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VALUES AND WELL-BEING IN CONTEXT:

An analysis of country and group influences

Florencia Maria Sortheix

ACADEMIC DISSERTATION

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Abstract

The purpose of this dissertation was to analyze the relationships between personal values and well-being, paying special attention to the contexts in which these associations emerge. This study addresses an ongoing controversy in current research between two competing hypotheses: a direct or healthy values perspective and the value-environment congruence perspective, the latter of which will be further developed in this dissertation. The theoretical background of the study is derived from Schwartz's value theory (1992, 2006), value-environment congruence models of well-being (Sagiv & Schwartz, 2000; Diener, Oishi, & Lucas, 2003; Diener & Diener, 1995), self-determination theory (Deci & Ryan, 1985), as well as research on subjective and work well-being (Diener, 1984; Bakker, Schaufeli, Leiter, & Taris, 2008).

This study used a variety of samples: large population samples from 25 European countries (*N*~40.000, European Social Survey, ESS, 2006), two representative samples of working age adults from a Finnish rural community in 1993 and 2007 (*N* = 373), university students from Argentina, Bulgaria and Finland (N = 627), as well as a representative sample of young adults from a longitudinal data set from the *Finnish Educational Transitions* (FinEdu) research project (N = 571).

First, the current study tested the relationships between values and the cognitive aspect of SWB—specifically life satisfaction (LS)—across European countries, and found that the level of socio-economic development of a country moderated the relationships between values and life satisfaction. Interestingly, some associations were contradictory: achievement values were positively and universalism values were negatively associated to life satisfaction in low socio-economically developed countries, and the reverse associations were found in highly developed nations. In less developed countries, which in the ESS are mostly Eastern European, openness to change values (positive) and conservation values (negative) were more strongly related to LS than in higher developed nations. This study also showed some universal positive motivations for well-being: valuing benevolence and hedonism, but not security or power was related to higher SWB in general population across countries.

Second, person-group value congruence—understood as the similarity between individual and average group values—related to higher subjective well-being among university students and fewer psychological stress symptoms among community members. Value congruence, but not individuals' scores on value priorities, predicted increased SWB in student samples. In the community sample,

conservation values related to fewer psychological symptoms in times of economic crisis, but not in times of economic prosperity.

Finally, this study examined long-term predictors of well-being at work (engagement) and proposed a conceptualization of career values based on self-determination theory's ideas of autonomous versus controlled sources of motivation. Results showed that intrinsically rewarding career values were positively related to subsequent engagement, but extrinsically motivated career values were unrelated. According to the findings, perceived person-organization value congruence was the strongest predictor of work engagement.

In sum, this study shows that the relationship between values and well-being is dependent on the broader social context that individuals inhabit. In particular, the relationship between individuals' values and well-being is influenced by country level characteristics, by the social groups to which they belong, as well as by organizational and developmental situations.

Tiivistelmä

Työssä selvitettiin henkilökohtaisten arvojen ja hyvinvoinnin yhteyksiä. Erityisesti tarkasteltiin sitä, miten nämä yhteydet vaihtelivat kontekstista riippuen. Tavoitteena oli ottaa kantaa kahteen kilpailevaan hypoteesiin, joista toinen olettaa että on olemassa terveellisiä arvoja, jotka ovat suoraan yhteydessä hyvinvointiin, toinen taas korostaa arvojen ja ympäristön yhteensopivuuden merkitystä hyvinvoinnille. Väitöstyö kehittelee jälkimmäistä näkökulmaa edelleen. Tutkimuksen teoriataustana ovat Schwartzin (1996, 2006) arvoteoria, hyvinvoinnin arvojen ja ympäristön kongruenssin mallit (Sagiv & Schwartz, 2000; Diener, Oishi, & Lucas, 2003; Diener & Diener, 1995), itsemääräämisteoria (Deci & Ryan, 1985) sekä subjektiivisen hyvinvoinnin ja työhyvinvoinnin tutkimus (Diener, 1984; Bakker, Schaufeli, Leiter, & Taris, 2008).

Tutkimuksen aineistoja oli neljä: edustavat otokset 25 Euroopan maasta (N~40.000, European Social Survey, ESS, 2006), Pyhtään työikäisiä edustavat otokset vuosilta 1993 ja 2007 (N=373), argentiinalaisia, bulgarialaisia ja suomalaisia yliopisto-opiskelijoita (N=627) sekä nuoria aikuisia edustava pitkittäisotos (N=571) Nuori valintojen edessä (FinEdu) tutkimushankkeesta.

Tutkimuksessa tarkasteltiin ensinnä arvojen yhteyttä subjektiivisen hyvinvoinnin kognitiiviseen aspektiin, elämäntyytyväisyyteen, ja todettiin että maan sosioekonominen kehitystaso moderoi arvojen ja elämäntyytyväisyyden suhdetta. Kiinnostava havainto oli, että jokin yhteydet olivat vastakkaisia: sosioekonomisesti heikosti kehittyneissä maissa suoriutumisarvot olivat positiivisessa ja universalismiarvot negatiivisessa yhteydessä elämäntyytyväisyyteen, kun taas korkean sosioekonomisen kehityksen maissa yhteydet olivat päinvastaiset. Vähemmän kehittyneissä maissa, jotka Euroopan yhteiskuntakyselyssä ovat pääasiassa Itä-Euroopan maita, muutosvalmiusarvojen positiiviset yhteydet ja säilyttämisarvojen negatiiviset yhteydet elämäntyytyväisyyteen olivat vahvemmat kuin korkeammalle kehittyneissä maissa. Tutkimuksessa löytyi myös arvoja, jotka ennustivat hyvinvointia kaikissa maissa: hyväntahtoisuus ja mielihyvä olivat positiivisessa ja turvallisuus ja valta negatiivisessa yhteydessä väestön subjektiiviseen hyvinvointiin.

Toiseksi henkilön ja hänen jäsenryhmänsä arvojen kongruenssi – ymmärrettynä yksilön arvojen ja ryhmän keskimääräisten arvojen samanlaisuudeksi – liittyi parempaan koettuun hyvinvointiin yliopisto-opiskelijoilla ja vähäisempiin stressioireisiin pyhtääläisillä. Arvokongruenssi, toisin kuin yksilöiden arvopreferenssit, ennusti myös parempaa hyvinvointia

opiskelijaotoksissa. Pyhtääläisillä säilyttämisarvot olivat yhteydessä vähäisiin stressioireisiin talouslaman aikana 1993 mutta eivät enää normaaliaikoina 2007.

Kolmanneksi tutkimus selvitti, mitkä tekijät ennustivat työhyvinvointia (työn imua) pitkällä tähtäyksellä. Itsemääräämisteorian autonominen – alisteinen – motivaatioerottelun pohjalta esitettiin uusi tapa käsitteellistää työarvoja. Tulokset osoittivat että työnsisäistä palkitsevuutta korostavat arvot olivat positiivisessa yhteydessä myöhempään työn imuun, mutta ulkoisia palkintoja korostavilla arvoilla ei ollut siihen yhteyttä. Yksilön ja organisaation arvojen koettu kongruenssi ennusti vahvimmin työn imua.

Kaikkiaan tutkimus osoitti, että arvojen ja hyvinvoinnin yhteys riippuu sosiaalisesta kontekstista – ihmisen ja hänen ympäristönsä arvojen yhteensopivuudesta, olipa ympäristö sitten jokin Euroopan maa, yliopiston opiskeluala, maalaiskunta tai työorganisaatio.

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Helsinki, March 1014
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List of original publications

This thesis is based on the following publications:

I Sortheix, F. M. & Lönnqvist, J.-E. (2014). Personal value priorities and life satisfaction: The role of socio-economic development across Europe. *Journal of Cross-Cultural Psychology, 45 (2),* 282–299. DOI: 10.1177/0022022113504621

II Sortheix, F. M. & Lönnqvist, J.-E. (in press). Person-group value congruence and subjective well-being in students from Argentina, Bulgaria and Finland. *Journal of Community and Applied Social Psychology*.

III Sortheix, F. M., Olakivi, A., & Helkama, K. (2013). Values, life events and health: A study in a rural Finnish community. *Journal of Community and Applied Social Psychology, 23,* 331–346. DOI: 10.1002/casp.2125

IV Sortheix, F. M., Dietrich, J., Chow, J. & Salmela-Aro, K. (2013). The role of career values for work engagement during the transition to working life. *Journal of Vocational Behavior, 83*, 466–475. DOI:10.1016/j.jvb.2013.07.003

The publications are referred to in the text by their roman numerals. The original articles are reprinted with the kind permission of the copyright holders.

1 Introduction

The last decades have witnessed an increased interest in the scientific study of well-being and, of the various constructs used to study this concept, subjective well-being (SWB) has become the most widely used to measure well-being across different countries (for a review, see Diener, Oishi, & Lucas, 2003). Today, governments of several countries are including measures of affective well-being to complement objective economic indicators (Diener, Lucas, Schimmack, & Helliwell, 2009). SWB includes a cognitive evaluation of life (i.e., life satisfaction), and an emotional aspect, that is, the presence of pleasant over unpleasant emotions (Bradburn, 1969; Lucas, Diener, & Suh, 1996). Sometimes SWB has been used interchangeably with the term "happiness", which has been embraced as one of the most important goals of our times—both for the individual and society at large (Lyubomirsky, Sheldon, & Schkade, 2005). In educational and organizational settings, well-being is mainly studied under the concept of engagement and is a topic of increasing importance (Bakker, Demerouti, & Ten Brummelhuis, 2012; Salanova, Agut, & Peiro, 2005). However, before setting happiness as a goal, a careful examination is needed of the proposed constructs to measure well-being, as well as study of their motivational underpinnings. A deeper analysis of the different conceptualizations of well-being, as well as its antecedents and outcomes will be presented in the next section.

The relationships between personal values, conceptualized in Schwartz's Value Theory (SVT, Schwartz, 1992) as the broad goals we have for our lives, and well-being have been under-explored (Sagiv, Roccas & Hazan, 2004; Schwartz, 2011a). This is perhaps surprising, since values—representing what is desirable and most important in life—are the foundation on which people live and relate to others (Schwartz, 1992). The existing research on the relationship between values and well-being has been conducted according to two opposing perspectives. The first, based mainly on self-determination theory (SDT, Deci & Ryan, 1985), suggests general universal links between specific values and well-being (Bobowik, Basabe, Páez & Jimenez, 2011; Bilbao, Techio, & Paez, 2007; Sagiv et al., 2004). The second, proposed by Sagiv and Schwartz (2000), suggests that the environment in which values are pursued may influence the relationship between values and well-being, however this has not yet been further developed. This gap in the literature is the starting point of the current dissertation research.

Cultural diversity poses a great challenge to any universal psychological claims arising from studies on the links between values and well-being. Thus, it is crucial to examine whether findings are generalizable to populations having different

ecologies, languages and belief systems, and social practices (Smith, Bond, & Kagitcibasi, 2006). There is an interdependence between individuals, their values, beliefs and behaviors, as well as the social groups and societies in which they function. The main aim of this dissertation is to analyze the extent to which relationships between values and well-being are universal or dependent on congruence effects (Sagiv & Schwartz, 2000; Lönnqvist et al., 2009). Further, the dissertation aims to develop and clarify the notion of value environment congruence, its relation to well-being and how it can be applied at different levels of analysis (societal, inter-personal and organizational). As such, this dissertation will provide a social-psychological understanding of well-being and its relation to values in the context of the groups, relations and societal conditions in which they arise.

This dissertation is comprised of four peer-reviewed articles examining contextual influences on the relations between values and well-being. To the best of my knowledge, no previous research has examined which country-level variables are related to systematic variations in the relationships between well-being and individual-level personal value priorities. Although there has been much cross-cultural research done on values, there are no systematic cross-cultural comparisons on how values relate to other psychologically meaningful variables (Roccas & Sagiv, 2010; for a very recent exception, see Boer & Fischer, 2013). The study reported in Article I addressed this gap in the research by using data from 25 European countries to test whether the relationships between values and life satisfaction varied across countries with different levels of socio-economic development.

In addition to the larger socio-cultural context, another understudied influence on the relationship between values and well-being relates to the communities and social groups to which the individual belongs. The scarcity of prior research on this issue motivated Articles II and III, both of which empirically tested the role of person-group value congruence on well-being. Article IV is a further exploration of person-organization dynamics within the context of work, where a good match between individual and organization values is suggested to be crucial for well-being. The longitudinal analysis reported in Article IV, considered the role of early career values for engagement in the transition from study to work.

Next, I will define the concepts used to assess well-being in this dissertation: subjective well-being, including life satisfaction, pleasant and unpleasant affect and engagement.

1.1 Approaches to the conceptualization of well-being

There are two intellectual traditions of well-being research: the *hedonic* or subjectivist perspective and the *eudaimonic* or objectivist perspective (Ryan & Deci, 2001; Ryan, Huta, & Deci, 2008). The hedonic approach focuses on individuals' subjective evaluations of feeling good and pleasant (Diener & Lucas, 1999; Diener, Suh, Lucas, & smith, 1999). In contrast, the eudaimonic approach develops an understanding of well-being based on Aristotle's ideas that happiness consists of the art of living according to our true *daimon*, which involves the development of character virtues and wisdom. Under this perspective, well-being, rather than being derived from a state of pleasure, is achieved through *eudaimonia*—that is, seeking to use and develop the best in oneself, by realizing potential for greater growth and self-expression (Ryan & Deci, 2001; Ryff & Keyes, 1995). The focus of eudaimonic well-being research is on the way people *function* rather than how they are *feeling*. Functioning well is generally defined in terms of fulfilling basic needs (Ryan & Deci, 2001), having positive interpersonal relations, autonomy, purpose, self-acceptance and mastery (Ryff & Keyes, 1995). The two most relevant theorizations from a eudaimonic perspective derive from self-determination theory (Deci & Ryan, 2000) and psychological well-being (Ryff & Singer, 1998). The broad range of constructs studied also includes well-being understood as exercising as well as expressing virtues such as gratitude, forgiveness, courage, wisdom (Kashdan & Steger, 2007; Seligman, Parks, & Steen, 2004; Steger, Oishi, & Kashdan, 2009).

This study focuses on subjective well-being (SWB), which is situated within the hedonic approach to the study of happiness. SWB has been conceptualized as a sense of satisfaction with one's life, both in general and in specific areas of one's life such as relationships, health and work. SWB includes a cognitive aspect, specifically the personal evaluation of one's life, as measured by the Satisfaction With Life Scale (Pavot & Diener, 1993). A person is considered to have high SWB if he or she is (a) satisfied with life, and (b) experiences frequent pleasant emotions such as joy, happiness, and infrequent unpleasant emotions, such as fear or anger (Lucas, Diener, & Suh, 1996). In opposition to pleasant emotions, namely, happiness, excitement, or engagement, unpleasant affect states like anxiety, stress, or depression are antagonistic to high SWB. The correlation between SWLS and positive affect scale is around .50, and with negative affect scale -.35 (Diener, Emmons, Larsen, & Griffin, 1985). However, the strength of these associations varies according to the cultural value emphasis of a country (Kuppens, Realo, & Diener, 2008).

As such, SWB measures can be considered as indicators of quality of life for a country and are, as a result, being used to complement objective measures such as gross domestic product (GDP) to assess societal progress (Diener, Inglehart, & Tay, 2012). At the individual level, experiencing well-being has shown to be provide multiple benefits, including better health, healthier habits, lower blood pressure, a stronger immune system and a prolonged, healthy life (Howell, Kern, & Lyubomirsky, 2007). Furthermore, longitudinal evidence shows that people who report higher well-being have better jobs, higher performance and salary (Lyubomirsky, King, & Diener, 2005).

Given that SWB is an antecedent of such positive outcomes, it is important to understand what factors foster SWB. There are theories explaining SWB as a product of a series of positive experiences and external events. Under this perspective, the role of life events and demographic factors on SWB is given particular attention (Pavot & Diener, 1993; Luhmann, Hofmann, Eid, & Lucas, 2012). For example, Campbell, Converse, and Rodgers (1976) showed that age, gender, education, ethnic background accounted for about 15 to 20 per cent of the variance in SWB. Other theories focus on the underlying predispositions that condition the way in which individuals experience external circumstances. Under this perspective, personality factors have been vastly studied (Costa & McCrae, 1980; Headey & Wearing, 1989). Extraversion personality trait correlated with pleasant affect (r = .37) in a meta-analysis of 47 samples (Lucas & Fujita, 2000) and Neuroticism, with unpleasant affect (r =.69) (Suh, Diener, & Fujita, 1996). In their meta-analysis De Neve and Cooper (1998) showed that SWB was also moderately associated with personality traits such as Conscientiousness and Agreeableness (.20) and that Openness to Experience had the smallest correlation. Schimmack, Oishi, Furr, and Funder (2004) showed that cheerfulness and depression were the facets of Extraversion that most strongly related to LS. On the contrary, the facet of sensation-seeking was not significantly related to LS.

In sum, the collected evidence on SWB suggests that there are three major determinant factors: (1) a genetically determined set point for happiness, (2) life circumstances (e.g., age, gender, education, culture), and (3) factors under one's voluntary control, such as the activities and practices one chooses to engage in (Lyubomirsky, Sheldon, & Schkade, 2005). In fact, after reviewing the literature, Lyubomirsky and colleagues (2005) concluded that the genetically determined set point explains about 50 per cent of variation in happiness, whereas life circumstances account for only 10 per cent, and intentional activities are responsible for the remaining 40 per cent. This conclusion suggests there is space for personal freedom and agency in the development of an individual's well-being,

and that one route to achieving well-being is through meaningful pursuits, values, and goals.

1.1.1 Engagement as a form of well-being

Engagement is a domain specific type of well-being that Bakker and Orelemans (2011) have termed *positive work-related SWB* (Bakker, Albrecht, & Leiter, 2011). The concept has been used both in the workplace and in education, and has been defined within work or study contexts as a positive, fulfilling, work-related state of mind (Bakker, Schaufeli, Leiter, & Taris, 2008; Salmela-Aro, Tolvanen & Nurmi, 2009; 2011). Engagement is characterized, first, by feelings of vigor, which involve high levels of energy, mental resilience to overcome set-backs, and persistence. The second component of engagement, dedication, conveys a sense of significance, enthusiasm, inspiration, pride and positive challenge in response to an activity. Finally, absorption is characterized by fully concentrating and being happily engrossed in one's work. Engagement fosters both academic (Salanova, Schaufeli, Martinez, & Bresó, 2010) and work performance (Bakker, et al., 2012; Salanova, et al., 2005).

There are some differences in the levels of emotional arousal that are activated in SWB and engagement. Research shows that individuals' mental map of emotions is organized on two dimensions: pleasure-displeasure and high-low arousal dimensions (see, Figure 1; see also Bakker & Oerlemans, 2011). Whereas life satisfaction and pleasure (or SWB) are located in the pleasant pole and can be either high or low arousal, engagement needs both high arousal and a pleasant affective state to emerge. Engagement involves activities that require a good deal of effort, whereas this is not necessary for experiences of SWB (Scollon & King, 2004). Empirically, engagement and SWB correlate .27 and engagement is more strongly related to organizational outcomes, such as commitment (Field, & Buitendach, 2011).

However, conceptually both SWB and engagement are indicative of pleasant affective states and, more importantly, both signal that "things are going well". In fact, it has been suggested that SWB is derived from a hedonic feeling typically experienced when the conditions of life are satisfactory. Thus, the experience of well-being may be considered a key outcome of successful coping with life. Likewise, the experience of engagement has recently been conceptualized as an indicator of successful coping with developmental demands and changes, such as the transition from study to work life. Here, important developmental tasks, such

as graduating, finding a job, and a corresponding feeling of being enriched by it, and being engaged with the tasks at stake, are taken as signs of a good developmental path (Dietrich, Parker, & Salmela-Aro, 2013).

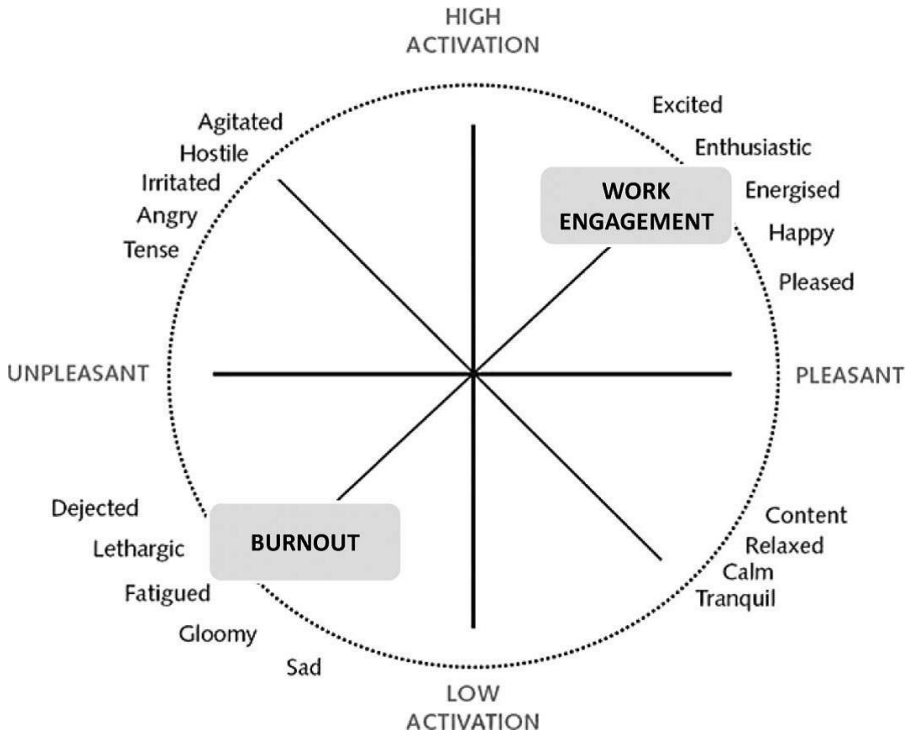

Figure 1. *A two-dimensional view of subjective well-being (Bakker, Albrecht, & Leiter, 2011). Printed with permission.*

1.2 Personal Value Priorities

Values represent basic individual motivations that are internalized as specific cultural practices through social institutions (Rokeach, 1973; Schwartz, 1992). Personal value priorities define what is important for us, while also serving as guidelines for behavior. Values are trans-situational goals that are stable throughout varied situations (Schwartz, 1992). This study will build on these definitions, making particular use of the conceptual model developed by Schwartz (1992, 2006) of the content and structure of the ten basic personal values that

Schwartz identified across several countries: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, conformity, tradition, and security. Specifically, these value types and definitions are (sample items listed in brackets):

1. Power: Social status and prestige, control or dominance over people and resources (social power, wealth, authority, preserving my public image).
2. Achievement: Personal success through demonstrating competence according to social standards (successful, ambitious, capable, influential).
3. Hedonism: Pleasure and sensuous gratification for oneself (pleasure, enjoying life).
4. Stimulation: Excitement, novelty and challenge in life (a varied, daring and exciting life).
5. Self-Direction: Independent thought and action-choosing, creating, exploring (creativity, freedom, independent, curious, choosing own goals).
6. Universalism: Understanding, appreciation, tolerance and protection for the welfare of all (broad-minded, wisdom, a world of beauty, equality, unity with nature, a world at peace, social justice, protecting the environment).
7. Benevolence: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (honest, loyal, helpful, forgiving, responsible).
8. Tradition: Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self (respect for tradition, humble, accepting my portion in life, devout, moderate).
9. Conformity: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms (self-discipline, obedient, politeness, honoring of parents and elders)
10. Security: Safety, harmony and stability of society, of relationships, and of self (family security, national security, reciprocation of favors, social order, clean, reciprocation of favors).

Values fill an evaluative function and an affective one, making some things more desirable than others and moving individuals towards those valued things (Schwartz, 1992). When confronted with critical life choices and decisions, people will consciously or unconsciously appeal to values. For example, a person might decide whether to accept a promotion or start a family based on the importance placed on achievement, career progress and wealth, or family and traditional institutions. In fact, empirical evidence shows that personal values correlate as expected with value-expressive behaviors (Bardi & Schwartz, 2003). People's

values, like their needs, induce a positive or negative valence to events, behaviors and situations (Feather, 1995); thus, values have a motivational and not just an evaluative function (Rokeach, 1973). The valences, infused by values, make people more attracted towards or repulsed by certain things to the extent these things promote the attainment of valued goals. For example, people who value universalism will tend to follow actions that protect the environment in a positive way whereas someone who values power might consider such actions as a waste of money. However, values as motives are distinct from needs. According to Feather (1995), "values are tied to a normative base involving a dimension of goodness and badness, whereas no necessary connection exists between needs and evaluations of goodness and badness" (p. 1136).

To investigate these constructs, Schwartz (1992) used multidimensional scaling techniques (SSA) and showed that value items were organized in a dynamic circular structure, as illustrated in Figure 2 below. Values are located in relation to one another along a circular motivational continuum. Schwartz described the relationships between values in terms of their underlying motivations. There are some values that are compatible with each other, and have congruent expected consequences, but there are others values, when pursued together, may be conflictual. For example, pursuing achievement values may be compatible with power values, but may conflict with the pursuit of benevolence values. The closer the values are in this representation, the more similar their underlying motivations. This motivational continuum determines a sinusoid curve of associations of values with any external variable. In other words, the circular structure of values suggests that any external variable would be expected to be associated similarly with values found adjacent in the value structure. Further, the strength of associations should decrease as one moves around the circle from the strongest positive to the strongest negative association, which should be located at opposite sides of the circle. Based on theoretical considerations one can formulate an integrated hypothesis of expected associations, requiring a careful examination of the construct under study. The specific characteristics of each construct make certain motivational goals more salient, and determine the sign of the relationship to the construct.

Personal values are also arranged in three larger higher-order value dimensions to show how values cluster with each other (see Figure 2). The first includes two bi-polar dimensions: self-transcendence versus self-enhancement and openness to change versus conservation. The former describes the conflict between considering one's own needs and interests above those of others with being socially concerned and taking into account the welfare and interests of

others. The latter reflects the opposition between independent action and seeking

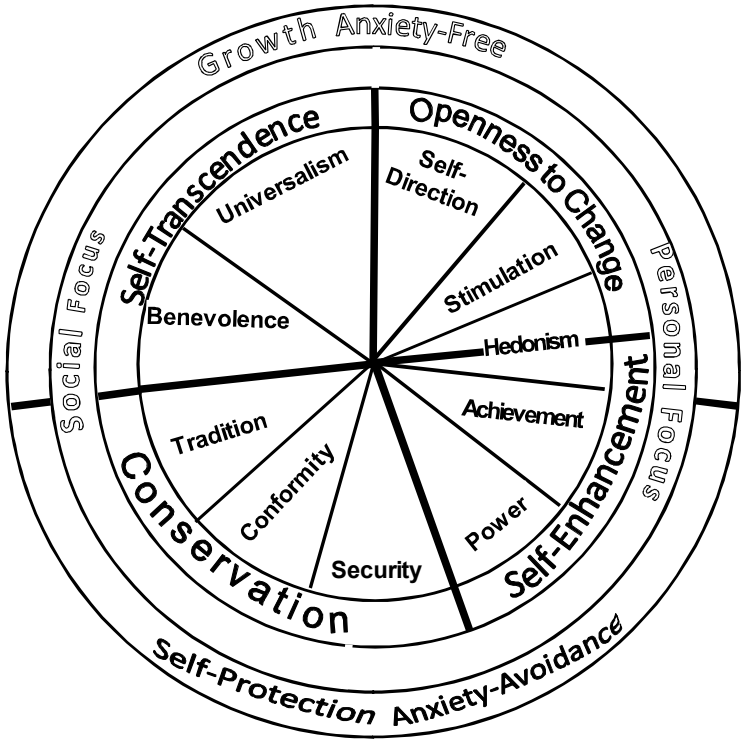

Figure 2. *Structural relations among the ten values, four higher order value dimension and two underlying motivational sources (Schwartz, 2011b). Reproduced with permission.*

The second higher-order value dimension distinguishes between person and social-focused values. It derives from the notion that values could serve the interests of the individual or the collective (Schwartz, 1992; 2006). Person-focused values regulate how one expresses personal characteristics and interests, and include self-direction, stimulation, hedonism, achievement and power. Social-focused values are those that promote, regulate and preserve cooperative and supportive relations, both within and among groups. A social focus is shared by the individual values of universalism, benevolence, conformity and tradition, which regulate how one relates socially to others and affects them. Security does not fit well into this classification scheme; although it tends to correlate most

strongly with the socially-focused values, security shares the self-concerned motivations of person-focused values as it is concerned mainly with protecting the self against threat (Schwartz, 2006).

A third classification of values was originally proposed by Bilsky and Schwartz (1994). Values can be clustered according to the extent they are conducive to personal growth and self-expression, or in the opposite way, based on anxiety and the extent to which they are protective against real or imagined threats. Growth values increase in importance when people have more possibilities to pursue and attain the goals and ambitions these values represent, whereas people will tend to downgrade the importance of such values if they perceive there is little chance of realizing their aspirations (Schwartz & Bardi, 1997). However, the opposite seems to occur with deficit values with a focus on self-protection; when people feel their security is threatened, the importance of deficit values raises. This is particularly evident for security values which increase, for example after a terrorist attack (Verkasalo, Goodwin, & Bezmenova, 2006) or after migration (Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2011).

As seen in Figure 2, openness to change and self-transcendence values share growth motivations, whereas conservation and self-enhancement values are located along the anxiety/protection pole. Hedonism, conformity and tradition do not have a clear-cut position in the growth-deficit distinction (Schwartz, 2011b), nor do achievement values. For example, achievement values have been both located among deficit and growth values, and have been theoretically conceptualized as healthy as well as unhealthy values. Bilsky and Schwartz (1994) and Sagiv and colleagues (2004) classified it as growth value, as according to self-determination theory (SDT, Deci & Ryan, 1985), competence needs fulfillment. In a more recent re-conceptualization, achievement was located at the border of anxiety-based values and growth values (Schwartz et al., 2012).

There are some important correlates to consider when analyzing the relationships between values and other external variables. There is evidence showing that value preferences change with age, so that age is negatively related to openness to change and self-enhancement values (Schwartz, 2003; 2007). Education has been positively related with self-direction and hedonism values and negatively with tradition and conformity values (Schwartz, 2003; 2007). There are also some consistent gender differences: women value self-transcendence values (i.e., benevolence and universalism) more than men, while men value self-enhancement values (i.e., power and achievement) more than women (Schwartz, 1992, 2003). These results hold across 127 samples from 71 countries (Schwartz & Rubel, 2005). According to these previous studies, there are gender and age

differences with regards to values, which need to be considered when analyzing values' association to well-being. The cultural value orientations of countries are also important to consider when studying predictors of SWB across countries (Diener et al., 2003).

1.2.1 Cultural values

The development of a personal value system lies in the interplay between people and social groups. People do not develop their values in isolation but rather through their experiences as members of groups and a larger social system. In this sense, values develop simultaneously for people to cope with their basic needs, as well as the opportunities and barriers in their environment. Schwartz (2013) defines culture as "a latent normative system that underlies and justifies the functioning of societal institutions" (p.1). I use Schwartz's autonomy and egalitarian value dimensions at the cultural level. Both autonomy and egalitarianism are related to Welzel and Inglehart's (2010) concept of self-expression values, which are also strong antecedents of well-being at the societal level. Under Schwartz's cultural values framework, the autonomy versus embeddedness dimension concerns boundaries between the individual and the group, and differentiates between cultures which encourage people to cultivate their own preferences and ideas (i.e., autonomous/individualistic) and those which emphasize the importance of maintaining status quo and restraining actions that might disrupt smooth social relationships (embedded/collectivistic). Another relevant dimension is egalitarianism versus hierarchy, which differentiates cultures that promote equal rights and possibilities, where acting for a common good is expected to happen out of free choice, from societies where inequality and power distance, and the unequal distribution of power and resources, are considered unquestionable. The cultural value of autonomy shares a conceptual and empirical resemblance with individualism, and has been shown to be a stronger predictor of well-being than wealth. In fact, research suggests that it is through increased autonomy that wealth has a positive relationship with well-being (Fischer & Boer, 2011).

In summary, SWB may be understood as a product of the interactions between the individual and the environment (Diener, 1984); however, more research is needed to analyze the interaction between individual psychological factors and living conditions for well-being (Diener & Lucas, 1999). In the next section, I will consider potential theoretical explanations for associations between values and

well-being. To do so, I will make use of Schwartz's value theory (1992, 2006) of individual value priorities that are organized along larger motivational orientations: self-transcendence (ST) versus self-enhancement (ST), openness (OP) versus conservation (CO), growth versus deficiency values, and person versus social-focused values (Figure 2). The focus of the dissertation will be on the following questions:

- What are the contextual factors that may foster or thwart links between values and well-being? This is the main task of Article I.
- How do the values of the people around you influence well-being? This question is explored in Articles II and III.
- How can we apply values to study well-being in the work context? This is the focus of Article IV.

The next chapter will delve further into the idea of motivational orientations and their relation to values and subjective well-being as operationalized in the current research.

2 Values and Well-being

The pursuit of each value has psychological, practical and social consequences, and thus, their associations to well-being deserve research attention (Bobowik, Basabe, Páez & Jimenez, 2010; Sagiv & Schwartz, 2000; Sagiv et al., 2004; Zubieta, 2008). While some scholars have begun to explore the relationship between values and well-being, the topic is as a whole understudied and the empirical evidence scarce. First, more research is needed to understand what types of values underlie subjective well-being judgements, whether the associations between values and well-being are universal, and which factors influence these associations (Schwartz, 2011a). In the next section, I review research results that link values and well-being at the individual level, starting from self-determination theory (SDT, Deci & Ryan, 1985), one of the major theoretical frameworks through which the relationship between values and well-being has been studied. Then, I present the possible contextual influences on the values and well-being relationship.

2.1 Theories suggesting direct associations between values and well-being

Some theoretical approaches have focused on the motivations, in terms of goals and values, of well-being (Deci & Ryan, 1985; Sheldon & Elliot, 1999). Self-determination theory's (Deci & Ryan, 1985; Ryan & Deci, 2001) ideas draw upon work by humanistic psychologists (e.g., Maslow, 1954; Rogers, 1961) who suggest that human beings are growth-oriented. In this framework, values are seen to help satisfy our basic needs, which in turn contribute to growth, self-actualization and well-being. Self-determination theory (SDT) is one broad theoretical perspective that has embraced the concept of eudaimonia, or self-realization, as a central definitional aspect of well-being. SDT explains human well-being as a function of satisfying three basic psychological needs, specifically: (1) autonomy, which is the need to be the perceived origin or source of one's own behavior; (2) competence, which refers to feelings of effectiveness in one's actions; and finally, (3) relatedness, which refers to the need to belong (Baumeister & Leary, 1995) and be connected with other human beings. Central to SDT is the importance of autonomy and intrinsic motivation (Deci & Ryan, 2000), which will be further developed in Article IV.

Most of the literature on values and well-being is derived from SDT's conceptualization of intrinsic and extrinsic aspirations. SDT theorists have distinguished the content of intrinsic versus extrinsic goals, which are often referred to as values or aspirations. According to the theory, intrinsic goals (e.g., relationship goals, contribution to community) are likely to promote the satisfaction of basic needs, while extrinsic goals are likely to undermine such needs (e.g., financial goals, social recognition goals, and appearance goals) (Kasser & Ryan, 2001). Researchers have provided vast evidence showing that giving priority to such intrinsic pursuits over extrinsic ones contributes to people's well-being (Kasser, 2002). The effect is found even in contexts which should support these values, such as business universities (Vansteenkiste, Duriez, Simons, & Soenens, 2006) and in different cultures (Ryan, Chirkov, Little, Sheldon, Timoshina, & Deci, 1999). It is challenging, however, to apply Schwartz's values to the goals as conceptualized in the SDT framework, because goals are more concrete than values, and refer to an activity the person has decided to engage in. Values are abstract and can be satisfied pursuing several different activities; further, they refer to what people consider to be important, which is not necessarily what they are able to do. For example, personal growth for a person who values openness to change could be achieved by travelling around the world, whereas for a person who values universalism, by engaging in pro-environmental actions, and for a person who values tradition, through strengthening his or her religious faith.

Attempts have been made to theoretically link SDT's three universal needs to personal values. For example, Sagiv, Roccas and Hazan (2004) related Schwartz's values to self-determination theory's (SDT) basic needs, thereby proposing theoretical associations between values and well-being (the "healthy" values' perspective). In terms of Schwartz's values (see Sagiv, Roccas, & Hazan, 2004), self-direction and stimulation values are expected to contribute to the satisfaction of autonomy needs, universalism and benevolence to relatedness needs, and achievement to competence needs. The other values—power, security, conformity and tradition—were interpreted by Sagiv et al. (2004) to represent "extrinsic" motivations, not arising from human universal needs and, thus, related to higher anxiety and lowered well-being (see Bilsky & Schwartz, 1994; Sagiv & Schwartz, 2000). Attainment of these latter values is contingent upon (1) obtaining social approval and material rewards (i.e., power), or (2) meeting the expectations of others and avoiding the sanctions they may impose (i.e., conformity, tradition), or (3) receiving protection and preventing harm (i.e., security). This distinction between healthy versus unhealthy values is appealing and, in part, connects with

the distinction between growth values (i.e., self-transcendence and openness to change) and anxiety-avoidance values (i.e., conservation and self-enhancement values; Bilsky & Schwartz, 1994; see Figure 2).

In the search of empirical support for such claims, I reviewed empirical studies using Schwartz's values and well-being at the individual level. A summary table is presented in Appendix 1. Correlation results from small samples (N < 300) did not show a clear pattern and the correlations were small (Cohen & Shamai, 2009; Joshanloo & Gahedi, 2009). In Iran, for example, achievement and hedonism correlated positively, and universalism and tradition negatively with life satisfaction (Joshanloo & Gahedi, 2009). Oishi, Diener, Suh and Lucas (1999) found very small correlations between values and SWB, achievement being the only value that was significantly positively related to LS and PA. When the average r was computed for a variety of different samples, the pattern of correlations did not follow the expected sinusoid curve of associations and almost all values had a positive correlation with LS (Bilbao et al., 2007). Finally, when national representative samples were combined, openness to change (positive) and conservation (negative) values had a more stable pattern of associations to well-being than the self-transcendence versus self-enhancement dimensions (Bobowik et al., 2011). These latter values had smaller and more inconsistent associations to SWB. The reviewed studies did not fully support the claims of the "healthy values" perspective and also neglected possible group differences. For example, in Bilbao et al.'s (2007) study, as many as 11 nationalities were combined, including immigrants and Spanish nationals, and in Bobowik et al.'s (2011) study, Europe was analyzed as a whole, which may obscure possible differences among countries in the value-SWB relationships.

In conclusion, the studies to date on the relationships between values and subjective well-being using Schwartz's value theory (1992) have been conducted at the individual level, neglecting possible cultural and contextual effects. Past research has examined intra-personal mechanisms in isolation, specifically how individuals' value orientations predict well-being, but the inter-personal and contextual factors that may influence the relationship between values and well-being has not yet been fully explored. This dissertation seeks to begin filling this gap in the research by examining the value congruity between the person and the environment (Sagiv & Schwartz, 2000). The study of value congruence in this study focuses on the influence of contextual (i.e., value-environment fit), interpersonal (i.e., value congruence and interpersonal relationships) and organizational (i.e., person-organization fit) factors on the relationship between values and well-being.

2.2 Revising value-environment fit ideas

According to Sagiv and Schwartz's (2000) value-environment fit hypothesis, the context where individuals live and function determines the relationship between values and well-being. When the environment prevents people from realizing their values, they are likely to experience negative well-being; there are also certain values that are required and functional in the environment, which promote greater well-being. The context—through a series of rewards, social sanctions, and affordances or possibilities for action (see Sagiv & Schwartz, 2000)—may influence the type of values that will be positively related to well-being. For instance, Sagiv and Schwartz (2000) showed that the context offered by students' majors moderated the relationship between values and well-being in student samples. The value of power attends to characteristics of careers in business while benevolence responds to careers in psychology (Gandal, Roccas, Sagiv, & Wrzesniewski, 2005). Thus, Sagiv and Schwartz (2000) suggested that when the environment supported and encouraged certain types of values (e.g., power in business careers), then adhering to these values brought about positive outcomes in terms of personal happiness. Specifically, they found that power values were related to higher well-being only among business students, and benevolence values were related to higher well-being only among psychology students.

Cross-cultural research on value congruent models of SWB suggests that differences in the predictors of well-being might be explained by different the cultural value orientations of their countries (Diener, Oishi, & Lucas, 2003; Oishi, Diener, Lucas, & Suh, 1999). Previous cross-cultural studies have found cultural variations in correlates of well-being (Diener & Diener, 1995; Oishi et al., 1999). For example, Diener and Diener (1995) found that the strength of association between satisfaction with the self and life satisfaction was significantly stronger in individualist nations than in collectivist nations. Using multi-level analyses in general population samples, Oishi et al. (1999) showed that income was a stronger predictor of LS in poorer countries, whereas satisfaction with family life was more strongly related to LS in wealthy nations. In student samples, satisfaction with the self and esteem needs were more strongly related to LS in more individualistic countries. While the above research shows differences among individualist and collectivist countries, there have been no systematic cross-cultural comparisons on the relationship between personal values and life satisfaction within the European context. Furthermore, little is known about how contextual country-level variables may influence the links between personal values and well-being at the individual level.

2.2.1 The role of socio-economic development

The idea of value-environment fit is generally understood in terms of similarity between an individual's values and the values that she or he encounters in her or his environment. In Article 1, with my co-author, I extend Sagiv and Schwartz's (2000) ideas and argue that the opportunities and constraints that the socio-economic realities pose to the pursuit of certain values are also relevant. To anticipate which values may be related to life satisfaction (LS), researchers need to consider not only how the motivations that underlie values might relate to LS, but also the requirements and affordances people encounter in their socio-economic realities (Oishi & Graham, 2010). We analyze the possibility that relationships between values and life satisfaction (LS) vary across countries according to their level of socio-economic development. In this study, we use LS as the outcome variable, as these judgments are more strongly related to overall living conditions reflected by the country's level of socio-economic development (Diener, Ng, Harter, & Arora, 2010). To date, there are few studies that include contextual variables (e.g., country of belonging, cultural values) and analyze individual-level variations according to these macro-level factors. The recent availability of multilevel techniques allows researchers to further study this question. For example, multilevel analyses have been employed to analyze how cultural values moderated the individual-level association between positive and negative emotions with life satisfaction (Kuppens, Realo, & Diener, 2008).

Instead of following the classification between growth and deficiency values, in Article I we develop a hypothesis based on the distinction between person- and social-focused values. It is argued that these values seem relevant to distinguishing contexts where a person-focus might be a more successful strategy, from other contexts where a social-focus might provide greater satisfaction. These values are differentially supported across European countries, which vary in their levels of development as measured by the Human Development Index (HDI, United Nations Development Program, 2007). HDI is a good index for measuring access to education, health and a decent standard of living. As such, it was expected that the pursuit of person- versus social-focused values will have different outcomes in terms of LS in countries that have different levels of socio-economic development.

Highly developed Western European countries that have longstanding democracies, egalitarian institutions and high levels of trust offer a supportive context for social-focused values. Interpersonal relationships and social capital become increasingly important for personal well-being (Helliwell & Putnam,

2004). Universalism values are supported in these societies that also emphasize equality and human rights. Tradition and conformity share the prosocial motivations of self-transcendence values and are associated with trust in institutions and, thus, help maintain a well-functioning society (Morselli, Spini, & Devos, 2012). We expect these values to be positively related to LS in highly developed nations. On the other hand, security values are not based on pro-social motives, but rather self-defense and anxiety-protection motivations (Schwartz, 2006); hence, we expect this value to have a negative association to LS across countries. Benevolence, which is argued to support relatedness needs (SDT, Deci & Ryan, 1985; Baumeister & Leary, 1995), is expected to have a positive association to LS across countries.

In low socio-economically developed countries we expect a different pattern of associations. In the European context, countries with low levels of HDI are mainly Eastern European—where we expect person-focused values to have a positive association to LS. Social-focused values are expected to be negatively related to LS, with the above mentioned exception of benevolence. In contexts of low socio-economic development self-enhacenment values (power and achievement) could be pursued to provide the basic requierements for living. On the contrary, the goals of universalistic values might probably be twarted by the social realities characterized by high levels of inequality. Low HDI countries in Europe have undergone massive structural changes and live in instability, thus we expect that openness to change values will have a positive association to LS. The opposite relationships are expected for conservation values (i.e., tradition, conformity and security), which could be less adaptive in contexts of high structural changes.

Cultural values are also relevant contextual variables to consider when examining the role of socio-economic development. Inglehart and Welzel (2005) proposed that development raises human choice and brings general changes in cultural value orientations. According to modernization theory, when survival is at stake, material needs become central and consequently people's priorities focus on personal and social security or stability and material welfare. By contrast, when the contextual reality guarantees some comfort, other needs come to the forefront such as freedom and equality (Inglehart & Welzel, 2005). With greater socio-economic development people emphasize self-expression values more, related to freedom, social participation, tolerance to different people, self-direction and trust. Self-expression values share similar concerns as self-transcendence (Egalitarianism) and openness to change (Autonomy) values. Thus, it is important to consider cultural values along with socio-economic indicators of development to distinguish their independent effects.

2.2.2 Person-group value congruence (VC)

In Article I of this dissertation, I conceptualize, with my co-author, value-environment fit in relation to the broader socio-economic context; however individuals also belong to smaller groups. How do the values of other people around influence SWB? There are some empirical findings suggesting that the values of others and social groups may influence individuals' well-being. Sagiv and Schwartz (2000) reasoned that students who hold values congruent with their major, would gain approval for their values as well as for value-congruent behaviors. "Congruent" people will have more opportunities to express their values in beliefs, attitudes and behaviors (see reviews in Bardi & Schwartz, 2003; Roccas & Sagiv, 2010; Rokeach, 1973). Furthermore, recent research shows that people are more attracted to others who share their music preferences because these preferences indicate similarity in values (Boer et al., 2011). Lönnqvist et al. (2009) found that, in university students from Finland and Russia self-esteem was correlated with congruence between personal values and the value profile of the group. Sharing similar values as others in one's community is related to higher perceived social support (Lehtinen, 1995). In fact, Goodwin, Costa and Adonu (2004) showed that perceived social support partially mediated the associations between values and self-esteem. Self-esteem and life satisfaction correlate .47 and are discriminable constructs. However, these findings serve as background to explore these issues in relation to SWB.

Articles II and III of this dissertation analyze the role of person-group value congruence in smaller groups, such as with university peers and others in the community. As such, the focus of these articles is on objective VC, which refers to the objective similarity between individual and group value profiles. Little research has assessed VC objectively in an academic context (for an exception in the study of self-esteem, see Lönnqvist et al., 2009). There is no clear evidence on whether VC can contribute to the prediction of subjective well-being (SWB) beyond the possible direct effects of personal values (Sagiv & Schwartz, 2000). The research design of Articles II makes it possible to test this hypothesis in different contexts, Argentina, Bulgaria and Finland, which vary in their cultural values orientations (Inglehart & Welzel 2005) and levels of SWB at the country level. World happiness reports consistently rank the Scandinavian and Northern European countries among the most happy and Eastern Europeans countries among the least happy countries in the world (Helliwell, Layard, & Sachs, 2012). Bulgaria is also, according to World Value Survey, the poorest country (Gross National Product (GNP) 2500) of this group. Thus, the hypothesis is tested in

countries that vary in their cultural value orientations and levels of economic development. In Article III, these ideas are tested in a community sample and analyzed according to whether sharing similar values with others in the community related to another measure of well-being, the lack of psychological stress symptoms.

Article II also considers the role of interpersonal relationships in SWB. Having positive relationships with others characterizes people who report having warm, satisfying and trusting relationships with others and who are concerned about the welfare of others—specifically those who are capable of strong empathy, affection, and intimacy (Ryff & Keyes, 1995). According to the "similarity-attraction" paradigm, value congruence may facilitate interpersonal relations (Byrne, 1971; see also Berscheid, 1985). Whether similarity in values is empirically related to better interpersonal relationships in the university context has not yet been analyzed by research. Thus, in Article II, value similarity are also tested for a direct or indirect (via interpersonal relationships) association with well-being. Business and Psychology student samples, who have different value orientations (Gandal, Roccas, Sagiv, & Wrzesniewski, 2005) and come from three different cultures, are used to test these ideas.

The data used for Article III consists of two samples from the same community, Pyhtää, 14 years apart. The role of community levels of conservation values in the temporal stability of the relationships is considered between values and psychological stress symptoms. Previous research on the same community has shown that local identification (with Pyhtää) and national identification increased between 1993 and 2007 (Helkama, Finell, & Pirttilä-Backman, 2009). Since national identification has been found to be associated with conservation values (Roccas, Schwartz, & Amit, 2010), the importance of conservation values is expected to increase in this community from 1993 to 2007. The Pyhtää study has been specifically designed to address the relatively neglected issue of time in socio-psychological research (Spini, Elcheroth, & Figini, 2009).

2.2.3 Person-organization fit

Another important context for studying the relationship between values and well-being is the workplace. Schwartz's basic individual values have been applied to work-related outcomes (Gandal, et al., 2005; Ros, Schwartz, & Surkiss, 1999). However, basic values are abstract and broad motivations concerning all aspects of our lives. This is why to understand motivation at work more concrete and

proximal concepts need to be applied. In Article IV, work or career values are used to study engagement at work. Career or work values refer to evaluations of the desirability of different kinds of job attributes (Johnson & Monserud, 2010). Researchers working on the concept of work values have used Schwartz's value framework to justify different classifications. For example, Johnson (2001) justified her measurement of altruistic work values based on Schwartz's values of self-transcendence. Ros and colleagues (1999) used the measurement of status, prestige and power based on the motivation of self-enhancement values. These two conceptualizations complement the typical distinction between intrinsic-extrinsic work values. Intrinsic work values refer to enjoyment and self-actualization directly derived from the work activity, and extrinsic work values relate to the instrumental outcomes and benefits derived from the job, like salary or work conditions. Career values also play a central role in vocational development, but surprisingly their relation to work engagement has not been given attention. From a life course perspective, it is important to understand what helps young people successfully manage one of their main developmental tasks in life. This is explored in Article IV, where the role of career values is analyzed in relation to engagement to overcome the gap in the literature.

Research on engagement at work has mainly concentrated on the characteristics of the workplace, such as job resources (i.e., autonomy, rewards) and demands (i.e., time pressure, workload) and how these influence the work burnout and engagement of employees (Hakanen, Bakker, & Schaufeli, 2006). Recently, the focus of research has been expanded to study the personal resources and individual characteristics that help individuals to cope and thrive at work (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Based on self-determination ideas on autonomous versus controlled forms of motivation (Deci & Ryan, 2000; Sheldon, & Elliot, 1999), I propose with my co-authors that early career values may function as a potential personal resource for subsequent engagement. In line with prior research, intrinsic career values are conceptualized as those referring to the interest, learning possibilities and a feeling that one's career is in accordance to the self. Young people with intrinsic career values may feel a sense of ownership of their behavior and may also be more likely to experience increasing amounts of fulfillment from the activities they undertake, in this case, their first work experiences. Accordingly, we propose that intrinsic career values are positive antecedents of work engagement as these values are based on autonomous forms of motivations and foster satisfaction of autonomy and competence needs (Gagné & Deci, 2005). Extrinsic career values concern the motivations of having a good salary and promotion (i.e., rewards career values)

and secure working conditions and possibilities of employment (i.e., security career values). Extrinsic career values are based on external sources of motivation which undermine feelings of autonomy. When career motivations focus on rewards and security, career values may predict lower levels of work engagement by focusing on extrinsic rewards and undermining the internalization of behaviors.

The experience of work engagement is also fostered when there is a correspondence between personal and organizational characteristics (Hakanen et al., 2008; Maslach & Leiter, 1997). Maslach and Leiter's (1997) model focuses on the degree of perceived congruency between the individual and key aspects of his or her organizational environment. Accordingly, Article IV longitudinally studies the relationships between career values and engagement, person-organization fit (i.e., congruence between personal and organizational values and goals) and also job match (i.e., whether the job is in line with the person's education).

3 Aims of the study

The main aim of this dissertation is to examine the associations between personal value priorities and well-being, taking into account the larger social context in which these relationships emerge. The central focus is to specify the conditions, both personal and social, on which relations of values and well-being depend (Sagiv & Schwartz, 2000; Schwartz, 2011a). The literature reviewed here indicates that research on this topic has over-looked the possible role of societal and group influences. The question, therefore, remains open: Are there direct relationships between values and well-being or do these relationships depend on congruence? This question is explored using three different levels of analysis, specifically, the societal, group and organizational.

Article I analyzes whether the relationships between personal values and LS vary according to the level of socio-economic development of the countries. Answers to these questions may shed light on the extent to which certain values are ubiquitously related to LS, and to what extent such relationships are influenced by contextual variables. The hypotheses are based on the distinctions between, and motivations underlying, person- and social-focused values. Based on value-environment fit, it is expected that person- and social-focused values will predict well-being differently in European countries that vary in terms of socio-economic development.

Hypothesis 1: In high HDI countries, social-focused values will be positively and person-focused values will be negatively related to life satisfaction.

Hypothesis 2: In low HDI countries, person-focused values will be positively and social-focused values will be negatively related to LS.

Articles II and III are developed to disentangle the role of values and person-group value congruence (VC) for subjective well-being (SWB) in university students from three countries (Article II), as well as in a Finnish population sample (Article III).

Hypothesis 3: Value congruence will be positively related to well-being in university and community samples.

Furthermore, in Article II the role of interpersonal relationships is considered as a possible mediator of the positive relation between VC and subjective well-being.

Hypothesis 4: Interpersonal relationships will mediate the relationship between VC and well-being.

In Article IV the role of early career values on work engagement are studied considering organizational variables. Despite extensive research on work

engagement, longitudinal studies addressing the role of career values for work engagement are missing. Article IV fills this gap with a focus on young adults at the transition from education to working life. Based on SDT (Deci & Ryan, 2000) it is expected:

Hypothesis 5: Intrinsic career values prospectively will predict high levels of work engagement.

Hypothesis 6: Extrinsic career values (i.e., rewards and security values) will predict low levels of work engagement.

Hypothesis 7: Person-organization fit (value congruence, job match) will be positively associated with work engagement.

4 Methods

4.1 Respondents and procedure

The data for this dissertation included four different data sets. A summary of the data sets, study aims, and measures from each article are found in Table 1. The first sample was collected by the European Social Survey (ESS) in 2006 from 25 European countries (Jowell & the Central Coordinating Team, 2007). The ESS data includes strict probability samples representative of the population 15 years of age and older and is available online (www.ess.nsd.uib.no). We excluded 6.3 per cent of participants who had more than five missing values in their responses to the Portrait Value Questionnaire (Schwartz, 2003). The final sample size was 44,106.

The second data set employed in this thesis was collected from psychology/education and business students from three countries. Psychology students from Argentina (n = 91) and Bulgaria (n = 98), and education students from Finland (n = 88) completed a printed questionnaire. Students responded during class or brought it to the following session. Business students from Argentina (n = 184), Bulgaria (n = 84) and Finland (n = 60) were invited by professors from their departments to respond to an online version of the questionnaire. All students were at the Master's level and studying in public universities. Following Schwartz' criteria, under which those individuals with incomplete answers or no discrimination among values should not included in the analysis, we excluded seven participants from further analyses. We also eliminated those participants with missing values on the outcome study variables. These criteria led to dropping 30 respondents leading to the final sample size of 605. Mean age ranged from 21.4 to 28 years. This data was collected with the help of colleagues in each country. The questionnaire used for Article II was developed for this study. For the measures of SWB (i.e., life satisfaction, positive and negative affect) standard back-translation procedures from the English original versions to Spanish, Finnish and Bulgarian were carried out. The Bulgarian translations were developed with the help of Prof. Ergyl Tair and her colleagues, Institute of Psychology, Bulgarian Academy of Sciences. The Finnish translations were done with the help of Prof. Helkama. The other measures were already available in each language.

