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# The moderator effect of age over the relations between Human Values and ZTPI

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## Abstract

The goal of this research was to explore the presumed relations between human values and Time Perspective (TP) concept and then to test the moderation effect of age category over those correlation that proved statically significant. Five general human factors of values (Status and Wealth, Spirituality and Religiosity, Adventure, Organization and Family and Intimate relationships) were assessed using the Romanian Inventory of Values. The Romanian version of Zimbardo Time Perspective Inventory – ZTPI (Zimbardo & Boyd, 1999) was then applied. The both measurements were collected from a sample of 183 persons, divided in two distinct groups of ages. Significant correlations were found between human values factors and TP. The hierarchical regression models confirmed the moderator effect of age category over many of the relations discovered initially between human values and TP facets. In conclusion, the human values an individual has acquired along his/her life seems to become a predictor of the preferred TP, but the power of prediction is often controlled by the age category.

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## 1. Introduction

The human values are considered one of the most predictive variables regarding the attitudes and behavioural evolution of individuals. There are many instruments for assessing the human values. Most of them were created using a rational approach. For example Rokeach (1973) has distinguished 18 terminal values, representing desirable

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end-states of existence, and 18 instrumental values representing desirable modes of conduct on the way to the terminal values. Another well-known taxonomy in the psychological literature was proposed by Schwartz (1992). He identified 10 factors of values: (1) Power, (2) Achievement, (3) Self-direction, (4) Hedonism, (5) Stimulation, (6) Benevolence, (7) Universalism, (8) Conformity, (9) Tradition and (10) Security.

DeRaad and Van Oudenhoven (2008) have criticized the highly subjective character of the generation process applied to obtain the initial list of values. Even the subsequent factorization process could be valid, the content validity is questionable. A subsequent problem is that some of the extracted factors are not replicated in similar researches. Lexical approach was proposed like alternative methodology to find and validate the factors of human values. In recent years, this approach succeeded in replicating cross-culturally some factors of values. For example Aavik and Allik (2002) and Renner (2003) using the same strategy came to the same results uncovering 4 equivalent factors, namely: (1) Self-enhancement/ Profit, (2) Benevolence/ Balance, (3) Broadmindedness/ Salvation, (4) Conservatism. DeRaad and Van Oudenhoven (2008) identified eight factors that were named: (1) Benevolence, (2) Love and Happiness, (3) Organization and Achievement, (4) Competence, (5) Status and Comfort (6) Aesthetics and Erudition, (7) Spirituality (8) Family and Tradition. A part of these factors were replicated by us on a Romanian sample, using a similar approach (Cretu, Burcas & Negovan, 2012).

Irrespective of the constructive strategy, it has been discovered that human values have a robust predictive value for many behaviours. For example, Feather (1995) found that values predict choosing a university course and Schwartz (1996) has shown that values predict voting for political parties. Sagiv and Schwartz (2004) found that values predict whether counselees exhibit independent versus dependent behavior throughout a number of career counselling sessions. Bardi and Schwartz (2003) have shown that "tradition and stimulation values correlate highly with common behaviours that express them, and hedonism, self-direction, universalism, and power values show reasonable associations with such behaviours. Security, conformity, benevolence, and achievement values tend to relate only weakly to common behaviours that express them." (1216).

Time Perspective was also confirmed as a strong predictor for a variety of attitudes and behaviors. The TP concept was defined by Zimbardo and Boyd (1999) as "... a fundamental dimension in the construction of psychological time, that emerges from cognitive processes partitioning human experience into past, present, and future temporal frames" (1271). The following five facets of TP construct were validated cross-culturally over the time: Past-negative, Past-positive, Present fatalistic, Present hedonistic and Future (Zimbardo & Boyd, 1999; Apostolidis & Fieulaine, 2004; Milfont et al., 2008; Diaz-Morales et al., 2006; Cretu & Negovan, 2012). Past negative factor circumscribes trauma, pain and regret. Past-positive factor reflects a warm, sentimental attitude toward the past. The Present-hedonistic reflects a hedonistic and risk-taking propensity, the person characterized by this dimension being oriented towards present pleasure, with little concern for future consequences. The Present-fatalistic reveals a fatalistic, helpless, and hopeless attitude toward the future and life, while the Future dimension of TP includes mental representations of future consequences and concerns, responsibility, striving for future goals and rewards (Zimbardo & Boyd, 1999)

Time Perspective was directly correlated both with normal and clinic personality characteristics. Karniol and Ross (1996) determined that future and past orientations of the person have impact on his/ her motivation. Nolen-Hoeksema (1995) found that the tendency of rumination about the past experience is correlated with depression. This conclusion was reiterated in a later research (Nolen-Hoeksema, Larson & Grayson, 1999). Holman and Zimbardo (2009) discovered that individuals high in Past Negative facet have a weak strategy for coping with stress, experience more conflicts and negative emotions in their life. Boyd and Zimbardo (2005) had discovered that facets of TP concept are predictive for overt behaviours (e.g. hours of study, grades received at exams, number of lies a person tells, how often the person steals) and also for happiness, shyness and temper. The authors found correlation between TP level of depression, anxiety, impulse control, self-esteem, novelty seeking etc. Other researches discovered that TP facets are predictive for the level of satisfaction in organizational settings (Antoniak, 2011).

In a previous research we tested the potential relations between some human values and the TP facets, and then we assessed the moderator effect of gender over those relations. The gender of the respondents was not confirmed as a moderator variable (Cretu, 2012). In the present research we have replicated the same design, but this time we tested if the pattern of correlations between the human values and TP factors is moderated by age category of the respondents. Our hypotheses were: *H1: The human values that an individual has internalized will be correlated*

with a specific TP facet. H2: The category of age is a moderator variable of the relations between human values and TP facets.

## 2. Method

### 2.1. Participants and procedure

The sample consisted of 183 persons who accepted to participate freely in this research. It was a convenience sample. An overall of 108 (59%) respondents were females. As the goal of our research was to compare to distinct groups of ages, we split the sample in two sub samples. In the first sub sample were included persons with ages between 15 and 20 years with a mean of 17.79 years (SD=1.27 years). This group was dummy coded by 0. The second sub sample included persons with ages between 55 and 79 years, with a mean of 58.66 years (SD=4.41years). This group was dummy coded by 1.

### 2.2. Measures

We have used Romanian Inventory of Human Values (Cretu et al., 2011), in order to assess the following five human values (alpha Cronbach in parentheses): Status and Wealth (.91), Spirituality and Religiosity (.94), Adventure (.86), Organization (.85) and Family and Intimate relationships (.77). The respondents were asked to assess for each item of value: "How important is for you this values in the present?", using a 7 points Likert scale (7=very important). They responded to a total of 30 items defining corresponding values. The Zimbardo Time Perspective Inventory (ZTPI), Romanian version, was applied to our respondents. The responses were collected using a 7-point Likert scale, ranging from very uncharacteristic (1) to very characteristic (7).

### 2.3. Data analysis

The five factors of human values and the five facets of Time Perspective (TP) were intercorrelated using Pearson coefficient. For those correlations that proved to be statistically significant and sufficiently strong we conducted a Hierarchical Regression procedure in order to test the expected moderation effect of the respondents' age category. Each value factor (one at a time) that was tested as a predictor for a specific time perspective was initially mean centered and entered in the step 1 of the regression model. Then an interaction term was created, multiplying the predictor value by the dummy coded variable of age. This variable was entered in the step 2 of the hierarchical regression model, in order to assess the moderator value of age category.

## 3. Results

We first computed all the correlations (Pearson correlation) between the five factors of human values and the five time perspective factors. The results of the correlation procedure are presented in Table 1.

Table 1 The Pearson's correlation values between five human values and ZTPI facets

	Past Negative	Present Hedonistic	Present Fatalistic	Future	Past Positive
Status & Wealth	.28**	.04**	.17*	.13	.18**
Spirituality & Religiosity	.06	.07	.37**	.31**	.12
Adventure	-.09	.40**	-.06	-.31**	.26**
Organization	.14	-.01	.11	.75**	-.07
Family & Intimate relationships	-.25**	.10	-.10	.19*	.31**

Note. N=183. \*p<.05; \*\*p<.01

As can be seen in the above table, more correlations were statistical significant, but only four of them were above .30. The correlations directions were to be expected. Thus, the correlations between Spirituality/ Religiosity and Present Fatalistic, Adventure and Present Hedonistic, Family/ Intimate relationships and Past Positive were all positive. The strongest positive relation was between Organization and Future orientation ( $r=.75, p<.01$ ).

In the next part we tested the purportedly moderation effect of age category over the correlations reported in the above table. We retained in this analysis only the correlations above .30. We built five hierarchical models of regression.

The first tested model has considered the moderation effect of age over the positive relation between values of Spirituality/ Religiosity and Present Fatalistic. The obtained results confirmed the moderator effect of age category. Thus, for Step 1, the value of  $R^2$  was significant ( $R^2=.14, p<.001$ ) and for Step 2 the value of  $\Delta R^2$  was also significant ( $\Delta R^2=.17, p<.01$ ). The value of standardised slope for moderator variable was significantly different from zero ( $\beta=.24, p<.01$ ). This model discriminates better the older people ( $R^2=.06$ ), than the younger ones ( $R^2=.23$ ).

The moderation effect of age over the positive relation between values of Adventure and the Present Hedonistic was tested in the next hierarchical model. The moderator variable had not a significant effect over this relation as long as  $R^2=.16$  for Step 1, and  $\Delta R^2=.16, p=.36$ , for Step 2 of the regression model. This model discriminates better the younger people ( $R^2=.19$ ), than older ones ( $R^2=.11$ ).

In the next model we tested the moderator effect of age category over the negative relation between values of Adventure and Future time perspective. The value of  $R^2$  was significant in the first step ( $R^2=.10, p<.001$ ), but also increased significantly in the second step of regression model, thus that  $\Delta R^2=.14, p<.01$ . The value of standardised slope for moderator variable was significantly different from zero ( $\beta=.29, p<.01$ ). This model discriminates better the younger people ( $R^2=.07$ ), than older ones ( $R^2=.005$ ).

The fourth tested hierarchical model confirmed the moderator effect of age category over the positive relation between value of Organization and Future orientation  $R^2=.56, p<.001$  and  $\Delta R^2=.58, p<.01$ . In this case, the value of standardised slope for moderator variable was significantly different from zero ( $\beta=.17, p<.01$ ). This model discriminates better the younger people ( $R^2=.64$ ), than older ones ( $R^2=.25$ ).

The last hierarchical model that we had built to test the moderation effect of age category over the positive relation between value of Family/ Intimate relations was not statistically significant:  $R^2=.09, p<.001$  and  $\Delta R^2=.10, p>.01$ .

#### 4. Discussion and conclusions

The results we obtained, confirmed partially our hypothesis. In relation with the first hypothesis, as a general trend, the five factors of values were discovered to be positively correlated with the five frames of time perspective that people live in. With one exception, the strong correlation discovered between Organization and Future, the magnitudes of the most indexes of correlation were low, but statically significant. Only one relation that exceeded the value of .30 (Adventure with Future) had a negative sign. Thus, those people characterized by a high level for the value of Organization tend to live more in the Future frame of time.

Regarding the second hypothesis, the moderator analysis revealed that the relation between value of Organization and Future TP is more specific to the younger people, compared with the older ones. Those people characterized by a higher level of Adventure tend to live in the Present Hedonistic and to ignore the Future orientation. As moderator analysis has shown, this pattern of relation is specific to the younger age group. It was also discovered that the positive relation between the value of Religiosity and the Present Fatalistic is more specific to older people than to younger ones.

We reconfirmed the fact that human values are correlated in a distinct manner with Time Perspective facets. The magnitude of the correlations discovered between these two types of variables, varies over the spectrum of ages. This fact indicates that, from a generation of age to the other, the subjective investment in a specific human value is different. The same is true for the unconscious investment in the framing process applied to the stream of experiences. We do not know exactly if the changes in the magnitude of these relations over the ages are due to some societal factors (e.g. the change of the social ideal), or to some biological factors (e.g. cognitive and affective maturation), or to an interaction between the two factors. A longitudinal study, that could assess each relation for each individual, at many moments in times, would be more suited, to have an answer to this problem.

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