1
Georgia	0.38	−2.20	−0.36	4
Germany[6]	−1.42	−3.19	−0.61	70
Ghana	1.08	−2.05	0.59	1
Hungary	−0.50	−2.57	−0.61	1
India	0.22	−1.40	0.36	5
Kenya[7]	1.13	−1.73	−0.18	2
Lithuania[8]	−0.00	−2.53	−0.61	4
Macedonia	0.29	−1.68	−0.03	7
Mexico	0.30	−2.60	−0.60	1
Moldova[9]	−0.05	−2.11	0.04	4
Morocco[10]	0.11	−2.81	−0.49	1
Nepal	0.65	−1.60	−0.21	21
New Zealand	−1.16	−2.67	0.06	1
Nicaragua[11]	−0.07	−2.58	−0.36	1
Nigeria	1.31	−2.07	0.15	6
Norway	−0.73	−3.63	−0.55	1
Pakistan	0.88	−2.21	0.01	9
Poland	0.05	−1.97	−0.02	1
Romania	−0.25	−2.48	−0.05	42
Russia	−0.09	−1.66	0.06	3
Rwanda[12]	1.13	−1.73	−0.18	2
Serbia	−0.64	−2.83	0.07	1
Slovakia	0.18	−2.58	−0.64	2
Spain	−1.02	−3.39	−0.67	1
Tanzania[13]	1.09	−1.65	−0.12	3
Tibet (China)[14]	0.33	−1.17	0.21	1
Trinidad and Tobago[15]	−0.11	−2.68	0.02	1
Turkmenistan[16]	0.16	−1.59	0.01	1
Ukraine	0.15	−1.75	0.12	2
The United States	−0.36	−2.31	0.63	16
Venezuela	−0.11	−2.68	0.02	1
Vietnam[17]	0.10	−0.90	0.33	3
Zimbabwe	0.34	−1.63	0.57	3

(continued)

Table A1. (continued)

Nationality	Embeddedness vs. autonomy	Hierarchy vs. egalitarianism	Mastery vs. harmony	*n*
Dual citizenship				
Croatia/Serbia[18]	−0.39	−2.44	0.05	1
Germany/Australia[19]	−0.97	−2.85	−0.32	1
Germany/Canada[20]	−1.26	−3.05	−0.28	1
Germany/Lebanon[21]	−0.50	−2.58	−0.09	1
Germany/Poland[22]	−0.69	−2.58	−0.32	2
Germany/The United States[23]	−0.89	−2.75	0.01	3
Kosovo/Albania[24]	−0.03	−2.48	−0.02	1
Lithuania/Bolivia[25]	0.27	−2.31	−0.43	1
The United States/ Costa Rica[26]	−0.40	−2.43	0.25	1
Uzbekistan/ Kyrgyzstan[27]	0.31	−1.48	0.14	5

Note. Geographic interpolation of scores: [1]Macedonia, Serbia, Bosnia, and Herzegovina; [2]Georgia, Russia; [3]Russia, Iran, Georgia; [4]Russia, Ukraine; [5]average of French- and English-speaking parts; [6]average of East and West; [7]Uganda, Ethiopia; [8]Latvia, Estonia; [9]Romania, Ukraine; [10]Egypt, Spain; [11]Costa Rica, Mexico; [12]Uganda, Ethiopia; [13]Ethiopia, Kenya, Uganda; [14]P.R. China, Nepal; [15]Venezuela; [16]Turkey, Russia, Iran; [17]Thailand, P.R. China; [18]Croatia, Serbia; [19]Germany, Australia; [20]Germany, Canada; [21]Germany, Lebanon; [22]Germany, Poland; [23]Germany, The United States; [24]Macedonia, Serbia, Bosnia and Herzegovina; [25]Lithuania, Bolivia; [26]The United States, Costa Rica; [27]Russia, Iran; proportion of interpolated scores in the subset of single citizenship: 17/46 = 0.37

Table A2. Items and Consistencies of Social Axiom Scales.

Social cynicism: 8 items, α = .70
   People create hurdles to prevent others from succeeding.
   People dislike others who succeed in life.
   Powerful people tend to exploit others.
   It is rare to see a happy ending in real life.
   People who become rich and successful forget the people who helped them along the way.
   Kind-hearted people usually suffer losses.
   Opportunities for people to get wealthy promote dishonesty.
   People always expect something in return for a favor.
Reward for application: 9 items, α = .80
   One will succeed if he or she really tries.
   Adversity can be overcome by effort.
   Success requires strong willpower.
   Opportunities only present themselves to those who are seeking them.
   Building the way step by step leads to success.
   Difficult problems can be overcome by hard work and persistence.
   Hard-working people will achieve more in the end.
   Endurance and determination are key to achieving goals.
   Hard-working people are well rewarded.
Social complexity: 8 items, α = .73
   One's behaviors may be contrary to his or her true feelings.
   Human behavior changes with the social context.
   A person's behavior is influenced by many factors.
   Different versions of the same reality can all be true.

Table A2. (continued)

People with different opinions can all be correct.
People may have opposite behaviors on different occasions.
A person is either good or evil, and circumstances have nothing to do with it. (reversed)
One has to deal with matters according to the specific circumstances.

Fate determinism: 5 items, α = .76

Fate determines a person's success in life.
The people whom a person will love in his or her life are determined by fate.
Fate has nothing to do with the tragedies of life. (reversed)
Fate determines one's successes and failures.
Some people are born lucky.

Fate alterability: 4 items, α = .48

Good luck follows if one survives a disaster.
There are many ways for people to predict what will happen in the future.
There are certain ways to help us improve our luck and avoid unlucky things.
Most disasters can be predicted.

Religiosity: 14 items, α = .91

Belief in a religion helps one understand the meaning of life.
Religion makes people escape from reality. (reversed)
Religious faith contributes to good mental health.
Religion contradicts science. (reversed)
Religious people are more likely to maintain moral standards.
Religious practice makes it harder to think independently. (reversed)
Religion slows down human progress. (reversed)
Religion makes people healthier.
There is a supreme being controlling the universe.
Only weak people need religion. (reversed)
Religion makes people happier.
Belief in a religion makes people good citizens.
Religion helps people make good choices for their lives.
Evidence of a supreme being is everywhere for those who seek.

Table A3. Items and Consistencies of Hierarchic Self-Interest Second-Order and First-Order Scales.

Hierarchic self-interest: Five first-order scales, α = .60

Individualism: Two items, α = .38

We would all be better off if everyone simply cared for himself or herself.
In order to excel, one must be able to stand alone.

Materialism: Two items, α = .70

Without achievement there is no happiness.
The most important thing in life is achievement.

Social comparison: Two items, α = .66

I would like to be among the best in all areas of life.
It is always my ambition to be better than the average.

Machiavellianism: Two items, α = .42

It is not important how you win but that you win.
One has to judge people's deeds according to their success.

Acceptance of social inequality: Two items, α = .47

Differences in rank between people are acceptable because they essentially illustrate what people have made of their opportunities.
By and large, I find the social differences in my country of upbringing just.

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