The third data set was a community sample consisting of 433 adults from a small municipality in Finland (about 5000 inhabitants) interviewed in the years

1993 and 2007 (Article III). The final sample size was 400 with a similar percentage of male and female participants. The average age of participants in 1993 was 43.5 years (SD = 12.6) and in 2007, 44.1 years (SD = 12.2). The samples were both drawn from the local population register using random sampling. Participants were first addressed with an introductory letter, and then by phone, to agree a date for an interview. Almost all interviews were done at the participants' homes. The interviewers were researchers and research assistants from the University of Helsinki, Department of Social Psychology. Completion rate was 75 per cent in 1993 and 51 per cent in 2007.

The fourth data set of this dissertation was analyzed in Article IV as part of a larger research project, Finnish Educational Transitions (FinEdu), which collected responses from all upper secondary students in a medium-sized city in the region of central Finland. This longitudinal data set had four measurement points, however, in this article only the last two measurement points are used, which concerned the transition from higher education to further education or employment collected in 2009 and 2011. The sample of the study (N = 571) consisted of participants who were 23 years of age at Time 1 (n = 422) and 25 years of age at Time 2 (n = 497). Sixty-six per cent of the longitudinal sample was female. At both measurement points, participants received the questionnaires and instruction letters at their homes. The response rate was 59 per cent at Time 1 and 70 per cent at Time 2. Missing values were addressed by using full information maximum likelihood estimation, which takes into account all available data. Attrition analysis conducted for the longitudinal sample showed no differences between participants who stayed and those who dropped out and dropped in of the study. There were more participants at Time 2 than Time 1 as more efforts were made to contact participants from previous waves of the study.

Table 1. *Summary of the participants, aims, measures and data analyses used in each article.*

	Data	Aims	Measures	Methods
I	Survey data from representative samples from 25 countries (N= ~40,000)	Examine the relation between personal values to life satisfaction across 25 European nations. Test the role of socio-economic development as a moderator of these relationships.	Schwartz's ten personal values, life satisfaction Human Development Index.	Multilevel analysis using SPSS mixed methods tool.
II	Psychology/education and business students from Argentina (*n*=289), Bulgaria (*n*=186) and Finland (*n*=152).	Investigate direct relationships between values and SWB in each sample. Test the importance of person-group value congruence (VC), the similarity between a person's own values and the values of their peers, for SWB. Test whether having good interpersonal relationships mediates the relation between VC and SWB.	Schwartz's ten value types, life satisfaction, positive and negative affect, person-group value congruence index, positive relationships.	Correlation and regression analyses using SPSS.
III	Survey data from a Finnish rural community, years 1993 (N=180) and 2007 (N=220)	Examine the relation between values, value congruence and symptoms. Examine how these relations changed from 1993 to 2007 as conservation values increased for the community.	Schwartz's ten personal values, life events and psychological stress symptoms.	Correlation, T-test comparison regression analyses with SPSS.
IV	Longitudinal data from a Finnish medium sized city. The participants were 23 years old at Time 1 (N=422) and 25 years old at Time 2 (N=497).	Examine the relations between career values and work-engagement across the transition from university to work. Test whether person-organization value congruence predicts engagement. Explore which type of work-study situation relates to engagement.	Work engagement, intrinsic, rewards and security career values, person-organization value congruence and work-life situation.	Exploratory Structural Equation Modelling (ESEM) using Mplus software.

4.2 Measures

Dependent variables

Subjective well-being

The data from Article I came from the European Social Survey (ESS, 2008). The ESS round 3 included the following 3 items: "How satisfied are you with life as a whole?", "how satisfied are you with how life has turned out so far?" and "how happy are you?" The questions could be answered on a range from 0, "extremely dissatisfied/unhappy", to 10, "extremely satisfied/happy", and were averaged to create a single score. Average Cronbach's alpha across countries was .85. The cross-country invariance of life satisfaction was tested using multi-group confirmatory factor analyses (MGCFA) with Mplus software (Muthén & Muthén, 1998-2007). A good model fit was obtained for metric invariance (CFI = .99, TLI = .99 and RMSEA = .06). For a description of this procedure, see Davidov, Schmidt and Billiet (2011).

In Article II, both the cognitive and the emotional aspects of subjective well-being were measured. Life satisfaction was measured using Diener's (1984) five-item original scale. Participants were asked about their agreement with items, such as: "In most ways my life is close to my ideal, the conditions of my life are excellent". Questions were answered on a scale from 1 (totally disagree) to 7 (totally agree) and were averaged to create a single score.

In Article II, we also included the measure for positive and negative emotional experience developed by Diener, Tov, Choi, Biswas-Diener, Wirtz, Prieto and Oishi (2009). Respondents were asked to report how often they had experienced certain emotions during the last four weeks. The items for pleasant affect were "...you felt good", "pleasant", happy", "joyful", "contented". The items for unpleasant affect were "bad", "unpleasant", "sad", "afraid", and "angry". The questions were answered on a scale from 1 (very rarely or never) to 5 (very often or always) and were averaged to create two single scores.

In Article III, a negative indicator of well-being, psychological stress symptoms, was used as an outcome measure. The measure used in this study included seven items that referred to psychological strain experienced over the past month. These were nervousness or restlessness, tension and anxiety, agitation and difficulty to stay still, depression, feeling fearful, overstrained and feeling a lump in the throat. Answers were given on the following scale: 1 (very

rarely), 2 (sometimes) and 3 (often). A summated scale was obtained, which considered the frequency of the symptoms, a high score represented more symptoms with high frequency. Cronbach's alpha was .78 for the sample of 1993 and .77 for 2007.

Engagement

In order to study well-being at work, in Article IV, engagement was used as an outcome variable. An abbreviated students' version of the Utrecht work Engagement scale (UWES; Bakker et al., 2008) was used; it included three questions for each dimension (Salmela-Aro et al., 2009; 2011). Vigor at work was assessed with items like: "When I'm studying / At my work, I feel that I'm bursting with energy". Dedication was measured by, e.g., "I find my studies / the work that I do full of meaning and purpose", and absorption by, e.g., "time flies when I am studying / working"). Responses were given on a Likert scale from 0 (never) to 6 (daily). Engagement was measured at two time points and Cronbach's alpha reliabilities for the whole engagement scale were .94 at Time 1 and .94 at Time 2.

Independent variables

Personal values

In Article I participants completed the 21-item version of the Portrait Values Questionnaire (PVQ21) adapted by Schwartz (2003) for the ESS. The 21 items each offer verbal portraits of different people and respondents are asked to rate how similar they are to the portrait. For example, "Thinking new ideas is important for him (or her for female respondents). He/she likes to do things in his own unique way" suggests a person for whom self-direction values are important. Respondents are asked: "how much like you is this person?" Answers are given on scale from 1 (very much like me) to 6 (not like me at all). The ten value types were computed controlling for differential scale use.

In Articles II and III respondents answered Schwartz's Value Survey (SVS, Schwartz, 1992). In the SVS, each item is followed in parentheses by a short explanatory phrase (e.g., equality (equal opportunity for all). Respondents rate the importance of each value item as "a guiding principle in their lives" and answers are given on scale from -1 (opposed to my values) to 7 (of supreme importance). To control for differences in scale use in these first three articles, standard

procedures were followed to center participants' answers on their mean in all items (Lindeman & Verkasalo, 2005). A personal mean of all items used for each person was calculated, and the sum of items included for each index was divided by the personal mean multiplied by the numbers of items included in the sum variable. Thus, the value scores represent the relative importance of each value type in relation to the other value types.

In Article II, samples from three countries were analyzed; as such, only the 45 SVS items that are recommended for cross-cultural studies were used (Schwartz & Sagiv, 1995). The higher-order value dimensions were computed for self-transcendence (ST), self-enhancement (SE), conservation (CO) and openness to change (OP) were calculated creating four scales from the corresponding original value items. Across the six groups of student samples (i.e., as there were two career paths from each country), Crombach's alpha reliabilities for self-transcendence ranged from .76 to .90, self-enhancement from .74 to .78, openness values from .64 to .79, and conservation from .65 to .84.

In Article III, values were measured using an extended 65-item version of Schwartz's Value Survey including work values (Myyry & Helkama, 2001) and some items adapted from an earlier measure of values (Rokeach, 1973). In the same manner, two higher-order dimensions, openness to change and conservation, were calculated by creating two scales from the original 22 value items that were also used to compute stimulation, self-direction, and hedonism value types and security, conformity, and tradition value types, respectively. Crombach's alpha reliabilities for Openness in 1993 and 2007 was .75 and .76, respectively; and for conservation, .80 and .82.

Career values

In Article IV the values in relation to young people's careers and well-being at work were measured. Several items measuring the importance of different aspects of work for career choice were used in the FinEdu questionnaire. For the purposes of Article IV, to measure intrinsic values four items were used ("interesting work", "a lot of opportunity to learn new things", "a good match between my job requirements and my abilities and experience", and "work that is important and valuable to me"). Career values focused on material rewards (rewards) were assessed by two items ("good pay" and "good opportunity for upgrading and promotion") and security career values by another two items ("convenient work hours and good physical working conditions, and "work that has good promising view of employment"). Answers were given on a scale from 1 (strongly disagree) to

7 (strongly agree). Cronbach's alpha reliabilities for intrinsic, rewards and security career values were .71, .71 and .54, respectively.

Value-congruence index (VC)

In Article II an objective measure of VC was computed. VC quantified the similarity of value profiles between the individual and the group, composed by other students from the same department (Business or Education/Psychology) and country (Argentina, Bulgaria and Finland). As such, it was calculated separately for each of the six groups of university students. VC was computed as the correlation between the individual's responses to the value items, and the average profile reported by fellow students. When analyzing the community sample in Article III VC was computed in the same way. This time the correlation was computed between each community member's response to value items and the overall community rating on the items for each year (1993, 2007). The resulting Pearson's correlation coefficients were transformed into Fisher's Z. The Fisher z-transformation applied to the r product is done to correct for the fact that, very high or very low correlations have less error variance, and should therefore be given more weight in the computations.

Positive interpersonal relationships

The quality of personal relationships was assessed using four items. Three questions were taken from Ryff and Keyes' (1995) short version of the psychological well-being questionnaire. Included in the scale were those items concerning positive relationships with others: "maintaining close relationships has been difficult and frustrating for me" (reversed), "people would describe me as a giving person, willing to share my time with others", and "I have not experienced many warm and trusting relationships with others" (reversed). The item "My social relationships are supportive and rewarding" was also included from Diener et al. (2009). Respondents answered on a scale from 1 (completely disagree) to 6 (completely agree) and responses were averaged. Reliability ranged from .57 to .72.

Person-organization fit

In Article IV, two items were used to measure person-organization value congruence from the Areas of Work-life Scale (Maslach & Leiter, 1997). The items

were: “My values and the values of my study/workplace are similar”, “my career goals are in line with my employer / place of study’s objectives”. Answers were given on a scale from 1 (strongly disagree) to 7 (strongly agree). Cronbach’s alpha reliability was .73. Furthermore, individuals’ life situation at the last point of assessment was considered to test how these different arrangements might also influence engagement. Categories were created based on the following information: if participants were in any study program, if they were employed or unemployed, and if they were working, whether the work was relevant to their level of education. Based on this, six final categories were established and we could compare the number of people in each category at Time 1 and Time 2 (for details, see Article IV).

Country-Level Variables

Socio-economic development

As an indicator of socio-economic development, the HDI of the United Nations Development Programme (UNDP; 2006) was used. This index assesses intercountry development levels on the basis of three so-called deprivation indicators: life expectancy at birth (health), adults literacy and enrollment in education (education in this case is currently measured by years of schooling) and adjusted GDP per capita (to measure the aspects of standards of living). The HDI was created to emphasize that the development of human capabilities should be considered the focus to measure social progress and not just economic growth. In 2007/2008 the UNDP classified all Eastern European countries, except Slovenia, as “high human development (or developing)”, whereas Western European countries (including Slovenia) were labeled “very high human development (or developed)”.

Cultural values

In Article I, HDI was tested as a possible moderator of the relationships between values and life satisfaction considering the potential effect of cultural values. Scores for each country were obtained from Schwartz’s data set (Israel Social Science Data Center, May 2, 2006). Country scores for autonomy versus embeddedness dimension were obtained by subtracting the second from the first score. For egalitarianism versus hierarchy scores were subtracted from egalitarianism scores.

Control variables

Gender, age and education were included as control variables in the analyses of this dissertation, because they have both been shown to influence value priorities (Schwartz, 1992; Schwartz & Rubel, 2005). Personal income was also controlled for, as this variable has previously been associated with subjective well-being (Fischer & Boer, 2011).

5 Results

5.1 The role of socio-economic development

The main goal of Article I was to analyze the extent to which the relationships between personal values and life satisfaction varied across countries with different levels of socio-economic development. Descriptive statistics of the samples used in the article are presented in Article I. The individuals' data was nested within each country. LS and values were individual-level variables, and individuals were nested in countries that differed in HDI. Hence, my co-author and I employed multilevel analyses using hierarchical linear regressions. The analyses were conducted using the Statistical Package for the Social Sciences (SPSS) Mixed Model procedure (see Singer, 1998). The use of multilevel techniques was also justified by the fact that country of belonging explained 23 per cent of variance in life satisfaction judgments. As our model included a cross-level interaction, we used grand mean centered variables to allow for a clearer interpretation of the results (Hox, 2010).

To test our hypotheses regarding the cross-level interaction between each basic value and the level of socio-economic development of the country, as measured by the Human Development Index (HDI), we ran ten separate multilevel models. Each individual value was analyzed separately to avoid problems with multicollinearity. We controlled for age, gender, education (years) and subjective income in the analyses. Eight of the ten values had significant interactions with HDI, with the exception of Benevolence and Hedonism. The last two values had significant main positive effects and, thus, show an overall positive association to LS across contexts. For more detailed information on the multilevel results, please see Article I.

We tested the significance of the interactions using Preacher, Curran and Bauer's (2006) tool. Results obtained from these simple slopes tests allowed us to check whether the associations were significant or not in different levels of HDI. The associations between values and LS were tested at high (i.e., 1 SD above the mean) and low (i.e., 1 SD below the mean) HDI scores. Results from the simple slopes tested for each value separately are presented in Figure 3.

We had anticipated that social-focused values would be positively related to LS in highly developed nations (H1). Simple slopes showed that in highly developed nations benevolence and tradition were positively related to LS. Universalism ($p=.09$) and conformity (ns.), had, as expected, a positive relation to LS but slopes

tests revealed that these relations were not significant. Thus, our hypothesis received only partial support. Security values did not show a statistically significant relation to LS and had a small negative slope. Person-focused values, such as self-enhancement values were expected to be negatively related to LS in highly developed countries. Results supported this idea, showing that achievement and power values were negatively related to LS in these countries.

In low HDI countries, consistent with our expectations, the social-focused values universalism, tradition, and conformity were all negatively associated with LS (all $p < .01$) and the size of associations were larger than in high HDI countries, supporting hypothesis 2. Security values were also negatively related to LS in this context of low HDI. We had also anticipated that power values, being person-focused, would be positive for LS in this context; however, the slope was also negative, as in high HDI countries.

In low socio-economically developed countries, self-direction, stimulation, hedonism, and achievement were all positively related to LS ($p < .01$) (H2). Results for the openness to change versus conservation value dimension showed that in low HDI countries—which are also unstable former Soviet countries and have experienced massive changes—openness to change values were more positively and conservation values more negatively related to LS than in highly developed nations.

Four values showed similar associations to LS across all countries: valuing hedonism or benevolence was consistently positively related to LS scores. Furthermore, valuing power or security was negatively related to LS in all countries. Two reversed patterns of associations emerged: valuing achievement related to increased LS in low HDI countries, but was related to lower LS in highly developed nations. On the contrary, valuing Universalism was related to lower LS in less developed nations, and to higher LS in more developed ones.

Because social development and value change occur together, another important issue tested in this study was the relationships between the country-level variables. These variables correlated as expected: HDI correlated .83 with autonomy vs. embeddedness and .48 with egalitarianism vs. hierarchy cultural values. We only included HDI for our analyses as it showed the strongest predictive power. In fact, when these three country level variables were entered together in the multilevel model, only HDI remained a statistically significant predictor of LS.

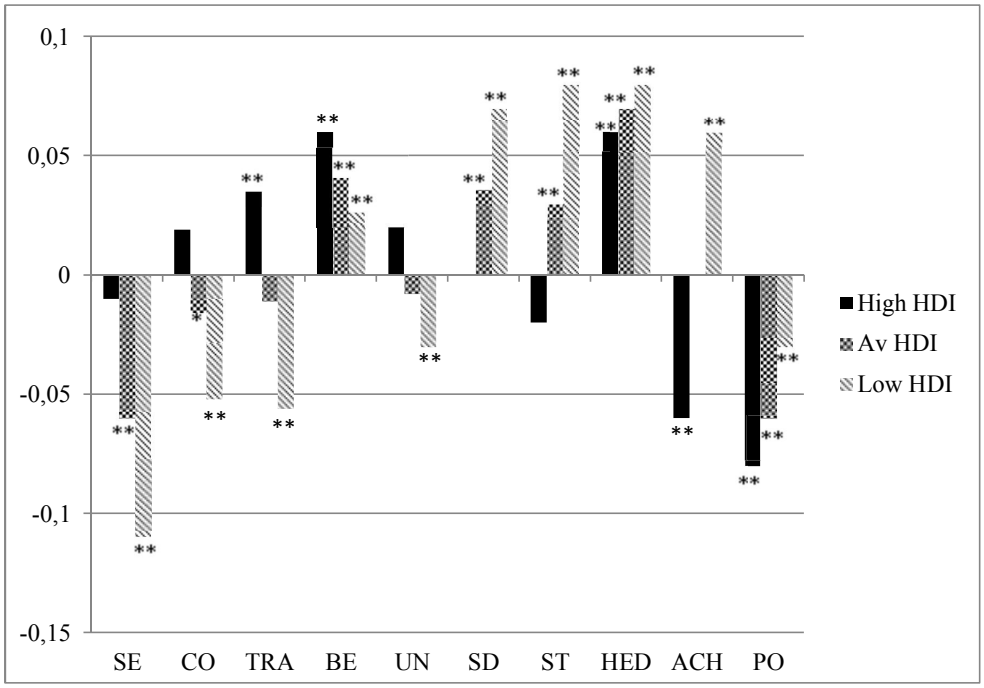

Figure 3. *Multilevel slope estimates of the ten values at high (+1 standard deviation), average (Av) and low (-1 standard deviation) levels of HDI (Human Development Index) in the prediction of Life Satisfaction. Note. *p<.05, **p<.01, SE=security, CO= conformity, TR= tradition, BE=benevolence, UN=universalism, SD= self-direction, ST= stimulation, HE= hedonism, AC= achievement, PO= power.*

5.2 Personal values and SWB in students from Argentina, Bulgaria and Finland

Descriptive statistics for each of the six student groups are presented in Table 2. In Article II, with my co-author, I tested whether there was a direct association between values and SWB. We analyzed data from student samples from two different careers from three countries. To control for group membership, we created five dummy variables to account for each of the six groups of students (psychology/education or business students from each three countries), using

Finnish education students as the reference category as this was the category with highest scores on SWB.

Correlation results showed that the value dimensions were not significantly associated with life satisfaction (LS), positive (PA) or negative affect (NA). Thus, we found no support for ideas suggesting direct associations between values and WB in these university samples. Next, we conducted a series of hierarchical regression analyses controlling for age, gender, university years, and group membership (Finnish Education students as the reference category) as predictor variables in Step 1. In the prediction of LS only years spent at the university (β = -.04, $p < .05$) significantly related to LS. In Step 2 we added the four higher order value dimension and value congruence index (VC) , only VC was significantly related to LS (β =.22, $p < .001$; $R2 = .06$, $F(13,612) = 3.12$, $p < .001$) supporting hypothesis 3. The same procedure was followed for PA and NA as dependent variables. In the prediction of PA, being women (women=1, β = -.08, $p < .05$) was related to less PA and VC related to more PA (β = .20, $p < .001$, $R2 = .06$, $F(13,619) = 2.80$, $p < .01$). For NA, being a women (β = .20, $p < .001$) was related to more NA, and VC (β = -.12, $p < .01$) related to less NA ($R2 = .09$, $F(13,619) = 4.54$, $p < .001$). All dummy variables created for group membership were significant, indicating that SWB was dependent on group membership (in all cases and consistent with mean scores presented in Table 2, the Finnish Education students had higher SWB compared with the other five groups).

In order to test the mediating role of interpersonal relationships on the relationship between VC and SWB, we conducted bootstrap mediational analysis Preacher and Hayes' (2008) macro for SPSS, which allows several covariates to be included in the analyses. In our case, we included age, gender and group as controls. The results for the mediation models tested for LS, PA and NA are presented in Figure 4, 5 and 6. The model bootstrapped 95% confidence interval (CI) is significant when zero is not included in the CI. The three models assessing the mediation of interpersonal relations on the association between VC and LS, PA and NA were all significant supporting hypothesis 4.

Table 2. *Number of participants, demographic and descriptive statistics on study variables for each sample.*

Group	*N*	Female (%)	Age M (SD)	ST	SE	CO	OP	PA	NA	LS	Relat.
Psychology/ Education											
Argentina	91	76 (83.5)	23.2 (3.7)	1.13 (.14)	.76 (.16)	1.02 (.15)	1.02 (.14)	3.68 (.52)	2.55 (.58)	4.63 (.88)	4.79 (.72)
Bulgaria	98	78 (78.0)	21.6 (1.3)	1.04 (.12)	.92 (.16)	.88 (.13)	1.16 (.15)	3.70 (.65)	2.70 (.70)	4.73 (1.03)	4.68 (.89)
Finland	88	84 (94.3)	28.0 (8.5)	1.26 (.17)	.75 (.15)	.86 (.16)	1.08 (.16)	4.01 (.60)	2.26 (.66)	5.05 (1.07)	4.96 (.62)
Business											
Argentina	184	130 (65.7)	23.6 (5.9)	1.09 (.16)	.81 (.18)	1.02 (.14)	1.01 (.17)	3.76 (.67)	2.59 (.64)	4.63 (1.30)	4.73 (.76)
Bulgaria	84	59 (66.3)	21.4 (5.5)	1.00 (.17)	.90 (.21)	.92 (.14)	1.16 (.19)	3.68 (.68)	2.55 (.76)	4.94 (1.12)	4.81 (.87)
Finland	60	43 (68.3)	27.9 (9.7)	1.10 (.23)	.87 (.18)	.92 (.17)	1.10 (.18)	3.77 (.89)	2.35 (.76)	4.56 (1.46)	4.47 (.92)

Note. ST = Self-transcendence; SE= Self-enhancement, CO= Conservation; OP= Openness; PA= Positive affect; NA= Negative Affect; LS = Life satisfaction; Relat. = interpersonal relationships.

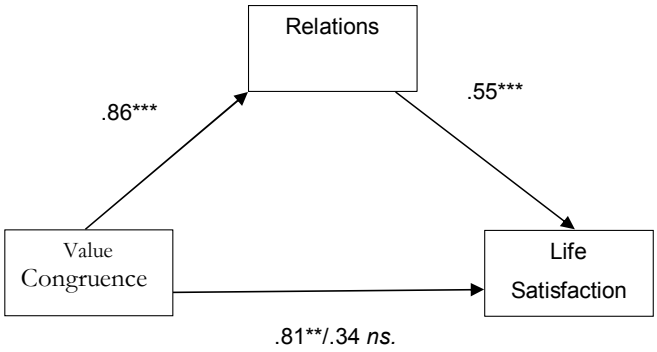

Figure 4. *The mediating role of positive interpersonal relationships in the prediction of life satisfaction with value-congruence. *** p < .001, ** p < .01, ns. = not significant. Unstandardized coefficients reported. CI= .31/.69.*

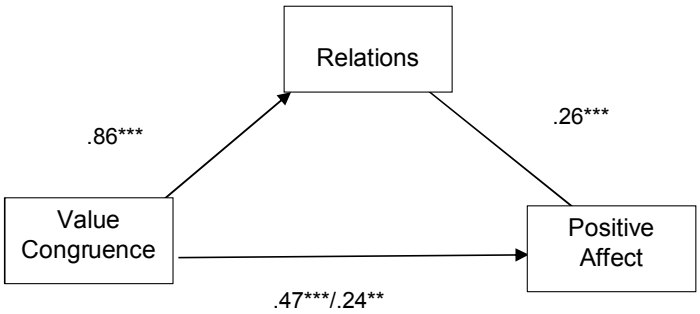

Figure 5. *The mediating role of positive interpersonal relationships in the prediction of positive balance with value-congruence. ***p < .001, *p < .05. Unstandardized coefficients reported. CI= .14/.34.*

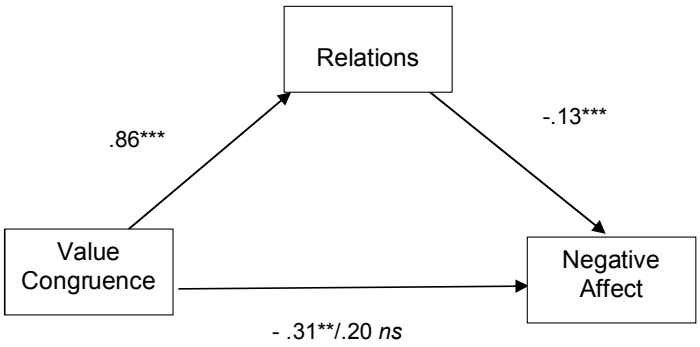

Figure 6. *The mediating role of positive interpersonal relationships in the prediction of negative affect with value-congruence. ***p < .001, **p < .01, *p < .05, ns = not significant. Unstandardized coefficients reported.CI = -.20/-.06.*

5.3 Personal values and psychological stress symptoms in a community sample

In Article III we analysed, first, the role of time on the variables under study, and secondly, how personal values and VC related to psychological symptoms. Descriptive statistics for values and psychological symptoms measures in 1993 and 2007 are presented in Table 3. We conducted t-tests to test changes in average scores between the two time points. Consistent with our previous studies in Finland, there was a significant increase in security and the conservation value

dimension and marginally, in conformity values from 1993 to 2007. Furthermore, variance in the conservation value dimension decreased significantly, suggesting greater agreement on the importance of conservation. Achievement values, on the other hand, decreased in importance. Results from the t-test comparison also showed that psychological symptoms also decreased in frequency in 2007. This finding can be understood if we consider the historical time period when people responded to the questionnaire. In 1993, Finland was going through one of the worst economic crises of all times with unemployment around 20 per cent. This can be considered as a contextual cause for psychological symptoms being higher in 1993 than in 2007.

Table 3. *Means, standard deviation and t-tests for the 1993 and 2007 samples.*

	Samples				
Variable	1993 (N = 174)	2007 (N = 226)	*t*	*df*	*P*
Demographics					
1. Age	42.1 (12.6)	44.3 (12.8)	-1.76	398	.08
2. Gender	.46 (.50)	.50 (.50)	-.89	398	.38
Personal Values					
3. Tradition	.79 (.26)	.80 (.23)	-.42	398	.68
4. Conformity	1.06 (.20)	1.09 (.19)	-1.92	398	.06
5. Security	1.12 (.19)	1.16 (.17)	-2.43	347	.02
6. Power	.44 (.30)	.47 (.25)	-.91	331	.37
7. Achievement	.83 (.28)	.76 (.23)	2.51	328	.01
8. Hedonism	1.03 (.29)	1.05 (.26)	-.68	398	.50
9. Stimulation	.78 (.27)	.74 (.28)	1.38	398	.17
10. Self-direction	1.02 (.21)	1.04 (.21)	-.70	398	.49
11. Universalism	1.13 (.20)	1.13 (.18)	-.02	398	.99
12. Benevolence	1.16 (.17)	1.18 (.16)	-1.36	398	.17
13. Openness	.94 (.17)	.94 (.16)	.11	398	.91
14. Conservation	1.00 (.15)	1.03 (.12)	-2.29	332	.02
Outcome variable					
15. Psych. Symptoms	1.32 (.33)	1.24 (.32)	2.27	398	.02

Note. Non Cont. Events = Non controllable events; Psych. Symptoms = Psychological stress symptoms. Gender (0 = male, 1 = female).

Correlation results on the relationships between personal values and well-being showed that, in 1993, stress symptoms were negatively related to security, conformity and benevolence values, and positively related to hedonism and stimulation values. These associations did not emerge in 2007. Psychological symptoms were negatively related to value congruence in 1993 ($r = -.18$, $p < .05$) and 2007 ($r = -.19$, $p < .01$, for details, see Article III).

In order to test the independent effect of VC controlling for personal values (as in Article II), we ran a hierarchical regression analysis predicting stress symptoms including age, gender, conservation, openness to change values and the year of interview (1993=0; 2007=1). Results from this first regression showed that these variables predicted symptoms ($R2 = .21$, $F(5, 412) = 3.75$, $p < .01$). The year of interview (B =. -.07, $p < .05$) contributing uniquely and conservation values being marginally significant predictors of fewer symptoms ($B = -.26$, $p < .08$). When the value congruence index was added in Step 2 of the same regression, ($R2 = .28$, $F(6, 412) = 5.54$, $p < .001$), only VC was significantly related to fewer symptoms ($B = -.28$, $p < .001$) and year of the interview was marginally related to fewer symptoms ($B = -.05$, $p < 06$). Thus, results coincide with those presented in Article II showing that VC has a significant main effect above that of values. In fact, values are not significant anymore after similarity in values in taken into account.

Summarizing the results of Article II and III, we may conclude that ideas suggesting direct relationships between certain values and well-being were not supported in either of these two studies. Hypothesis 3, which suggested a positive relationship between person-group value congruence and well-being, was supported in university and community samples. Finally, the association between VC and SWB was partially mediated by positive interpersonal relationships (Article II).

5.4 Career values and engagement: Person-organization match

The purpose of Article IV was to apply values to the study of well-being at work. Structural equation modeling with Mplus software was used for the longitudinal analysis. In order to establish the measurement model for the career values exploratory structural equation modeling (ESEM, Marsh et al., 2009). ESEM avoids confirmatory factor analysis procedures with specified factor loadings in the case researchers have no definitive factorial structure, as in our case as the items used to measure career values had not been used in structural models before. The ESEM model identified three underlying factors of career values and had an excellent fit ($\chi^2(7) = 12{,}05$; $p < .10$; CFI = .99; RMSEA = .043). As work engagement was measured at Time 1 and Time 2, we tested longitudinal measurement invariance using longitudinal CFA. We established strong measurement invariance for our measure of engagement for engagement at T1 and

T2 ($\chi^2(13) = 60{,}72$; $p < .001$; CFI = .96; RMSEA = .08) (Cheung, & Rensvold, 2002).

Table 4 shows the mean values, standard deviations and correlations between the variables used in our analyses at Time 1 and Time 2. Next, we tested our hypothesis using structural equation modeling with Mplus (Figure 7). Results showed that intrinsic career values predicted engagement at Time 1 (B =.47, $p < .01$) and Time 2 (B = .21, $p < .01$), thus supported hypothesis 5. Contrary to our hypothesis (H6), extrinsic career values were unrelated to engagement, and not negatively related as we had anticipated. The perceived person-organization value congruence (B =. 55, $p < .01$) was also associated with higher levels of engagement (H7). Also having a full-time job that was in line with one's qualifications related to higher levels of engagement (B = .18, $p < .01$) in comparison with the reference category (i.e., full-time studying) , suggesting that a good match between the person and the organization would be beneficial in terms of engagement.

Table 4. *Correlations, means (M) and standard deviations (SD) for observed variables in the study.*

	M	*SD*	1	2	3	4	5	6	7	8	9
1. Gender	.34	.47	-								
2. Intrinsic (T1)	6.18	.64	-.20**	-							
3. Rewards (T1)	4.54	1.30	.15**	.15**	-						
4. Security (T1)	5.37	1.22	-.13**	.19**	.38**	-					
5. P_O VC (T2)	4.78	1.27	-.06	.08	.10	.10	-				
6. Subj. Inc. (T2)	2.46	.86	.11*	-.02	-.05	-.05	.06	-			
7. Econ. Stress (T2)	3.91	2.78	-.10*	.05	.05	-.05	-.04	-.58**	-		
8. Engagement (T1)	4.31	1.12	-.05	.35**	.08	-.00	.29**	.06	-.02	-	
9. Engagement (T2)	3.48	.88	-.16**	.27**	.06	.08	.49**	.09	-.00	.43**	-

Note. T1 (N=422; age=23 years), T2 (N=571; age=25 years). Gender (Female= 0; Male = 1). P-O VC= Person-organization value congruence; Subj. Inc. = Subjective income, Econ. Stress = economic stress. *$p < .05$, **$p < .01$.

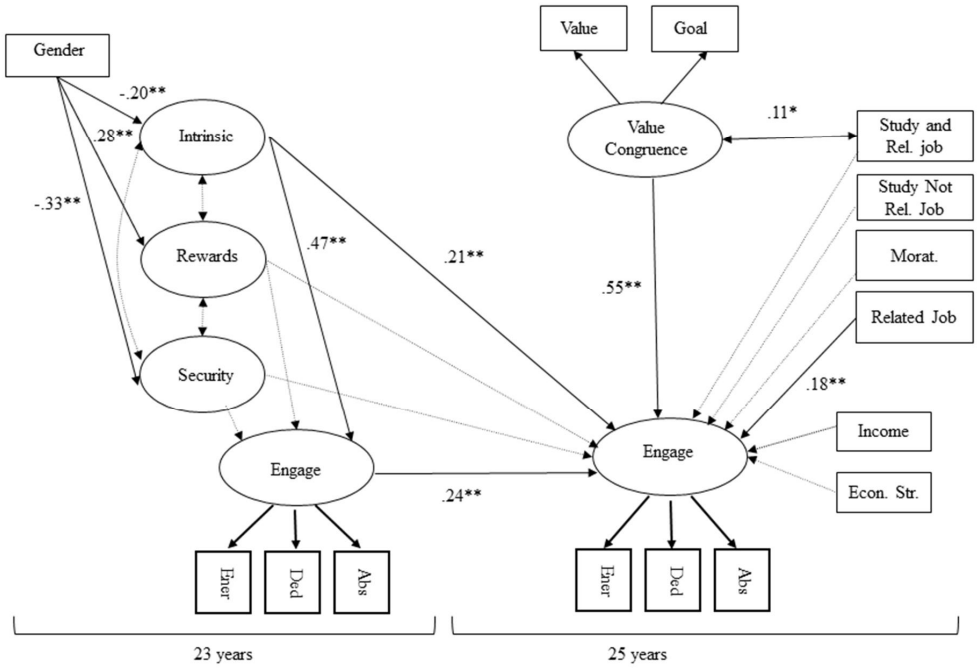

Figure 7. *Model of career values, value congruence and work-study situation predicting engagement. Study and Rel. Job = Study and work in a job relevant to the person's education, Study Not Rel. Job = Study and work in a job not relevant to studies, Morat. = Moratorium activities; Related Job = Work full-time in a job relevant to the person's studies. Reference category= Study full-time.*

6 Discussion

6.1 Discussion of main results

The main aim of this dissertation was to investigate if there are direct relationships between values and well-being, and whether these associations depend on societal and group influences. The summary of main results is presented in Table 5. The results from the dissertation show that, first, the level of socio-economic development of the country moderates the associations between individual values and life satisfaction (Article 1); second, peer-group value similarity has a direct association with well-being outcomes (Article II and III); third, person-organization fit matters for work engagement even when controlling for other relevant variables (Article IV); and, finally, the characteristics of a specific time period when value-well-being associations are examined matters (for instance, times of economic downturn, Articles II and IV).

Table 5. *Summary of main results from the four articles.*

Article	Results
I	The country-level Human Development Index (HDI) moderated the relationships between life satisfaction (LS) and nine of the ten basic values identified by Schwartz's values theory. Achievement was positively related to LS in low HDI countries, but negatively in high HDI countries, whereas the opposite pattern occurred for universalism values and LS. Across countries, high benevolence and hedonism values were associated with heightened LS. On the contrary, valuing power or security related to lower LS. This was the first study to systematically test cross-cultural variations in these relationships and consider the broader context in which personal values are pursued.
II	Regression results showed no significant direct relationships between values and SWB in these samples. Person-group VC was positively related to SWB controlling for personal values. VC was positively related to better interpersonal relationships. In fact, having good interpersonal relationships partially mediated the effect between VC and both aspects of SWB, life satisfaction and affect.
III	No consistent direct relationships were found between single values and psychological symptoms. The higher the value congruence between individual and group values, the fewer the reported symptoms, for both time points. There was an increase in the importance of conservation values and a decrease in psychological stress in the community from 1993 to 2007.
IV	Intrinsic career values predicted work engagement. The degree of perceived person-organization value congruence was related with higher work engagement. Having a job that was related to one's own education two years later predicted engagement even when previous engagement levels and other variables were controlled for. Being a woman was related to higher intrinsic and lower extrinsic career values.

6.1.1 Value environment fit with country levels of socioeconomic development

In Article I, we found that the relationships between personal values and life satisfaction (LS) varied across countries with different levels of socioeconomic development. The inclusion of a macro-contextual variable, such as HDI, is crucial to understanding under which conditions the link between values and well-being strengthens, weakens or reverses. It is worth noting that the associations between universalism and achievement reversed in high versus low socioeconomically developed countries. Results suggest there are boundary conditions for the link to exist, that is, a certain level of development needs to be met for universalism to have a positive association to LS. When development is low, achievement seems to be a better strategy in terms of SWB. The findings are consistent with a previous study showing that achievement values are related to higher well-being in Iran—another low HDI country (Joshanloo & Ghaedi, 2009).

Two values had ubiquitous associations to heightened well-being: benevolence and hedonism. Benevolence values are mainly concerned with the well-being of close others. The positive association of benevolence and LS is consistent with extensive research on the importance of close interpersonal relationships for well-being (Baumeister & Leary, 1995; Ryff & Keyes, 1995; Ryan & Deci, 2001). The motivations underlying the value of hedonism had the strongest associations with life evaluations. Hedonism values reflect the motivation to have a good time and enjoy life which may motivate pleasurable behaviors (Bardi & Schwartz, 2003) and elicit positive emotions which, being a component of SWB, are positively associated to LS across countries (Kuppens, Realo, & Diener, 2008). Interestingly, at the country level, Vauclair, Hanke, Fischer and Fontaine (2011) found evidence of a new value type labelled self-fulfilled connectedness (SFC) which combined self and other concerned motivations. SFC contained items that were not included in Schwartz's analyses, such as happiness, mature love, true friendship, inner harmony and cheerful. Among other cultural values, SFC was the strongest correlate of SWB at the country level.

Power and security values, on the other hand, were related to lower LS across contexts. The novelty of our results, however, is found in the strength of associations with LS, which varied according to the country level of HDI. Power values deserve particular attention as they have been studied in relation to materialistic and extrinsic motivations (for a review on SDT, see Deci & Ryan, 1995; Ryan & Deci, 2001; Sagiv, Roccas & Hazan, 2004) and therefore associated with higher anxiety and lowered well-being. Power values were more strongly (negatively) associated to LS in more developed nations. This may be due to the

fact that money and control over resources can be pursued for different reasons in high and low developed societies (Dittmar et al., 2008; Fontaine et al., 2008). Finally, security values were negatively related to LS across countries, the relation being stronger in low HDI countries. This is consistent with prior research suggesting that adherence to security values may be a reaction to a perceived threat and sense of loss. For example, unsettling or stressful events, both at a societal level (terrorist attacks; Verkasalo, Goodwin, & Bezmenova, 2006) and personal level (migration to another country; Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2011), have been shown to increase the importance of security values. Research has also shown that security values are related to worries, people who attribute greater importance to security values tend to worry more about threats to themselves and the society (Schwartz, Sagiv, & Boehnke, 2000).

The consistent associations between openness versus conservation values and SWB across countries could be partially explained by values' shared motivations with personality traits (Roccas, Sagiv, Schwartz, & Knafo, 2002). Extraversion correlates positively with openness to change values (self-direction, stimulation), and negatively with conservation values (tradition, conformity, and security values). From an affect-as-information perspective, for example, Schwarz and Clore (2007) proposed that people rely on their emotional experiences when making LS judgments, so people who are naturally more cheerful, for example, will be more likely to report higher LS. On the contrary, conservation values were related to a prevention focus (Leikas, Lönnqvist, Verkasalo, & Lindeman, 2009), that represent an avoidance motivation, which is negatively associated to SWB (Elliot, Sheldon, & Church, 1997).

In sum, person-focused values were, as expected positively related to LS in low HDI countries. However, the pattern of direct relationships between values and LS reported in Article I did not fully support our expectations. Particularly, from the social-focused values, only benevolence, tradition and universalism values were related to higher LS in more developed societies. The results also did not comply with ideas derived from a healthy values perspective. Thus, further theorizations are still needed to understand the relationship between values and well-being in general population samples. In fact, Schwartz (2012) recently revised his ideas on the relationships between values and SWB and suggested that the pattern of relations reflects the focus of values on personal (positive) versus social (negative) outcomes, and also their grounding in growth (positive) versus anxiety (negative). These higher order motivations need to be taken into account simultaneously in order to anticipate the potential associations between values and SWB.

Value congruence between individuals and their countries

Congruence, in terms of similarity between an individual's values, value expressive behavior and the cultural value emphasis, has been argued to be associated with higher well-being (e.g., Oishi, Diener, Lucas, & Suh, 1999; Sagiv & Schwartz, 2000). The results of the current study suggest that the relationship between values and well-being is more complex. We reasoned and found that high openness to change values and low conservation values are associated with higher LS in more vulnerable and instable countries marked, at least in the present sample, not only by low levels of HDI, but also by being more oriented towards embeddedness/conservation cultural values. Overall, results showed that conservation values were negatively, and openness to change values positively related to LS in these countries. So, even though the surrounding cultural context emphasized conservation values, it was actually valuing openness to change that was beneficial for the citizens of these countries. Thus, the results presented in Article I suggest that is not similarity or agreement with societal values per se that determines increased happiness, but the fit between personal values, and the requirements and opportunities the person finds in a particular context. Other research using experimental designs has also reported a lack of association between the perceived value discrepancies between individual and societal values and life satisfaction (Bernard, Gebauer, & Maio, 2006).

Furthermore, in organizational research, dissimilarity in values has also been conceptualized as "complementary fit". Individuals and environments may complement one another by responding adequately to each other's needs, such as when an environment provides opportunities for achievement that are in accordance with the individuals' goals for achievement or when an individual with high approach orientation and openness encounters a context of turmoil. A complementary fit indicates that individuals fit, not because they are similar to everyone else in the surrounding context, but rather because their particular characteristics are beneficial for themselves or the collective (Cable & Edwards, 2004).

The strength of associations between values and LS were, in general, larger in less developed countries. One possible explanation for this finding is the tightness, which is high in Northern European countries, versus looseness, which characterizes Eastern European countries, of nations (Gelfand et al., 2011). In societies with less formal regulations of behavior (i.e., loose), values may guide behavior to a greater extent, as opposed to more normative context. Another possible explanation for the weaker associations between values and LS in high

HDI countries, builds on the results from Fischer and Boer (2011), according to which economic development brings greater well-being because it increases autonomy. The greater freedom of choice that people in highly developed nations encounter could allow individuals to choose those environments that they themselves feel are the most satisfying. The freedom or opportunity to pursue any value could make the overall associations of values and LS weaker.

6.1.2 Person-group value congruence in university and community groups

Article II focuses on the role of personal values in the well-being of university students in two careers and three countries. We sought to address previous inconsistencies and gaps in the research literature on this topic. Some scholars have suggested universal and direct relationships between certain values and well-being (Bilsky & Schwartz, 1994; Deci & Ryan, 2000). However, our analyses revealed no significant direct relationships between university students' personal value priorities and SWB (i.e., life satisfaction, positive and negative affect). Objective person-group value congruence (VC) was significantly related to LS, Pa and NA. As such, this study provides strong evidence that sharing values similar to those held by other students has an important role for personal happiness—regardless of country or career path. Importantly, the positive relationship between VC and SWB emerged also when controlling for personal values.

We also found, in Article III, that VC was related to fewer psychological symptoms in a Finnish community sample. This finding emerged in both samples, from 1993 and 2007, suggesting that community members who share a similar value profile to others in the community experience fewer psychological stress symptoms. As in Article II, the effect of VC was significant, even when controlling for personal values. These are novel results, as previous research on VC has typically neglected to control for possible direct relationships between values and well-being (e.g., Lönnqvist et al., 2009). Our findings highlight the role of significant others and their values for personal well-being. It is interesting that when smaller groups are analysed—and not the whole country—having similar values has positive effects on well-being.

According to optimal distinctiveness research (Brewer, 1991; Leonardelli, Pickett, & Brewer, 2010), people have both the need for inclusion and the need for differentiation. Individuals, thus, will tend to identify with groups that allow them to balance their uniqueness (i.e., as an individual in the group) at one pole of the continuum, with the homogeneity at the other pole. People will seek to balance

these two extremes to maintain satisfactory and long-lasting group membership. Furthermore, value discrepancies may not always have a negative association to well-being. Bernard and colleagues (2006) argued that: "people with a high need for uniqueness may possess stronger personal and societal value discrepancies, which predicts more positive subjective well-being for these individuals" (p. 81). Roccas et al. (2013) also demonstrated that telling individuals that their values, but not their traits, were unique (i.e., "higher" than others) and not the "same as others" increased people's reported self-esteem. Thus, further research could explore whether personal characteristics, such as the need for uniqueness or distinctiveness from others could moderate the VC-SWB link reported here.

In conclusion, fitting in with peers is important for personal well-being as demonstrated in Articles II and III. The results of the current study suggest that when the units of analysis are proximal groups, where identification and membership might be important for personal well-being (Jetten et al., 2011), VC has a direct and unique positive effect on well-being. However, fitting in with the society in terms of person-country value similarity does not seem to be related to LS. In Article 1 another rationale was put forward: that the associations between values and LS in large national representative samples depend on the socio-economic reality. The conflicting results may also be due to different ways of analyzing congruence, which was assessed in Article 1 by matching a contextual variable (HDI) and individual values, and in Articles II and III, by objective value congruence. It is not entirely clear whether it is the method of analysis (i.e., the interaction between personal values and group-level indices vs. value congruence) or the level at which congruence is assessed (i.e., country vs. community vs. peers) that is responsible for the conflicting results.

6.1.3 The role of interpersonal relationships

VC was associated to having better interpersonal relationships. This is in line with previous research suggesting that individuals are attracted to and develop friendships more easily with those with whom they are more similar (Byrne, 1971; Berscheid, 1985), as well as empirical evidence on the important role of value similarity in interpersonal relationships, such as friendship formation (Boer, et al., 2011; Solomon & Knafo, 2007).

In Article II, interpersonal relationships were related to higher SWB, which is consistent with the idea that relationships are fundamental sources of well-being (Deci & Ryan, 1985; Baumeister & Leary, 1995) and that social networks, and the

associated norms of reciprocity and trust, have powerful effects on the level and efficiency of production and well-being. Sociologists have broadly defined these in terms of social capital to refer to these effects on human health (Helliwell & Putnam, 2004). More recently, social psychologists have used the term social cure to refer to the effects that group participation and belonging have for maintaining personal health (Jetten, Haslam, & Haslam, 2011). For instance, those individuals who can maintain and have maintained more active social networks fare better with cardiac disease and other health problems (Jetten et al., 2011).

Furthermore, the findings of the current study support the idea that positive association between VC and SWB is partially mediated by having positive relations with others. When values are shared, people may feel they "fit in" and belong to peer and social groups. Our results empirically show that VC fosters better interpersonal relationships which partially explains why VC relates to higher SWB among university students.

6.1.4 The role of time period

In Article III, my co-author and I also tested mean level changes in the variables under study. We found increases in community levels of conservation values and a decrease on psychological stress symptoms from 1993 and 2007. Regarding direct associations between values and psychological symptoms, we found that conservation values and benevolence correlated to fewer psychological symptoms in 1993, but not in 2007. The fact that conservation values had a positive association to health outcomes deserves attention, as these values are generally related to lower well-being (Sagiv et al., 2004). To interpret these results, the broader socio-economic situation of Finland in 1993 must be taken into account; at the time, the country was in the midst of a massive economic crisis and the unemployment rate was about 20 per cent. Perhaps having a high regard for conservation and benevolence values is beneficial in circumstances of risk. These are all pro-social values and it is possible that, in the case of our data, they could have provided a sense of social support through close relationships and traditional institutions. Importantly, regression results showed that when VC was included in the analyses personal values were no longer significant predictors of psychological symptoms. The 2007 data, collected when Finland was economically flourishing, showed that values were unrelated to psychological symptoms. This is in line with results from Article 1 which showed that the greater the country's level of socio-

economic development the weaker the associations between values and well-being.

6.1.5 Person-organization fit

The first issue addressed in Article IV was whether career values were related to work engagement cross-sectionally or longitudinally. Intrinsic career values related to interest, opportunities to learn and develop skills were important psychological resources that predicted engagement after two years of assessment. Our results showed that intrinsic career values contributed to engagement even controlling for other relevant variables, such as gender, income, and person-organization match.

Based on SDT, we also predicted that extrinsic career values, related to remuneration and security at work, would be negatively related to engagement because they focused on extrinsic sources of motivation. However, the results showed no significant associations between these values and engagement. In this case, as in our community study (Article III), the contextual situation appears to be relevant. The study was carried out between 2008 and 2010 during a global economic crisis. In Finland unemployment among youth was up to 20 per cent in early 2010. It is also worth noting that the developmental stage of young adults is marked by a need to establish their role as a worker and have the necessary income for independent living; this points to the potential role that income and job security could have as a strategy to get ahead for young people at early stages of their careers. Another possibility, as proposed by Schaufeli and Bakker's (2004) theorization, is the achievement (or not) of work goals related to higher income and job conditions may moderate the non-significant associations between career values and engagement reported here.

Person-organization fit had the strongest relationship to engagement at Time 2 controlling for career values and work status. Again, the idea that values in our environment are relevant for personal well-being was supported. A good match between the individuals' values and goals and those of the organization are also strongly associated with work engagement (Leiter, 2008). Furthermore, those students who had a job related to their education reported higher engagement. Other job-study situations and, notably, income were not related to engagement. Thus, according to our results, a job that allows young people to develop their identity as a worker and intrinsic career values were more important that financial concerns for engagement at least in early adulthood.

6.2 Limitations and methodological concerns

> Life at its noblest leaves mere happiness far behind; and indeed cannot endure it.... Happiness is not the object of life, life has no object: it is an end in itself; and courage consists in the readiness to sacrifice happiness for a more intense quality of life.
>
> *George Bernard Shaw (1856-1950); Playwright, Nobel Prize Winner*

Measures

The use of SWB as our outcome variables is not without its limitations as it only covers more hedonic aspects of well-being. In contemporary research the psychological definition of "happiness" remains largely implicit in the outcomes we choose to study. The associations of LS with values reported in Article I are informative as they uncover its motivational basis. In their critique of reducing well-being to a hedonic well-being state, self-determination theory researchers Ryan and Deci (2001) state: "... within this paradigm, the terms well-being and hedonism are essentially equivalent. By defining well-being in terms of pleasure versus pain, hedonic psychology poses for itself a clear and unambiguous target of research and intervention, namely maximizing human happiness" (p. 144). Although SWB is important, it is not identical to psychological health and other indicators of human functioning are needed to complement SWB (Diener & Suh, 1999). Thus, to obtain a more holistic picture of well-being, the information coming from the two traditions is necessary and looking at the antecedents and outcomes of well-being through a variety of lenses is instructive and important (Ryan & Deci, 2001).

Another limitation is that we only used self-report measures in this research. However, a study by Nave, Sherman and Funder (2008) revealed that a measure assessing subjective happiness was positively associated with more objective indicators of well-being, such as social reputations, positive ratings by clinicians, and exhibiting adaptive social behaviours. Furthermore, in the prediction of these more objective indicators, the measure assessing subjective happiness was no less effective than a measure that included more functional aspects of well-being.

In terms of the value instruments, even though values identify what is important in peoples' lives, they do not tell us what people are really doing about their values, that is, if they behave in accordance with their values. For example, the following statement appeared in the comments from Argentinean respondents to the questionnaire, which included the SVS: "I had the doubt if they [the values]

refer to guiding principles or ways of action. Sometimes a value is very important but it does not play a part in our lives. For example, "clean", "orderly", they may be important but sometimes there is just not enough time. So, do you score for the importance it has in our lives as a guide, or the presence the value really has in our lives?" Thus, other research focusing on behavioral expressions of values, for example, and SWB could be necessary.

Cross-sectional

The presented results are correlational in nature. The causality as argued in the introduction is assumed to be in the direction from values to LS. Values, although they do change (Bardi, Lee, Towfigh, & Soutar, 2009; Lönnqvist et al., 2011), appear to be more stable than, for example, LS. Even if values sometimes do change due to major life events, they seem to revert back to their baseline levels (Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2013). SWB, even though has also some degree of stability and genetic influence, is influenced by country-level living conditions and life events. Lucas (2007) showed that even though people adapt to life changes, people vary in their degree of adaptation: that is, even though certain degree of adaptation always takes place, there are long-lasting changes in SWB after events such as divorce or unemployment. Importantly, even considering other predictors of well-being, there is always around 40 per cent of variance that is open to change (Lyubomirsky et al., 2005).

In Article 1 the nature of our European sample impeded us from overcoming the third variable problem common to all correlational research. European countries follow a pattern such that higher HDI countries have higher wealth, freedom and egalitarianism. It is possible that a third variable that covaries with HDI could also explain the findings. The only way to find out will be to attempt to replicate our results with data sets in which HDI does not show the same pattern of associations with potential third variables. For instance, samples including low HDI countries that are not former communist ones could be very informative.

In Article 2, we assumed that having good interpersonal relationships increases SWB. However, the reverse mechanism is also possible; some recent experimental research showed that positive mood increases sociability (Whelan & Zelenski, 2012). This association might be reciprocal where high SWB promotes better interpersonal relationships, which in turn have a strong positive association with SWB. Further longitudinal and experimental research could be useful to clarify the relation between SWB and interpersonal relationships.

One limitation of our results could be the generally small effects values appear to have on LS. However, even if the effects are small, they are quite comparable with other effects found in the literature on LS. A series of meta-analyses (Richard, Bond, & Stokes-Zoota, 2003) based on hundreds of studies demonstrated that well-being has most frequently been linked to amount of social activity, ethnicity, marital status, and gender, with effect sizes ranging from r = .00 (gender) to r = .15 (social activity).

Samples and response rate

In Articles III and IV Finnish samples were used. In Article III we used a rather homogenous Finnish community. The results suggest that the state of the community (i.e., the level of conservation values and economic crisis) matter for the links between values and well-being. However, this idea should be tested among other cultural groups. The sample used in Article IV consisted of Finnish young adults, thus, characteristics of the educational system may have influenced our results. Features of Finnish universities, such as a higher age at entry to university, tuition-free studies, and the difficulty in gaining admission to university, may mean that some of the results would have been different in countries with a different education system.

The review of empirical results (See appendix A) suggests that correlations between values and well-being also depend on the type of sample. Large samples are needed to find meaningful results when analyzing the associations between values and SWB. In Articles II, direct associations were not found between values and SWB, however, these may have been difficult to detect due to the relatively small and internally homogeneous samples. It seems that in small homogenous samples other mechanisms than the ones suggesting a direct effect of values are needed to understand the relationships between values and well-being.

In Article II, the response rate from the printed questionnaire ranged from 100 per cent in Bulgaria, where the questionnaire was administered as part of a course, about 80 per cent in Argentina to 90 per cent in Finland. The response rates from Business students answering an online questionnaire naturally could not be computed. In Article III, the completion rate was 75 per cent in 1993 and 51 per cent in 2007. These were samples from the same population, but different people, thus no attrition analyses could be carried out. In Article IV the response rate was 59 per cent at Time 1 and 70 per cent at Time 2. Attrition analyses showed no difference between groups.

6.3 Further research

Multilevel analyses of the role of country-level variables on the associations between personal motivations, such as personal and career values, and well-being are needed. This area of research is a promising road to further cross-cultural psychological understandings of how individual-level associations are shaped by cultural contexts. A recent study tested how a variety of contextual variables (e.g., cultural values, socioeconomic development, etc.) influenced value-attitudes link and found that with increasing collectivism the associations between conservation, rather than openness to change values, were more consistent with the expected attitudes (Boer & Fischer, 2013).

As mentioned in the introduction, subjective well-being as a measure that responds to the hedonic approach might not be enough to account for the complex nature of psychological health (Ryff & Singer, 1995). In order to complement SWB, researchers could include measures of social well-being (Keyes, 1998) or social capital (Helliwell & Putnam, 2004), both of which are often neglected as an important facet of the overall domain of individual well-being. According to Helliwell and Putnam (2004), social well-being is an important marker of the quality of life in a country. Further research could analyze whether different values relate to social aspects of well-being.

Scholars have recently proposed that gaining an understanding of the conditions, circumstances and reasons through which happiness may not be beneficial is important (Gruber et al., 2011). For example, experiencing lowered well-being (i.e., unpleasant affect) produced by value in-congruence, might also be an adaptive mechanism—it may motivate the individual to leave incompatible environments and search for contexts that match better with his or her own values. This is particularly important in work organizations where, as reported in Article IV, person-organization fit is a strong correlate of engagement.

Further research interested in promoting behavior or attitude change in groups should consider the importance of value congruence. When value discrepancies between the individual and the group are made salient these discrepancies may function as motivation for change (Rokeach, 1973; Schwartz & Inbar-Saban, 1988). Rokeach (1973) theorized that when personal values contradict those of the reference group, a sense of dissatisfaction may emerge, fueling the desire to change values as well as related behaviors and attitudes. This idea was tested in an experiment involving a TV program that provided viewers with the opportunity to compare their own values to the values of the American society in 1974; results showed an increase in targeted values in the community (Rockeach, 1973). These

ideas proved also successful in a weight-loss program (Schwartz & Inbar-Saban, 1988). Confrontation between personal values and those from participants who succeed in the program, particularly on the values of wisdom, world of beauty, self-control and ambition, promoted change in those individuals who aimed at following this program.

Future studies could explore in more detail the interplay between personality, interpersonal relationships and well-being. As stated in the introduction, personal values influence the way we relate to others, and it would be interesting to explore, for example, which values contribute to better interpersonal relationships. A recent study in the context of web-based social networks showed that personality traits influenced the way people interacted with others in the net, which ultimately affected SWB (Zuh, Woo, Porter, & Brzezinski, 2013).

In Article IV a subjective measure of person-organization value congruence ("to what extent do organization values and goals match your own?") was used (Leiter, 2008). Thus, we do not know which specific values are prevalent in the worker's organization. Further organizational studies could examine how personal and specific organizational values interact to predict work engagement. Finally, research has shown that extrinsic motivation relates to subsequent work burnout (Van Beek, Taris, & Schaufeli, 2011). In our study, extrinsic career values were not related to work engagement at initial stages of the career. Future studies could examine whether extrinsic career values, if sustained for a longer period of time, would lead to work burnout.

Future studies could focus on value change following a life transition. For example, Bardi, Buchanan, Goodwin, Slabu, and Robinson, (2014) provided evidence showing that people chose life transitions based on value self-selection and socialization processes. Results from this study showed that students chose majors that best match their own values at the beginning of studies (self-selection), whereas there was no evidence of value socialization, i.e. Psychology students did not increase the importance of values compatible with this career. On the other hand, in the university years Psychology students who were considering a money-making career decreased the value of benevolence, and considering a career in management predicted an increase in power values during a three year period. Career values as well as occupational aspirations develop and change to adjust to the opportunities present in the environment. Future studies could analyze how the adjustments in aspirations, including career values, relate to work engagement. In this sense, it would be particularly interesting to test the influence of different job characteristics and the rewards reinforced in the work place on career value change.

6.4 Practical implications and concluding remarks

Nowadays measures of subjective well-being (SWB) are used to rate the progress of countries and inform public policy. Indeed, countries with higher SWB are characterized by being more equitable, democratic and have higher social capital and interpersonal trust (Diener, Lucas, Schimmack, & Helliwell, 2009). Those societies with higher levels of SWB around the world are the Scandinavian and Northern European countries (Helliwell, Layard, & Sachs, 2012). The results of this dissertation show that it is in these societies that self-transcendence values (benevolence and universalism) relate positively, and self-enhancement values (achievement and power) relate negatively to SWB. The results also showed that in less economically developed nations some values, for example, achievement might help people cope with their realities in the short term. In societies with lower levels of SWB, for example, Hungary, competition has been central for success in all levels of society after the fall of the Soviet Union (Fülöp, 2009). The current research found that valuing success and other achievement values related to higher life satisfaction in these contexts. Self-enhancement values, however, are also related to lower empathy (Myyry & Helkama, 2001) and less environmental concerns (Stern, Dietz, Kalof, & Guagnano, 1995). Thus, when SWB is based on achievement values, for example, having happiness as a goal and measure of progress might be a poor strategy in the long term—particularly if the aim is to create more sustainable and livable societies for all. Thus, the results suggest that country levels of SWB might also depend on the possibilities and constraints that certain contexts impose to the pursuit of values.

The results of this study signal some relevant contextual factors to consider if we aim at promoting well-being in communities and youth. The positive influence of sharing similar values to those around you (Article II and III) provides evidence on ways to increase SWB: through shared values and inter-personal relationships. The present findings suggest that the transmission of values during university years may be relevant in the life-course development of well-being. SWB is facilitated by actions that promote shared values among students and community members. Fostering activities that develop a sense of shared values among individuals could increase person-group value congruence and, as the current study's results indicate, contribute to better interpersonal relationships. Programs to promote well-being have become concerned with when, how and for whom interventions are intended (Layous, & Lyubomirsky, in press). Following the results of this dissertation, the characteristics of the country and values of the groups people belong should be considered when designing these interventions.

The results also have practical implications for career development during educational years. First, fostering intrinsic motivation during college or university years appears to be a helpful strategy to foster work engagement later on (Salmela-Aro, Mutanen, & Vuori, 2012). In addition, the findings of the current study revealed a positive association between person-organization value congruence and work engagement during early stages of the career. Offering help to young people in seeking jobs in organizations holding compatible values could be a way of fostering higher levels of work engagement; higher education institutions could play a role in this. In the current study, the participants who found a job that was in line with their qualifications reported higher engagement at work. During university years, a career development program could help students identify the importance of, and possibilities for, finding the type of jobs for which they are being trained. Educational institutions need to offer resources, networking activities and guidance in the search for a job that fits well. Self-determination theory's ideas on the importance of autonomous regulation of behavior for work engagement in youth samples also calls for more research on the ways organizations may foster this motivation, which provides not only more efficiency but an increased sense of self-realization.

To conclude, future research, as well as practical programs aimed at promoting personal well-being should take into consideration the key message of this dissertation: the relationships between values and well-being also depend on the broader social context. Within the general population, this research has suggested we need to consider the socio-economic reality in order to understand which values may promote well-being. Furthermore, the social context, particularly the role of peer group values in the formation and development of a personal value system, deserves growing attention. According to the dissertation results, person-group value congruence was more important than individual value priorities for well-being. Thus, any policy that has a goal of promoting well-being, or the development of values such as tolerance, respect or solidarity within a population should target the groups and communities to which individuals belong. Similarly, within professional contexts, the interplay between work motivations (i.e., career values) and larger organizational environments should be a focus of attention if we are to improve the well-being of future generations of young people during the critical, and sometimes precarious, transition from study to work. Well-being and values are intertwined within the individual, but their connections are dependent in part on the social, economic, and work contexts. Thus, any practical policy would benefit from further research exploring the nature of the specific connections between context, values and well-being.

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Appendix

Appendix A. Summary of studies examining the relationships between personal values and well-being.

Study	Sample	Measures	PO	ACH	HED	ST	SD	UN	BEN	TRA	CO	SE
Sagiv & Schwartz (2000)	German and Israeli students and German adults (N=1261)	SWLS	-.02	.04	.00	.03	-.01	-.05	.05	.02	.02	-.01
		Bradburn PA	-.06	.10*	.05	.13*	.12*	-.03	.05	-.08*	-.12*	-.13*
	Israeli business students (N=40)	SWLS	.27*	.05				-.11	-.10			
		Bradburn PA	.17	.41*				-.22	-.11			
	Israeli psychology students (N= 42)	SWLS	-.26*	-.07				.03	.18			
		Bradburn PA	-.34*	-.07				.03	.07			
Joshanloo & Gahedi (2009)	200 university students from Iran	SWLS	.04	.34**	.12	.01	.06	-.15	.08	-.09	-.01	.02
Oishi, Diener, Suh, & Lucas (1999)[1]	US university students (N= 256-271).	SWLS	-.07	.13*	.06	.05	-.03	-.02	.03	-.01	-.04	-.06
		PA (4 items)	.00	24**	-.03	-.03	.01	-.05	.04	-.07	-.01	-.05
Cohen & Shamai (2009)	271 police officers Israeli University	Psychological well-being [2]	-.18**	.14*	.04	.02	.15*	-.03	.21**	-.24**	-.03	.05
Bilbao, Techio, & Paez (2007)	Mixed sample (N=3664)[3]	SWLS	-.09**	.01	.16**	.04*	.14**	.07**	.15**	.05*	.00	.07*

Note. PANA = Positive and negative affect. PO = power, AC = achievement, HE = hedonism, ST = stimulation, SD = self-direction, UN = universalism, BE = benevolence, TR = tradition, CO = conformity, SE = security

[1] Values were measured by Pairwise Comparison Value Survey (PCVS, Oishi, Schimmack, Diener, & Suh, 1998) .

[2] Measured by a revised version of the Oxford Happiness Inventory (OHI), which includes 29 items (Hills and Argyle, 2002).

[3] The sample included 65% students (from 11 countries) 29% immigrants in Spain.

Appendix A (continuation). Summary of studies examining the relationships between personal values and well-being in the European Social Survey Sample.

Study	Sample	Measures	PO	ACH	HED	ST	SD	UN	BEN	TRA	CO	SE
Bobowik et al. (2011)	ESS Europe all countries Round 3, without Spain (N= 26778/28042)	LS[4]	-.09**	-.06**	.15**	.07**	.12**	.03**	.12**	-.08**	-.06**	-.19**
		PANA	-.07**	-.04**	.11**	.07**	.12**	.03**	.06**	-.08**	-.05**	-.14**
Sortheix & Lönnqvist (2013)	ESS Round 3 all 25 countries (N~44000)	LS- High HDI	-.05**	-.01	.11**	.04**	.02	.00	.04**	-.04	-.01	-.09**
		LS - Low HDI	.04**	.18**	.19**	.23**	.16**	-.13**	.01	-.18**	-.12**	-.25**

Note. PANA = Positive and negative affect. PO = power, AC = achievement, HE = hedonism, ST = stimulation, SD = self-direction, UN = universalism, BE = benevolence, TR = tradition, CO = conformity, SE = security.

[4] LS = Life satisfaction (measured by a single item: how satisfied are you with your life as a whole?

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Personal Value Priorities and Life Satisfaction in Europe: The Moderating Role of Socioeconomic Development

Florencia M. Sortheix[1] and Jan-Erik Lönnqvist[2]

Abstract

The present study examined the relations of personal values to life satisfaction (LS) across 25 European nations. Multilevel statistics with country-level Human Development Index (HDI) as a contextual moderator tested its effect on the individual-level relations between personal values and LS. HDI moderated the relations between LS and 8 of the 10 basic values identified by Schwartz's values theory. Across countries, high benevolence and hedonism values were associated with heightened LS, whereas high power and security values were related to lower LS. Achievement was positively related to LS in low HDI countries, but negatively in high HDI countries, whereas the opposite pattern occurred for universalism values and LS. Our results emphasize the importance of considering the broader context in which personal values are pursued when examining their implications for LS.

Keywords

well-being, life satisfaction, values, socioeconomic development, value–environment fit, multilevel analyses

The last few decades have witnessed an increased interest in the study of subjective well-being (SWB; for a review, see Diener, Oishi, & Lucas, 2003). SWB measures reflect the influence of several indicators of quality of life for a country (Diener, Inglehart, & Tay, 2012). The notion that SWB could and should be used to inform public policy is gaining momentum, and SWB measures have recently been included in government programmes to complement more traditional measures (Diener & Seligman, 2004). In this study, we focused on the cognitive rather than affective aspect of SWB, because the former are more strongly related to overall living conditions reflected by the country's level of socioeconomic development (Diener, Ng, Harter, & Arora, 2010). Life satisfaction (LS) refers to the cognitive evaluation of one's life, in general and in specific areas, such as relationships and work (Diener, 1984).

The study of the relations between personal values and well-being has generally been conducted under the assumption that these relations are universal (Bobowik, Basabe, Paez, Jimenez,

[1]Department of Social Research, University of Helsinki, Finland
[2]Swedish School of Social Science, University of Helsinki, Finland

Corresponding Author:
Florencia M. Sortheix, Department of Social Research, University of Helsinki (P.O. Box 54), 00014, Helsinki, Finland.
Email: florencia.sortheix@helsinki.fi

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& Bilbao, 2011; Joshanloo & Ghaedi, 2009; Sagiv, Roccas, Hazan, 2004). However, Sagiv and Schwartz (2000) suggested that the environment in which values are pursued may influence these relations. Person–environment value congruence, or value–environment fit, refers to the idea that people are happier when their environments allow them to pursue and fulfill their values (Sagiv et al., 2004; Sagiv & Schwartz, 2000). However, to the best of our knowledge, no previous research has examined which country-level variables are related to systematic variation in relations between individual-level personal value priorities (Schwartz, 1992) and LS. In fact, although there is much cross-cultural research on values, there seem to be no systematic cross-cultural comparisons on how values relate to other psychologically meaningful variables (Roccas & Sagiv, 2010; for a very recent exception, see Boer & Fischer, 2013).

In this study, we focused on two questions. First, are specific personal values related to LS? Second, does the relation between personal values and LS vary according to the level of socio-economic development of the country? Answers to these questions may shed light on the extent to which certain values are ubiquitously related to LS, and to what extent such relations are influenced by contextual variables. Based on value–environment fit, we expect that different values will predict well-being differently across European countries that vary in terms of socio-economic development. We will use Schwartz's theory (1992, 2006) of universal human values to argue and develop our hypotheses, and multilevel modeling techniques to test our ideas.

Schwartz's Value Theory and Structural Relations Among Values

Values represent basic individual motivations (Schwartz, 1992) and are also internalized as specific cultural practices through social institutions (Rokeach, 1973). Values define what is important for us, are stable through time and situations (Schwartz, 1992), and guide choices and behavior (Bardi & Schwartz, 2003; Lönnqvist, Leikas, Paunonen, Nissinen, & Verkasalo, 2006). A dynamic circumplex structure, shown in Figure 1, describes the relations among values. Schwartz (2006) defined the 10 basic values in terms of the broad goals that they express as follows:

Conformity—restraint of actions, and intentions which could upset or harm others and/or violate social norms and expectations.
Tradition—respect, commitment, and acceptance of the customs and ideas that one's culture or religion provides.
Benevolence—preserving and enhancing the welfare of those with whom one is in frequent personal contact.
Universalism—understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.
Self-Direction—independent thought and action—choose own goals, create, explore.
Stimulation—excitement, novelty, and challenge in life.
Hedonism—pleasure, doing things that bring gratification for oneself.
Achievement—personal success through demonstrating competence according to social standards.
Power—social status and prestige, control or dominance over people and resources.
Security—safety, harmony, and stability of society.

Schwartz's (1992) original dimensional organization of values describes the oppositions between openness to change versus conservation and self-transcendence to self-enhancement values. A complementary classification scheme was proposed by Schwartz (2006) to differentiate values according to the interests they serve: the self or others. Person-focused values regulate how one expresses personal characteristics and interests, and include self-direction, stimulation,

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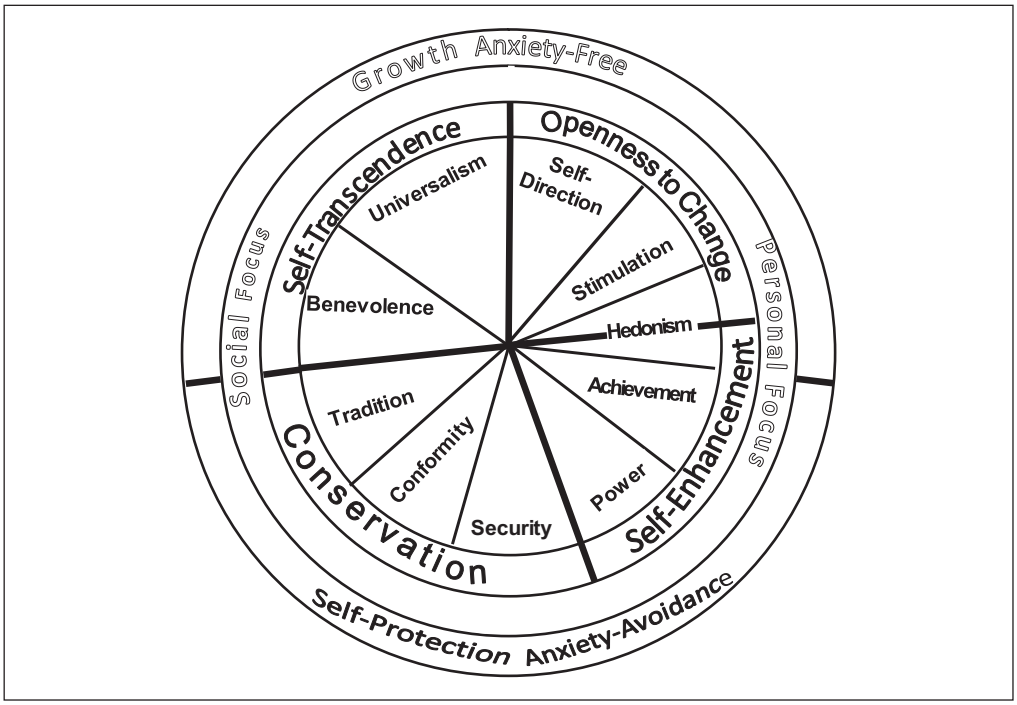

Figure 1. Structural relations among the 10 values, four higher order value dimension and two underlying motivational sources.
Source. Schwartz (2011). Reproduced with permission.

hedonism, achievement, and power. Social-focused values are those that promote, regulate, and preserve cooperative and supportive relations among groups. These values regulate how one relates socially to others and affect their interests, and include universalism, benevolence, conformity, and tradition. Security does not fit well into this classification scheme; although security tends to correlate most strongly with the social-focused values, it shares the self-concerned motivations of person-focused values as it is concerned mainly with protecting the self against threat (Schwartz, 2006; Schwartz et al., 2012).

Previous research using European samples has, at the individual level, reported LS to be positively associated with openness to change (self-direction, stimulation, and hedonism) and negatively associated with conservation values (conformity, tradition, and security; Bobowik et al., 2011). The associations between self-transcendence (universalism and benevolence) and self-enhancement (power and achievement) values and LS were smaller and less consistent (Bobowik et al., 2011). However, this research did not test for country-level moderators. By contrast, we believe that the consideration of the *context* in which values are pursued may be necessary to better understand the relations between well-being and values.

Value–Environment Fit

Value–environment fit refers to the notion that the context—through a series of rewards, social sanctions and affordances or possibilities for action (see Sagiv & Schwartz, 2000)—influences the type of values that will be positively related to well-being. For instance, Sagiv and Schwartz (2000) showed that the context offered by individuals' study majors moderated the relations

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between values and well-being in student samples. Specifically, they found that power values were related to higher well-being only among business students, but that benevolence values were related to higher well-being only among psychology students. They suggested that when the environment supported and encouraged certain types of values (e.g., power in business careers), then adhering to these values brought about positive outcomes in terms of personal happiness. That is, based on the idea of value–environment fit, similarity between the individual's values and the values that he or she encounters in his or her environment would be expected to contribute to satisfaction. Does the surrounding social context promote those values that the individual adheres to?

In this study, we will extend the idea of value–environment fit (Sagiv et al., 2004; Sagiv & Schwartz, 2000) to argue that it is not only value similarity that determines how values are related to well-being in different contexts, but also pertinent are the possibilities and constraints that countries with different socioeconomic realities place on their citizen (Gibson, 1977). Such realities may determine the possibilities of individuals to act on their values; whether it is possible for the individual to live up to his or her ideals and values may to some extent depend on the societal context. The main argument of this article is that the extent to which the individual's values are aligned with the socioeconomical context afforded by the country in which he or she lives is associated with LS.

One of the most plausible candidates to moderate the relations between personal values and well-being in general population samples is the socioeconomic context afforded by one's country of residence. In this study, we used the Human Development Index (HDI), as a measure of country socioeconomic development. HDI includes measures for a long and healthy life, access to education and a decent standard of living. The index reflects how well the country is doing for the majority of its citizens (e.g., in education, health, etc.) and is often used as a measure of quality of life. HDI may adequately capture the overall long-term life circumstances which have been shown to be strongly related to LS judgments (Diener et al., 2010).

We will develop our hypotheses regarding the associations between values and LS based on the classification into person and social-focused values (Schwartz, 2006). These dimensions, reflecting self- versus other orientation, appear to be consistently distinguishable across societies and measurement instruments. Similar dimensions have also been found in other field of research than values research; for example, Hogan (1983) labeled these dimensions rather intuitively as "getting ahead" and "getting along." We expect person and social-focused values to have different consequences for LS in high and low socioeconomically developed European countries.

The Present Research

In highly developed countries (e.g., Western European countries like Norway or Switzerland), we expect social-focused values (universalism, benevolence, tradition, and conformity) to be positively related to LS, and self-enhancement values (achievement and power) to be negatively related to LS. Western European countries receiving the highest HDI ratings are all long-standing democracies with strong welfare systems that guarantee the fulfillment of their citizens' basic requirements for living. Under such favorable conditions, a focus on getting along with others and participating in community life may be the better strategy in terms of well-being. Indeed, it seems that once basic needs are satisfied, interpersonal relationships and social capital become highly relevant for individual happiness (Diener & Seligman, 2004; Helliwell & Putnam, 2004). Universalism and benevolence values are, based on their very definitions, concordant with such environments in which social justice and equality are promoted. Tradition and conformity values, sharing the prosocial motivation of self-transcendence values (Schwartz, 2006), could also fit such environments. These two values are related to trust in institutions (Morselli, Spini, & Devos, 2012), which is likely to be related to happiness with the public goods that those institutions

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provide, which in turn is known to predict well-being (Oishi, Schimmack, & Diener, 2012). In sum, social-focused values should fit the social, economic, and institutional realities that characterize high HDI countries.

The pursuit of personal gain and dominance over others (power), and of being recognized as more successful than others (achievement), represents a self-concerned motivation that has been associated with lower well-being in samples of Western and economically developed countries (Bilsky & Schwartz, 1994; Deci & Ryan, 1995). In these countries, such pursuits may be discouraged, equality being the social ideal. Thus, we expect self-enhancement values to be negatively related to LS in more developed European countries. Regarding openness to change values, prior research has consistently linked these values with higher SWB (Bobowik et al., 2011; see also the importance of autonomy in self-determination theory, Deci & Ryan, 1995). However, these values may be more vital in countries in which a climate of instability reigns. The turmoil characteristic of countries undergoing large structural changes—that is, postcommunist countries (see the following)—is likely to necessitate adaptation to new life circumstances, social roles, and norms. Because openness to change values may be important for LS primarily because they facilitate such adaptation, we expect these values to be of importance primarily in low HDI countries, but less so in high HDI countries.

In contexts of low human development, much of the above delineated hypotheses for high HDI countries may be reversed. First, we expect person-focused values to be positively related to LS. Life goals such as progressing in one's career and gaining higher social status (achievement) and wealth (power) could be fundamental tools for meeting basic needs and for providing material security not only for oneself but also for close others. This is consistent with previous findings showing, for example, that financial satisfaction was a stronger predictor of LS among general population in poorer nations (Oishi, Diener, Lucas, & Suh, 1999) and research showing that the pursuit of material goods is negatively related to well-being mainly in richer nations (Dittmar, 2008).

Openness to change values—also classified as person-focused—are also expected to be positively related to life-satisfaction in low HDI countries. The HDI serves as an indicator of vulnerability—individuals and communities faced with rapid change and increasing uncertainty have lower HDI scores. In our European sample, the most vulnerable countries are the postcommunist ones which have undergone massive economic, social, and institutional changes in the past two decades. The instability that characterizes former communist t countries (Bulgaria, Ukraine, Russian Federation, etc.) has created a context of uncertainty and large inequalities in wealth. The capacity to adapt to rapid change may be crucial in such contexts. Consistent with this idea, previous research conducted in these countries reported a strong positive relation between being young and LS (Realo & Dobewall, 2011). This result was explained by youth being more successful in adapting to change. Older people adhering to the old traditions and social order were the most vulnerable group (Realo & Dobewall, 2011). In terms of personal values, those scoring high in openness to change values could be more comfortable with adopting a new system, and this could in low HDI countries contribute to their well-being.

We expect social-focused values to be negatively related to LS in low HDI countries. Continued resistance to change and adherence to the norms and conventions established by the old system should be reflected by higher scores on the conservation values of tradition, conformity, and security. These values may have adverse consequences for satisfaction in the face of inevitable and profound change. We also expect universalism to be negatively related to LS in low HDI countries. People living in such a context may simply have fewer resources to pursue universalism. A large proportion of their time and resources may be spent in striving to satisfy the more basic requirements of living, and due to a lack of appropriate policies and practices, they may have fewer possibilities to fulfill the goals motivated by universalism values. Protecting the environment or caring for social justice may simply not be very feasible options in everyday life.

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Furthermore, striving for equality in countries with increasing social disparities may be a source of distress. Thus, besides not being able to live up their personal standards, those scoring high on universalism may, in low HDI countries, find more causes of frustration in the surrounding events, activities, policies, and social realities. Benevolence values, mainly concerned with the well-being of close others, derive from the universal need to belong (Baumeister & Leary, 1995). Because there is consistent evidence on the universal positive effect of interpersonal relations on well-being (Helliwell & Putnam, 2004), we expect benevolence to be positively related to LS also in low HDI countries.

In sum, in high HDI countries we expect social-focused values (self-transcendence and conservation) to promote well-being, but self-enhancement values to be detrimental to well-being. By contrast, in low HDI countries, we expect person-focused values (self-enhancement and openness to change) to promote well-being, but social-focused values (conservation and universalism) to be detrimental to well-being. This study is the first to systematically test cross-cultural variations in the individual-level relation between values and well-being. The European Social Survey (ESS) data set allows us to test our ideas using nationally representative samples from 25 European countries.

Our operationalization of context, the HDI, is an index of living conditions that offer opportunities or set limitations for the pursuit of certain values. However, socioeconomic development also brings about changes in the cultural orientation of countries—It is correlated with the importance of freedom and democracy (Inglehart, Foa, Peterson, & Welzel, 2008). In terms of Schwartz's (2007) cultural value theory, Autonomy—conceptually close to individual-level openness to change—and Egalitarianism[1]—close to self-transcendence—correlate positively with the HDI (Basabe & Ros, 2005). Thus, it is important to test whether the proposed effects of the HDI remain even after accounting for variations in cultural values.

Method

Participants

We used data from the ESS Round 3 collected in 2006 from 25 European countries (Jowell & The Central Coordinating Team, 2007).[2] The ESS data includes strict probability samples representative of the population 15 years and older and is available online at www.ess.nsd.uib.no. We excluded 6.3% of participants who had more than five missing values in their responses to the Portrait Value Questionnaire (Schwartz, 2003). The total final sample size was $N = 44.106$ (for a country-level breakdown, see Table 1).

Measures

Life Satisfaction (LS). The ESS Round 3 included a number of questions to assess general LS. We used the following 3 items: "How satisfied are you with life as a whole?" "How satisfied are you with how life has turned out so far?" and "How happy are you?" The questions were answered from 0 (*extremely dissatisfied/unhappy*) to 10 (*extremely satisfied/happy*) and were averaged to create a single score. Average Cronbach's alpha across countries was .85. The two first questions were conceptually very similar to those in Diener's (1984) Satisfaction With Life Scale which assesses the cognitive aspect of SWB and has been used for multiple cross-cultural studies (Biswas-Diener, Vittersø, & Diener, 2010; Oishi et al., 1999). The inclusion of an emotional item ("how happy are you?") was justified as it loaded strongly with the two more cognitive items. Tests of explanatory equations show that the same variables (e.g., income) explained variations in happiness and LS to similar degree in the ESS data set (Helliwell, Layard, & Sachs, 2012). Country-level averages are presented in Table 1.

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Table 1. Number of Participants, Average Age, Life Satisfaction, and Value Priorities, and the Human Development Index of 25 European Countries.

Country	*n*	Age	LS	BEN	UN	SD	ST	HE	ACH	PO	SE	CO	TRA	HDI
Norway	1,533	46.2	7.77	1.23	1.19	1.13	0.87	0.90	0.89	0.79	1.06	1.08	0.97	0.970
Ireland	1,582	46.09	7.53	1.19	1.18	1.13	0.85	0.87	0.90	0.78	1.15	0.98	1.07	0.964
Sweden	1,585	47.97	7.80	1.24	1.20	1.16	0.87	1.05	0.84	0.78	1.00	0.96	1.02	0.961
Switzerland	1,758	49.88	7.94	1.22	1.22	1.16	0.82	1.04	0.88	0.78	1.05	0.88	1.03	0.956
The Netherlands	1,814	48.7	7.44	1.18	1.17	1.16	0.90	1.04	0.89	0.77	1.03	1.00	0.97	0.961
Finland	1,645	48.46	7.95	1.21	1.22	1.12	0.87	0.93	0.81	0.70	1.12	1.03	0.99	0.958
France	1,948	48.09	6.78	1.24	1.27	1.11	0.84	1.07	0.78	0.69	1.08	0.94	1.05	0.958
Denmark	1,451	49.49	8.26	1.30	1.21	1.18	0.87	1.07	0.88	0.81	0.99	1.03	0.98	0.953
Spain	1,802	46.08	7.49	1.23	1.20	1.10	0.79	0.91	0.82	0.77	1.18	1.03	1.07	0.952
Austria	2,326	44.28	7.42	1.19	1.13	1.14	0.85	1.04	0.97	0.85	1.10	0.89	0.95	0.952
Belgium	1,767	46	7.42	1.21	1.17	1.08	0.86	1.06	0.91	0.78	1.07	0.98	1.05	0.951
UK	2,301	49.44	7.27	1.22	1.18	1.12	0.88	0.94	0.89	0.77	1.13	0.97	1.03	0.945
Germany	2,828	48.05	6.89	1.20	1.16	1.14	0.80	0.99	0.91	0.79	1.09	0.93	1.00	0.945
Slovenia	1,329	46.12	7.09	1.13	1.13	1.09	0.88	0.99	0.97	0.80	1.08	0.97	1.06	0.924
Cyprus	933	47.55	7.51	1.19	1.12	1.10	0.83	0.93	0.88	0.84	1.21	0.97	1.11	0.911
Portugal	2,117	51.18	6.05	1.18	1.14	1.04	0.80	0.92	0.96	0.85	1.14	0.97	1.09	0.907
Hungary	1,409	51.13	5.90	1.17	1.15	1.10	0.79	1.07	0.94	0.81	1.23	0.93	1.07	0.878
Poland	1,629	43.79	6.89	1.14	1.16	1.06	0.84	0.80	0.93	0.86	1.16	1.10	1.08	0.876
Slovakia	1,670	43.44	6.35	1.10	1.12	1.06	0.83	0.81	0.95	0.87	1.17	1.05	1.08	0.873
Estonia	1,420	47.2	6.60	1.17	1.17	1.08	0.83	0.89	0.88	0.78	1.16	1.01	1.03	0.878
Latvia	1,592	42.62	6.20	1.05	1.03	1.06	0.91	0.96	1.00	0.96	1.12	0.91	0.98	0.859
Bulgaria	1,248	49.94	5.05	1.17	1.12	0.98	0.82	0.83	1.06	0.65	1.20	1.06	1.11	0.835
Romania	1,876	46.07	6.10	1.06	1.10	1.03	0.79	0.80	1.00	0.95	1.12	1.06	1.02	0.832
Russ. Fed.	2,306	46.15	5.54	1.12	1.13	1.05	0.77	0.83	0.97	0.96	1.22	1.00	1.07	0.811
Ukraine	1,877	48.83	5.09	1.15	1.18	1.04	0.78	0.81	0.90	0.94	1.22	1.08	1.07	0.789

Note. Former communist countries are in italics. LS = Life Satisfaction; BEN = benevolence; UN = universalism; SD = self-direction; ST = stimulation; HE = hedonism; ACH = achievement; PO = power; SE = security; CO = conformity; TRA = tradition; UK = United Kingdom; HDI = Human Development Index (UNDP, 2007).

The cross-country invariance of our measure of LS was tested using multi-group confirmatory factor analyses (MGCFA) with Mplus software (Muthén & Muthén, 2004). The model fit of the three-item LS scale (with all factor loadings constrained to be equal across countries), assessed was very good (Comparative Fit Index, CFI = 0.99, Tucker–Lewis Index, TLI = 0.99, and the Root Mean Square of Approximation, RMSEA = 0.06), confirming metric invariance—a precondition for working with correlation and regression coefficients—across countries. Although the metric scalar invariant model exhibited a significant inflation of the χ^2 value, $\Delta\chi^2(44) = 356.65$, $p < 0.001$, compared with the factorial invariant model, the approximate goodness-of-fit measures signaled a good to very good model fit, with CFI and TLI above 0.90 and RMSEA below 0.08 (for a description of the procedure for cross-national comparisons, see Davidov, Schmidt, & Billiet, 2011).

Personal values. Participants completed the 21-item version of the Portrait Values Questionnaire (PVQ21) adapted by Schwartz (2003) for the ESS. The 21 items each offer verbal portraits of different people and respondents have to rate how similar they are to the portrait. For example, "Thinking new ideas is important for him (or her for female respondents). He or she likes to do things in his or her own unique way" suggests a person for whom self-direction values are important. Respondents were asked, "how much like you is this person?" and answers were given on scale from 1 (*very much like me*) to 6 (*not like me at all*). All responses were recoded so that higher values represented higher agreement with the description. Reliabilities averaged .56, ranging from .35 for tradition to .72 for hedonism, and were very similar to previously reported reliabilities (e.g., Schwartz & Rubel, 2005). Low reliabilities are to be expected due to

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few items measuring each value (2-3) and the broad concepts that each value represents. Despite some low reliabilities, there is firm evidence supporting the validity of the PVQ21. The measure has been consistently related to different variables such as political orientation, interpersonal trust, immigration attitudes (Schwartz, 2007) and gender differences (Schwartz & Rubel, 2005). Multidimensional scaling and MGCFA of the values measured with the PVQ21 in 19 representative European samples from the ESS data set supported the near equivalence of meaning of the values across countries (Schwartz & Rubel, 2005). To control for individual differences in scale use, we followed standard procedures to center participants' answers using their mean for all items (Lindeman & Verkasalo, 2005; Lönnqvist et al., 2006). The values scores, therefore, represent the relative importance to the person of each value type compared with the other value types, with the average score for all 10 value scales being 1.00. Country-level averages are shown in Table 1.

Control variables. We included gender, age, and education as control variables, because they have both been shown to influence value priorities (Puohiniemi, 2002; Schwartz, 1992; Schwartz & Rubel, 2005). Within each country, almost exactly half of the participants were female. Country-level averages of age are presented in Table 1. We also controlled for personal income, as this variable has previously been associated with SWB (Diener et al., 2010). Subjective income was assessed by asking "How do you feel about your household's income nowadays?" The categorical response options were 1 (*living comfortably on present income*), 2 (*coping on present income*), 3 (*living difficultly on present income*), and 4 (*living very difficultly no present income*). This variable was dummy coded using "coping on present income" as the reference category.

Socioeconomic development. As an indicator of socioeconomic development, we used the HDI of the United Nations Development Program (UNDP, 2007) which reflects the time period of ESS Round 3 (2006). This index assesses inter-country development levels on the basis of three so-called deprivation indicators: life expectancy, adult literacy, and the logarithm of purchasing power adjusted per capita gross domestic product (GDP). All Western European countries were labeled by UNDP as "very high human development," whereas all of the former communist countries, except Slovenia were labeled as "high human development." Country scores are shown in the last column of Table 1 (sorted from highest to lowest scores on the HDI).

Cultural values. Country scores for Autonomy versus Embeddedness and Egalitarianism versus Hierarchy were obtained from Schwartz's large-scale survey on teacher from 55 countries.[3] To obtain two bipolar value dimensions, we subtracted Embeddedness scores from Autonomy scores and Hierarchy scores from Egalitarianism scores.

Analyses

Using data from the ESS, we wanted to study the relations between values and LS across European countries which varied in level of development. The associations were expected to vary across countries, and all analyses were therefore performed by means of multilevel techniques which allowed relating properties of individuals and properties of the groups and structures in which they function. The analyses were conducted using the Statistical Package for the Social Sciences (SPSS) Mixed-Model procedure (see Singer, 1998). LS and values were individual-level variables, and individuals were nested in countries that differed in HDI. As our model included a cross-level interaction we used grand mean centered variables to allow for a clearer interpretation of the results (Hox, 2010).[4]

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Table 2. Mixed-Model Parameters for Control Variables, Individual Values (Social-Focused), and the Interaction Between Individual Values and HDI in the prediction of Life Satisfaction.

	Security		Conformity		Tradition		Benevolence		Universalism	
Parameter	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*
Fixed effects										
Intercept	7.08**	0.06	7.07**	0.07	7.07**	0.07	7.08**	0.06	7.07**	0.07
Individual-level variables										
Control variables[a]										
Personal value	−0.52**	0.07	−0.12*	0.06	−0.08	0.06	0.44*	0.08	−0.08	0.08
Country-level variable										
HDI	9.14**	2.03	9.44**	1.38	9.627**	1.38	9.495**	2.01	9.749**	2.06
Egalitarianism-hierarchy	−0.07	0.07	−0.07	0.07	−0.07	0.07	−0.07	0.07	−0.07	0.07
Autonomy-embed.	−0.13	0.20	−0.12	0.21	−0.13	0.21	−0.15	−0.02	−0.13	0.21
Cross-level interaction										
HDI × Individual value	7.69**	1.2	5.14**	1.16	6.74**	1.06	2.80	1.422	5.06**	1.43
Covariance parameters										
Random intercept variance	0.096**	0.03	0.103**	0.032	0.106**	0.032	0.095**	0.029	0.101**	0.031
Random slope variance	0.079*	0.03	0.071*	0.029	0.055*	0.025	0.10*	0.044	0.098*	0.043
Residual variance	2.42**	0.02	2.437**	0.016	2.436**	0.016	2.437**	0.016	2.44**	0.017

Note. Gender (male = 0, female = 1); HDI = Human Development Index; Est = Parameter Estimate. N = 39,278-40,278.
[a]Average coefficients for control variables (all $p > .001$): age (Est. = −.006, *SD* = .00), gender (Est. = .06, *SD* = .016), years of education (Est. = .01, *SD* = .00), living comfortably on present income (Est. = .53, *SD* = .02), living with difficulty on present income (Est. = .−.87, *SD* = .02), and living very difficultly on present income (Est.= −2.06, *SD* = .03).
*$p < .05$. **$p < .01$.

Results

As a starting point, we examined how much variance in LS was explained by the grouping category (country) by means of the intraclass correlation coefficient. We compared in an unconditional model (a model without predictors), the obtained variances at Level 1 (individual) and Level 2 (country). The percentage of variance that occurred between countries was 23. Thus, a rather high proportion of LS was explained by belonging to a country and justified the further use of multilevel techniques. The country-level variables correlated as expected: HDI was positively correlated with the cultural value of autonomy versus embeddedness ($r = .83$; $p < .001$) and egalitarianism versus hierarchy ($r = .48$; $p < .001$). The two cultural value dimensions were also highly correlated ($r = .67$; $p < .001$).

To test our hypotheses regarding the cross-level interaction, we ran 10 separate mixed-models analyses predicting LS (to avoid multicollinearity, each basic value was analyzed separately). The mixed models included, as Level 1 predictors age, gender, subjective income (dummy coded), and one basic value, as Level 2 predictors, HDI and the two cultural value dimensions, and finally, the cross-level interaction between the basic value and HDI. Only the effects of values were modeled as random. In the prediction of LS, the HDI was the only statistically significant country-level predictor when the three country-level variables were entered simultaneously. At the level of the individual, the relations between personal values and LS were consistently qualified by the interactions between personal values and HDI: the interactions between 8 of the 10 basic values and country-level HDI were significant (Tables 2 and 3). The exceptions were benevolence and hedonism suggesting that these values have a positive and similar relation with LS across different levels of the HDI.

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Table 3. Mixed-Model Parameters for Control Variables, Individual Values (Person-Focused), and the Interaction between Individual Values and HDI in the prediction of Life Satisfaction.

	Self-direction		Hedonism		Stimulation		Achievement		Power	
Parameter	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*	Est	*SE*
Fixed effects										
Intercept	7.07**	0.07	7.05**	0.07	7.07**	0.06	7.05**	0.07	7.07**	0.06
Individual-level variables										
Control variables[a]										
Individual value	0.331**	0.08	0.51**	0.06	0.24**	0.05	0.01	0.07	−0.49**	0.06
Country-level variables										
HDI	9.21**	2.04	9.47**	2.15	9.36**	2.07	10.04**	2.07	9.46**	2.05
Egalitarianism-hierarchy	−0.07	0.07	−0.06	0.07	−0.00	0.07	−0.06	0.07	−0.07	0.07
Autonomy-embed.	−0.12	0.21	−0.18	0.22	−0.11	0.21	−0.15	0.21	−0.14	0.21
Cross-level interaction										
HDI × Individual value	−6.56**	1.35	−1.31	0.68	−6.48***	0.82	−9.25***	1.33	−4.0***	1.09
Covariance parameters										
Random intercept variance	0.097**	0.03	0.109**	0.034	0.101**	0.031	0.107**	0.031	0.099**	0.031
Random slope variance	0.098*	0.041	0.077*	0.03	0.026	0.031	0.098*	0.039	0.054*	0.024
Residual variance	2.43**	0.017	2.428**	0.02	2.434**	0.016	2.429**	0.016	2.43**	0.016

Note. Gender (Male = 0, Female = 1); HDI = Human Development Index; Est = Parameter Estimate. N = 39,278-40,278.
[a]Average coefficients for control variables (all $p > .001$): age (Est. = −.006, *SD* = .00), gender (Est.= .06, *SD* = .016), years of education (Est.=.01, *SD* = .00), living comfortably on present income (Est. = .53, *SD* = .02), living with difficulty on present income (Est. = .−.87, *SD* = .02), and living very difficultly on present income (Est. = −2.05, *SD* = .03).
*$p < .05$. **$p < .01$.

For testing and probing the two-way interactions estimated in the hierarchical linear regression models we used the computational tool developed by Preacher, Curran, and Bauer (2006) for the case of a Level 1 predictor and a Level 2 moderator variable. The associations between values and LS were tested at high (1 *SD* above the mean) and low (1 *SD* below the mean) values of HDI. To illustrate the relations between values and LS at high, average, and low levels of HDI, we plotted the obtained simple slope estimates of the 10 values (Figure 2). To facilitate interpretation, prior to the computation of these slope coefficients, all of the predictor variables and the dependent variable were standardized; this entails that the slope estimates can, for the evaluation of effect sizes, be interpreted as correlation coefficients.[5]

We expected that prosocial values would be positively related to LS in highly developed countries. Slopes analyses showed that in high HDI countries only benevolence and tradition were positively related to LS. Universalism ($p = .09$) and conformity (*ns*), had, as expected, a positive relation to LS, but slopes tests revealed that these relations were not significant. Thus, our hypothesis regarding the positive relation between social-focused values and LS in high HDI countries received only partial support. We also hypothesized that self-enhancement values would be negatively related to LS in highly developed countries. As expected, achievement and power values showed a negative association with LS in these countries. Security values did not show a statistically significant relation to LS and had a small negative slope.

In low HDI countries, we expected that person-focused values would show a positive relation with LS. Slope analyses (Figure 2) showed, as expected, that self-direction, stimulation, hedonism, and achievement were all positively related to LS ($p < .01$). Contrary to our hypothesis, the slope for power values (person-focused) was negative. However, consistent with our expectations, the social-focused values universalism, tradition, and conformity were all negatively associated with LS (all $p < .01$). Security values were also negatively related to LS.

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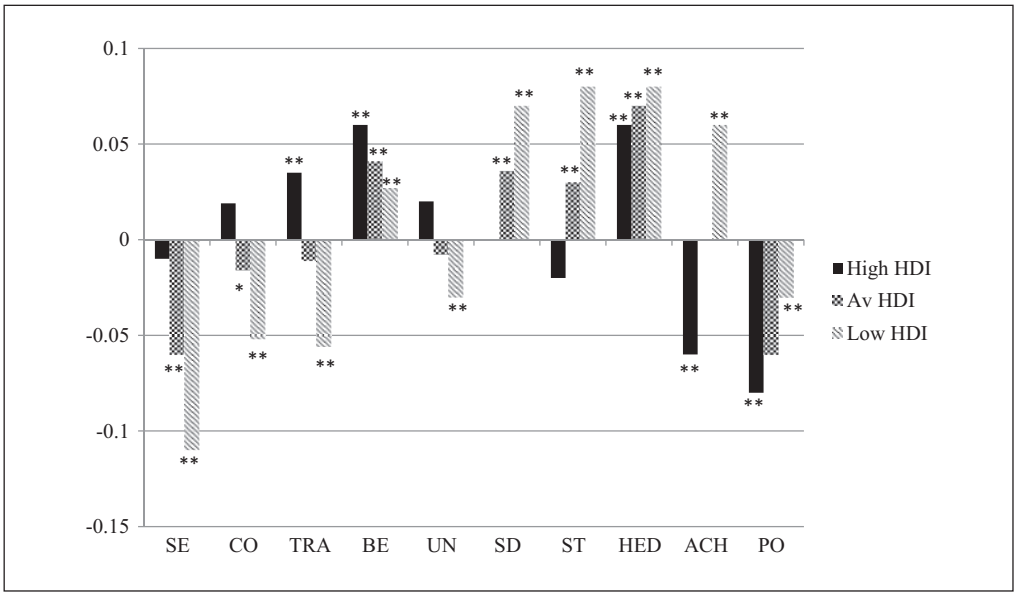

Figure 2. Multilevel slope estimates of the 10 values at high (+1 standard deviation), average (Av) and low (−1 standard deviation) levels of HDI (Human Development Index) in the prediction of Life Satisfaction.

Note. SE = security; CO = conformity; TR = tradition; BE = benevolence; UN = universalism; SD = self-direction; ST = stimulation; HE = hedonism; AC = achievement; PO = power.

*$p < .05$. **$p < .01$.

Our hypothesis suggesting that openness to change values would be positively related to LS in low HDI countries was supported: the slopes for self-direction, stimulation and hedonism were, in low HDI countries, .07, .08 and .08, respectively. In high HDI countries, the corresponding slopes were .00 (NS), .02 (NS), and .06, respectively, and supported our assumption that these values would be less relevant in more stable contexts.

Four values showed similar relation to LS across countries: valuing hedonism or benevolence was consistently positively related to LS scores. Furthermore, valuing power or security was negatively related to LS in all countries.

Discussion

Previous research on the relationships between personal values and well-being has mainly focused on the main effects of values on well-being without paying careful attention to contextual effects. The results of the present research show that country-level HDI moderates the associations of 8 of the 10 personal values with well-being, with benevolence and hedonism values being the only exception.

In high HDI countries, we expected social-focused values to be positively related to LS. However, simple slope tests showed that in these countries, only benevolence and tradition were statistically significantly positively associated with LS. Nevertheless, the expected positive associations between the other two social-focused values, universalism and conformity, were almost statistically significant. Of the person-focused values, the self-enhancement values, showed, as expected, negative associations with LS, whereas the associations between the openness to change values and LS were, also as expected, very weak. In low HDI countries, the relations between social-focused values and LS were consistent with our expectations: all social-focused

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values, except benevolence, were negatively related to LS. We further predicted that in these countries, person-focused values would predict higher levels of LS. Only power values contradicted this hypothesis, showing a negative association with LS.

Comparison of the associations between values and LS in high and low HDI countries shows that these associations were reversed for achievement and universalism (although the association between universalism and LS did not quite reach statistical significance in high HDI countries; Figure 2). The more general motives of personal progress and social concern are most clearly crystallized in achievement and universalism values, respectively. As expected, valuing equality, social justice, and the welfare of people in general (some of the central goals of universalism values) may decrease LS in more competitive and ruthless environments. In such environments, situations of inequality and social injustice are likely to be encountered frequently. This discrepancy between the reality that one encounters and the values that one adheres to may lead people adhering to universalistic values to report lower levels of LS. However, focusing on getting ahead (achievement) may be the best option in such environments.

The divergent associations of achievement values with LS could help explain why it has been theoretically conceptualized as a healthy (Bilsky & Schwartz, 1994; Sagiv et al., 2004) and anxiety-based value, presently located at the border zone of anxiety-based and growth values (Schwartz et al., 2012). Our findings are consistent with a previous study showing that achievement values are related to higher well-being in Iran—another low HDI country (Joshanloo & Ghaedi, 2009).

In low HDI countries, why do universalism and benevolence values show opposite associations with LS? Recall that benevolence values are mainly concerned with the well-being of close others. The ubiquitous relation of benevolence and LS is consistent with extensive research on the importance of close interpersonal relationships for well-being (Baumeister & Leary, 1995; Ryan & Deci, 2001; Ryff & Keyes, 1995).

Hedonism values had the strongest positive association with LS across high and low HDI countries. The circular structure of values suggests that the strength of associations between values and other outcome variables should follow a sinusoid curve (Schwartz, 1992), Any external variable would be expected to be associated similarly with values adjacent in the value structure, and associations with the external variable (in our case, LS) should decrease as one moves around the circle from the strongest positive to the strongest negative association (these should be located at opposite sides of the circle). As, shown in Figure 2, hedonism values do not comply with such a sinusoidal pattern. One reason for this could be that behaviors motivated by hedonism; that is, pursuing activities that lead to pleasure and gratification (Bardi & Schwartz, 2003), could ubiquitously lead to increases in positive affect. Positive affect, being a component of SWB (Diener, 1984) is across countries positively associated with LS (Kuppens, Realo, & Diener, 2008).

Power values also deserve special attention as the expected positive association with LS did not emerge in low HDI countries. Although power values share the self-oriented motivation of achievement values, they are directly focused on obtaining material rewards and dominance. There is a large body of research within SDT (Kasser, Ryan, Couchman, & Sheldon, 2004) that suggests that the motivational goals that power values represent are "extrinsic" (for a review on SDT, see Deci & Ryan, 1995; Ryan & Deci, 2001; Sagiv, et al., 2004) and therefore associated with higher anxiety and lowered well-being. The pursuit of power is contingent on attaining wealth and respect from others and could thus undermine personal autonomy and prevent individuals from focusing on more rewarding goals, such as cultivating oneself and one's interpersonal and community relations (Ryan & Deci, 2001). Based on Dittmar's (2008) ideas, we believe that in more developed nations material goods may be pursued with the illusion of overcoming identity deficits (e.g., appear successful in the eyes of others). By contrast, in less-developed countries the motivation for pursuing wealth may, for many people, and especially the most

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disadvantaged ones, just be to provide for a living, and this may diminish the negative effects of the pursuit of wealth.

Finally, security values were negatively related to LS in high HDI countries. This is consistent with Schwartz's suggestion that security values, despite being located among the social-focused values, may not share the same prosocial motivations as conformity and tradition (Schwartz, 2006). Furthermore, there is quasi-experimental and longitudinal evidence suggesting that heightened adherence to security values may be a reaction to a perceived lack of security. That is, unsettling or stressful events, at a societal level (terrorist attacks; Verkasalo, Goodwin, & Bezmenova, 2006) and personal level (migration to another country; Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2011) have been shown to increase the importance of security values. Such increases in the importance of security values as a reaction to threatening events would suggest that high security values could be related to lower LS across cultures.

More generally, our results suggest that some of the relations between personal values and well-being are context-dependent, thereby supporting models in which the links between well-being and values are qualified by the particular environment (Diener & Diener, 1995; Diener et al., 2003; Sagiv & Schwartz, 2000). Our results are also in line with some recent research that has challenged the universality of value–attitude links by showing that macro-contextual variables influence such links (Boer & Fischer, 2013). However, we also found some consistent patterns of associations across countries: Focusing on the well-being of close others (benevolence), enjoying life (hedonism), and not attributing importance to material wealth (power) and personal safety (security) are associated with increased feelings of satisfaction.

Implications and Further Research

Similarity between an individual's values and the surrounding cultural value system has been argued to be associated with higher LS (e.g., Oishi et al., 1999; Sagiv & Schwartz, 2000). In light of our results, things might be more complicated. We reasoned and found that high openness to change values and low conservation values are associated with higher LS in more vulnerable and instable countries, marked, at least in the present sample, by being more oriented toward Embeddedness (Schwartz, 2006). The role of cultural values, however, needs to be further examined in samples including such less-developed countries that have not recently undergone the rapid social changes characteristic of former communist countries. Also pointing to the importance of a more heterogeneous sample of countries, cross-country agreement on the relative importance of the 10 basic values is very high in the ESS sample (Fischer & Schwartz, 2011). This could explain why Schwartz's cultural values dimensions failed, in the prediction of LS, to add to the predictive power of the HDI. Furthermore, the value–environment fit hypothesis should in future research be more directly examined by matching individual-level values with the cultural aggregate of these values.

The relations between values and LS emerged more consistently and strongly in low HDI countries. Two possible and related explanations may be put forward. First, the stronger relations between values and LS that emerged in former communist countries could be related to the tightness versus looseness cultural dimension. This dimension opposes countries that have many strong norms and a low tolerance of deviant behavior with those that have weak social norms and a high tolerance of deviant behavior. In terms of the tight versus loose dimension, Eastern European countries are the loosest countries in the world, whereas Western and Northern European countries are much tighter (e.g., Bulgaria, which ranked second lowest in HDI in the present study, was ranked highest in looseness in a 33-nation study, whereas Norway, ranked highest in HDI, was among the tightest nations, second only to Eastern Asia countries; Gelfand et al., 2011). As suggested by Roccas and Sagiv (2010), values may guide behavior more strongly in loose cultures, and this may in part explain why values are more strongly related to LS in

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Eastern Europe. However, the cultural dimension of tightness versus looseness, although potentially helpful in explaining cross-cultural differences in the relative strength of associations between values and well-being, would be hard-pressed to account for the sign reversals found for instance, for universalism and achievement.

Another possible explanation builds on the result of Fischer and Boer (2011), according to which economic development brings greater well-being because it increases autonomy. The greater freedom of choice that people in highly developed nations encounter could allow individuals to choose those environments that they themselves feel are the most satisfying—those adhering to conservation values and those adhering to openness to change values may find ample opportunities to nurture their values. The freedom or opportunity to pursue any value could make the overall associations of values and LS weaker. Within-country analyses discriminating individuals living in different regions (e.g., big cities or small towns) could shed more light into these questions.

Limitations and Conclusions

One objection to our results could be the generally small effects values appear to have on LS. However, even if the effects are small, they compare quite favorably with other effects found in the literature on LS. A series of meta-analyses (Richard, Bond, & Stokes-Zoota, 2003), based on hundreds of studies, revealed that LS has most frequently been linked to amount of social activity, ethnicity, marital status, and gender, with effect sizes ranging from $r = .00$ (gender) to $r = .15$ (social activity).

Other limitations of the present study should also be acknowledged. First, the presented research is correlational in nature. Longitudinal studies would provide clearer evidence on causal relations between values and LS. However, we believe that the causality may be in the direction from values to LS. Values, although they do change (Bardi, Lee, Towfigh, & Soutar, 2009; Lönnqvist et al., 2011; Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2013), appear to be much more stable than is LS.

Another limitation refers to the specific characteristics of the HDI index, our country-level moderator. This index correlates highly with cultural values and wealth. Future analyses, conducted with a larger set of countries, could attempt to pry apart the effects of wealth and cultural value orientations. Although our analyses do not allow us to determine the relative importance of the various constituents of development, it is noteworthy that country-level value orientations did not predict LS when considered in conjunction with the HDI. Consistent with previous findings (Diener et al., 2012), this could be interpreted as implying the importance of the more material aspects of development for LS. Also regarding the HDI, another limitation was that all of the countries in our sample were high HDI countries. Including low HDI countries (e.g., developing countries with an HDI below .50) would be important in future studies.

As a final limitation and potential direction for future research, we wish to emphasize that reporting high satisfaction ("feeling good") is not enough to account for the complex nature of personal well-being (cf. Nave, Sherman, & Funder, 2008). More specifically, several researchers (for a review, see Biswas-Diener, Kashdan & King, 2009) have called for an integration of hedonic and eudaimonic conceptions of well-being. Functioning well is generally defined in terms of fulfilling basic needs (Ryan & Deci, 2001), having positive interpersonal relations, autonomy, purpose, self-acceptance, and mastery (Ryff & Keyes, 1995). According to the present study, a perspective on human health and well-being which is deeply integrative should also include personal values as the link between individuals and the societies in which they function.

We started out by noting that SWB measures are presently being advocated as aids to inform public policy. This may not be entirely straightforward, as illustrated by our result regarding the

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associations between personal values and well-being. Those personal values that contribute to personal well-being by helping people cope with and adjust to the system in the short term (e.g., achievement values in low HDI countries) might in the long run prove a poor strategy, as the happiest countries in the world, arguably suitable to be considered model societies, appear to be those in which self-enhancement values are negatively related to happiness.

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Notes

1. A cultural emphasis on Autonomy encourages individual to cultivate and express their own preferences, feelings, ideas, and abilities. Opposite to Autonomy is Embeddedness, which emphasizes maintaining the status quo and restraining actions that might disrupt in-group solidarity or the traditional order. Also regulating the focus between self- and other-concern is the cultural value dimension of Egalitarianism versus Hierarchy. In egalitarian countries people are socialized to consider one another as moral equals and are expected to act for the benefit of others as a matter of choice. In hierarchical cultures the unequal distribution of power, roles, and resources is seen as legitimate and even desirable.
2. Neither data collectors, nor the data distributor (Norwegian Social Science Data Services) are responsible for the analysis or interpretation of results presented in this article.
3. Scores were obtained directly from S. H. Schwartz's data from Israel Social Sciences Data Center on May 2, 2006.
4. The results were virtually identical when we used group-mean centering for individual-level variables instead of grand mean centering.
5. The within-country correlations using raw data also showed a similar pattern of associations in high versus low HDI (Human Development Index) countries.

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Person-Group Value Congruence and Subjective Well-Being in Students from Argentina, Bulgaria and Finland: The Role of Interpersonal Relationships

FLORENCIA M. SORTHEIX[1]* and JAN-ERIK LÖNNQVIST[2]
[1]Department of Social Research, University of Helsinki, Finland
[2]Swedish School of Social Science, University of Helsinki, Finland

ABSTRACT

The present study examined the relations between personal values, value congruence, interpersonal relationships and subjective well-being in psychology/education and business students from Argentina (N= 275), Bulgaria (N = 182) and Finland (N= 148). Regression analyses showed, first, that there were no direct relations between higher order value priorities and life satisfaction (LS), positive affect (PA) or negative affect (NA). Second, objective value-congruence (VC)—the similarity between individual and group values—was positively related to LS and PA, and negatively related to NA. Most importantly, the effects of VC on LS, NA and PA were partially mediated by good interpersonal relationships. Our results show that interpersonal relationships are facilitated by sharing values similar to those of one's fellow students. More generally, personal values per se appear not to be associated with subjective well-being, more important is how these values fit into the social context. Copyright © 2014 John Wiley & Sons, Ltd.

Key words: personal values; well-being; life satisfaction; interpersonal relationships; value congruence

The study of well-being has emerged as a major research area in the last decades. The most prevalent construct in research on this topic has been subjective well-being (SWB; Diener, 1984). SWB has been conceptualized as being comprised of both cognitive judgments (life satisfaction; LS) and emotional components (positive affect (PA) and negative affect (NA); Diener, Suh, Lucas, & Smith, 1999). SWB is linked to major life outcomes, such as health, employability and performance (Lyubomirsky, King, & Diener, 2005). On the other hand, personal values provide guidelines for living and a basis from which to evaluate events, behaviors and persons (Schwartz, 1992). Schwartz's value theory (1992) is a highly influential and popular framework for values research. To date, relatively little research has examined whether SWB is associated with personal values, as conceptualized within the framework provided by Schwartz's value theory, and the results of this research have been mixed (Joshanloo, & Ghaedi, 2009; Sagiv & Schwartz, 2000; Sagiv, Roccas, & Hazan, 2004).

The study on the relations between personal values and well-being has mainly been conducted from two different perspectives. First, direct relations between values and well-being outcomes have been investigated based on self-determination theory and methods (Deci & Ryan, 2000; Vansteenkiste, Duriez, Simons, & Soenens, 2006). A second line of research has focused on the situational constraints that affect the relations between values and well-being (Sagiv & Schwartz, 2000; Lönnqvist et al., 2009; Sortheix & Lönnqvist, 2014). Within the latter approach, there is evidence that having a value profile that is similar to the profiles of one's fellow students (Lönnqvist et al., 2009), endorsing values that are compatible with one's university major (Sagiv & Schwartz, 2000), and endorsing values that fit the requirements of the broader socio-economic context (Sortheix & Lönnqvist, 2014), are all related to heightened well-being. In this study we will investigate both the direct relations between values and well-being, and the importance of whether one's values are aligned with the values of one's peers. More specifically, regarding the latter, we will study the importance of person-group value congruence (VC) for SWB.

Person-group VC refers to the subjective or objective similarity between the values of the individuals and the values of their group or organization. Subjective VC is measured by directly asking individuals to report on the perceived fit between their own values and their group's or organization's values (Kristof-Brown, Zimmerman, & Johnson, 2005). Most of the research on the effects of VC on different organizational outcomes, including job satisfaction, has investigated subjective VC (e.g., Edwards & Cable, 2009). By contrast, we measured objective VC. This was assessed indirectly by comparing students' values with the average values of their group of peers, which has not yet been studied in relation to SWB.

Our study addresses previous gaps in the research literature on values and well-being. Only few studies have assessed objective value congruence in relation to SWB. One study found that in student samples, objective VC was associated with self-esteem (Lönnqvist et al., 2009). However, this study did not use SWB as the outcome variable, nor did it control for differences in personal values. Another study (Sagiv & Schwartz, 2000) showed that students' major (Psychology versus Business) moderated the association of certain values and SWB, but did not assess value congruence with peers. Most importantly, no previous studies have assessed the mechanisms that could explain the potential beneficial effects of person-group VC for SWB in a university context. According to the "similarity-attraction" paradigm, value congruence may facilitate interpersonal relations (Byrne, 1971; see also Berscheid, & Reis, 1998). The second major contribution of this study is to investigate whether possible associations between VC and SWB are explained by interpersonal

relationships. We present results from samples of students of Business and of Psychology or Education from three different countries: Argentina, Bulgaria and Finland.

A Universal Theory of Personal Value Orientations and their Relations to Well-Being

Values are relatively abstract and function as evaluative standards that define desirable ends and ways to achieve goals (Rokeach, 1973). Across countries people are able to differentiate between ten value types (Schwartz, 1992; Sagiv & Schwartz, 1995). Schwartz' circumplex structure organizes values along a continuum of correlated constructs depending on whether they oppose or complement each other. Two bi-polar dimensions best describe the compatibilities and incompatibilities among values. The first dimension represents the opposition between self-transcendence values (benevolence and universalism), which provide the motivation for caring for the well-being of others and social justice, versus self-enhancement values (power and achievement), which focus on personal gain, dominance and success according to social standards. The second dimension reflects the opposition between openness to change values (self-direction, stimulation and hedonism[1]) that foster the motivation for independent action, creativity, and pleasure, versus conservation values (conformity, tradition and security) that concern the maintenance of statu quo, self-restriction and resistance to change.

Schwartz's framework also distinguishes the higher order value dimension of growth (self-transcendence and openness) versus deficit (self-enhancement and conservation) values (Schwartz et al., 2012). Growth values have been argued to promote self-expression and personal growth and to become more important the more a person attains the goals towards which the values are directed (Bilsky & Schwartz, 1994). Opposite to growth values are anxiety-avoidance values, which are sought to protect the self against threat. The importance of anxiety-avoidance values has been suggested to be higher for people in unstable, insecure and deprived contexts (Schwartz & Bardi, 1997) or after major disasters (Verkasalo, Goodwin, & Bezmenova, 2006). The distinction between growth and anxiety-avoidance values could provide the basis for anticipating direct relations between values and well-being (see also, Bilsky and Schwartz, 1994). Realizing values related to growth needs (e.g. universalism, benevolence, self-direction) could be expected to provide greater satisfaction than pursuing goals related to deficiency or extrinsic needs (e.g. power, tradition, and conformity). This idea is consistent with self-determination theory (SDT; Deci & Ryan, 2000), which suggests that individuals have basic needs for autonomy (sense of free choice and volition), competence (feel able to modify and affect one's situation) and relatedness (sense of belonging to groups). These basic needs can be conceptually linked to the motivational goals underlying openness to change (e.g., self-direction) and self-transcendence (e.g., benevolence) values (see also, Sagiv et al., 2004). The pursuit of certain other values; i.e., power, security or conformity, might be dependent upon external contingencies and thus, would not be expected to provide intrinsic satisfaction (Deci & Ryan, 2000). However, empirical results on the associations between Schwartz's values and well-being have provided mixed findings (Bobowik, Basabe, Paez, Jimenez, & Bilbao, 2011; Sagiv & Schwartz, 2000).

[1] Hedonism is located between the openness to change and self-enhancement dimensions. It shares motivations from both dimensions, and is sometimes conceptualized as belonging to one of the dimensions, sometimes the other.

In contrast to the above presented view that seeks universal direct relations between values and well-being, there are some studies that have shown that different values are related to well-being in Psychology versus Business students. Specifically, Sagiv and Schwartz (2000) found that achievement and power were positively related to well-being among Israeli Business students, and power values were negatively related to well-being only among Israeli Psychology students. Sagiv and Schwartz (2000) suggested that those students, whose values were compatible with the values promoted by their university majors, would enjoy higher well-being. Indeed, economy students typically attribute greater importance to self-enhancement values than do students from other disciplines (Gandal, Roccas, Sagiv, & Wrzesniewski, 2005). More generally, power and achievement are important in enterprising work environments, and less important in social occupational environments, in which benevolence and universalism are considered important (Knafo & Sagiv, 2004). Achievement values are also associated with well-being among students from Iran, a country oriented towards self-enhancement (Joshanloo & Ghaedi, 2009). Results of this kind suggest that the relations between values and well-being may vary across groups.

Person-Group Value Congruence and the Role of Interpersonal Relations

Within the vocational (Robst, 2007; Dawis & Lofquist, 1984) and organizational literature (Maslach & Leiter, 2008) there is substantial research interest in person-environment (P-E) fit, which can be *"broadly defined as the compatibility between an individual and a work environment that occurs when their characteristics are well-matched* (Kristof-Brown, Zimmerman, & Johnson, 2005, p. 281)." P-E fit involves several specific types of fit; for instance, fit with the vocational training, the organization, the job tasks, and the co-workers/group (Lauver & Kristof-Brown, 2001). This last type of fit focuses on the compatibility of team members and is the most pertinent from the perspective of the present research, which examines the role of person-group similarity in values. Studies on work motivation have shown that the subjective perception of the compatibility between personal and organizational values and goals is a key factor for well-being in work and study settings (Maslach & Leiter, 2008; Sortheix, Dietrich, Chow, & Salmela-Aro, 2013). During the university years vocational development is also influenced by P-E fit. Knafo and Sagiv (2004) applied the Attraction-Selection-Attrition (ASA) model (Schneider, Goldstein, & Smith, 1995) to understand vocational career choices. They argued that, individuals choose to study careers that allow them to express their abilities, interests and values. Thus, they are *attracted* towards careers that match their values (Knafo & Sagiv, 2004). Later, in the process of *selection*, individuals feel that peers and teachers accept or reject them into the career environment. Finally, in the *attrition* stage, those students who fail to adjust and feel that their characteristics and interests do not match their current vocational choice, may choose to leave.

The aims of this research were to investigate, across different countries and groups, whether some values were directly associated with SWB, and the role of objective VC as a determinant of SWB. For these purposes, we analysed data from students of Psychology or Education and of Business, in three countries, Argentina, Bulgaria and Finland. In a rather similar multigroup study on students' personal values and self-esteem, Lönnqvist et al. (2009) showed that VC between personal and group values was associated with higher self-esteem. In a general population sample, VC between the individual's values and average community values was related to fewer symptoms of psychological distress (Sortheix, Olakivi, & Helkama, 2013). Similarity in values has also been related to marital satisfaction (Gaunt, 2006) and to interpersonal attraction (Boer, Fischer, Strack,

Bond, Lo, & Lam, 2011). In all of these studies, objective VC has been assessed by computing an index of profile similarity; i.e., the individual's profile and the profile of the group (or other person, in case of dyads), both consisting of responses to all items, have been correlated with each other. Such an index has the advantage of using all of the available information.

Based on the above studies we expected person-group VC to be positively related to SWB. More generally, evidence suggests that social identity — feeling part of a group — plays a key role in health and well-being, which are enhanced to the extent that people are able to live fulfilling group lives, and have access to the social support that these provide (Jetten, Haslam, & Haslam, 2011). During the educational years, one of the main developmental tasks for students is developing their identity and role as students and future workers (Super, 1980). Sharing values with other students might facilitate this task. We expected that:

Hypothesis 1: Person-group VC among university students will be positively related to subjective well-being.

One mechanism through which VC could affect well-being is through interpersonal relationships. Having good interpersonal relationships is fundamental for personal well-being (Baumeister & Leary, 1995; Ryff, & Keyes, 1995). Positive relationships with others are characterized as being warm, satisfying, trusting and considerate of the other's welfare (Ryff & Keyes, 1995). The need for supporting interpersonal relationships is rooted in the basic needs to belong and to be connected with others in social groups (Baumeister & Leary, 1995). People who experience positive relationships are likely to report higher well-being (Myers, 2000). Furthermore, those with close relationships cope better with various stresses, including bereavement, job loss and illness (Abbey & Andrews, 1985). Social resources (e.g., family support, friends, romantic relationships, and social skills) are among the strongest correlates of SWB (Diener & Fujita, 1995). Research using college student data has shown that support from the group of other students also facilitates objective outcomes, such as academic performance (Salanova, Martinez, Breso, Llorens, & Grau, 2005). We expect positive relationships and SWB to be positively related across countries.

Similarity binds people together (Kandel, 1978; McPherson, Smith-Lovin, & Cook, 2001) and plays an important role interpersonal attraction (Byrne, 1971; Berscheid & Reis, 1998). The association between value similarity and relationship quality has been studied particularly among couples (Gaunt, 2006; Russell & Wells, 1991). However, value similarity may also be important in peer relationships. There is recent empirical evidence showing that people are more attracted to others who share their music preferences because these preferences indicate similarity in values (Boer et al., 2011). In organizations, value similarity facilitates communication (Edwards & Cable, 2009) and reduces uncertainty in interpersonal relationships by providing common ground for cognition (Kalliath, Bluedorn, & Strube, 1999). In our study we analyse groups of university students who study the same major. Several converging lines of research suggest that value congruence may facilitate interpersonal relationships. First, Byrne (1971; see also Berscheid, & Reis, 1998) showed that individuals are attracted by others who share similar characteristics. Second, in organizations, VC contributes to communication, predictability and trust (Edwards, & Cable, 2009). Third, a sense of understanding is facilitated when people share similar values, and this could be crucial in maintaining social relationships.

In this study we focus on the university context and investigate the role of VC in both interpersonal relationships and in SWB, as well as whether the association of VC and SWB is mediated by interpersonal relationships.

Hypothesis 2: Interpersonal relationships will mediate the relation between VC and subjective well-being among university students.

Methods

Participants and procedure

In order to improve the generalizability of our results, we sought to test our hypotheses both cross-culturally and across groups that adhered to different personal values. We therefore ran our research in three different countries and with groups of students that due to their different majors – Psychology, Education and Business Administration – could be expected to differ with regard to their personal values (see, Gandal et al., 2005; Knafo & Sagiv, 2004).

All participants were in the last years of their studies and volunteered to participate. Psychology students from Argentina (*N*=91), Bulgaria (*N*=98) and Education students from Finland (*N*=88) were invited by their professors to answer a written questionnaire at home and return it the following class. Business students were invited by professors from their departments to respond to an online version of the questionnaire in three public universities from Argentina (*N*=184), Bulgaria (*N*=84) and Finland (*N*=60). Descriptive statistics from each group are shown in Table 1.

We followed Schwartz's (1992) recommendation and eliminated those responses with more than 70 per cent missing items in the value questions and responses that exhibited only minimal discrimination among values (i.e., participants who responded identically to all items). These criteria, recommended by Schwartz (1992), are commonly used and strengthen the associations of value priorities with behavior and attitudes (e.g., Bardi & Schwartz, 2003). We also eliminated those participants with missing data in some of the study variables. These criteria led to dropping 30 respondents, giving us a final data size of 605.

Measures

Life satisfaction (LS). We included the five items from the original scale (Diener, 1984). Items asked individual to report their level of agreement with statements such as: "In most ways my life is close to my ideal, the conditions of my life are excellent". Questions were answered on a scale from 1 (*totally disagree*) to 7 (*totally agree*) and were averaged to create a single score. The LS scale measures the cognitive aspect of subjective well-being, and has been used for multiple cross-cultural studies (Diener, & Diener, 1995; Diener, Oishi, & Lucas, 2003). Conmbach's alpha reliabilities ranged from .68 to .90 among groups.

Positive and Negative Affect. We used ten items, developed by Diener, Tov, Choi, Biswas-Diener, Wirtz, Prieto, and Oishi (2009), to measure pleasant and unpleasant experience. Positive (PA) and negative affect (NA) are often only weakly correlated (Lucas et al., 1996) and are generally considered discriminable factors, not merely opposite poles on the same continuum. Respondents were asked to report how often they had experienced each of the following emotions during the last four weeks. The items for positive affect were "...you felt good", "pleasant", happy", "joyful", "contented". The items for negative affect were "bad", "unpleasant", "sad", "afraid", and "angry". The questions were answered on a scale from 1 (*Very rarely or Never*) to 5 (*Very often or Always*) and were averaged to create two single score, one for positive and one for

negative affect. Crombach's alpha reliabilities for positive affect ranged from .79 to .92; and for negative affect, from .70 to .82.

Table 1. Number of participants, demographic and descriptive statistics on study variables for each sample.

Group	*N*	Female (%)	Age M (SD)	ST	SE	CO	OP	PA	NA	LS	Relat.
Psychology/ Education											
Argentina	91	76 (83.5)	23.2 (3.7)	1.13 (.14)	.76 (.16)	1.02 (.15)	1.02 (.14)	3.68 (.52)	2.55 (.58)	4.63 (.88)	4.79 (.72)
Bulgaria	98	78 (78.0)	21.6 (1.3)	1.04 (.12)	.92 (.16)	.88 (.13)	1.16 (.15)	3.70 (.65)	2.70 (.70)	4.73 (1.03)	4.68 (.89)
Finland	88	84 (94.3)	28.0 (8.5)	1.26 (.17)	.75 (.15)	.86 (.16)	1.08 (.16)	4.01 (.60)	2.26 (.66)	5.05 (1.07)	4.96 (.62)
Business											
Argentina	184	130 (65.7)	23.6 (5.9)	1.09 (.16)	.81 (.18)	1.02 (.14)	1.01 (.17)	3.76 (.67)	2.59 (.64)	4.63 (1.30)	4.73 (.76)
Bulgaria	84	59 (66.3)	21.4 (5.5)	1.00 (.17)	.90 (.21)	.92 (.14)	1.16 (.19)	3.68 (.68)	2.55 (.76)	4.94 (1.12)	4.81 (.87)
Finland	60	43 (68.3)	27.9 (9.7)	1.10 (.23)	.87 (.18)	.92 (.17)	1.10 (.18)	3.77 (.89)	2.35 (.76)	4.56 (1.46)	4.47 (.92)

Note. ST = Self-transcendence; SE= Self-enhancement, CO= Conservation; OP= Openness; PA= Positive affect; NA= Negative Affect; LS = Life satisfaction; Relat. = interpersonal relationships.

Schwartz's Value Survey. Respondents completed an extended 65-item version of the Schwartz Value Survey (SVS, Schwartz, 1992) in their native language. The extended version included work values (Myyry & Helkama, 2001) and some items adapted from an earlier measure of values (Rokeach, 1973). Each item is followed in parentheses by a short explanatory phrase (e.g., equality (equal opportunity for all). Respondents rate the importance of each value item as "a guiding principle in their lives" and answers are given on scale from -1 (*opposed to my values*) to 7 (*of supreme importance*). For this study we used the 45 items that are recommended for cross-cultural studies (Schwartz & Sagiv, 1995). We computed the higher order value dimensions of self-transcendence (ST, 13 items), self-enhancement (SE, 10 items), conservation (CO, 12 items) and openness to change (OP, 10 items) by averaging the items that composed each higher order values. Because individuals' vary in their use of Schwartz's scale, we controlled for response tendency, by following the standard procedures to center each individual's responses around his or her overall mean (Lindeman & Verkasalo, 2005; Schwartz, 1992). Across the six groups of student samples Crombach's alpha reliabilities for self-transcendence ranged from .76 to .90; for self-enhancement, .74 to .78; for openness values, .64 to .79; and for conservation, .65 to .84.

Value-congruence index. The value-congruence index that we computed represented the similarity of the individual's values with the group's values. It was computed as the correlation between two values profiles. One profile was the individual's personal values profile, and the other profile was the average profile reported by the individual's fellow students (same major, same country). The resulting Pearson's correlation coefficients were transformed into Fischer's z.

Positive Relationships. Positive relationships were assessed using Ryff and Keyes (1995) short 3 items sub-scale of psychological well-being. Items are: "maintaining close relationships has been difficult and frustrating for me (reversed)", "people would describe me as a giving person, willing to share my time with others", and "I have not experienced many warm and trusting relationships with others (reversed)". We also added the item designed to measure quality of interpersonal relationships in Diener et al.'s (2009) flourishing scale: "My social relationships are supportive and rewarding" Respondents answered on a scale from 1 (*completely disagree*) to 6 (*completely agree*) and responses were averaged. Crombach's alpha reliabilities ranged from .57 to .72.

Background information. We controlled for age and gender, as these have been shown to influence personal values (Schwartz, & Rubel, 2005). To control for socialization time, we included the numbers of years the students had been enrolled at the university as a control variable. This was controlled for because value similarity among university students could increase with time spent at the university. As we aim at testing the independent role of VC on both relationships and SWB, we need to control for time spent together with peers. This will allow us to show that it is not the time spent together, but the similarity of values that matters.

Results

The relationships between values and subjective-wellbeing (SWB)

For each of the six samples, the means and standard deviations of all variables are presented in Table 1. Correlation analyses showed non-significant associations between LS, PA and NA, and the four higher order values dimensions, the only exception being the Finnish sample of Business students (see, Table 2). Thus, we found no support for direct associations between values and SWB. We further analysed whether there were group differences in the relations between value dimensions and LS, NA and PA. We conducted a series of hierarchical regression analyses controlling for age, gender and group membership. After controls, dummies, and value dimensions were included in the model, we added the interaction terms group*value dimension. None of the interaction effects were significant predictors of LS, PA or NA, nor did they add significant explanatory power, and they were therefore removed from further analyses. Further, more exploratory regression analyses were conducted to investigate the possible moderating role of study major on the associations between values and LS, PA and NA. We included the same control variables as above, but now replaced the dummy variable that indicated group membership with a dummy variable that indicated country. This allowed us to test the interactions between value dimensions and study majors (Psychology/Education=0; Business=1). These interactions were not significant for any of the four value dimensions. Thus, contradicting the results presented by Sagiv and Schwartz (2000), we found no evidence showing that the relations between values and LS, NA or PA vary according to students' majors (i.e. Business vs. Education/Psychology).

Person-group value congruence (VC) and SWB

Next, we conducted another set of hierarchical regression analyses to test the association between VC and SWB, controlling for age, gender, university years, and group membership (Finnish Education students as the reference category[2]) as predictor variables

[2] We chose Finnish Education students as the reference category because they reported the highest levels of SWB.

in Step 1. In the prediction of LS only years spent at the university (β = -.04, $p < .05$) were significantly related to LS. In Step 2, in which we added the four higher order value dimension and VC, only VC was significantly related to LS (β =.22, $p < .001$; $R^2 = .06$, F (13,604) = 3.12, $p < .001$).

The above described procedure was also followed for PA and NA as dependent variables. Regarding background characteristics, being a woman predicted lower PA (women=1, β = -.08, $p < .05$) and higher NA (β = .20, $p < .001$). More importantly, VC was related to higher PA (β = .20, $p < .001$, $R^2 = .06$, F (13,604) = 2.80, $p < .01$), and to lower NA (β = -.12, $p < .01$, $R^2 = .09$, F (13,604) = 4.54, $p < .001$).Thus, hypothesis 1 suggesting that VC would be positively associated to SWB, was fully supported.

Table 2. *Correlations between values, value congruence, interpersonal relationships and subjective well-being for each student group.*

	Argentina			Bulgaria			Finland		
	Psychology (N=91)			Psychology (N=98)			Education (N=88)		
	LS	PA	NA	LS	PA	NA	LS	PA	NA
ST	.01	.08	-.03	.05	.00	-.16	.02	-.12	.12
SE	-.01	-.06	.00	-.04	-.08	.20	.02	.08	-.17
CO	-.07	.06	-.00	.07	-.00	-.13	-.09	.01	.11
OP	.04	-.09	.00	-.07	.10	.09	.11	.13	-.21*
VC	.16	.12	-.09	.22*	.01	.02	.20^{+}	.11	-.19
Rel	.33**	.17	-.10	.44**	.25*	-.02	.58**	.56**	-.46**
	Argentina			Bulgaria			Finland		
	MBA (N=184)			MBA (N=84)			MBA (N=60)		
	LS	PA	NA	LS	PA	NA	LS	PA	NA
ST	-.07	-.08	-.04	.03	-.18	.07	.15	.37**	-.10
SE	-.01	.03	.08	.04	.05	-.16	-.10	-.28*	.15
CO	.00	.03	.00	.15	.08	.03	-.12	-.24*	-.04
OP	.09	.03	.01	-.19	.05	.06	-.05	-.12	.06
VC	.05	.04	-.03	-.01	.13	.01	.41**	.52**	-.12
Rel	.26**	.27**	-.07	.43**	.25**	.00	.50**	.57**	-.44**

Note. ** $p < .01$, * $p < .05$; $^{+}$ $p = .06$; ST = self-transcendence; SE = self-enhancement, CO = conservation; OP = openness to change; LS = life satisfaction; PA = positive affect; NA = negative affect; VC = value congruence; Rel = interpersonal relationships.

Do interpersonal relationships mediate the association between VC and SWB?

In order to test the mediating role of interpersonal relationships on the relationship between VC and SWB, we conducted bootstrap mediational analysis using Preacher and Hayes' (2008) macro for SPSS version 21 (SPSS Inc., Chicago, Illinois, U.S.A). This analysis allows several covariates to be included in the analyses – we included age, gender and group as controls. The results of the mediation analyses are presented in Figure 1, 2 and 3, for LS, PA and NA, respectively. The three models assessing the mediating role of interpersonal relations on the association between VC and LS, PA and NA were all

significant (i.e., the bootstrapped 95% confidence intervals did not include zero), supporting hypothesis 2[3].

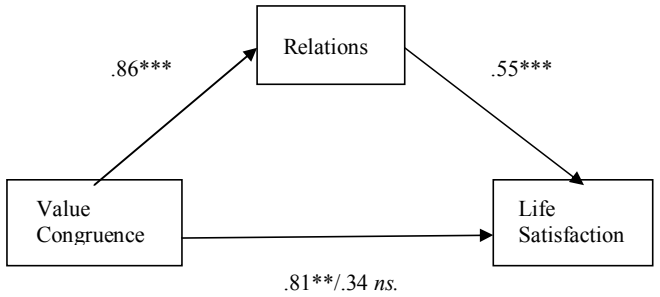

Figure 1. *The mediating role of positive interpersonal relationships in the prediction of life satisfaction with value-congruence. *** p < .001, ** p < .01, ns. = not significant. Unstandardized coefficients reported. CI= .31/.69.*

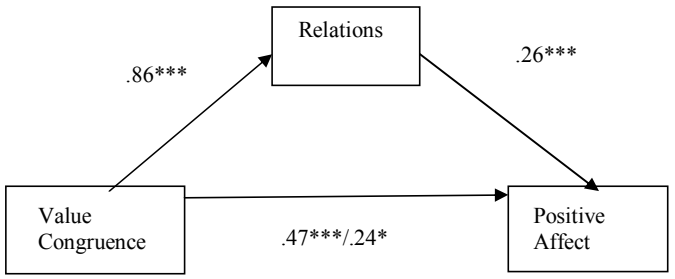

Figure 2. *The mediating role of positive interpersonal relationships in the prediction of positive affect with value-congruence. ***p < .001, *p < .05. Unstandardized coefficients reported. CI= .14/.34.*

[3] In the three regression models, the dummy variables for the five student groups were significant negative predictors of LA and PA, and positive predictors of NA. All groups thus showed lower well-being than the reference category, Finnish Education students (for averages, see Table 1).

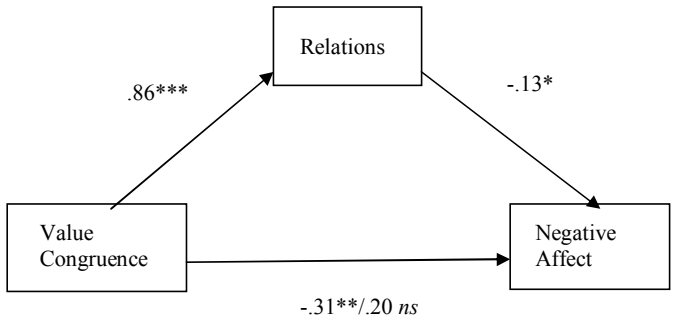

Figure 3. *The mediating role of positive interpersonal relationships in the prediction of negative affect with value-congruence. ***p < .001, **p < .01, *p < .05, ns = not significant . Unstandardized coefficients reported.CI = -.20/-.06.*

Discussion

The primary aim of this study was to test the role of personal values in the well-being of university students from two study majors in three countries. We thereby sought to address previous inconsistencies and gaps in the research literature on this topic. Some scholars have suggested universal and direct relations between certain values and well-being (Bilsky & Schwartz, 1994; Deci & Ryan, 2000). However, our analyses revealed no significant direct relations between university students' personal value priorities and SWB (LS, PA, or NA). Furthermore, contrary to what Sagiv and Schwartz (2000) found, students' study majors did not moderate the associations between values and well-being. Our results suggest that to understand the relations between personal values and well-being, it is necessary to consider other mechanisms than ones suggesting a direct effect of values.

Objective person-group VC was significantly related to SWB, supporting hypothesis 1. Our results provided strong evidence that even whilst controlling for personal values, sharing values similar to those held by other students is associated with SWB. This is a novel result, as previous research on VC has typically neglected to control for personal values when examining the associations between VC and other outcome variables (e.g., Lönnqvist et al., 2009; Boer et al., 2011).

The second, more important, aim of this research was to analyze whether interpersonal relationships mediated the relationship between VC and SWB. Consistent with prior research on the importance of belonging and close relationships for well-being (Baumeister & Leary, 1995; Jahoda, 1958; Ryff, & Keyes, 1995), having good interpersonal relationships was associated with higher SWB. In support of hypothesis 2, the positive association between VC and SWB was partially mediated by interpersonal relationships. Research has suggested that sharing similar attributes fosters attraction between individuals (Byrne, 1971). Our results advance this knowledge by providing empirical evidence showing that value similarity contributes to well-being through the facilitation of social relationships.

Theoretical and Practical Implications

Based on the theoretical distinction between growth and anxiety-based values, or on the suggested relations between certain values and the basic universal needs identified by

SDT, one could expect certain values to be associated with well-being. However, such expectations are challenged by the accumulating empirical evidence – to which the present results also contribute – according to which there are contextual factors that influence the associations between certain values and well-being. Furthermore, there are other possible mechanisms through which values may influence well-being. For example, Oishi, Diener, Suh, and Lucas (1999) suggested that values may function as moderators on the association between domain satisfaction and overall life satisfaction (LS). Specifically, in a diary study, Oishi et al. (1999) found that satisfaction with grades was a stronger predictor of LS for students who value achievement, whereas satisfaction with friends was more important for those who valued benevolence.

The results of the present study, which document a consistent association between objective VC and SWB, show that the values of the peer group matter for well-being. We reasoned that VC would allow students to "fit in" at their universities (Knafo & Savig, 2004), and this would foster group membership and the development of their identities as students. Social identity refers to the ideas of self that people develop through their involvement in groups. The more groups people belong to, the more diverse identities (and factors associated to them, such as social support, belonging and solidarity) they can develop and the greater their well-being (Jetten et al., 2011). Our result is consistent with previous findings showing that sharing similar values contributed to health outcomes in a small community sample (Sortheix, Olakivi, & Helkama, 2013) and suggests that the association between VC and personal well-being might be present particularly when groups that are relevant for the individual personal identity.

The most important contribution of the present study was that we identified a mediating mechanism between values and well-being – interpersonal relationships mediate the effects of VC on well-being. The positive association between VC and interpersonal relationships coincides with ideas suggesting that individuals are attracted to and develop friendships more easily with those with whom they are more similar (Byrne, 1971; Berscheid, & Reis, 1998), as well as empirical evidence on the important role of value similarity in interpersonal relationships, such as friendship formation (Boer, et al., 2011; Salomon & Knafo, 2007). Our study connects the ideas mentioned above: VC facilitates interpersonal relationships, and thereby contributes to SWB. Importantly, our data comes from student samples, thus more evidence is needed to test whether this mechanism applies to other samples.

The present results suggest some practical applications for educators and vocational researchers. First, research has shown that minority groups often adhere to different values than the majority. For example, students with Mexican background, who typically value traditional familial loyalty and cooperation, may, when confronted with the individualistic and male orientation of US universities, suffer from decreased well-being and increased drop-out (Gloria, Castellanos, & Orozco, 2005). Fostering activities that develop a sense of shared values among students could increase VC and, as our results indicate, contribute to better interpersonal relationships. Second, universities could do well to allow students to explore the suitability of different career environments, as these could, based on our results, be expected to be highly relevant in determining individuals' well-being. Our results are consistent with the notion that person-organization fit is crucial for well-being already during the university years (Maslach & Leiter, 2008), and further suggest that sharing values with other students is an important determinant of personal well-being. Finding an appropriate academic and career environment during the university years may be highly relevant in the life-course development of well-being.

Suggestions for Future Studies

In an organizational (Edwards & Cable, 2009) and educational contexts (Knafo & Sagiv, 2004) value congruence between the individual and the organization determines intentions to stay and better performance (Maslach & Leiter, 2008). Thus, experiencing value dissonance may motivate individuals to leave incompatible environments and search for contexts that match their values. Further research might investigate whether low value congruence among fellow students is also related to more objective outcomes, such as academic performance and study drop out.

Future studies could explore why and how VC is related to positive relationships. For instance, does objective value similarity among groups enhance communication, lead to shared perceptions of goals, or diminish conflict? And do these mechanisms explain why VC is associated with interpersonal relationships? These and other potential mediator variables are presented in Edwards and Cable's article (2009) that focuses on subjective value congruence between individual and the organizations.

Limitations and Conclusions

Some limitations of the current study need to be acknowledged. First, this research is correlational in nature and other research designs – i.e., experiments – are needed to determine causality. For example, we assumed that having good interpersonal relationships increases SWB. However, the reverse mechanism is also possible; some recent experimental research showed that positive mood increases sociability (Whelan, & Zelenski, 2012). The relation between SWB and interpersonal relationships may therefore be reciprocal: high SWB promotes better interpersonal relationships which in turn have a strong positive association with SWB.

As another limitation, we only used self-report measures. However, a study by Nave, Sherman and Funder (2008) revealed that a measure assessing subjective happiness was positively associated with more objective indicators of well-being, such as social reputations, positive ratings by clinicians, and exhibiting adaptive social behaviors. Furthermore, in the prediction of these more objective indicators, the measure assessing subjective happiness fared no worse than a measure that included more functional aspects of well-being. Finally, direct associations between values and SWB may have been difficult to detect due to the relatively small and internally homogeneous samples used in this study. Further research using representative populations and larger samples is needed to settle whether there are direct relations between values and well-being (Bobowik et al., 2011; Sortheix, & Lönnqvist, 2014). To conclude, this study showed that person-group value congruence was more important than individual value priorities for well-being. The social context, particularly the role of peer group values, deserves more attention in the study of SWB.

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Values, Life Events, and Health: A Study in a Finnish Rural Community

FLORENCIA M. SORTHEIX*, ANTERO OLAKIVI and KLAUS HELKAMA
Social Research, University of Helsinki, Finland

ABSTRACT

The relationships between individual values (Schwartz, 1992), life events, and psychological symptoms were analyzed in a general population sample from a Finnish rural community. The design was a cross-sectional survey. Data were gathered in 1993 ($n = 174$) and 2007 ($n = 226$). We investigated whether personal values would predict the number of life events. Results showed that openness to change values was positively and conservation values, negatively related to life events (those over which the individual had certain degree of control, e.g. getting a new job) in 1993. As expected, an increase in the importance of conservation values from 1993 to 2007 weakened the association between values and life events so that in 2007, only stimulation values were related to events. Although no consistent direct relations were found between single values and symptoms, we found that the higher the value congruence between individual and group values, the fewer the reported symptoms, for both time points. This research provided evidence suggesting that life events are also related to one's personal value priorities. Copyright © 2012 John Wiley & Sons, Ltd.

Key words: values; life events; well-being

INTRODUCTION

The association between life events and illness onset has been largely studied since the original work of Holmes and Rahe (1967) on the Social Readjustment Scale (Stroebe & Jonas, 2001). Life events impair well-being because they require that individuals cope with new situations that challenge their adaptive strategies (Holmes & Rahe, 1967; Lazarus & Folkman, 1984). A recent meta-analysis examined 188 studies published mainly in the last decade (Luhmann, Hofmann, Eid, & Lucas, 2011) and showed the consistent relation between life events and impaired subjective well-being.

*Correspondence to: Florencia M. Sortheix, Department of Social Research, Social Psychology, University of Helsinki, Unioninkatu 37 2nd floor (P.O. Box 54), Helsinki 00014, Finland.
E-mail: florencia.sortheix@helsinki.fi

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There are few investigations of individual characteristics that influence the occurrence of life events (Headey, 2006; Headey & Wearing, 1989; Magnus, Diener, Fujita, & Pavot, 1993). We found no previous research on the relation of life events to personal values (Schwartz, 1992). This is surprising because values, as conceptions of what is worthy and desirable (Schwartz, 1992), also motivate and direct behaviour (Bardi & Schwartz, 2003; Lönnqvist, Leikas, Paunonen, Nissinen, & Verkasalo, 2006). Thus, this study fills a gap in the literature on values and life events.

Our second aim was to examine the relations between personal value priorities and personal health (psychological symptoms). Sagiv, Roccas, and Hazan (2004) examined three potential links between values and well-being. The first was the healthy values perspective, drawn on humanistic and self-determination theory research (Deci & Ryan, 2000). The second was the goal attainment and self-concordance model proposed by Sheldon and Elliot (1999). Last was the value–environment congruence idea, originally presented by Sagiv and Schwartz (2000), which focuses on contextual and interactional influences on the relation between values and well-being. Hence, we know that although some values (e.g. self-direction) generally predict higher and others (e.g. power) lower well-being (Bilsky & Schwartz, 1994, Schwartz, 2011), findings from different samples are mixed. Congruence between personal values and the prevailing values in the environment predicts higher subjective well-being (Sagiv & Schwartz, 2000) as well as self-esteem (Lönnqvist, Walkowitz, Wichardt, Lindeman, & Verkasalo, 2009). These two competing hypotheses ('healthy' values vs. value congruity) will be tested in this study, as the data do not provide an opportunity to examine the goal attainment hypothesis.

Our third focus is the temporal stability of the relationships between values, life events, and stress symptoms. Our data come from the same community 14 years apart, which makes it possible to examine the relatively neglected issue of time (Spini, Elcheroth, & Figini, 2009).

VALUES AND BEHAVIOR

Values are general beliefs about the importance of normatively desirable behaviors or end states (Rokeach, 1973; Schwartz, 1992). Schwartz's (1992) model describes the relations among 10 basic values: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, conformity, tradition, and security. The conflicts and compatibilities among values give rise to a circular structure. Values closer in the circular model are more similar in their underlying motivations. Schwartz (1992) also proposed four higher-order dimensions. (i) Openness to change versus conservation reflects the opposition of hedonism, stimulation, and self-direction values with security, conformity, and tradition values. (ii) Self-transcendence versus self-enhancement describes the conflict between considering own needs and interests above others (achievement and power) and being socially concerned and consider the welfare and interests of others (universalism and benevolence). The first dimension is more relevant to life events because this opposition may predict whether individual will look for novelty, new things, and events in life or maintain security and avoid risks. Although hedonism values share motivations from both openness to change and self-enhancement values, they are generally included among the first ones because they share with openness the basic goals of searching for novelty, apart from gratifications and enjoying life.

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Values influence behaviour, making certain paths in life more attractive than others (Feather, 1995). 'Values have long-term effects on a person's behaviour, functioning to influence both the short-term and long-term goals that become salient for a person and the selection of plans and actions that relate to these goals' (Feather, 1995). Numerous attempts have been made to clarify the link between values and action (Roccas, Sagiv, Schwartz, & Knafo, 2002; Bardi & Schwartz, 2003). Feather (1995) suggested that values, being connected with a person's sense of self, influence the short-term and long-term goals and the selection of action to achieve these goals. Several studies have shown the association between personal values and outcome behaviours, for instance, self-transcendence values predicted cooperative behaviour (Schwartz, 2007), whereas self-enhancement values were related to autocratic behaviour and competitiveness (Schwartz, 2007).

Values, as cognitive representations of motivations in the form of goals and ideals, are relevant to goal-directed acts (Roccas et al., 2002). Roccas et al. (2002) found that whereas traits influenced more automatic behaviours, such as positive or negative affect, values influenced behaviours over which individuals had certain control, such as religiosity (Roccas & Schwartz, 1997) or voting for liberal or conservative political parties (Helkama, Uutela, & Schwartz, 1991; Schwartz, 1996; Piurko, Schwartz, & Davidov, 2011). Furthermore, openness to change values were positively related to adaptation to the migration process (Roccas, Horenczyk, & Schwartz, 2000) and readiness to contact outgroup minorities (Schwartz & Sagiv, 1995).

Openness to experience is the personality dimension that correlates more strongly and consistently with values: positively with stimulation (varied life, exciting life, dared), hedonism, and achievement and negatively with security, conformity, and tradition (Roccas et al., 2002). Thus, there seems to be strong motivational similarities between openness to change values and the Big Five personality trait of openness to experience, whereas conservation values share similar motivations with neuroticism personality trait (McCrae, 1996; Roccas et al., 2002).

LIFE EVENTS AND INDIVIDUAL DIFFERENCES

Individuals select situations and avoid others on the basis of their underlying characteristics and dispositions (Emmons, Diener, & Larsen, 1985; Emmons & Diener, 1986), like traits and personal values. There are individual differences that may predispose individuals to expose themselves to more events, for instance, openness to experience personality trait (Magnus et al., 1993; Paunonen, 2003). A more recent study using adolescent samples also showed that extraversion was a positive, and harmony (related to traditional values and norms), a negative predictor of negative events (Ho, Cheung, & Cheung, 2008). The authors suggested that controllability of events should be a focus of analysis in future studies.

In the list of life events by Holmes and Rahe (1967), adapted for this study (Lillberg et al., 2003), there are events over which individuals have some degree of control (e.g. get a new job, move to a new flat). Whereas a few events may be entirely exogenous (e.g. death of spouse), most are to some degree internally driven. In this study, we considered only events that happened in the last 6 months because only events closer in time have shown to be associated with other psychological variables, such as well-being (e.g. Norris & Murrell, 1987; Suh, Diener, & Fujita, 1996).

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Based on the evidence earlier, we expect that individuals who attribute high importance to openness to change values would be more likely to expose themselves to new, challenging things in life (i.e. more events), whereas individuals high on conservation values would tend to seek security and stability (i.e. less events). Thus, we will hypothesize the following:

Hypothesis 1

Openness to change values (stimulation, self-direction, and hedonism) will be positively related with number of controllable events in the last 6 months.

Hypothesis 2

Conservation values (security, tradition, and conformity) will be negatively related with number of controllable events in the last 6 months.

THE MODERATING ROLE OF CONFORMITY VALUES

Research shows that the extent to which values motivate behaviour (Bardi & Schwartz, 2003) is influenced by social norms and pressures. The more normative the behaviour is, the less guided by personal values it is (Bardi & Schwartz, 2003). Fischer (2006) found that individual values are more consistently related to behaviours that have no clear or strong social norms attached to them.

Although altruism toward ingroup and outgroup members is conceptually linked to benevolence and universalism values, respectively, their associations to prosocial behaviour depends on the importance the person ascribes to conformity values. Lönnqvist et al. (2006, 2009) found in two studies that universalism values predicted altruism only for those people who had low regard for conformity. Analogous findings were made by Koivula (2008) in a Finnish steel company where conformity moderated the relations between values and attitudes toward organizational change. Positive attitudes were the norm of the company, and self-transcendence–self-enhancement values predicted variation in attitudes only among low conformists.

Conformity (and tradition) values differ psychologically from the other Schwartz values because they imply following local norms, whereas the other values imply a personal choice among competing goals. The importance of conformity in a community indicates the extent to which members are oriented to norms (as opposed to free choice).

Puohiniemi (2006) found an increase in conservation values in Finland in national representative samples from 2001 to 2005, and we expect to find the same change in our target community. Extrapolating from the evidence just cited, we argue that when conservation in a community increases, the ability of values to predict life events (or other psychological variables) decreases. Hence, we expect that the associations between personal values and other variables would be stronger for 1993 than for 2007.

Hypothesis 3a

An increase in mean levels of conservation values in the community will weaken the associations between personal values and controllable life events.

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Hypothesis 3b

An increase in mean levels of conservation values in the community will weaken the associations between personal values and stress symptoms.

LIFE EVENTS, VALUES, AND HEALTH

Extensive research has analyzed the relation between the occurrence of life events and their relation to health impairment following the exposure to stressful situations (Holmes & Rahe, 1967; Lazarus & Folkman, 1984; Headey & Wearing, 1989). Stress and feelings of loss are natural by-products of adapting and trying to regain homeostasis after experiencing change in life. For example, adverse life events are strong antecedents of depression and breast cancer (Leskelä et al., 2004; Lillberg et al., 2003). Also, minor changes in life have shown to impair health (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982). Based on previous research, we expect that the number of reported life events will be related to more psychological symptoms.

Hypothesis 4

Life events will be related to more psychological symptoms.

The idea that certain values would be positive and others negatively related to health and well-being (i.e. fewer psychological symptoms) is partially based on values' relation to personality traits. Neuroticism is consistently related to lower and extraversion to higher levels of well-being (Headey & Wearing, 1989; Hotard, McFatter, McWhirter, & Stegall, 1989). This is in line with findings showing that a proclivity to experience negative psychological states is associated with higher importance for tradition and security and lower regard for stimulation (Silfver, Helkama, Lönnqvist, & Verkasalo, 2008; Hirvela & Helkama, 2011).

Values may also be clustered according to the extent they satisfy 'growth' (stimulation, self-direction, universalism, and benevolence) or 'deficiency/protection' needs (power, security) (Bilsky & Schwartz, 1994). Whether conformity, tradition, and hedonism should be classified as 'growth' or 'defensive' values remains to be decided in future studies, according to Schwartz (2011). Studies of the relations between personal values and subjective well-being, however, have given mixed findings (Sagiv & Schwartz, 2000; Joshanloo & Ghaedi, 2009), suggesting the relation between values and health outcomes requires other mechanisms to explain the associations previously reported. In fact, Sagiv and Schwartz (2000) found that power and achievement values were positively related to indicators of well-being among business students, whereas power was negatively related to well-being among psychology students.

An alternative to direct associations between values and well-being is the value environment congruence hypothesis, suggesting that the congruence between personal values with the prevailing values in the context relates to higher subjective well-being (Sagiv & Schwartz, 2000). Studies using different methodologies have found support for this hypothesis, e.g. Oishi, Diener, Lucas, and Suh (1999), Sagiv and Schwartz (2000), and Lönnqvist et al. (2009). Sharing the same values contributes to feelings of belonging

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and inclusion, which are considered fundamental human needs (Baumeister & Leary, 1995). Sagiv and Schwartz (2000) suggested that social sanctions could be an important mechanism underlying the congruence effect. In a rural community, people holding values that oppose the prevailing norms could be excluded. On the contrary, feeling understood by others (which is a possible outcome of value congruence) was related with greater life satisfaction and fewer physical symptoms in the general population (Lun, Kesebir, & Oishi, 2008). Thus, we expect that:

Hypothesis 5

Congruence between personal values and those emphasized in the community will be related to fewer psychological symptoms.

METHODOLOGY

Target community

This research was carried out at the Pyhtää municipality in Finland, 120 km east of Helsinki, with about 5000 inhabitants. It has been a target of a social psychological study several times. Relevant for the present context is the finding that both local identification (with Pyhtää) and national identification increased between 1993 and 2007 (Helkama, Finell, & Pirttilä-Backman, 2009; Finell & Olakivi, 2012). Since national identification has been found to be associated with conservation values (Roccas, Schwartz, & Amit, 2010), this finding is consistent with our expectation of increased importance of conservation values.

Participants

The original sample consisted of 433 interviewed adults from the community of Pyhtää. We excluded cases based on Schwartz's (1992, pp. 18–20) criteria for his Value Survey. Specifically, we excluded cases that had responded to less than 73.2% of the items in the survey, had used the highest possible response (7) to more than 37.5% of the items, or had used the same number in more than 62.5% of the items. Participants who missed more than two items on the life event questionnaire were also excluded. This led to a final sample size of $n = 400$. In 1993, there were 94 male participants with an average age of 43.5 years ($SD = 12.6$ years) and 80 women with an average age of 40.5 years ($SD = 12.5$ years). In 2007, there were 112 male participants with an average age of 44.7 years ($SD = 13.3$ years) and 114 women with an average age of 44.1 years ($SD = 12.2$ years).

Procedure

The 1993 and 2007 samples were both drawn from the local population register and were independent of each other. Random sampling was utilized to achieve representativeness in relation to the 18- to 65-year-old Finnish- or Swedish-speaking local population. The local residents drawn to the samples were first addressed with an introductory letter, and then by phone, to agree on a date for an interview. Almost all interviews were done at the participants' homes. The interviewers were researchers and research assistants from the

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University of Helsinki, Department of Social Psychology. Completion rate was 75% in 1993 and 51% in 2007. The interviews focused on job conditions, free-time activities, and health, life events, and personal values. The questions on symptoms were asked by the interviewer aloud, and the interviewees responded using the appropriate numbers (1, 2, or 3, see later paragraphs). For life events and personal values, participants completed a questionnaire.

Measures

Life events. We assessed life events using a 19-item Finnish inventory adapted from Holmes and Rahe (1967) at the Department of Public Health, University of Helsinki, in 1981 (for details, see Lillberg et al., 2003). It was designed to gather information on a wide range of life experiences while maintaining inventory size that was manageable in large-scale questionnaire study. It also attempted to capture experiences typical in Finland. Respondents were asked whether certain events had happened in their lives: (1) never, (2) during the previous 6 months, (3) during the previous 5 years, or (4) earlier. The 13 events that were regarded as controllable were *divorce or separation*, *breakup of a long-term relationship*, *considerable increase in arguments with spouse*, *financial difficulties*, *considerable difficulties at workplace*, *living apart from spouse on account of work*, *considerable increase in responsibility at work*, *taking a bank loan*, *gain of new family member*, *family member leaving home*, *change to different line of work*, *change in residence*, and *considerable positive change in life*. The other six items that were considered to be outside personal control included *death of spouse*, *death of a close relative or friend*, *interrupted pregnancy in the family*, *change in health of family member*, *loss of employment*, and *3-month disability due to disease or injury*. All the events listed as uncontrollable were rated as being objectively negative in previous studies (Magnus et al., 1993). It is important to note, however, that the level of controllability of a controllable event could vary across participants.

Personal values. Participants answered to an extended version of Schwartz's Value Survey (SVS, Schwartz, 1992). Besides the original 56 SVS values, the 1993 version had 11 and the 2007 version had 16 additional items, including all Rokeach (1973) values in both years and five work-related values (Myyry & Helkama, 2001; Hirvela & Helkama, 2011) in 2007. For our analyses, we included only 42 SVS value items that have shown to have the most stable cross-cultural equivalence (Schwartz, 1992; Schwartz & Sagiv, 1995). In the survey, each item is followed by a short definition in parentheses, and the participants are asked to rate each value as a guiding principle in their own life on a 9-point scale from −1 (*opposed to my values*) to 0 (*not important*) to 7 (*of supreme importance*). Following standard procedures, the indexes for the 10 value types were further adjusted to control for respondents' possible tendency to utilize only one end of the scale. This was done by dividing each individual's index score with the same individual's mean of all value ratings (Lindeman & Verkasalo, 2005; Lönnqvist et al., 2009). