# INTERRELATIONSHIPS OF PERSONAL VALUES: A MODERATED MEDIATION ANALYSIS BASED ON GENDER AND AGE

**Lyudmyla Romanyuk**
lyudmila.romanyuk@icloud.com
Taras Shevchenko National University of Kyiv, Ukraine

*Received December 24, 2017; Revised December 26, 2017; Accepted December 27, 2017*

**Abstract.** The present study describes ten personal values expressed by men and women from two countries, and it explores the relationships between two opposing values, Achievement and Benevolence, specifying Stimulation as a mediator between them. It is further explored whether such a mediation model could be further qualified by age and Gender as moderators. The 40-item Portraits Values Questionnaire (PVQ), measuring ten basic values, was administered to 1,000 young adults from two countries. Hierarchical regression methods were applied to examine mediation and moderation mechanisms.Minor gender and country differences emerged for some of the ten basic values. An indirect relationship among the three selected values was identified. Stimulation was found to operate as a mediator between achievement and benevolence. A conditional process model was established with Gender moderating the Achievement – Stimulation path (men had a steeper slope than women), whereas age moderated the Stimulation – Benevolence path (younger individuals had a steeper slope than older ones). Gender also moderated the Achievement – Benevolence path (men had a steeper slope than women). For men, the association between achievement and stimulation was stronger than for women. For the younger persons, the association between stimulation and benevolence was stronger than for older ones. For women, the level of benevolence was independent of their achievement level. The present analyses shed new light on indirect and differential associations among personal values, adding a novel perspective to research on cognitive mechanisms involved in the ten basic values' becoming.

***Keywords:*** *values, achievement, benevolence, stimulation, gender, age, moderation, mediation.*

**Романюк Людмила. Взаємозв'язки особистих цінностей: аналіз змодерованої медіації за гендерною та віковою ознаками.**

**Анотація.** Дослідження описує десять особистих цінностей, виражених чоловіками та жінками з двох країн, а також взаємозв'язок між двома протилежними цінностями: досягненням і доброзичливістю, визначаючи стимуляцію як медіатора між ними. Автор з'ясовує, чи може така модель медіації ще більше кваліфікуватись за віком та гендером як модераторами. Для вимірювання десяти основних цінностей 1000 молодих людей із двох країн використано Опитувальник портретів цінностей із 40 пунктів (PVQ). Для перевірки механізмів медіації та модерації застосовано ієрархічні регресійні методи. Менші гендерні та національні відмінності виникли за деякими з десяти основних цінностей. Виявлено непрямий зв'язок між трьома вибраними цінностями. Установлено, що стимуляція діє як медіатор між досягненнями та доброзичливістю. Модель умовного процесу була встановлена з гендером, що моделювала зв'язки досягнення–стимуляція (чоловіки мали міцніші звязки, ніж жінки), тоді як вік модерував шлях стимуляції–доброзичливості (у молодших людей виявлено міцніший зв'язок, ніж у старших). Гендер також моделював зв'язок досягнення–доброзичливість (чоловіки мали міцніші зв'язки, ніж жінки). Для чоловіків зв'язок між досягненням та стимуляцією був більш значущий, ніж для жінок. Для

© *Romanyuk, Lyudmyla (2017). East European Journal of Psycholinguistics, 4(2),84–94. DOI: 10.5281/zenodo.1156306*

молодших людей зв'язок між стимуляцією та доброзичливістю був більш значущий, ніж для старших. Для жінок рівень доброзичливості виявився незалежним від рівня досягнень. Здійснений аналіз проливає нове світло на непрямі та диференційовані асоціації серед особистих цінностей, додаючи нову перспективу для дослідження когнітивних механізмів, задіяних у становленні десяти основних цінностей.

***Ключові слова:*** *цінності, досягнення, доброзичливість, стимуляція, гендер, вік, модерація, медіація.*

## 1. Introduction

The usefulness of the personal values model by Schwartz (1992) has been confirmed by a large body of evidence. The theory distinguishes ten basic values grouped in four dimensions: self-direction, stimulation (Openness to Change), achievement, power, hedonism (Self-Enhancement), security, conformity (Conservation) and benevolence, universalism, tradition (Self-Transcendence). Schwartz's model has been examined in many samples from many cultures (Schwartz, 1992; Schwartz & Sagiv, 2000) and convincing evidence has been provided on the distinctiveness of the ten value types and the relational structure among these value types. Moreover, Parks-Leduc, Feldman, and Bardi (2015) have conducted a meta-analysis of the relationships between personality traits and the ten values, and have documented relationships that are consistent and meaningful, but not large, showing that traits and values constitute distinct constructs.

Although the theory discriminates between ten values, it postulates that values form a continuum of related motivations at a more basic level,. Power and achievement reflect motivations of social superiority and esteem; achievement and hedonism point to self-centered satisfaction; universalism and benevolence address the enhancement of others and transcendence of selfish interests; benevolence and tradition reflect the devotion to one's in-group; benevolence and conformity are related to normative behavior that promotes close relationships. This continuum gives rise to the circular structure depicted in Figure 1. The closer any two values are in either direction around the circle, the more similar are their underlying motivations; the more distant any two values are positioned, the more antagonistic their motivations are supposed to be.

Values that appear next to each other on this circumplex model are more likely to be prioritized by a person to the same extent. Whereas neighboring values of the circumplex are compatible, values on opposite sides are usually not held strongly by the same person. When one value is temporarily engaged, opposing values on the circumplex are rather to be suppressed. When one value goes up, the other tends to go down. This has been documented experimentally. For instance, people who were asked to sort words pertaining to achievement values from other words, were less likely to devote their time to extend social support which is an action associated with benevolence values (Maio et al., 2009).

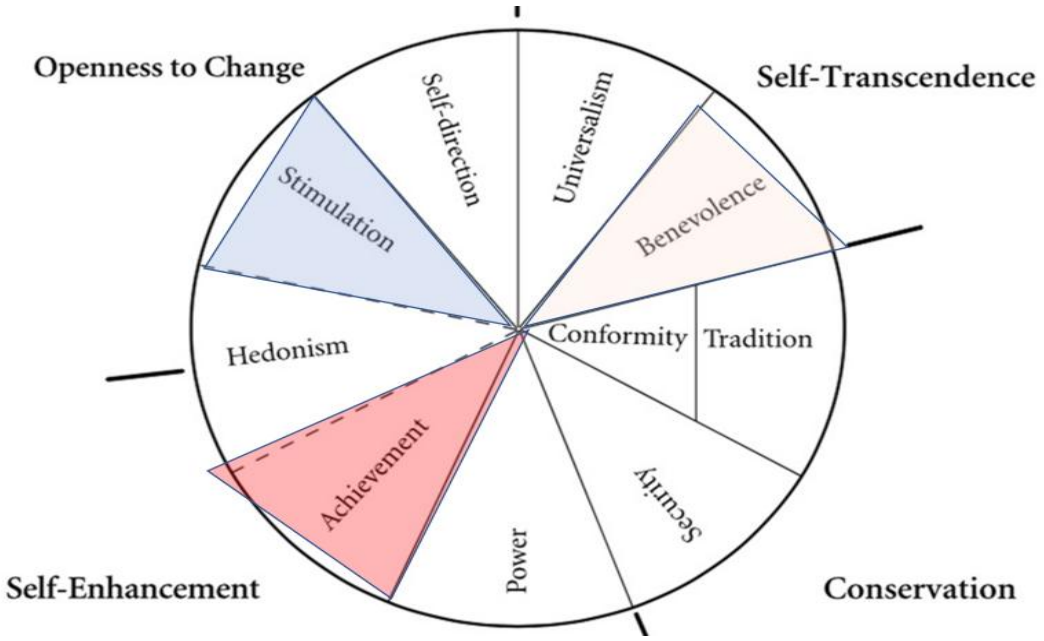


***Fig. 1.*** *Circumplex model of ten values (Schwartz, 1992), highlighting the three selected values for the present analysis: Achievement, Stimulation, Benevolence*

Although there are many studies that examine direct linear relationships among the ten values and the overall structure of the model, there is not much evidence on more fine-grained indirect relationships that might also exist among those values. The present study, thus, looks at such indirect, differential, or conditional associations that might shed further light on the interrelationships. For this exercise, we have chosen two opposing values, namely achievement and benevolence, and one factor that lies in between them in the circumplex model, namely stimulation. The general assumption is that achievement and benevolence values are unrelated, and the question is whether one could establish more indirect or complex relations that are not visible at first glance. In the following, we give a brief description of the selected values.

### 1.1. Achievement

Achievement values reflect success through demonstrating personal competence as measured in terms of social yardsticks. Most individuals value being successful, capable, ambitious, and influential. Competent action generates the resources necessary for individuals to manage life and to obtain social approval, and for groups to reach their collective objectives. Achievement values emphasize the demonstration of capability in terms of current cultural demands and standards. Subjective importance of values can be a driver of behavior. Stronger achievement values are associated with work-related actions such as taking on too many commitments (Bardi & Schwartz, 2003). In this example, an achievement motive can obstruct achievement as an outcome.

### 1.2. Stimulation

Stimulation concerns excitement, novelty, and challenge, mainly derived from a need to attain an optimal, positive, rather than threatening level of activation and human functioning (Berlyne, 1960). It pertains to an exciting, varied life, and daring to explore one ‘s environment. Stimulation can be a result of companionship or friendship. A friend has stimulation value if he or she is imaginative or interesting, or can introduce a person to new ideas or experiences. Values can be conflicting. Stimulation values tend to undermine tradition values, for instance, when people pursue novelty and change. Neighboring values are hedonism and self-direction.

### 1.3. Benevolence

Benevolence entails preserving and enhancing the welfare of people within one’s close social network. Benevolence values derive from a basic need for affiliation (Korman, 1974; Maslow, 1965) and effective group functioning (Kluckhohn, 1951). These values include caring concern for others, and the promotion of supportive and collaborative social contacts. Benevolence values reflect a motivation for such affiliative social behaviors. Values can be temporarily ‘engaged,’ when activated by experiences resulting in corresponding behaviors and attitudes. When primed for benevolence values, for example, one is more likely to react favorably to requests for donations or social support (Burgoyne & Lea, 2006; Maio, Pakizeh et al., 2009; Vohs et al., 2006). Most critical are relations within primary groups such as the family. Benevolence values accentuate voluntary concern for the welfare of others. Individuals who advocate this, value being helpful, honest, forgiving, responsible, loyal, and they also value true friendship and mature love. They also value a sense of belonging, meaning in life, and a spiritual life. Pursuing achievement values typically conflicts with pursuing benevolence values. Seeking success for oneself tends to impede actions aimed at enhancing the welfare of others in need for help. There might be a trend towards more public attention to benevolence values, as more young people attending universities; the rising use of new technologies, and political discourse that embraces benevolence values, including peace, environmentalism, social justice, equality, and honesty (Wade at al., 2011).

### 1.4. Gender and Age Differences

When establishing oneself in the worlds of work and family, in early adulthood, demands for achievement are at stake. Challenges and opportunities arise. These life circumstances foster pursuit of achievement and stimulation values at the expense of security, conformity, and tradition values. In middle adulthood, people tend to preserve established family, work, and social relations. Such life circumstances put more emphasis on security, conformity, and tradition values and less on stimulation and achievement values. With retirement and widowhood, opportunities to express achievement and stimulation values decrease while security and tradition values become more essential.

Dissimilarities in men's and women's motives and orientations are likely to be reflected by different value priorities. Specifically, they lead to the hypotheses that men more than women attribute importance to power, achievement, hedonism, stimulation, and self-direction values. Women attribute more importance than men especially to benevolence values and to universalism, conformity, and security values.

Prince-Gibson and Schwartz (1998) have studied the role of age and gender in relation to the ten basic values. They examined this in a sample representative of the Israeli Jewish population above age 19 (480 men and 519 women) revealing no main effects of gender on the importance attributed to any of ten values. Failing to find gender differences, the authors examined conditional gender differences in value priorities, if the nature and extent of such differences would vary with the extent of variation in life circumstances (such as age, ethnicity, education, marital status, socioeconomic status) within and across both genders. Yet, there were no interactions with age, education, or ethnicity. It turned out that the values had quite similar meanings for both men and women. Age, education, or ethnicity exerted substantial main effects on value priorities but there were no interactions. Their analyses were constrained to interactions among the demographic variables, and they did not look at interactions between gender and age with value constructs. Thus, in the present study, we consider interactions between selected values and gender and age within a more complex conditional process analysis.

### 1.5. Aims of the Study

The present study aims at exploring the relationships between personal values of achievement, benevolence, and stimulation, where the latter is specified as a mediator between the others that are located on opposite sides of the circumplex model. The study, thus, looks at indirect mechanisms that might shed further light on the value interrelationships. As an example, we have examined two opposing values, namely achievement and benevolence, and one factor that lies in between them in the circumplex, namely stimulation. The general assumption is that achievement and benevolence are unrelated, and the question is whether one could establish a possible mechanism to relate them indirectly, taking also age and gender into account. Stimulation could serve as a mediator between achievement and benevolence, given its location in the circumplex. Moreover, the positive association between achievement and benevolence – as well as the association between achievement and stimulation -- could be stronger for men than for women, because dissimilarities in men's and women's motives and orientations are likely to find expression as different value priorities. They lead to the hypotheses that men more than women attribute importance to power values in particular and also to achievement, hedonism, stimulation and self-direction values. Women attribute more importance than men especially to benevolence values and also to universalism, conformity, and security values. One could also expect a positive linear relation between stimulation and benevolence which might be stronger among more mature adults. The current approach is somewhat exploratory given the lack of

previous research into differential and indirect relationship among the values. The conceptual model is displayed in Figure 2.

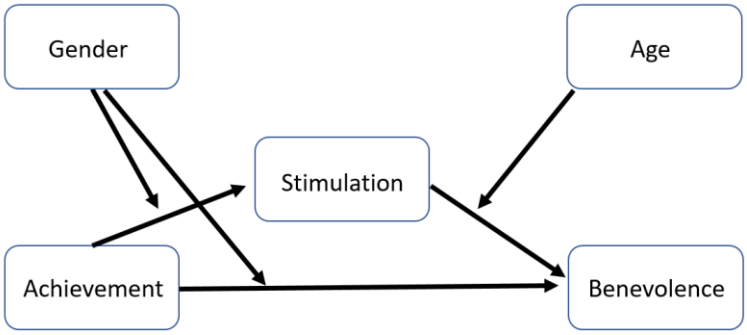


***Fig. 2.*** *Conceptual moderated mediation model with stimulation as a mediator and gender and age as moderators*

## 2. Methods

### 2.1. Participants

The sample consisted of 500 Ukranian (56.2% women) and 500 Polish students (40.0% women). The age ranged in the Ukranian sample from 18 to 24 years (M = 20.50, SD = 1.60), and in the Polish sample from 18 to 25 years (M = 20.82, SD = 2.15). The Ukranian sample consisted of students from bachelor and master degree courses, and the Polish sample were students from master and doctoral degree courses. This study was carried out in accordance with the Declaration of Helsinki.

### 2.2. Instruments

The 40-item Portraits Values Questionnaire (PVQ) measures the ten basic values ( Schwartz et al., 2001), namely self-direction (four items such as “She likes to do things in her own original way.”), stimulation (three items such as “He always looks for new things to try.”), hedonism (three items such as “He seeks every chance he can to have fun.”), achievement (four items such as “She likes to impress other people.”), power (three items such as “She wants people to do what she says.”), security (five items such as “It is important to him to live in secure surroundings.”), conformity (four items such as “He believes that people should do what they’re told.”), tradition (four items such as “She thinks it is best to do things in traditional ways.”), benevolence (four items such as “It’s very important to help the people around him.”), and universalism (six items such as “He believes everyone should have equal opportunities in life.”). Each value contains a short portrait of a person whose goals, aspirations, or wishes are related to a given value. Participants responded to each item on a six-point Likert-type scale ranging from (1) “not like me at all” to (6) “very much like me”. The scores indicate the subjective importance of values; they do not reflect that respondents manifest this value themselves but that this value is important to them such that they *value* it highly (see: being rich vs. valuing richness). The questionnaire was administered in two

versions, one for women and the other for men. The versions were identical except for the words that indicated the gender of the respondents. The internal consistencies, Cronbach's alpha, for the selected scales were α=.65 for benevolence, α=.63 for stimulation, and α=.74 for achievement.

### 2.3. Analytic Procedures

Computations were performed with SPSS 24, with the SPSS Process macro by Hayes (2013). To explore the moderated mediation hypothesis, a model was specified in which stimulation as putative mediators was regressed on achievement; whereas benevolence was regressed on achievement, moderated by age and gender, controlling for country and self-directness. Variables were mean-centred prior to analysis. Confidence intervals (95%) were generated by bootstrapping with 5,000 re-samples. To illustrate interactions, simple slope analyses were performed.

## 3. Results

### 3.1. Preliminary Descriptive Analysis

For gender and country differences in ten values scales, the means, standard deviations (SD), and significance levels are shown in Table 1 (see: Appendix). Although some differences between the countries as well as between men and women are statistically significant, due to the large sample size, there were no substantial differences because all the effect sizes ($Eta^2$) for country were below .029, and for gender differences, none of the $Eta^2$ exceeded .019. This is in line with Prince-Gibson and Schwartz (1998) who did not find significant gender differences (except for Power). Intercorrelations of the ten values scores are shown in Table 2 (see: Appendix).

### 3.2. Moderated Mediation Analysis

A conditional process model was specified that included stimulation as a mediator between achievement and benevolence, qualified by interactions with gender on the left side and with age on the right side. Of the stimulation variance, 31% were accounted for by the predictors, and of the benevolence variance, 15% were explained. The index of moderated mediation was significant (0.01, CI 95% [0.001, 0.014]), and the following unstandardized parameters were estimated. Stimulation was predicted by achievement, b=.26, CI 95% [0.19, 0.33], and the interaction of gender and achievement b=-.16, CI 95% [-0.28, -0.04]. Covariates were self-directness, b=.44, CI 95% [0.36, 0.51], and country, b=-.26, CI 95% [-0.36, -0.15] with Polish students scoring higher on stimulation than Ukrainian students.

Benevolence was directly predicted by achievement, b=-.10, CI 95% [-0.17, -0.03], the gender by achievement interaction, b=-.11, CI 95% [-0.23, -0.001], gender, b=.21, CI 95% [0.11, 0.31], stimulation, b=.12, CI 95% [0.06, 0.18], the covariate self-directedness, b=.32, CI 95% [0.24, 0.40], and the age by stimulation interaction, b=-.03, CI 95% [-0.06, -0.01]. There were no differences between

countries. Figure 3 displays the moderated mediation model with unstandardized parameter estimates.

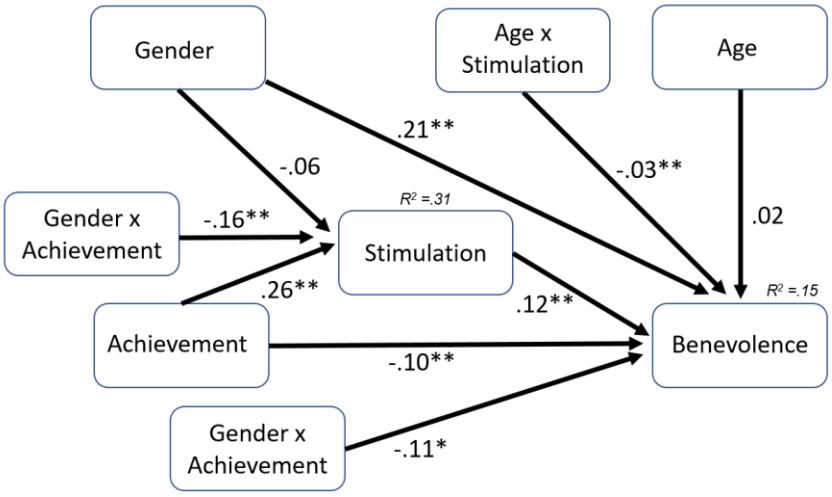


***Fig. 3.*** *Moderated mediation model based on hierarchical regressions with unstandardized parameter estimates.*
**p < 0.05, **p < 0.01*

To illustrate the three significant interactions, simple slopes analyses were performed. The relationship between achievement and stimulation was moderated by gender in a way that men had a steeper slope than women. For men, the association between achievement and stimulation was stronger than for women (see Figure 4).

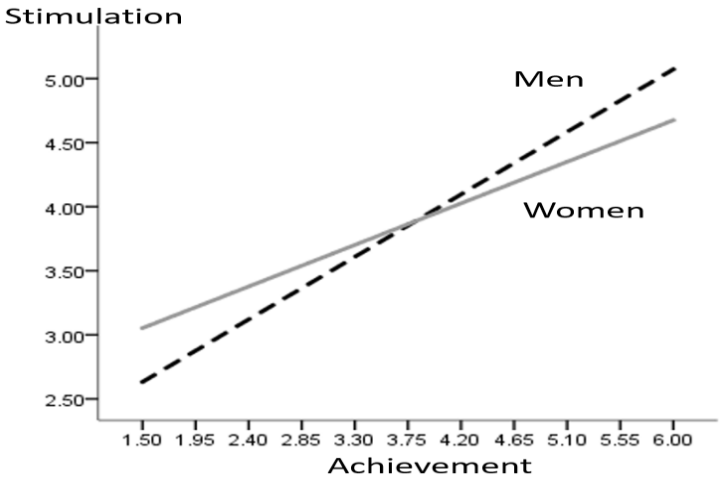


***Fig. 4.*** *Simple slope display for the interaction between achievement and gender on stimulation*

Also, the relationship between achievement and benevolence was moderated by gender in a way that men had a steeper slope than women. For men, the association between achievement and benevolence was stronger than for women (see Figure 5). For women, the level of benevolence was independent of their achievement level.

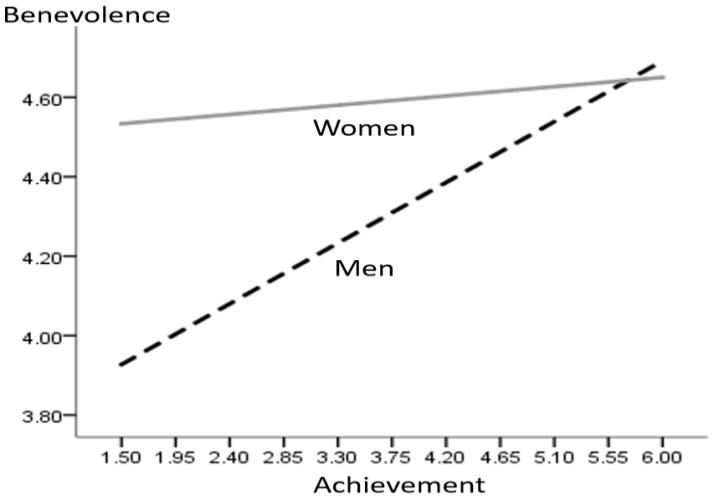


***Fig. 5.*** *Simple slope display for the interaction between achievement and gender on benevolence.*

The relationship between stimulation and benevolence was moderated by age in a way that younger individuals had a steeper slope than older ones. For the younger persons, the association between stimulation and benevolence was stronger (see Figure 6).

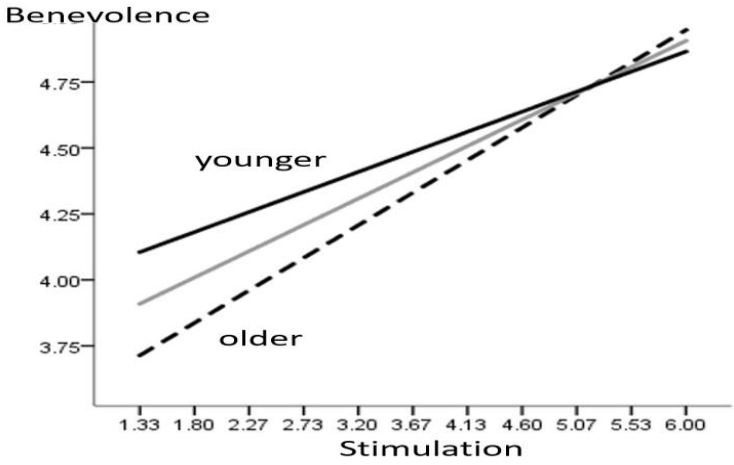


***Fig. 6.*** *Simple slope display for the interaction between stimulatin and age on benevolence.*

## 4. Discussion and Conclusions

The present analyses have explored some complex interrelationships among personal values, gender, and age, pointing to possible mechanisms that may be involved in individual differences in personal values. Earlier studies have focused on direct linear associations between the ten values and the overall circumplex structure. As an alternative to the common approaches we have aimed at examining indirect and differential relationships that may also exist among the values. As an example, we have chosen two opposing values, achievement and benevolence, and added stimulation as a mediator between these two values.

The established model describes the conditional indirect effect of achievement on benevolence (via stimulation): the mechanism through which achievement exerts its effect on benevolence is also dependent on the gender and age of the study participants.

Achievement had a very small negative direct effect on benevolence, compensated by a positive indirect effect on benevolence. This simple mediator model demonstrates that it might be useful to avoid univariate analyses of values and look also for indirect relationships among the values.

The model was further qualified by gender and age as moderators, documenting that the relationships were stronger for men than for women. When scoring low on achievement, men were also scoring low on benevolence, but this relationship did not emerge for women. Women attributed, on average, a higher value to benevolence than men, but this was independent of their achievement value level. Although men and women did not differ in terms of achievement and stimulation mean levels, the association between these two values was stronger for men than for women.

Younger individuals scored higher on benevolence than their older counterparts under the condition that they were low in stimulation.

A major limitation of the analysis lies in its exploratory nature in a cross-sectional data set that does not allow for causal inferences or temporal processes. There is a need for replication in longitudinal or experimental data to shed further light on such differential associations or conditional processes among values. Nevertheless, the present analyses shed new light on indirect and differential associations among personal values, adding a novel perspective to research on mechanisms that may be involved in the ten basic personal values.

## References

Bardi, A., & Schwartz, S.H. (2003). Values and behaviour: Strength and structure of relations. *Personality and Social Psychology Bulletin, 29*(10), 1207–1220.

Berlyne, D. *Conflict, Arousal and Curiosity*. New York: McGraw-Hill. 1960.

Burgoyne, C.B. & Lea, S.E.G. (2006). Money is material. *Science, 314*(5802), 1091–1092.

Hayes A. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York: Guilford Press.

Kluckhohn, C. (1951). Values and value-orientations in the theory of action: An exploration in definition and classification. In: *Toward a General Theory of Action,* (pp. 388-433). T. Parsons & E. Shils (Eds.), Cambridge, MA: Harvard University Press.

Korman, A. (1974). *The Psychology of Motivation*. Englewood Cliffs, NJ: Prentice-Hall.

Maio, G. R., Hahn, U., Frost, J., & Cheung, W. (2009). Applying the value of equality unequally: Effects of value instantiations that vary in typicality. *Journal of Personality and Social Psychology, 97*(4), 598–614.

Maio, G.R., Pakizeh, A., Cheung, W.Y. & Rees, K.J. (2009). Changing, priming, and acting on values: effects via motivational relations in a circular model. *Journal of Personality and Social Psychology, 97*(4), 699–715.

Maslow, A.H. (1965). *Eupsychian Management*. Homewood, IL: Dorsey.

Parks-Leduc, L., Feldman, G., & Bardi, A. (2015). Personality traits and personal values: A meta-analysis. *Personality and Social Psychology Review, 19*(1) 3–29.

Parsons, T. & Bales, R. F. (1953). *Family, Socialization, and Interaction Process.* Glencoe:

Free Press.
Prince-Gibson, E., & Schwartz, S. H. (1998). Value priorities and gender. *Social Psychology Quarterly, 61,* 49-67.
Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25,* 1-65.
Schwartz, S. H. & Sagiv, L. (2000). Value priorities and subjective well-being: Direct relations and congruity effects. *European Journal of Social Psychology, 30,* 177-198.
Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross Cultural Psychology, 32,* 519-542.
Vohs, K.D., Mead, N.L. & Goode, M.R. (2006). The psychological consequences of money. *Science, 314*(5802), 1154–1156.
Wade, M.D., Liu, L.A. & Vacek, J. (2011). Values and upward influence strategies in transition: Evidence from the Czech Republic. *Journal of Cross-Cultural Psychology, 42*(2), 288–306.

## Appendix

*Table 1*

**Comparison of ten values between men and women, and Polish and Ukrainian adults**

| | Men (n=519) | | Women (n=481) | | | Polish (n=500) | | Ukranian (n=500) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | p | Mean | SD | Mean | SD | p |
| Conformity | 3.79 | 0.84 | 3.98 | 0.75 | <.01 | 3.80 | 0.88 | 3.96 | 0.71 | <.01 |
| Tradition | 3.54 | 0.92 | 3.75 | 0.84 | <.01 | 3.49 | 0.98 | 3.79 | 0.77 | <.01 |
| Benov | 4.41 | 0.84 | 4.61 | 0.81 | <.01 | 4.51 | 0.83 | 4.50 | 0.84 | .88 |
| Univers | 4.04 | 0.79 | 4.16 | 0.72 | <.01 | 4.20 | 0.85 | 3.99 | 0.64 | <.01 |
| Self | 4.57 | 0.81 | 4.61 | 0.78 | .51 | 4.54 | 0.88 | 4.64 | 0.70 | .03 |
| Stim | 4.16 | 1.01 | 4.08 | 0.92 | .25 | 4.21 | 1.04 | 4.03 | 0.88 | <.01 |
| Hedon | 4.32 | 1.09 | 4.22 | 1.08 | .15 | 4.16 | 1.22 | 4.38 | 0.92 | <.01 |
| Achieve | 4.30 | 0.96 | 4.37 | 0.89 | .27 | 4.26 | 0.98 | 4.41 | 0.86 | <.01 |
| Power | 3.55 | 1.08 | 3.43 | 1.14 | .10 | 3.28 | 1.12 | 3.70 | 1.07 | <.01 |
| Security | 4.00 | 0.85 | 4.16 | 0.77 | <.01 | 3.99 | 0.88 | 4.17 | 0.74 | <.01 |
| Age | 20.72 | 1.98 | 20.59 | 1.79 | .29 | 20.82 | 2.15 | 20.49 | 1.58 | <.01 |

*Table 2*

**Intercorrelations of the ten values in total sample (N=1,000)**

| | Conform | Tradit | Benov | Univers | Self | Stim | Hedon | Achieve | Power | Security |
|---|---|---|---|---|---|---|---|---|---|---|
| Conform | 1.00 | .52** | .35** | .40** | .03 | -.03 | -.08* | .16** | -.04 | .44** |
| Tradition | .52** | 1.00 | .41** | .40** | .04 | .02 | -.02 | .04 | -.07* | .44** |
| Benov | .35** | .41* | 1.00 | .47** | .32** | .25** | .13** | .12** | -.12** | .23** |
| Univers | .40** | .40** | .47** | 1.00 | .26** | .14** | -.03 | .12** | -.05 | .43** |
| Self | .03 | .04 | .32** | .26** | 1.00 | .49** | .42** | .53** | .37** | .26** |
| Stim | -.03 | .02 | .25** | .14** | .49** | 1.00 | .59** | .44** | .32** | .09** |
| Hedon | -.08* | -.02 | .13** | -.03 | .42** | .59** | 1.00 | .43** | .44** | .12** |
| Achieve | .16** | .04 | .12** | .12** | .53** | .44** | .43** | 1.00 | .61** | .36** |
| Power | -.04 | -.07* | -.12** | -.05 | .37** | .32** | .44** | .61** | 1.00 | .26** |
| Security | .44** | .44** | .23** | .43** | .26** | .09** | .11** | .36** | .26** | 1.00 |

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)