

## HENRIK DOBEWALL

Human values and subjective well-being:  
An exploration of individual and cultural  
differences, change across life span,  
and self-other agreement







## **HENRIK DOBEWALL**

Human values and subjective well-being:  
An exploration of individual and cultural  
differences, change across life span,  
and self-other agreement



Department of Psychology, University of Tartu, Estonia

Dissertation is accepted for the commencement of the degree of Doctor of Philosophy (in Psychology) on June 13, 2013 by the Council of the Faculty of Social Sciences and Education, University of Tartu.

Supervisor: Anu Realo, *PhD*, Academy Research Professor  
University of Tartu, Estonia

Opponent: Klaus Boehnke, *PhD*, Professor  
Jacobs University Bremen, Germany

Commencement: August 29, 2013

Publication of this thesis is granted by the Department of Psychology, University of Tartu and by the Doctoral School of Behavioural, Social and Health Sciences created under the auspices of European Union Social Fund.



European Union  
European Social Fund



Investing in your future

ISSN 1024–3291

ISBN 978–9949–32–348–7 (print)

ISBN 978–9949–32–349–4 (PDF)

Copyright: Henrik Dobewall, 2013

University of Tartu Press  
[www.tyk.ee](http://www.tyk.ee)

## CONTENTS

LIST OF ORIGINAL PUBLICATIONS .....	6
INTRODUCTION.....	7
1. An introduction to the main concepts and to the aims of this dissertation .....	7
1.1. What are personal and cultural values? .....	7
1.2. What is subjective well-being and why is it important?.....	11
1.3. Personality traits, values, and SWB .....	13
1.4. Aims of the thesis .....	14
2. Methods.....	14
2.1. Samples .....	14
2.1.1. International comparative surveys .....	14
2.1.2. Samples drawn from the Estonian population.....	15
2.2. Measures .....	15
2.2.1. Schwartz's values .....	15
2.2.2. Inglehart's values .....	19
2.2.3. Happiness and life satisfaction.....	19
2.2.4. Basic personality traits .....	20
3. The relationship between Schwartz's and Inglehart's value theories .....	21
3.1. Maximizing the overlap between Inglehart's and Schwartz's value dimensions: A rotational approach.....	23
3.2. Analyzing Inglehart's and Schwartz's items in a joint value space .....	25
4. Human life course: Disentangling age, period, and cohort effects.....	26
4.1. Cultural differences in the relationship between age and subjective well-being.....	27
5. Self-other agreement in values and well-being .....	29
5.1. The role of personality traits in the self-other agreement in SWB .....	30
5.2. Convergence between self-report and other-report measures of personal values in comparison to personality traits.....	31
CONCLUSIVE REMARKS .....	33
ACKNOWLEDGEMENTS .....	34
REFERENCES .....	35
SUMMARY IN ESTONIAN.....	42
PUBLICATIONS.....	45
CURRICULUM VITAE.....	153

## LIST OF ORIGINAL PUBLICATIONS

- I Dobewall, H., & Strack, M.** (in press). Relationship of Inglehart's and Schwartz's value dimensions revisited. *International Journal of Psychology*.
- II Dobewall, H., & Rudnev, M.** (2013). Common and unique features in Inglehart's and Schwartz's value theories at the country and individual levels. *Cross-Cultural Research*. Advance online publication. DOI: 10.1177/1069397113493584
- III Realo, A., & Dobewall, H.** (2011). Does life satisfaction change with age? A comparison of Estonia, Finland, Latvia, and Sweden. *Journal of Research in Personality*, 45, 297–308.
- IV Dobewall, H., Realo, A., Allik, J., Esko, T., & Metspalu, A.** (2012). Self-other agreement in happiness and life-satisfaction: The role of personality traits. *Social Indicators Research*. Advance online publication. DOI: 10.1007/s11205-012-0157-y.
- V Dobewall, H., Aavik, T., Konstabel, K., Schwartz, S. H., & Realo, A.** (2013). A comparison of self-other agreement in personal values versus the Big Five personality traits. *Manuscript under review*.

### **The author of the present dissertation contributed to these publications as follows:**

- In **Studies I and II**: formulated the research questions, carried out the majority of the data analyses, and wrote manuscripts as the main author;
- In **Study III**: participated in formulating the research question, prepared data files, carried out some of the analyses, and participated in the writing of the manuscript;
- In **Studies IV and V**: participated in formulating research questions, conducted most of the data analyses, wrote manuscripts as the main author.

### **Principal aims of the studies are to:**

- identify the overlap and unique features of two widely used value theories – those of Shalom Schwartz and Ronald Inglehart (**Studies I and II**);
- disentangle age, period, and cohort effects in changes of life satisfaction (**Study III**), in order to explain cultural differences in change across the life-span;
- assess the convergence between self- and other-ratings of subjective well-being (**Study IV**) and personal values (**Study V**), both examined in relation to personality traits.

# INTRODUCTION

## **I. An introduction to the main concepts and to the aims of this dissertation**

### **I.1. What are personal and cultural values?**

Human values differ both within and between cultural groups (Rokeach, 1973), whilst the nation is seen as the key unit of shared basic values (Minkov & Hofstede, 2012). This matches with Williams' (1970) conception of cultural values as shared ideas about what is good, right, and desirable in a society. Values emphasized in a given nation have become the most central feature of understanding culture, as researchers hold them responsible for shaping and justifying the particular beliefs, attitudes, goals, and actions of individuals and groups. Put another way, everyday practices as well as institutional arrangements and policies appear to express the underlying cultural value emphases of a society (Schwartz, 2004).

Values, however, are also individual-level phenomena expressing and being expressed by people's feelings and thoughts. Most importantly, personal values were also found relating to corresponding clusters of behavior throughout a variety of contexts (see Schwartz, 2005, for a review). From the psychological perspective, personal values are seen as beliefs about "desirable, transsituational goals, varying in importance, that serve as guiding principles in people's lives" (Schwartz & Bardi, 2001, p. 269). Although distinct from other psychological constructs (Schwartz, 1992), values were found to be systematically related to personality traits (Fischer & Boer, 2013), motives (Bilsky, 2006), individual religiosity (Saroglou, Delpierre, & Dernelle, 2004), and attitudes (Boer & Fischer, 2013), for instance.

When speaking about values, this dissertation mostly complies with the theory of human values by Shalom Schwartz (1992; 1994; 2006), who first identified ten distinct types of personal values – Universalism, Benevolence, Tradition, Conformity, Security, Power, Achievement, Hedonism, Stimulation, and Self-Direction – at the individual level<sup>1</sup>, and later, seven cultural values at the level of nations (see Table 1). However, this dissertation also deals with the question of how Schwartz's value theory relates to another prominent value theory by Ronald Inglehart (**Studies I and II**, see part 3 of this introduction).

---

<sup>1</sup> In their refined theory, Schwartz and colleagues (2012) use 19 narrow defined value types.



**Table 1.** The Schwartz’s Ten Individual and Seven Culture-Level Value Types

Individual-level Value Type and its Motivational Defining Goal	Country-level Value Type and Societies’ Response to the Basic Problems in Regulating Human Activity
<i>Self-Transcendence</i> <b>Universalism:</b> understanding, appreciation, tolerance, and protection for the welfare of <i>all</i> people and for nature.  <b>Benevolence:</b> preserving and enhancing the welfare of those with whom one is in frequent personal contact (the ‘in-group’).	<i>Harmony-Egalitarianism</i> <b>Harmony</b> emphasizes fitting into the world as it is, trying to understand and appreciate rather than to change, direct, or to exploit. <b>Egalitarianism</b> seeks to induce people to recognize one another as moral equals who share basic interests as human beings.
<i>Conservation</i> <b>Conformity:</b> restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.  <b>Tradition:</b> respect, commitment, and acceptance of the customs and ideas that one’s culture or religion provides.  <b>Security:</b> safety, harmony, and stability of society, of relationships, and of self.	<i>Embeddedness</i> <b>Embeddedness:</b> people are viewed as entities embedded in the collectivity.
<i>Self-Enhancement</i> <b>Power:</b> social status and prestige, control or dominance over people and resources.  <b>Achievement:</b> personal success through demonstrating competence according to social standards.	<i>Hierarchy-Mastery</i> <b>Hierarchy</b> relies on hierarchical systems of ascribed roles to ensure responsible, productive behavior. <b>Mastery</b> encourages active self-assertion in order to master, direct, and change the natural and social environment to attain group or personal goals.
<i>Openness</i> <b>Stimulation:</b> excitement, novelty, and challenge in life.  <b>Hedonism:</b> pleasure or sensuous gratification for oneself.	<i>Autonomy</i> <b>Affective Autonomy</b> encourages individuals to pursue affectively positive experiences for themselves. <b>Intellectual Autonomy</b> encourages individuals to pursue their own ideas and intellectual directions independently.
<b>Self-Direction:</b> independent thought and action – choosing, creating, exploring.	

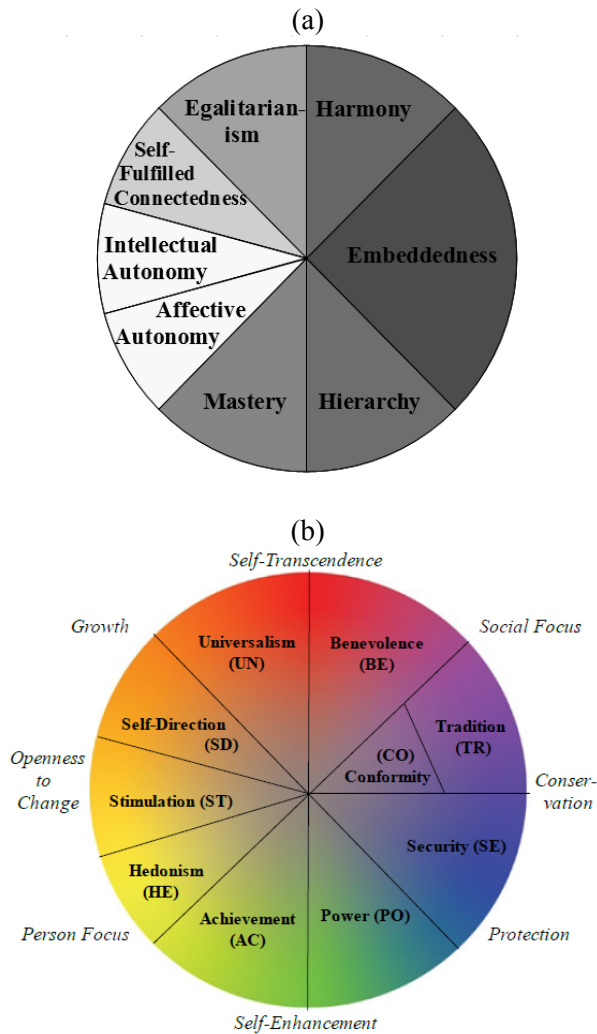
*Note.* Adapted from Schwartz (2006, pp. 140–141; 1992, pp. 5–12).

According to Shalom Schwartz, the abovementioned value types form a quasi-circular structure at both levels, as defined by the commonalities and conflicts among them (Figure 1). In other words, adjacent value types are jointly preferred; values on the respective opposite side of the circle are disliked. To give an example, Self-Direction values can serve to permit excitement (Stimulation) or to discover and understand people who are different from oneself (Universalism). On the contrary, it causes cognitive (and sometimes social) conflicts to seek pleasure for oneself (Hedonism) and at the same time give family the first priority (Tradition) (Schwartz, 1992).

Cultural values (Schwartz, 2006) are organized on three higher-order dimensions, based on the argument that values represent how groups respond to three vital societal issues: the relationship between the individual and the group (Embeddedness opposed to Intellectual and Affective Autonomy); how societies are structured so that people behave in a responsible manner, preserving the social fabric (Hierarchy vs. Egalitarianism); and the relationship of humankind to the natural and social world (Mastery vs. Harmony).

Human values represent a motivational continuum, just like the wheel of colors, rather than being discrete (Schwartz et al., 2012); therefore, it is possible to collapse them into two dimensions (Verkasalo, Lönnqvist, Lipsanen, & Helkama, 2009; **Study I**). The Self-Enhancement vs. Self-Transcendence dimension reflects whether people strive for sharing and fairness or whether they value competition and personal gain, even at the expense of others, whereas the Openness to Change vs. Conservation dimension contrasts novelty and expression of intellectual, behavioral, and emotional autonomy with communal-tied preferences for self-restriction and order. Further, although the individual-level structure has ten values as compared to seven value types at the cultural level, culture-level values "...are organized into the same two basic dimensions that organize individual-level values" (Schwartz, 1994, p. 101).

Schwartz (2005) reviewed and empirically underpinned the link between values and demographic characteristics like education, gender, and age, which holds across a variety of countries. From a cross-cultural point of view, an important issue is the similarity of value structures across countries. This similarity, called structural invariance, is a precondition for conducting comparative research because, otherwise, the measures in question do not have the same meaning for all respondents (Byrne, Shavelson, & Muthén, 1989; Steenkamp & Baumgartner, 1998). Human values are supposed to fulfill this requirement "because they are grounded in one or more of three universal requirements of human existence", namely, "needs of individuals as biological organisms, requisites of coordinated social interaction, and survival and welfare needs of groups" (Schwartz, 1992, p. 4).



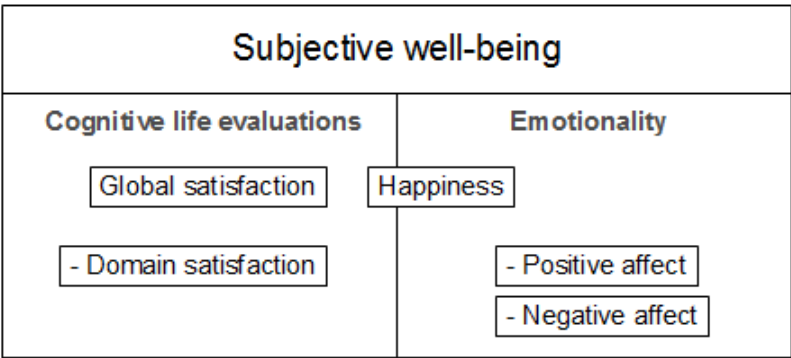
**Figure 1.** Schwartz's prototypical value structures at the (a) country and (b) individual levels. *Note.* Adopted from Schwartz (1992, 2006). At the country level, a recently identified value type – Self-Fulfilled Connectedness – was added (Vauclair, Hanke, Fischer, & Fontaine, 2011). At the individual level, the labels of the diagonal axes were added – Growth vs. Protection and Personal vs. Social Focus (Fontaine, et al., 2008).

Recent research (e.g., Davidov, 2008; Perrinjaquet, Furrer, Usunier, Cestre, & Valette-Florence, 2007; Steinmetz, Isidor, & Baeuerle, 2012) demonstrated that some samples do not fit the proposed quasi-circular structure, but there is also strong support in the literature for the contention that values are structured in similar ways across cultures (Bilsky, Janik, & Schwartz, 2011; Fontaine, Poortinga, Delbeke, & Schwartz, 2008; Schwartz, 1992). The functions of

values might vary nevertheless along with important economic, contextual and historical factors (Fischer, Milfont, & Gouveia, 2011; Strack & Dobewall, 2012).

### 1.2. What is subjective well-being and why is it important?

Early research in happiness established well-being as an important value for most people. “If happiness be one of the major goals of living, if not the only consciously acceptable end of life itself /.../, surely an analysis of the conditions fostering or hindering its attainment is an intellectual obligation of the first order, since upon it rests the merit of all other human and social values” (Hartmann, 1934, p. 203). A vast amount of work, therefore, has tried to find out what factors enhance people’s happiness and sense of well-being (Seligman, Steen, Park, & Peterson, 2005, for a review).



**Figure 2.** The components of subjective well-being (SWB).

In recent decades, much of researchers’ attention has focused on the construct of subjective well-being (SWB), which, according to Diener and colleagues (2003), is simply the scientific name for how people evaluate lives, and equates to what lay people call satisfaction or happiness.<sup>2</sup> Diener (1984) proposed that SWB has three components or facets such as life satisfaction, positive emotionality, and (lack of) negative emotionality, but the exact structure of SWB is still an object of debate (Busseri & Sadava, 2011). Figure 2 describes the structure of SWB in a simplified model, which does not assume any causal relationships between the components.

During the last years, interest in societies’ performance on SWB indicators has risen among the public as well as in academia (Forgeard, Jayawickreme, Kern, & Seligman, 2011; Michaelson, Abdallah, Steuer, Thompson, & Marks,

<sup>2</sup> Following this definition of SWB, the three terms —SWB, life satisfaction, and happiness— are used interchangeably in this thesis.

2009). Indicators of life satisfaction or SWB are used to comprehend classical measures of societal success like the Gross Domestic Product (GDP) (World Bank, 1978–2013) or the Human Development Index (UNDP, 1990–2011). National levels of SWB are today a well-studied topic and country rankings on happiness and life satisfaction scales (e.g., Diener & Oishi, 2004; Inglehart, Foa, Peterson, & Welzel, 2008; Veenhoven, 1996) receive wide media coverage whenever published. On maps of world happiness (White, 2007), North America and Australia generally rank high, followed by Europe and South America, while Asian and African countries show relatively low average levels of SWB. There is also variation within these regions; for example, whilst Northern European welfare states often take a leading position in cross-national comparisons, Eastern European countries score much lower on SWB measures due to their distinct political past<sup>3</sup> (Inglehart, et al., 2008; **Study III**).

At the cultural level, individualism vs. collectivism (Hofstede, 2001; see **Study I**, for a discussion of the relationship between different measures of this dimension) and GDP, as well as democracy and perceived free choice, all relate to high SWB scores of nations (Diener et al., 2003). Fischer and Boer (2011) were further able to show that autonomy is even more important for national well-being than affluence. Therefore, it is not surprising that many researchers and, especially, policy makers believe that happiness and life satisfaction are better indicators of the quality of people's lives and societal success than an increase in GDP is (Aldrick, 2009; Karma, 2008).

Concentrating on individuals, there are several known determinants of SWB. Demographic variables like marital status or religiosity and other individual attributes of a person, like optimism or personality traits, have consistently been found to relate to SWB, while associations with other socio-demographic variables, like gender or age (**Study III**), tend to depend on the well-being measure used or the culture studied (Diener, Suh, Lucas, & Smith, 1999). SWB has gained importance because happiness not only relates to a variety of positive outcomes, such as good health and a long life, for instance, but also because it leads to individual success (Lyubomirsky, King, & Diener, 2005). However, there is increasing evidence that SWB is heritable. As shown by Weiss and colleagues (2008), genes account, on average, for about half of the variation in individuals' level of happiness.

---

<sup>3</sup> For some countries it was documented that what followed the fall of communism – radical social and economic reforms, economic hardships, insecurity, etc. – caused declining life satisfaction, making it most unlikely that some fixed cultural predisposition of Eastern Europeans accounts for these level differences.

### **1.3. Personality traits, values, and SWB**

According to the Five Factor Theory (McCrae & Costa, 1990) of personality, personality traits are enduring tendencies to behave, think, and feel in consistent ways. The five factors (domains) – Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness – are measured by 30 more specific personality facets and their structure replicates well across countries (McCrae et al., 2004). Of the basic personality traits, Extraversion and Neuroticism exert substantial influence on the affective and also, to a lesser degree, the cognitive component of SWB (Diener et al., 1999). Previous studies (see DeNeve, & Cooper, 1998 for a review) additionally identified a wide range of narrower personality variables theoretically related to the Big Five factors of personality, such as dominance sociability or warmth, to name a few, that correlate with happiness.

Therefore, it is not surprising that Haslam and colleagues (2009) found Schwartz's values to be less strongly correlated with various measures of SWB as compared to the Big Five personality traits, whilst the latter even accounted for (i.e., mediated) the effects of values on SWB. The authors pointed out that values, nevertheless, have important "indirect associations with SWB through their interactions with other psychological and social variables" (Haslam, Whelan, & Bastian, 2009, p. 42). As mentioned above, previous research on well-being has shown that personality traits explain "a substantial amount of interindividual variance in SWB. However, these studies are limited in their ability to explain the underlying processes of SWB" (Oishi, Diener, Suh, & Lucas, 1999, pp. 164-165). Longitudinal value change, however, was found to be able to account for positive change in psychological well-being (Sheldon, 2005). In the same vein, a recent longitudinal study (Headey, Muffels, & Wagner, 2010) showed that long-term happiness can be substantially affected by personal (and economic) choices, indicating that SWB is not solely dependent on one's so-called set-point of happiness. Therefore, in addition to the genetic or dispositional component of SWB, there remains a lot of room for change across the life-span as well as for other factors to influence people's SWB, including situational factors, other psychological constructs, etc. (Lucas, 2007).

There is a general consensus about how values link to SWB, which can be summarized to three main perspectives: healthy vs. unhealthy values (universally leading to or undermining well-being, respectively), goal attainment (all values endorsed by a person can influence SWB independent of their motivational underpinning), and a congruence perspective (in which the fit between personal values and the values prevailing in the environment is seen as crucial to SWB) (see Sagiv, Roccas, & Hazan, 2004, for a review). Empirically, measures of SWB as well as "ill-being" (e.g., depression) are, indeed, located very centrally in the value space (Bilsky & Schwartz, 1994). Moreover, the values which have a negative (or positive) effect on SWB seem to vary across cultures dependent on a nation's contextual characteristics (Sortheix & Lönnqvist, in press).

## **I.4. Aims of the thesis**

The current doctoral thesis examines values and SWB from three perspectives: The first research question (see part 3 of this introduction) is how the set of value dimensions proposed by Shalom Schwartz (1992; 2006) relates to a conceptually and methodologically different set of value dimensions proposed by Ronald Inglehart (Inglehart & Baker, 2000), both at the individual and cultural levels (**Study I** and **Study II**). An answer to this research question will allow us to state the maximum amount of overlap between Schwartz's and Inglehart's value dimensions. Further, I examine if their items form common dimensions or whether they capture unique values content. At the cultural level, the results can be compared to earlier studies (e.g., Schwartz, 2006; Inglehart & Oyserman, 2004), whilst at the individual level, research (e.g., Beckers, Siegers, & Kuntz, 2012, Datler, Jagodzinski, & Schmidt, 2013; Welzel, 2010; Wilson, 2005) has only started to understand the similarities and differences between Schwartz's and Inglehart's value theories.

The second aim of this thesis is to examine change in life satisfaction across the life-span (**Study III**/part 4 of this introduction) in geographically and culturally close, yet politically and economically different Northern European countries – Estonia, Finland, Latvia, and Sweden. The main research question is whether or not, and to what extent, life satisfaction follows similar age trends across the four abovementioned countries.

The third research question of the thesis asks how life satisfaction and happiness (**Study IV**) as well as values (**Study V**) are perceived from the self- and observer-perspective (i.e., based on ratings of informants who know the target well) in relation to personality traits (see part 5 of this introduction). More specifically, the aim is to clarify if the degree of self-other agreement in SWB is partially based on self- and other-rated personality facet scores; and whether the self-other agreement in personal values is at a comparable level with basic personality traits. This agreement, then, shows whether observers can judge other people's values with some accuracy.

## **2. Methods**

### **2.1. Samples**

#### **2.1.1. International comparative surveys**

One of the oldest available cross-national datasets is the *European Values Study* (EVS). Since its start in 1981, the EVS ([www.europeanvaluesstudy.eu](http://www.europeanvaluesstudy.eu)) investigates changes in how Europeans think about life, family, work, religion, politics, and society. Surveys are conducted every 9 years; **Study III** used the first three waves. In 1990, the EVS was integrated into the *World Values Survey* (WVS). The WVS ([www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)) is carried out in an effort to compare values and attitudes of people living around the world. So far, five

waves have been conducted on all six inhabited continents and cover nations that represent more than 80% of the world's population. **Study III** compares EVS/WVS data (1982 to 2008–2009) from Estonia, Finland, Latvia, and Sweden, while **Studies I** and **II** used WVS data ( $N = 46,444$ ) collected in no less than 47 nations (with Germany split into East and West) in the years 2005 to 2008.

Data from the first four rounds (2002–2008) of the biannual *European Social Survey* (ESS) were used. The ESS ([www.europeansocialsurvey.org](http://www.europeansocialsurvey.org)) was designed to observe the interaction between Europe's changing institutions and the attitudes, beliefs, and behaviors of its inhabitants. From the full sample, which includes over 30 nations, the same four nations were selected for **Study III** (total  $N = 39,420$ ).

### **2.1.2. Samples drawn from the Estonian population**

**Study IV** analyzed data ( $N = 1,251$ ) collected by the Estonian Genome Center, University of Tartu ([www.geenivaramu.ee](http://www.geenivaramu.ee)) (see Allik, Realo, Möttus, Esko, Pullat, & Metspalu, 2010). Participants were recruited (after random selection) from individuals visiting general practitioners' offices and hospitals. They donated blood samples and completed a medical questionnaire; additionally, participants were asked to report their SWB and to complete a personality test. Informant reports were collected from acquaintances, friends, and family members who knew the target well.

**Study V** was based on self- and other-reports from two relatively small samples with  $N$ s of about 100. The participants reported demographic information, their personal values, and personality traits. Well-acquainted informants provided other-ratings on the same instruments.

## **2.2. Measures**

### **2.2.1. Schwartz's values**

The original Schwartz Values Survey (SVS; 1992) uses importance ratings to assess people's guiding principles in life (e.g., "mature love") (used in **Study II**). The instrument consists of 56 items of which 45 are used to compare nations (Schwartz, 1994).

The Portrait Values Questionnaire (PVQ) (Schwartz, Melech, Lehmann, Burgess, & Harris, 2001), developed later, is especially suitable for representative and cross-national samples because it measures values in a less abstract way: indirectly through a comparison task with a fictive person's goals, aspirations, and wishes. Respondents had to decide how much the described person was like them (self-rated form) or like the target (informant form) using the 21-item shortened version of the PVQ that is included in the core questionnaire of the ESS (used in **Study V**). The ESS PVQ has relatively low internal consistency coefficients due to the small number of items used to



measure each scale and their intentional heterogeneity (i.e., resulting in a low average inter-correlation among the items), ranging from .36 to .70 for the ten specific value types and from .69 to .75 for the higher-order values (Schwartz, 2007).

**Studies I and II** were based on a 10-item version of the PVQ as assessed in the fifth wave of the WVS. Table 2 lists the portraits of the both PVQ instruments in their exact wording. A comparison of the PVQs used in the ESS and the WVS indicates that one item for each value type might not fully capture all varieties of a segment of the value circle and that the WVS instrument has, in some cases, strongly diverging wording (e.g., the Benevolence item). For instance, the selected Universalism item captures only the concern for nature component of the Universalism value, omitting the two other components (understanding and social concern). Cronbach alphas of the four higher-order values, calculated on the basis of the pooled sample, were very low, ranging from .38 (Openness to Change) to .51 (Conservation).

**Study V** also administered the *Estonian Value Inventory* (EVI; Aavik & Allik, 2002), which is a culture-specific value measure (i.e., a native language-based set of value-laden nouns) referring to the same 2-dimensional structure like the Schwartz's value measures described above, but including a value factor – Self-Realization – not captured in Schwartz's theory. The other EVI factors were labeled as follows: Benevolence (parallel to Schwartz's Benevolence/Tradition), Self-Enhancement (Power/Achievement), Broadmindedness (Universalism), Hedonism (Hedonism/Stimulation), and Conservatism (Conformity/Security). Alphas of the six EVI scales were in the range of .78 and .86 (Aavik & Allik, 2002). For the observer reports, the value questions were changed accordingly.

**Table 2.** A Comparison of the Portrait Value Questionnaires: European Social Survey versus the World Values Survey

ESS PVQ with 21 items	WVS PVQ with 10 items
<i>Universalism</i>	
He/She thinks it is important that every person in the world be treated equally. He/She believes everyone should have equal opportunities in life.	
It is important to him/her to listen to people who are different from him/her. Even when he/she disagrees with them, he/she still wants to understand them.	
He/She strongly believes that people should care for nature. Looking after the environment is important to him/her.	Looking after the environment is important to this person; to care for nature.
<i>Benevolence</i>	
It is very important to him/her to help the people around him/her. He/She wants to care for their well-being.	It is important to this person to help the people nearby; to care for their well-being.
It is important to him/her to be loyal to his/her friends. He/She wants to devote him-/herself to people close to him/her.	
<i>Conformity</i>	
He/She believes that people should do what they're told. He/She thinks people should follow rules at all times, even when no one is watching.	
It is important to him/her always to behave properly. He/She wants to avoid doing anything people would say is wrong.	It is important to this person to always behave properly; to avoid doing anything people would say is wrong.
<i>Tradition</i>	
It is important to him/her to be humble and modest. He/She tries not to draw attention to him-/herself.	
Tradition is important to him/her. He/she tries to follow the customs handed down by his/her religion or his/her family.	Tradition is important to this person; to follow the customs handed down by one's religion or family.
<i>Security</i>	
It is important to him/her to live in secure surroundings. He/She avoids anything that might endanger his safety.	Living in secure surroundings is important to this person; to avoid anything that might be dangerous.
It is important to him/her that the government insures his/her safety against all threats. He/She wants the state to be strong so it can defend its citizens.	

**Table 2.** Continues

ESS PVQ with 21 items	WVS PVQ with 10 items
<i>Power</i>	
It is important to him/her to be rich. He/She wants to have a lot of money and expensive things.	It is important to this person to be rich; to have a lot of money and expensive things.
It is important to him/her to get respect from others. He/She wants people to do what he/she says.	
<i>Achievement</i>	
It is important to him/her to show his/her abilities. He/She wants people to admire what he/she does.	
Being very successful is important to him/her. He/She hopes people will recognize his/her achievements.	Being very successful is important to this person; to have people recognize one's achievements.
<i>Stimulation</i>	
He/She likes surprises and is always looking for new things to do. He/She thinks it is important to do lots of different things in life.	
He/She looks for adventures and likes to take risks. He/She wants to have an exciting life.	Adventure and taking risks are important to this person; to have an exciting life.
<i>Hedonism</i>	
Having a good time is important to him/her. He/She likes to 'spoil' him-/herself.	It is important to this person to have a good time; to "spoil" oneself.
He/She seeks every chance he/she can to have fun. It is important to him/her to do things that give him/her pleasure.	
<i>Self-Direction</i>	
Thinking up new ideas and being creative is important to him/her. He/She likes to do things in his/her own original way.	It is important to this person to think up new ideas and be creative; to do things one's own way.
It is important to him/her to make his/her own decisions about what he/she does.	
He/she likes to be free to plan and not depend on others.	

*Note:* PVQ = Portrait Value Questionnaire; ESS = European Social Survey; WVS = World Values Survey.

### 2.2.2. Inglehart's values

Inglehart (1997) initially used factor scores based on 22 variables to derive the two cultural level dimensions of the Cultural Map of the World. Inglehart and Baker (2000) reduced them to the ten variables listed in Table 3. Inglehart and colleagues (Inglehart & Baker, 2000; Inglehart & Welzel, 2005) therefore measure values as being reflected in people's attitudes, beliefs, and behaviors.<sup>4</sup> The same variables were used for individual level analyses to produce a similar 2-dimensional value structure (Inglehart & Baker, 2000).

**Table 3.** The Ten Items for Inglehart's Dimensions

<i>Secular-rational values vs. Traditional authority</i>	
1.	How important is God in your life? ['not at all' 1 ... 'very important' 10]
2.	Abortion is never justifiable ['never justifiable' 1 ... 'always justifiable' 10]
3.	How proud are you to be (nationality)? ['very proud' 1 ... 'not proud at all' 4]
4.	Showing greater respect for authority is ['good thing' 1 ... 'bad thing' 3]
5.	It is more important for a child to learn independence and determination than obedience and religious faith (i.e. Autonomy index) [-2 to +2]
<i>Self-expression vs. Survival values</i>	
1.	Taking all things together, would you say you are ['very happy' 1 ... 'not happy at all' 4]
2.	Signing a petition ['have done' 1 'Might do' 2, 'would never do' 3]
3.	Homosexuality is never justifiable ['never justifiable' 1 ... 'always justifiable' 10]
4.	General trust in people. ['Most people can be trusted 1', 'Can't be too careful' 2]
5.	Respondent gives priority to self-expression and quality of life over economic and physical security (i.e. Materialism – Postmaterialism index) ['materialist' 1, 'mixed' 2, 'postmaterialist' 3].

### 2.2.3. Happiness and life satisfaction

In this dissertation, two single items of happiness and life satisfaction, employing slightly different wording, were used (see, **Studies III** and **IV**, for a detailed discussion of their validity and reliability). The exact wording of the SWB items is presented in Table 4.

In **Study III**, the single item life satisfaction measures included in the EVS, WVS, and the ESS were analyzed. The items in the WVS/EVS and ESS have almost identical phrasing. Unfortunately, the questions assess life satisfaction with a different number of scale points. Therefore, in **Study III**, the 11-point scale from the ESS was adjusted to the 10-point scale from the WVS. The

<sup>4</sup> According to Schwartz's definition of values, these items would not belong to the domain of values as they do not represent motivational goals.

SWB-measure was then cross-validated against the ICS2001 dataset (Kuppens, Realo, & Diener, 2008), the latter using the multi-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985).

**Study IV** assessed a person’s happiness and life satisfaction in a self-rated and an other-rated form with single item measures.

**Table 4.** *SWB Measures Used in this Dissertation*

Self-Ratings	Other-Ratings
<i>Study III</i>	
<i>Life-satisfaction (EVS/ WVS):</i> All things considered, how satisfied are you with your life as a whole these days?	
<i>Life-satisfaction (ESS):</i> All things considered, how satisfied are you with your life as a whole nowadays?	
<i>Study IV</i>	
<i>Life-satisfaction:</i> All things considered, how satisfied are you with your life as a whole nowadays?	<i>Life-satisfaction:</i> All things considered, how satisfied is she/he with her/his life as a whole nowadays?
<i>Happiness:</i> Taking all things together, how happy would you say you are?	<i>Happiness:</i> Taking all things together, how happy would you say she/he is?

*Note.* EVS = European Values Survey; WVS = World Values Survey; ESS = European Social Survey. For the happiness item used in the WVS, please see Table 3.

#### 2.2.4. Basic personality traits

**Study IV** measured personality traits with the Estonian version of the NEO Personality Inventory-3 (NEO-PI-3; McCrae, Costa, & Martin, 2005). The NEO-PI-3 measures the basic five personality domains and also the more specific 30 personality trait facet scores, being assessed with 240 balanced items. Internal consistencies of this inventory are commonly good, being above .87 for the domains and ranging from .48 to .84 for the facet scores (McCrae et al., 2005).

In **Study V**, another measure of personality traits was used – the ‘Short Five’ personality inventory (S5; Konstabel, Lönnqvist, Walkowitz, Konstabel, & Verkasalo, 2012) – assessed with few (60) yet relatively long and comprehensive items. Alphas of the Big Five personality traits of the S5 range from .74 to .89 (Konstabel et al., 2012).

The NEO-PI-3 and the S5 were administered to the participants and informants in a self-report or an observer-report form, respectively.

### **3. The relationship between Schwartz's and Inglehart's value theories**

Research has identified several basic cultural (value) dimensions on which nations differ. Some cultural theories differentiate between as few as two (Bond et al., 2004; Inglehart & Baker, 2000), five (Hofstede, 2001), seven (Schwartz, 2006), or no less than nine dimensions (House, Hanges, Javidan, Dorfman, & Gupta, 2003). As already said above, the specific interest of the current thesis is the comparison of value dimensions and value theories by Shalom Schwartz (e.g., 1992; 2006) and Ronald Inglehart (e.g., Inglehart & Baker, 2000; Inglehart & Welzel, 2005). The ten most highly cited publications of these two authors alone, according to *Google Scholar* (as at 5 May 2013), account cumulatively for more than 46,000 citations, indicating their significant influence on contemporary social sciences and a remarkable acceptance of their theories. The meaning and measurement of values, however, differs from one theory to the other.

According to Inglehart (1997), economic development is linked with coherent, and, to some extent, predictable changes across a wide range of political, social, and religious norms and beliefs. Inglehart's value orientations reflect the basic life experiences of people, formed at an early age, which provide guidelines to master life in a given society (Inglehart & Welzel, 2005). The two dimensions spanning the Cultural Map of the World explain a large part of cross-cultural variation (Inglehart & Baker, 2000).

Two conceptual differences between Inglehart's and Schwartz's value theories are most noteworthy. Firstly, Inglehart views values and their manifestations as indistinguishable. Problems emerge when correlating his dimensions with other constructs such as SWB, for instance, of which some elements, namely happiness, are already included in one of the Inglehart's dimensions (see e.g., Kuppens et al., 2008; Datler, Jagodzinski, & Schmidt, 2013, for a similar argument). Schwartz defines values more narrowly and, therefore, his cultural values can be related to any culture-level indicator of behavior or attitudes, including the average level of happiness and life-satisfaction.

Secondly, these two approaches can be considered to be conceptually different, as Schwartz's theory focuses more on values as an aspect of people's personality (cf. Bilsky & Schwartz, 1994), whereas Inglehart's approach focuses more on underlying institutional processes (e.g., Inglehart & Welzel, 2005).

Despite these differences, there is strong agreement among comparative social scientists that, at the cultural level, Schwartz's Autonomy vs. Embeddedness and Inglehart's Self-Expression vs. Survival value dimensions draw on the same cultural emphases of a society: autonomous human choice (Inglehart & Oyserman, 2004). This dimension on which cultures differ is most widely known as the opposition between individualism and collectivism

(Hofstede, 2001). However, the correlational pattern of Schwartz's other cultural value types and Inglehart's two dimensions was inconclusive, ranging from  $r = -.41$  to  $.73$  (Schwartz, 2006). If correlations leave space for speculations and two instruments have, without a doubt, several conceptual similarities (discussed in **Study II**), it is theoretically possible that they measure basically the same spectrum of a psychological construct, but that the alignment of the dimensions defining this spectrum might be different (Schmitt et al., 2007).

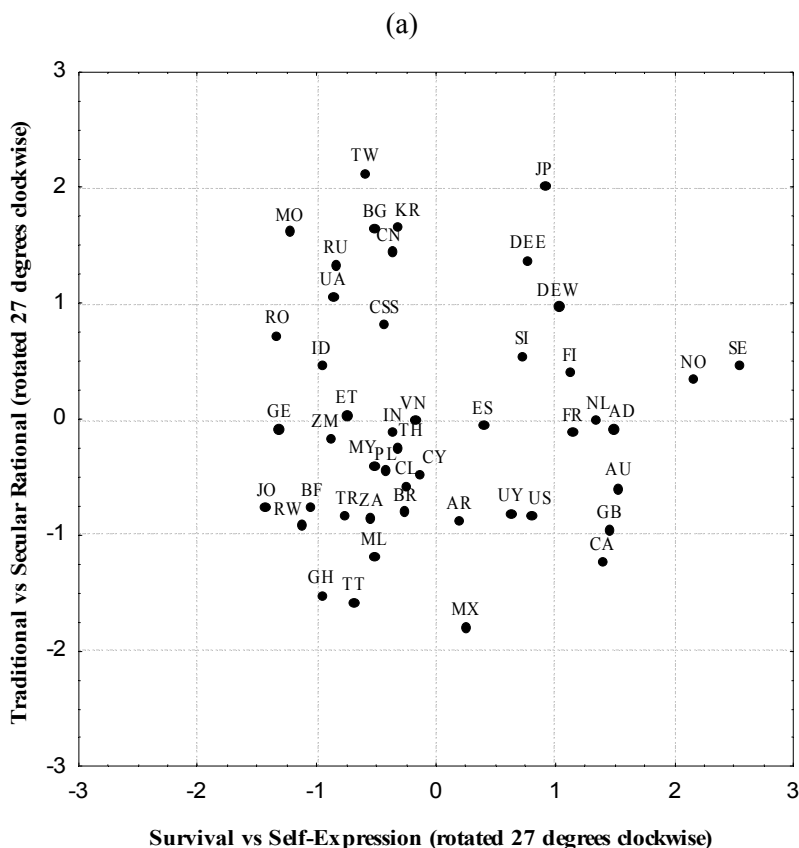
Even though more and more studies have been published on this topic over the past few years (Beckers, Siegers, & Kuntz, 2012; Datler, Jagodzinski, & Schmidt, 2013; Welzel, 2010; Wilson, 2005), there is still less known about the relationship between Schwartz's and Inglehart's value dimensions at the individual level. Recently, Beckers, Siegers, and Kuntz (2012) compared Schwartz's and Inglehart's indicators. After studying the links between these values and several dependent variables, they concluded that Schwartz's values are a more powerful instrument than Inglehart's dimensions. Datler and colleagues (2012) assessed the validity of Inglehart's and Schwartz's value dimensions using representative West German data (WVS/ESS). Both value theories were able to predict a large part of the variation in specific attitudes and behavior, but, contrary to Beckers and colleagues' (2012) interpretation, they found Inglehart's dimensions to have a higher exploratory power, although Schwartz's model seemed to be more internally consistent.

The fifth wave of the WVS (see the note of Figure 3 for the included nations) includes both measures of Schwartz's value circle (Table 2) and the indicators for Inglehart and Baker's (2000) dimensions (Table 3). Both **Study I** and **Study II** aimed to answer the research question of how the two value theories by Schwartz and Inglehart relate both at the individual and cultural levels, using two different analytical strategies. By rotating the value structures towards one other, **Study I** aimed to highlight their conceptual similarities and, at the same time, to maximize their correlations. Such rotation is possible because the orientation of orthogonal axes in a 2-dimensional space is arbitrary. **Study II** was designed to find the substantive associations between Schwartz's and Inglehart's items that have remained undiscovered by earlier comparisons and to identify the value content which is not covered by the respective other value theory. This was done by analyzing their items jointly by means of a multi-dimensional scaling technic, which allows visualization of similarities or dissimilarities in a correlation matrix of all 20 variables.

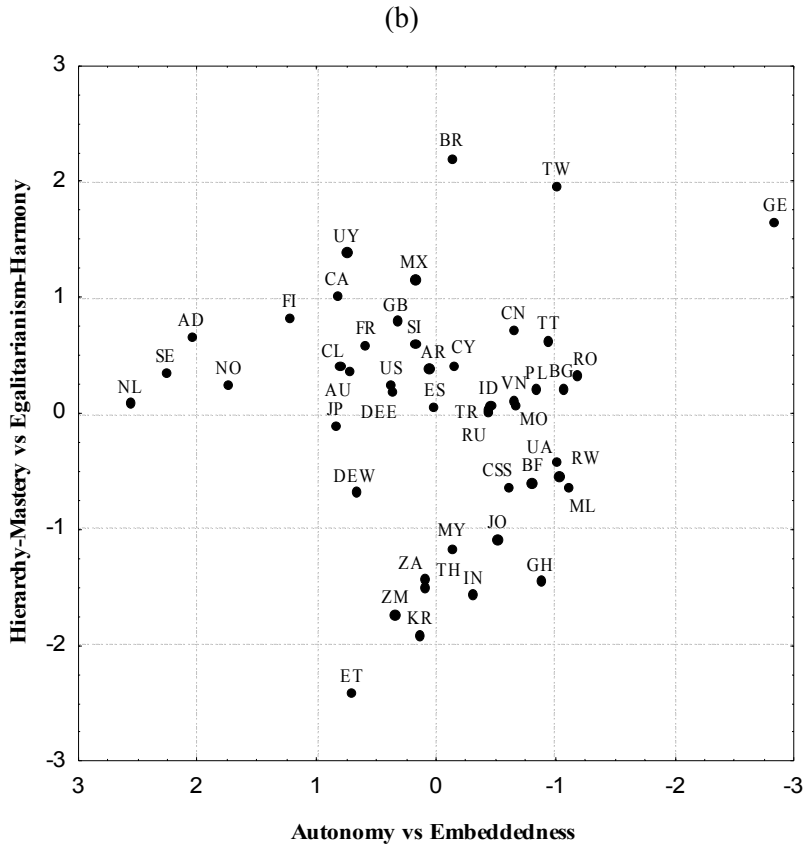
### 3.1. Maximizing the overlap between Inglehart's and Schwartz's value dimensions: A rotational approach

In **Study I** we first reproduced the originally proposed dimensions of both value theories (see Tables 1 and 3; Inglehart & Baker, 2000; Schwartz, 1992; 1994). In a second step, we rotated Inglehart's dimensions towards Schwartz's value circle.

After Inglehart's dimensions had been rotated 27 degrees clockwise at the cultural level, Autonomy vs. Embeddedness showed a maximal overlap with Inglehart's Self-Expression vs. Survival dimension,  $r = .82$  ( $p < .001$ ). With this method, however, it was not possible to increase the associations simultaneously for the second pair of dimensions – Egalitarianism-Harmony vs. Hierarchy-Mastery and Secular-Rational vs. Traditional values – which correlated before and after rotation near zero.







**Figure 3.** Plot of countries on the (a) Inglehart's and (b) Schwartz's 2-dimensional maps.

*Note.* Please note the different scaling of the x-axis: In Schwartz's figure (a), Autonomy is located on the left but in Inglehart's figure (b), Self-Expression is indicated on the right in order to be comparable with earlier publications of these two authors (e.g., Schwartz, 2006; Inglehart & Welzel, 2005). Respective *N* with complete answers in brackets. AD = Andorra (901); AR = Argentina (642); AU = Australia (1257); BF = Burkina Faso (859); BG = Bulgaria (503); BR = Brazil (1305); CA = Canada (1701); CL = Chile (790); CN = China (937); CSS = Serbia (549); CY = Cyprus (990); DEE = East Germany (839); DEW = West Germany (627); ES = Spain (926); ET = Ethiopia (849); FI = Finland (878); FR = France (897); GB = Great Britain (734); GE = Georgia (1020); GH = Ghana (1299); ID = Indonesia (1323); IN = India (909); JP = Japan (582); JO = Jordan (1085); KR = South Korea (1174); ML = Mali (607); MO = Moldova (846); MX = Mexico (1304); MY = Malaysia (1178); NL = Netherlands (798); NO = Norway (936); PL = Poland (687); RO = Romania (1135); RU = Russian Federation (1091); RW = Rwanda (1146); SE = Sweden (807); SI = Slovenia (710); TH = Thailand (1431); TR = Turkey (1104); TT = Trinidad and Tobago (921); TW = Taiwan (1200); UA = Ukraine (555); US = United States (1118); UY = Uruguay (659); VN = Vietnam (1111); ZA = South Africa (2504); ZM = Zambia (1026).

The following is to illustrate the adjustment of Inglehart's dimensions in order to maximize the fit between the two sets of value dimensions. Before rotation, Norway and Sweden were located high on the Self-Expression (x-axis) and at the same time high on the Secular-Rational (y-axis) value dimensions in the upper-right corner of the Cultural Map of the World (Inglehart & Welzel, 2005). With the rotation, these nations moved closer to the midpoint of the y-axis while keeping their leading position on the x-axis (Figure 3a). As can be seen from the 2-dimensional plots, after rotation, the locations of the nations on Inglehart's and Schwartz's value maps (Figure 3b) were similar along the x-axis (e.g., Sweden and Romania), but not necessarily along the y-axis (e.g., Brazil and Japan).

The results suggest that Schwartz's and Inglehart's originally proposed 2-dimensional value structures share one dimension at the cultural level, whereas the other-pair of dimensions seem to be much less related than previously found (e.g., Schwartz, 2006). It is noteworthy that Schwartz's (2006) earlier comparison indicated an overlap of Autonomy vs. Embeddedness and Self-Expression vs. Survival values of only 41 %, whereas the 67% overlap we observed in the correlation at the country level is evidence of high similarity.

At the individual level, the rotation of Inglehart's values of about 45 degrees clockwise produced two dimensions with totally new content at the diagonals of his model, which were coined Secular-Rational/Survival and Secular-Rational/Self-Expression, according to the poles the new dimensions cut in half. At this level, the maximal overlap between Schwartz's Openness to Change vs. Conservation dimension and Inglehart's Secular-Rational/Self-Expression diagonal was  $r = .24$  ( $p < .001$ ). Given the reported differences in prediction power (see Beckers et al., 2012; Datler et al., 2012), this overlap of merely 6% has the implication that it makes sense to 'keep' both theories, as they tap into different concepts. Furthermore, the associations between the Schwartz's Self-Transcendence vs. Self-Enhancement and both Inglehart's dimensions were relatively weak (see also Welzel, 2010).

### **3.2. Analyzing Inglehart's and Schwartz's items in a joint value space**

**Study II** focused on relationships between Inglehart's and Schwartz's theories that can be found at the level of single items. To make this comparison possible, we controlled for biases in scale use with a covariate correction approach simultaneously in both value measures using the mean rating given to all Schwartz items (Schwartz, 2005) and an index of communication styles based on selected WVS items. The latter adjustment variable was suggested by Smith (2011).

The results indicated that, at the country level, those items belonging to Schwartz's Autonomy vs. Embeddedness dimension were located at the

diagonal of the Cultural Map of the World (Inglehart & Welzel, 2005), suggesting that, in order to be autonomous, individuals need to have both self-expressive and secular-rational values, whereas being embedded means endorsing both traditional and survival values.

Recently, Vaclair and colleagues (2011) located a new cultural value type, Self-Fulfilled Connectedness, which contains values that represent profound attachment to others as well as attributes of self-fulfillment. The reported similarities in meaning of Self-Expression and Intellectual Autonomy, which in **Study II** merged in the joint value space, support the notion that autonomous human choice has a social connotation.

At the individual level, there was a similarity between Inglehart's Self-Expression and only one Schwartz's item measuring Self-Direction. Inglehart's Secular-Rational and Traditional value items were found to go together with the items measuring Schwartz's Openness to Change vs. Conservation dimension. Overall, however, Inglehart's items lay along a single axis within Schwartz's value circle which started between Stimulation and Self-Direction and ended close to the Security and Tradition items, suggesting that it takes endorsement of values captured by both Inglehart dimensions in order to be truly open or conservative, respectively.

Nonetheless, two distinct regions of Schwartz's values were identified in which none of the Inglehart's items were located: Harmony–Egalitarianism vs. Hierarchy–Mastery (cultural level) and Self-Transcendence vs. Self-Enhancement (individual level), respectively. At the same time, the joint MDS plot revealed that, at the individual level, Inglehart's Survival values are not captured by the Schwartz's items included. This finding is in line with Fischer and colleagues (2011), who argued that values related to survival needs are largely absent in Schwartz's value inventories.

The identification of unique value content of both theories is maybe the most important contribution of **Study II**. We were also able to confirm, to some extent, recent attempts at the theoretical development of Schwartz's values (Vaclair et al., 2011) and also Fischer and colleagues' (2011) criticism.

## **4. Human life course: Disentangling age, period, and cohort effects**

When interested in changes of psychological variables across the life-span, researchers are confronted with complex methodological issues associated with the simultaneous estimation of age, period, and cohort effects (APC). These three components of change were defined as follows (**Study III**): Age effects are effects of growing older (for instance, climbing stairs is easier for a young than for a very old person; role changes like those associated with becoming parents, etc.). Period effects are societal, historical, or cultural changes simultaneously influencing all cohorts. Cohort effects are “the replacement of

(happier or less happier) cohorts born early in the 20th century by cohorts born later in the same century” (p. 298).

By aiming to examine cultural differences in change trajectories, we used an alternative to longitudinal studies, which is an intra-cohort aging approach to change, also called a cross-sectional sequential design (Baltes, 1968; Glenn, 2005). “Intra-cohort aging summarizes the net results of individual-level change and is, therefore, a conservative aggregate measure of what is happening at the individual level” (Danigelis, Hardy, & Cutler, 2007, p. 813). This approach is based on the basic claim that members of a birth cohort share special characteristic features due to the unique socio-historical experiences they had in their formative years (i.e., during socialization) (e.g., Ryder, 1965). The design makes it possible, by building on an age by cohort table, to follow birth cohorts as they grow older in order to disentangle effects of aging from period and cohort effects. The interaction effects of age or cohort and time of measurement (i.e., period), however, must be examined in separate analyses due to an identification problem (Mason, Oppenheim, Mason, & Winsborough, 1973).

Methodologically, the identification problem is a multicollinearity situation due to the fact that if one has the age of a respondent and the period when the survey took place, the third variable, namely, year of birth, can be perfectly calculated. For this statistical reason, it was believed until recently that confounded APC effects could not be estimated within a single statistical model (Glenn, 2005) without imposing one or more constraints (e.g., by constraining the coefficients of two periods to be equal). The results, however, will always depend on the constraints used and there is no empirical test that can give certainty whether the right ones were chosen (Tu, Davey Smith, & Gilthorpe, 2011). Thus, although several empirical approaches have been proposed in order to overcome or at least avoid the identification problem (e.g., Mishler & Rose, 2007; Tu et al., 2011; Yang, Fu, & Land, 2004; Yang & Land, 2006), all these new APC approaches “have primarily been employed by their authors and have yet to be widely adopted or evaluated by other researchers or methodologists” (Harding, 2009, p. 1451) or “cannot or should not be used to recover the underlying age, period, and cohort effects” (Luo, in press, p. 1). For these reasons, a graphical cross-sectional sequential design was used in **Study III**, which looks at interactions between two of the three APC components at a time.

#### **4.1. Cultural differences in the relationship between age and subjective well-being**

People’s well-being across life span has caught the interest not only of psychologists but also of demographers and economists (Easterlin, 2006). Related studies examine special populations like the elderly (e.g., Gana, Bailly, Saada, Joulain, & Alaphilippe, 2012), investigate changes in satisfaction over the life circle of parenthood (Powdthavee, 2009), look at gender differences

(Inglehart, 2002), or focus on the depriving effect of youth unemployment on their life satisfaction (Realo & Dobewall, 2011). Most importantly, there is an ongoing debate of whether SWB is U-shaped in life (Blanchflower & Oswald, 2008; 2009; Glenn, 2009; Sutin, Terracciano, Milanese, An, Ferrucci, & Zonderman, 2013; Yang, 2008) – that people in midlife would be generally less happy than those at younger and older ages – and about the degree to which this trend can be generalized cross-culturally (Baird, Lucas, & Donnellan, 2010; Deaton, 2008). If SWB does indeed have a universal age trajectory, it would have wide-ranging implications for policymakers and scientists in a world of aging societies (United Nations, 2010), whilst a rejection of this claim would be even more important to take into account when making culture-sensitive predictions of societal development on these measures.

**Study III** was carried out in order to compare the relationship between age and life satisfaction in four European nations: Estonia, Finland, Latvia, and Sweden. The age representative sequential (repeated) cross-sectional dataset was produced by merging EVS, WVS, and ESS. This way it was possible to investigate changes over a period of up to 27 years. The study makes an important contribution to the literature because studies at one specific point in time alone cannot explain *why* age-life satisfaction trajectories differ across countries (cf. Deaton, 2008).

The mean levels of life satisfaction in the two Nordic nations showed an almost flat trend, whilst in the Baltic countries they varied considerably. Like earlier research (Diener & Oishi, 2004; Inglehart et al., 2008; Veenhoven, 1996; White, 2007), we observed consistent mean level differences between Estonia-Latvia and Finland-Sweden. More specifically, in the Nordic nations there was a flat trend, at a comparatively high level. In the Baltic countries the mean levels of life satisfaction varied considerably – decreasing from 1990 to 1996, then steadily increasing until 2006/2007 and finally again slightly decreasing (2008/2009) – driven by immense political and socioeconomic changes in these nations during the last two decades (Inglehart et al., 2008). Even today, people in Estonia and Latvia report, on average, two scale points lower life satisfaction than their neighbors in Finland and Sweden.

In the two Nordic countries, the relationship between age and life satisfaction was virtually zero. Unlike in Finland and Sweden, the relationship between age and subjective well-being in Estonia and Latvia was best described as curvilinear, with younger and older people having higher levels of life satisfaction. **Study III** also found – in line with many other studies (see George, 2010, for a review) – little evidence for declining life satisfaction in old age.

If the observed relationship between age and life satisfaction did indeed appear primarily due to age effects, there should be a universal age-related intra-cohort change, whereas the between-cohort mean level differences in SWB should be minor. Our findings, however, showed that the observed changes in life satisfaction across the life-span in Estonia and Latvia were not due to age-related changes per se but rather to an interaction of cohort (e.g., the

later born cohorts having high social optimism and no Soviet-time memories) and period effects (e.g., the improved economic situation).

Putting the results into the big picture, **Study III** serves as an example for the same historical event (such as the restoration of independence in Estonia and Latvia) resulting in different outcomes for different cohorts experiencing the same event but at different life stages (the “losers” vs. the “winners” of transition). This is alarming, because the current economic crisis, and, in particular, recently high youth unemployment in Europe, has the potential to produce a “lost generation” with permanently lower mean SWB levels than earlier born cohorts (Realo & Dobewall, 2011; Sutin et al., 2013). In such a situation, within-nation trajectories of well-being across age may change if an historical event exerts a lasting effect on (young) people’s well-being.

## **5. Self-other agreement in values and well-being**

Survey researchers are confronted with the subjectivity of the answers provided by their respondents and the inherent limits of self-report methodology. It is well known that people’s reports of their behavior, attitudes, personality, and well-being may be affected by various response biases such as socially desirable responding (Paulhus, 1991) or the tendency to present oneself in a more positive light than is warranted by the facts (Diener et al., 2003). How do we know, then, if a person truly has traditional or universalistic values, or is in fact happy or satisfied? One possibility is to collect data through an independent measurement method, using opinions of other people (e.g., peers, spouses, siblings, parents etc.) who know the person well.

In this context, an examination of the self-other agreement (i.e., the correlation between self- and other-reports) has a remarkable history of providing a consensual validation of self-report measures in the fields of happiness (Hartmann, 1934), personality traits (Cattell, 1946), and other individual attributes. The other-ratings can be compared to respective self-ratings in order to validate the self-report measure of life satisfaction, happiness, or value priorities. If there is no convergence, then the measures used may not capture the underlying concept of interest. However, a more modest interpretation of observed correlations may also be reasonable because it might well be that they both measure something completely different.

Today meta-analyses are available for both SWB (Schneider & Schimmack, 2009) and personality traits (Connolly, Kavanagh, & Viswesvaran, 2007), yielding a substantial effect size for self-other agreement in these psychological constructs. For personal values, however, this test still has to be made, even though research in human values has a comparably long tradition (Allport & Vernon, 1931). For SWB, research has already begun to identify sources of the observed agreement between observer- and self-report measures (Schneider, & Schimmack, 2010; Schneider, Schimmack, Petrican, & Walker, 2010). There-

fore, there is a remarkable difference in terms of the state of research between the two concepts.

Two separate studies were designed in order to examine self-other agreement of happiness and life satisfaction (**Study IV**), and personal values (**Study V**), both in relation to personality traits.

### **5.1. The role of personality traits in the self-other agreement in SWB**

When assessing the self-other agreement of happiness and life satisfaction, it is important to note that demographic variables, compared to dispositional personality traits, explain only a relatively small part of the variance in SWB scales (Diener et al. 1999). As argued above, Extraversion and Neuroticism are strongly correlated with SWB and there is some consensus that positive affect even forms the core of Extraversion (Watson & Clark 1997). Consequently, one could expect that personality traits also serve as an important basis for self- and other-ratings of SWB.

The dataset included single item measures for both essential components of SWB (cf. Diener et al., 2003) – happiness and life satisfaction – which were combined in a composite score of individual differences in well-being. In this study, we concentrated on the 30 personality trait facet scores of the NEO-PI-3 (McCrae, Costa, & Martin, 2005).

Preliminary analyses showed, in line with DeNeve and Cooper's (1998) meta-analysis, that also more narrow traits – in the form of personality facets – correlate with well-being. Moreover, it was found that both other-ratings and self-reports of SWB were predicted by self- and other-rated personality facets.

The main purpose of **Study IV** was to examine the role of personality traits in the self-other agreement in subjective well-being. We proposed two different paths: the one derived from the concept of the looking-glass-self (Cooley, 1902) the other drawing on lay beliefs of causes of people's happiness (Furnham & Cheng, 2000). The first perspective assumes that other-views of personality and, likewise, SWB reflect onto a person's self-reports of SWB. In other words, it assumes that self-reported SWB is partially determined by other-ratings of SWB, and that the effect of other-ratings on self-ratings is transmitted by specific self- and other-personality traits. The second perspective is based on the idea that lay people know about the special role of personality in life evaluations. Therefore, it is also possible that, when judging someone's SWB, knowledgeable informants indeed base their ratings on the targets' self-reported SWB. In this case, self-reported SWB accounts for other-reported SWB, although the effect is likely to be mediated by certain self- and other-rated personality traits.

The measure of SWB showed significant and comparatively high self-other agreement,  $r = .55$  ( $p = .000$ ). Using Preacher and Hayes' (2008) multiple

mediator model, we found this agreement to be mediated through the self- and other-rated personality facet scores of N3 (Depression) and E6 (Positive Emotions),  $Z = 2.8001-11.7142$ . This finding implies that people recognize if someone we know well is happy or unhappy, satisfied or unsatisfied, based also on specific personality facets of the target. At the same time, self-reported SWB may reflect, to some extent, what other people think about one's personality.

## **5.2. Convergence between self-report and other-report measures of personal values in comparison to personality traits**

It has been argued by several researchers that personal values might be too privately held (McAdams, 1995) or too individually subjective (Hitlin & Piliavin, 2004) to be accurately judged by others.

**Study V** was conducted in order to examine whether the self-other agreement in personal values is at a comparable level with another aspect of a person's personality: traits. If the convergence among these self- and other-report measures of values is at a substantial level (i.e., at least at the same level as that of the Big Five domains), it would suggest that observers can judge others' personal values with some accuracy.

As said above, the study is a novel attempt at systematically examining and interpreting the self-other agreement in personal values. There are two opposing views of whether values or traits are expected to show higher self-other agreement. The Five-Factor Theory (McCrae & Costa, 1999) of personality classifies values as so-called characteristic adaptations – formed through the interaction of personality traits with the environment – which can be better assessed by direct observation than basic personality traits (Allik & McCrae, 2002). The theory of human values (Rokeach, 1973; Schwartz, 1992), on the contrary, “suggest[s] that it is difficult for others to infer a person's values because a value may be expressed in a variety of behaviours and any single behaviour may express multiple values. Moreover, values refer to motivation not to action, so observers must infer them indirectly” (**Study V**, p. 3), resulting in less convergence between self-reports and other-ratings of values as compared to personality traits.

We used two different value measures in order to capture both more general higher-order values and specific value types. As described above, the Schwartz value measure included (the ESS PVQ) has relatively low reliabilities (Schwartz, 2007) compared to the Big Five personality traits of the S5 (see Konstabel et al., 2012). Also, the second, culture-specific value measure – the EVI – has shown differences in internal consistencies (Aavik & Allik, 2002). This indicates that the differences in the proportion of error in the values and trait measurements should be taken into account when relating the level of their self-other agreement (Schmidt & Hunter, 1996).



When corrected for attenuation (i.e., measurement error), the self-other agreement in the higher-order values (median  $r = .65$ ) was very similar to that of the basic personality traits (median  $r = .68$ ). Substantial self-other agreement correlations (median  $r = .68$ ) were also found for the six lower-level value types of the EVI.

These findings suggest that other-ratings can be used for examining people's values, as the correlations between self- and other-ratings of values are at the same level as for well-being (**Study IV**) or personality traits (Schneider & Schimmack, 2009). Other-reports of values should therefore be used more often to complement self-ratings.

## CONCLUSIVE REMARKS

To sum up, the main conclusions of this dissertation are the following:

- The value theories proposed by Shalom Schwartz and Ronald Inglehart share one dimension (67% overlap), which seems to coincide with what is best known as the opposition between individualism and collectivism (**Study I**). An analysis of the joint structure of Schwartz's and Inglehart's items (**Study II**) showed that in order to be autonomous, individuals need to have both self-expressive and secular-rational values, whereas being embedded means endorsing both traditional and survival values. We also found unique content of both Schwartz's and Inglehart's values not captured by the other respective theory, suggesting that researchers should continue to use them both.
- Are there cross-cultural differences in life-span trajectories of life satisfaction? We found in Finland and Sweden that age does not seem to matter much for how satisfied people are, whilst the relationship between age and life satisfaction in Estonia and Latvia was best described as curvilinear, with life satisfaction reaching its lowest level at around 51–60 years of age. At the same time, younger people were remarkably more satisfied than older people (**Study III**). The observed age differences in life satisfaction in the two Baltic countries seem to be best attributed to an interaction of cohort and period effects. Thus, a universal life satisfaction age trajectory may not exist; the relationship between age and life satisfaction is likely to vary along with important cultural, political, and socioeconomic factors.
- **Study IV** reported a strong self-other agreement in subjective well-being (SWB). Self- and other-rated personality facet scores (N3: Depression and E6: Positive Emotions) were found to partially mediate the agreement between self- and other-rated SWB. The findings suggest that, when making judgments about someone's happiness or life satisfaction, observers indeed rely on the personality traits of this person. Moreover, we found that self-reported SWB reflects, to some extent, what other people think about this person's personality.
- Finally, **Study V** compared the self-other agreement in personal values versus the Big Five personality traits. When corrected for attenuation due to measurement error, self-other agreement in both the higher-order values and more narrowly defined value factors was substantial and similar to that for the Big Five personality traits. The results of **Study V** suggest that people can judge others' values with some accuracy and therefore other-ratings of personal values can be used to validate and complement self-report value measures.

## ACKNOWLEDGEMENTS

I want to express my sincere gratitude to my supervisor Anu Realo who guided me with her insights and inspiration through the ups and downs of my dissertation. There is nothing I could give in return for her steady support during the last four years.

I am most thankful to Micha Strack from the University of Göttingen and Markku Verkasalo from the University of Helsinki, who both encouraged me to do my *PhD* here in Tartu where I was welcomed warmly and mentored wisely.

Mobility grants of the Estonian Institute, the Archimedes Foundation, and the School of Behavioural, Social and Health Sciences allowed me to get known to some of the most inspiring people, ideas and places.

My special gratitude to my dear family, Soila and Linus, for their exceptional patience and love. They particular know how much this time meant to me. Thanks to my loved ones, I never lost joy, motivation, or direction.

Without the open ears and comments of my wonderful parents (Jürgen and Brigitte), siblings (Mareike, Eric, and Jacob), relatives and friends in and outside of academia, writing this dissertation would have been impossible.

## REFERENCES

- Aavik, T., & Allik, J. (2002). The structure of Estonian personal values: A lexical approach. *European Journal of Personality*, 16, 221–235.
- Aldrick, P. (2009). Nicolas Sarkozy wants ‘well-being’ measure to replace GDP. Retrieved from <http://www.telegraph.co.uk/finance/economics/6189582/Nicolas-Sarkozy-wants-well-being-measure-to-replace-GDP.html>.
- Allik, J., & McCrae, R. R. (2002). A Five-Factor Theory perspective. In R. R. McCrae & J. Allik (Eds.), *The Five-Factor Model of personality across cultures* (pp. 303–321). New York: Kluwer Academic/Plenum Publishers.
- Allik, J., Realo, A., Mõttus, R., Esko, T., Pullat, J., & Metspalu, A. (2010). Variance determines self-observer agreement on the big five personality traits. *Journal of Research in Personality*, 44, 421–426.
- Allport, G. W., & Vernon, P. E. (1931). *A study of values*. Boston, MA: Houghton Mifflin.
- Baltes, P. B. (1968). Longitudinal and cross-sectional sequences in the study of age and generation effects. *Human Development*, 11, 145–171.
- Baird, B. M., Lucas, R. E., & Donnellan M. B. (2010). Life satisfaction across the lifespan: Findings from two nationally representative panel studies. *Social Indicators Research*, 99, 183–203.
- Beckers, T., Siegers, P., & Kuntz, A. (2012). Congruence and performance of value concepts in social research. *Survey Research Methods*, 6, 13–24.
- Bilsky, W. (2006). On the structure of motives: Beyond the ‘Big Three’. In M. Braun & P. Ph. Möhler (Eds.), *Beyond the horizon of measurement* (pp. 73–84). Mannheim: ZUMA.
- Bilsky, W., Janik, M., & Schwartz, S.H. (2011). The structural organization of human values: Evidence from three rounds of the European Social Survey (ESS). *Journal of Cross-Cultural Psychology*, 42, 759–776.
- Bilsky, W., & Schwartz, S. H. (1994). Values and personality. *European Journal of Personality*, 8, 163–181.
- Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science and Medicine*, 66, 1733–1749.
- Blanchflower, D. G., & Oswald, A. J. (2009). The U-shape without controls: A response to Glenn. *Social Science and Medicine*, 69, 486–488.
- Boer, D., & Fischer, R. (2013). How and when do personal values guide our values and sociality? Explaining cross-cultural variability in attitude-value linkages. *Psychological Bulletin*. Advance online publication. DOI: 10.1037/a0031347 .
- Bond, M. H., Leung, K., Au, A., Tong, K. K., de Carrasquel, S. R., Murakami, F., et al. (2004). Culture-level dimensions of social axioms and their correlates across 41 cultures. *Journal of Cross-Cultural Psychology*, 35, 548–570.
- Busseri, M. A., & Sadava, S. W. (2011). A review of the tripartite structure of subjective well-being: Implications for conceptualization, operationalization, and synthesis. *Personality and Social Psychology Review*, 15, 290–314.
- Byrne, B. M., Shavelson, R. J., & Muthén, B. (1989). Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin*, 105, 456–466.
- Cattell, R. B. (1946). *The description and measurement of personality*. Yonkers, N.Y.: World Book

- Connolly, J. J., Kavanagh, E. J., & Viswesvaran, C. (2007). The convergent validity between self and observer ratings of personality: A meta-analytic review. *International Journal of Selection and Assessment*, 15, 110–117.
- Cooley, C. H. (1902). *Human nature and the social order*. New York: Charles Scribner's Sons.
- Datler, G., Jagodzinski, W., & Schmidt, P. (2013). Two theories on the test bench: Internal and external validity of the theories of Ronald Inglehart and Shalom Schwartz. *Social Science Research*, 906–925.
- Danigelis, N. L., Hardy, M., & Cutler, S. J. (2007). Population aging, intracohort aging, and sociopolitical attitudes. *American Sociological Review*, 72, 812–830.
- Davidov, E. (2008). A cross-country and cross-time comparison of the human values measurements with the second round of the European Social Survey. *Survey Research Methods*, 2, 33–46.
- Deaton, A. (2008). Income, aging, health and well-being around the world: Evidence from the Gallup World Poll. *The Journal of Economic Perspectives*, 22, 53–72.
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124, 197–229.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542–575.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71–75.
- Diener, E., & Oishi, S. (2004). Are Scandinavians happier than Asians? Issues in comparing nations on subjective well-being. In F. Columbus (Ed.), *Asian economic and political issues*: Vol. 10 (pp. 1–25). Hauppauge, NY: Nova Science.
- Diener, E., Oishi S., & Lucas, R. E. (2003). Personality, culture and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology*, 54, 403–425.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276–302.
- Easterlin, R. (2006). Life cycle happiness and its sources. Intersections of psychology, economics, and demography. *Journal of Economic Psychology*, 27, 463–482.
- Fischer, R. & Boer, D. (2011). What is more important for national well-being: Money or autonomy? A meta-analysis of well-being, burnout and anxiety across 63 societies. *Journal of Personality and Social Psychology*, 101, 164–184.
- Fischer, R., & Boer, D. (2013). *Motivational basis of personality traits: A meta-analysis of value-personality correlations*. Manuscript submitted for publication.
- Fischer, R., Milfont, T., & Gouveia, V. V. (2011). Does social context affect value structures? Testing the intra-cultural stability of value structures with a functional theory of values. *Journal of Cross-Cultural Psychology*, 42, 253–270.
- Fontaine, J. R. J., Poortinga, Y. H., Delbeke, L., & Schwartz, S. H. (2008). Structural equivalence of the values domain across cultures: Distinguishing sampling fluctuations from meaningful variation. *Journal of Cross-Cultural Psychology*, 39, 345–365.
- Forgeard, M. J. C., Jayawickreme, E., Kern, M. & Seligman, M. E. P. (2011). Doing the right thing: Measuring wellbeing for public policy. *International Journal of Wellbeing*, 1, 79–106.
- Furnham, A., & Cheng, C. (2000). Lay theories of happiness. *Journal of Happiness Studies*, 1, 227–246.
- Gana, K., Bailly, N., Saada, Y. Joulain, M., & Alaphilippe, D. (2012). Does life satisfaction change in old age: Results from an 8-year longitudinal study. *The*

- Journals of Gerontology: Series B*. Advance online publication. DOI: 10.1093/geronb/gbs093.
- George, L. K. (2010). Still happy after all these years: Research frontiers on subjective wellbeing in later life. *The Journals of Gerontology*, 65B, 331–339.
- Glenn, N. D. (2005). *Cohort analysis*. Beverly Hills, CA: Sage.
- Glenn, N. D. (2009). Is the apparent U-shape of well-being over the life course a results of inappropriate use of control variables? A commentary on Blanchflower and Oswald (66:8, 2008, 1733–1749). *Social Science and Medicine*, 69, 481–485.
- Harding, D. H. (2009). Recent advances in age-period-cohort analysis. A commentary on Dregan and Armstrong, and on Reither, Hauser and Yang. *Social Science and Medicine*, 69, 1449–1451.
- Hartmann, G. W. (1934). Personality traits associated with variations in happiness. *Journal of Abnormal and Social Psychology*, 29, 202–212.
- Haslam, N., Whelan, J., & Bastian, B. (2009). Big five traits mediate associations between values and subjective well-being. *Personality and Individual Differences*, 46, 40–42.
- Headey, B., Muffels, R., & Wagner, G. G. (2010) Long-running German panel survey shows that personal and economic choices, not just genes, matter for happiness. *PNAS*, 107, 17922–17926.
- Hitlin, S., & Piliavin, J. A. (2004). Values: Reviving a dormant concept. *Annual Review of Sociology*, 30, 359–393.
- Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- House, R.J., Hanges, P.J., Javidan, M., Dorfman, P., & Gupta, V. (2003). *Globe, cultures, leadership, and organizations: Globe study of 62 societies*. Newbury Park, CA: Sage.
- Inglehart, R. (1997) *Modernization and postmodernization: Cultural, economic, and political change in 43 societies*. Princeton, NJ: Princeton University Press.
- Inglehart, R. (2002). Gender, aging, and subjective well-being. *International Journal of Comparative Sociology*, 43, 391–408.
- Inglehart, R., & Baker, W. E., (2000). Modernization, cultural change, and the persistence of traditional values. *American Sociological Review*, 65, 19–51.
- Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom, and rising happiness: A global perspective (1981–2007). *Perspective on Psychological Science*, 3, 264–285.
- Inglehart, R., & Oyserman, D. (2004). Individualism, autonomy, and self-expression. The human development syndrome. In H. Vinken, J. Soeters, & P. Ester (Eds.), *Comparing cultures: Dimensions of culture in a comparative perspective* (pp. 74–96). Leiden and Boston: Brill.
- Inglehart, R., & Welzel, C. (2005). *Modernization, cultural change, and democracy: The human development sequence*. New York: Cambridge University Press.
- Karma, U. (2008). *Explanation of GNH Index*. Thimphu: Centre for Bhutan Studies.
- Konstabel, K., Lönnqvist, J., Walkowitz, G., Konstabel, K., & Verkasalo, M. (2012). The 'Short Five' (S5): Measuring personality traits using comprehensive single items. *European Journal of Personality*, 26, 13–29.
- Kuppens, P., Realo, A., & Diener, E. (2008). The role of positive and negative emotions in life satisfaction judgment across nations. *Journal of Personality and Social Psychology*, 95, 66–75.

- Lucas, R. E. (2007). Adaptation and the set-point model of subjective well-being - Does happiness change after major life events? *Current Directions in Psychological Science*, 16, 75-79.
- Luo, L. (in press). Assessing validity and application scope of the intrinsic estimator approach to the age-period-cohort problem. *Demography*.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131, 803-855.
- Mason, K., Oppenheim, W. M., Mason, H. H., & Winsborough, W. K. P. (1973). Some methodological issues in cohort analysis of archival data. *American Sociological Review*, 38, 242-258.
- McAdams, D. P. (1995). What do we know when we know a person? *Journal of Personality*, 63, 365-396.
- McCrae, R. R., & Costa, P. T. (1990). *Personality in adulthood*. New York: The Guilford Press.
- McCrae, R. R., & Costa, P. T. (1999). A Five-Factor Theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research*, 2<sup>nd</sup> ed. (pp. 139-153). New York/London: The Guilford Press.
- McCrae, R. R., Costa, P. T., & Martin, T. A. (2005). The NEO-PI-3: A more readable revised NEO personality inventory. *Journal of Personality Assessment*, 84, 261-270.
- McCrae, R. R., Costa, P. T., Martin, T. A., Oryol, V. E., Rukavishnikov, A. A., Senin, I. G., et al. (2004). Consensual validation of personality traits across cultures. *Journal of Research in Personality*, 38, 179-201.
- Michaelson, J., Abdallah, S., Steuer, N., Thompson, S., & Marks, N. (2009). *National accounts of well-being: Bringing real wealth onto the balance sheet*. London: New Economics Foundation.
- Minkov, M., & Hofstede, G. (2012). Is national culture a meaningful concept? Cultural values delineate homogeneous national clusters of in-country regions. *Cross-Cultural Research*, 46, 133-159.
- Mishler, W. & Rose, R. (2007). Generation, age, and time: The dynamics of political learning during Russia's transformation. *American Journal of Political Science*, 51, 822-834.
- Oishi, S., Diener, E., Suh, E., & Lucas, R. E. (1999). Value as a moderator in subjective well-being. *Journal of Personality*, 67, 157-184.
- Perrinjaquet, A., Furrer, O., Usunier, J.-C., Cestre, G., & Valette-Florence, P. (2007). A test of the quasi-circumplex structure of human values. *Journal of Research in Personality*, 41, 820-840.
- Powdthavee, N. (2009). Think having children will make you happy? *The Psychologist*, 22, 308-311.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879-891.
- Realo, A., & Dobewall, H. (2011). Age, employment, and life satisfaction in Estonia, Latvia, Finland, and Sweden. In M. Lauristin (Ed.), *Estonian human development report 2010* (pp. 88-95). Tallinn, AS Eesti Ajalehed.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Ryder, N. B. (1965). The cohort as a concept in the study of social change. *American Sociological Review*, 30, 843-861.

- Sagiv, L., Roccas, S., & Hazan, O. (2004). Value pathways to well-being: Healthy values, valued goal attainment, and environmental congruence. In A. Linley, & J. Stephen (Eds.), *Positive psychology in practice* (pp. 68–85). New York, NY: John Wiley.
- Saroglou, V., Delpierre, V., & Dernelle, R. (2004). Values and religiosity: A meta-analysis of studies using Schwartz's model. *Personality and Individual Differences*, 37, 721–734.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 5, 410–421.
- Smith, P. B. (2011). Communication styles as dimensions of national culture. *Journal of Cross-Cultural Psychology*, 42, 216–233.
- Schmidt, F. L., & Hunter, J. E. (1996). Measurement error in psychological research: Lessons from 26 research scenarios. *Psychological Methods*, 1, 199–223.
- Schmitt, D. P., Allik, J., McCrae, R. R., & Benet-Martínez, V. et al. (2007). The geographic distribution of big five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology*, 38, 173–212.
- Schneider, L., & Schimmack, U. (2009). Self-informant agreement in well-being ratings: A meta-analysis. *Social Indicators Research*, 94, 363–376.
- Schneider, L., & Schimmack, U. (2010). Examining sources of self-informant agreement in life-satisfaction judgments. *Journal of Research in Personality*, 44, 207–212.
- Schneider, L., Schimmack, U., Petrican, R., & Walker, S. (2010). Acquaintanceship length as a moderator of self-informant agreement in life-satisfaction ratings. *Journal of Research in Personality*, 44, 146–150.
- 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. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H. C. Triandis, Ç. Kagitçibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications* (pp. 85–119). Thousand Oaks, CA: Sage.
- Schwartz, S. H. (2004). Mapping and interpreting cultural differences around the world, In H. Vinken, J. Soeters & P. Ester (Eds.), *Comparing cultures: dimensions of culture in a comparative perspective* (pp. 43–73). Leiden, Boston: Brill.
- Schwartz, S. H. (2005). Robustness and fruitfulness of a theory of universals in individual human values. In A. Tamayo & J. B. Porto (Eds.), *Valores e comportamento nas organizações* [Values and behavior in organizations] (pp. 56–95). Petrópolis: Vozes.
- Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative Sociology*, 5, 136–182.
- Schwartz, S. H., & Bardi, A. (2001) Value hierarchies across cultures: Taking a similarities perspective. *Journal of Cross Cultural Psychology*, 32, 268–290.
- Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R. Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J. E., Demirutku, K., Dirilen-Gumus, O., & Konty, M. (2012). Refining the theory of basic individual values: New concepts and measurements. *Journal of Personality and Social Psychology*, 103, 663–688.



- Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., & Harris, M. (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.
- Sheldon, K. M. (2005). Positive change during college: Normative trends and individual differences. *Journal of Research in Personality*, 39, 209–223.
- Sortheix, F. M., & Lönnqvist J.-E. (in press). Personal value priorities and life satisfaction in Europe: The moderating role of socio-economic development. *Journal of Cross-Cultural Psychology*.
- Steenkamp, J. B. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research*, 25, 78–90.
- Steinmetz, H., Isidor, R., & Baeuerle, N. (2012). Testing the circular structure of human values: A meta-analytical structural equation modelling approach. *Survey Research Methods*, 6, 61–75.
- Strack M., & Dobewall, H. (2012). The value structure in less developed European countries still remains an ellipse. *Europe's Journal of Psychology*, 8, 587–602.
- Sutin, A. R., Terracciano, A., Milaneschi, Y. An, Y., Ferrucci, L. & Zonderman, A. B. (2013). The effect of birth cohort on well-being: The legacy of economic hard times. *Psychological Science*, 24, 379–385.
- Tu, Y. K., Davey Smith, G., & Gilthorpe, M. S. (2011). A new approach to age-period-cohort analysis using partial least squares regression: The trend in blood pressure in the Glasgow alumni cohort. *PLoS ONE*, 6, e19401.
- United Nations. (2009). *World population ageing 2009*. Retrieved from <http://www.un.org/esa/population/unpop.htm>
- United Nations Development Programme (1990 through 2013). *Human Development Report*, UNDP, New York.
- Vauclair, C.-M., Hanke, K., Fischer, R., & Fontaine, J. R. J. (2011). The structure of human values at the culture level: A meta-analytical replication of Schwartz's value orientations using the Rokeach value survey. *Journal of Cross-Cultural Psychology*, 42, 186–205.
- Veenhoven, R. (1996). Happy life expectancy: A comparative measure of quality of life in nations. *Social Indicators Research*, 39, 1–58.
- Verkasalo, M., Lönnqvist, J. E., Lipsanen, J., & Helkama, K. (2009). European norms and equations for a two dimensional presentation of values as measures with Schwartz's 21-item portrait values questionnaire. *European Journal of Social Psychology*, 39, 780–792.
- Watson, D., & Clark, L. A. (1997). Extraversion and its positive emotional core. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality psychology* (pp. 767–793). New York: Guilford.
- Weiss, A., Bates, T. C., & Luciano, M. (2008). Happiness is a personal(ity) thing – the genetics of personality and well-being in a representative sample. *Psychological Science*, 19, 205–210.
- Welzel, C. (2010). How selfish are self-expression values? A civicness test. *Journal of Cross-Cultural Psychology*, 41, 152–174.
- White, A. (2007). A global projection of subjective well-being: A challenge to positive psychology? *Psychtalk*, 56, 17–22.
- Williams, R. M. Jr. (1970). *American society: A sociological interpretation* (3rd Ed.). New York: Knopf.
- Wilson, M. S. (2005). A social-value analysis of postmaterialism. *The Journal of Social Psychology*, 145, 209–224.

- World Bank (1978 through 2013). *World Development Report*. New York, NY: Oxford University Press.
- Yang, Y. (2008). Social inequalities in happiness in the United States, 1972 to 2004: An age-period-cohort analysis. *American Sociological Review*, 73, 204–226.
- Yang, Y. Fu, W. J., & Land, K. C. (2004). A methodological comparison of age-period-cohort models: The intrinsic estimator and conventional generalized linear models. *Sociological Methodology*, 34, 75–110.
- Yang, Y., & Land, K. C. (2006). A mixed models approach to the age-period-cohort analysis of repeated cross-section surveys, with an application to data on trends in verbal test scores. *Sociological Methodology*, 36, 75–98.

## SUMMARY IN ESTONIAN

### **Väärtused ja subjektiivne heaolu: individuaalsete ja kultuuriliste erinevuste, elu jooksul toimuvate muutuste ning enda ja teiste hinnangute kokkulangevuse uurimus**

Väärtused juhivad ja õigustavad inimeste tegevust, peegeldades samal ajal kultuuri ideaale ja jagatud arusaamu sellest, mis on õige ja vale, hea või halb. Käesoleva väitekirja on eesmärgiks välja selgitada, kas ja kuivõrd kattuvad Shalom Schwartzi ja Ronald Ingleharti väärtusteooriad, ehk millised on nende poolt välja pakutud väärtusmõõtmete ühised ja unikaalsed omadused (**Uurimus I ja II**). Teiseks oluliseks teemaks, mida antud väitekirja käsitleb, on inimeste subjektiivne heaolu, mille all peetakse silmas inimeste hinnanguid oma õnnelikkusele ja eluga rahulolule. Väitekirja eesmärk on siinkohal eristada vanuse, ajastu ja sünnikohordi mõju eluga rahulolu vanuselistes muutustes (**Uurimus III**), sooviga seletada eluga rahulolu ealisi muutusi erinevates kultuurides. Samuti käsitleb väitekirja enda ja teiste hinnangute kokkulangevust nii subjektiivse heaolu (**Uurimus IV**) kui väärtuste puhul (**Uurimus V**), võttes sealjuures arvesse ka peamiste isiksuse seadumuste vahendava mõju.

Väitekirja peamised tulemused ja järeldused on järgmised:

- Shalom Schwartzi ja Ronald Ingleharti väärtusteooriad kattuvad suures osas vaid ühe kultuuritasandi väärtusmõõtme lõikes, mis väljendab ühiskondade individualistlikke ja kollektivistlikke püüdlusi (**Uurimus I**). Schwartzi ja Ingleharti väärtusdimensioonide aluseks olevate üksiküksimuste analüüs näitas, et selleks, et olla oma väärtushinnangutes autonoomne ja avatud, peavad indiviidid pidama oluliseks nii eneseväljenduslikke kui ka ilmalik-ratsionaalseid väärtuseid, samas kui konservatiivsuse ja seotusega käib kaasas nii traditsionaalsete kui ellujäämist rõhutavate väärtuste oluliseks pidamine (**Uurimus II**). Ühtlasi leidsime, et nii Schwartzi kui Ingleharti väärtusmõõtmel on teatav unikaalne sisu, mistõttu oleks uurijatel mõistlik jätkata mõlema väärtusteooria kasutamist.
- Kas eluga rahulolu muutused eluea lõikes on kõikjal samasugused? Leidsime, et Soomes ja Rootsis ei sõltu inimeste eluga rahulolu kuigivõrd sellest, milline on nende vanus, samal ajal kui Eestis ja Lätis on eluga rahulolu kõver elukäigu jooksul kergelt U-kujuline (**Uurimus III**). Eluga rahulolu Eestis ja Lätis on kõrgeim noorte inimeste seas; kuni ligikaudu 60. eluaastani eluga rahulolu pidevalt langeb, jäädes seejärel püsima samale tasemele (Läti) või hakates vähesel määral taas tõusma (Eesti). **Uurimus III** tulemused näitavad, et eluga rahulolu vanuselised muutused kahes eelnimetatud Balti riigis on ennekõike tingitud sünnikohordi ja ajastu koosmõjust. Seega, universaalset eluga rahulolu trajektoori ei ole olemas – eluga rahulolu muutused inimeste eluea lõikes võivad eri riikides märkimisväärselt varieeruda, sõltudes olulistest kultuurilistest, poliitilistest ja sotsiaalmajanduslikest teguritest.

- **Uurimus IV** käsitles enda ja teiste antud hinnangute kokkulangevust subjektiivse heaolu hindamisel. Tulemused näitasid, et nii enda kui teiste poolt antud hinnangud inimese isiksuse seadumustele (N3: Depressioon ja E6: Positiivsed emotsioonid) vahendavad osaliselt enda ja teiste hinnangute kokkulangevust subjektiivse heaolu puhul. Ehk siis viitavad **Uurimus IV** tulemused sellele, et hinnates kellegi teise õnnelikkust või eluga rahulolu, toetuvad inimesed hinnangute andmisel vähemasti osaliselt hinnatava inimese isiksuse seadumustele. Samuti leidsime, et see enesekohased subjektiivse heaolu hinnangud võivad teatud määral peegeldada seda, kuidas teised inimesed antud inimese isiksust näevad ja hindavad.
- Lõpetuseks, **Uurimus V** võrdles enda ja teise hinnangute kokkulangevust väärtuste ja Suure Viisiku isiksuse seadumuste puhul. Tulemused näitasid, et kui võtta arvesse mõõtmisviga, on enda ja teiste hinnangute kokkulangevus väärtuste puhul isiksuse seadumustega võrreldaval tasemel. Seega võib **Uurimus V** tulemuste põhjal väita, et inimesed suudavad teiste inimeste väärtusi küllaltki täpselt hinnata, mistõttu saab teiste poolt antud hinnanguid edukalt kasutada enesekohaste väärtushinnangute valideerimiseks ja täiendamiseks.

## **PUBLICATIONS**

# CURRICULUM VITAE

**Name:** Henrik Dobewall  
**Citizenship:** German  
**Date of birth:** September 11, 1982  
**Phone:** +358 453 484 862  
**E-mail:** henrik.dobewall@ut.ee

## Education:

2009–2013 Doctoral studies, Department of Psychology, University of Tartu  
2003–2009 Master’s studies in social sciences, Faculty of Social Sciences, Georg-August University of Göttingen

## Professional employment:

2012–2013 Project manager, Department of Psychology, University of Tartu  
2011–2012 Project manager, Estonian-Swedish Mental Health and Suicidology Institute, Tallinn  
2009 Assistant, German–Baltic Chamber of Commerce, Tallinn

## Main research interests:

Subjective well-being, individual and cultural values, life course, inter-group relations, cross-national comparative research

## Membership of professional organizations:

European Survey Research Association  
International Association for Cross-Cultural Psychology

## Publications:

Dobewall, H., & Rudnev, M. (2013). Common and unique features in Inglehart’s and Schwartz’s value theories at the country and individual levels. *Cross-Cultural Research*. Advance online publication. DOI: 10.1177/1069397113493584  
Dobewall, H., & Strack, M. (in press). Relationship of Inglehart’s and Schwartz’s value dimensions revisited. *International Journal of Psychology*.  
Dobewall, H., Realo, A., Allik, J., Esko, T., & Metspalu, A. (2012). Self-other agreement in happiness and life-satisfaction: The role of personality traits. *Social Indicators Research*. Advance online publication. DOI: 10.1007/s11205-012-0157-y.  
Strack M., & Dobewall, H. (2012). The value structure in less developed European countries still remains an ellipse. *Europe’s Journal of Psychology*, 8, 587–602.

- Dobewall, H., & Strack, M. (2011). Cultural value differences, value stereotypes and diverging identities in intergroup conflicts. The Estonian example. *International Journal of Conflict and Violence*, 5, 211–223.
- Realo, A., & Dobewall, H. (2011). Does life satisfaction change with age? A comparison of Estonia, Finland, Latvia, and Sweden. *Journal of Research in Personality*, 45, 297–308.
- Realo, A., & Dobewall, H. (2011). Age, employment, and life satisfaction in Estonia, Latvia, Finland, and Sweden. In M. Lauristin (Ed.), *Estonian Human Development Report 2010* (p. 88–95). Tallinn, AS Eesti Ajalehed.

## ELULOOKIRJELDUS

**Nimi:** Henrik Dobewall  
**Kodakondsus:** Saksamaa  
**Sünniaeg:** 11. september 1982  
**Telefon:** +358 453 484 862  
**E-post:** henrik.dobewall@ut.ee

### **Hariduskäik:**

2009–2013 Doktoriõpe, psühholoogia instituut, Tartu Ülikool  
2003–2009 Magistriõpe, sotsiaalteaduskond, Göttingeni Georg-Augusti  
Ülikool

### **Teenistuskäik:**

2012–2013 Projektijuht, psühholoogia instituut, Tartu Ülikool  
2011–2012 Projektijuht, Eesti-Rootsi vaimse tervise ja suitsidoloogia  
instituut, Tallinn  
2009 Assistent, Saksa-Balti kaubanduskoda, Tallinn

### **Uurimistöö põhisuunad:**

Subjektiivne heaolu, individuaalsed ja kultuurilised väärtused, elukäik,  
grupisisesed suhted, rahvustevahelised võrdlevad uuringud

### **Kuulumine erialaorganisatsioonidesse:**

Euroopa küsitlusuuringute assotsiatsioon (ESRA)  
Kultuuriti võrdleva psühholoogia rahvusvaheline assotsiatsioon (IACCP)



## DISSERTATIONES PSYCHOLOGICAE UNIVERSITATIS TARTUENSIS

1. **Jüri Kruusvall.** Environmental and social influence on human activity. Tartu, 1994, 135 p.
2. **Dagmar Kutsar.** Transformation in Estonia as reflected in families: Insight into social stress and poverty. Tartu, 1995, 171 p.
3. **Aleksander Pulver.** Measurement of elementary movement vectors in human visual system. Tartu, 1995, 123 p.
4. **Ritva Fagerström.** The correlations between psychological factors and vision in aged cataract operation patients. Tartu, 1996, 145 p.
5. **Eve Kikas.** Conceptual development in school-aged children: The impact of teaching. Tartu, 1997, 112 p.
6. **Anu Realo.** Individualism and collectivism: An exploration of individual and cultural differences. Tartu, 1999, 164 p.
7. **Aaro Toomela.** Cultural-historical psychology: three levels of analysis. Tartu, 2000, 171 p.
8. **Anneli Kolk.** Cognitive development of children with non-progressive unilateral brain lesion. Tartu 2001, 95 p.
9. **Aune Valk.** Two facets of ethnic identity: pride and differentiation. Tartu, 2001, 153 p.
10. **Anu Aluoja.** Depression in the population: assessment, prevalence and relationships with socio-demographic factors and cognitive aspect of social adjustment. Tartu 2002, 73 p.
11. **Talvi Kallasmaa.** Personality traits and ways of coping: their characteristics and interrelations. Tartu 2002, 119 p.
12. **Luule Mizera.** Socialization in Estonian families: attitudes and behavior in comparative perspective. Tartu 2003, 117 p.
13. **Kairi Kreegipuu.** Availability and accessibility of information in perception of moving stimuli. Tartu 2004, 97 p.
14. **Riina Häidkind.** Monoaminergic mechanisms in mood-associated behaviours and neurochemistry in rats. Tartu 2004, 123 p.
15. **Evelyn Kiive.** Studies on peripheral markers of central serotonergic activity and behaviour. Tartu, 2005, 113 p.
16. **Helle Pullmann.** The development of intelligence and personality traits among Estonian schoolchildren. Tartu, 2005, 112 p.
17. **Kenn Konstabel.** The structure and validity of self- and peer-reported personality traits. Tartu, 2006, 103 p.
18. **Toivo Aavik.** Lexical analysis of Estonian personal values vocabulary and relation to socially desirable responding and parenting practices. Tartu, 2006, 113 p.
19. **Margus Tõnissaar.** Stress and sociability: individual differences and their neurochemical substrate. Tartu, 2006, 161 p.

20. **Kaia Laidra.** Adolescent personality: Development, interrater agreement, and relation to academic achievement. Tartu, 2007, 117 p.
21. **Iiris Luiga.** Interaction of object perception and visual attentional selection processes. Tartu, 2007, 116 p.
22. **Marika Paaver.** Types of impulsivity, their behavioural expression, and association with the markers of vulnerability of serotonin system. Tartu, 2007, 140 p.
23. **Tanel Mällo.** Exploratory behaviour and 50-kHz ultrasonic vocalizations in rats: behavioural and neurochemical profiles of persistent inter-individual differences. Tartu, 2008, 216 p.
24. **Aet Alttoa.** Neurochemical regulation of rat exploratory behaviour: focus on dopaminergic and noradrenergic neurotransmission. Tartu, 2008, 166 p.
25. **René Mõttus.** Universal and specific features of personality traits in their various representations. Tartu, 2009, 170 p.
26. **Kirsti Akkermann.** Serotonin-related biomarkers and symptoms of eating disorders. Tartu, 2010, 120 p.
27. **Iris Podar.** Eating disorders, personality, and cultural differences. Tartu, 2010, 130 p.
28. **Denis Matrov.** Cerebral oxidative metabolism and effects of chronic variable stress in animal models of human affective styles. Tartu, 2010, 208 p.
29. **Kadri Kõiv.** Studies on monoaminergic regulation of inter-individual differences in exploratory behaviour and the activating and rewarding effects of psychostimulants in rats. Tartu, 2010, 132 p.
30. **Triin Hannust.** Children's knowledge about the Earth and gravity and its change in the course of development and learning. Tartu, 2011, 108 p.
31. **Kersti Luuk.** Antecedents and concomitants of adult psychological distress. Tartu, 2011, 132 p.
32. **Margus Kanarik.** Inter-individual differences in vulnerability to depression: regional brain energy metabolism, serotonergic function and behaviour in animal models. Tartu, 2011, 239 p.
33. **Aire Raidvee.** Pooling of elementary motion, colour, and orientation signals into global perception. Tartu, 2012, 105 p.
34. **Liisi Kõöts-Ausmees.** Emotional experience: relations to personality, subjective well-being, recollection, and external influences. Tartu, 2012, 137 p.
35. **Pirko Tõugu.** "Where did we go last weekend?" Socialization of children through past-event reminiscing in various cultural contexts. Tartu, 2012, 132 p.
36. **Triin Kurrikoff.** Interpersonal relationships and behaviour: moderation by functional gene variants. Tartu, 2012, 126 p.
37. **Karin Täht.** The cross-cultural view on students' motivation to learn. Tartu, 2012, 137 p.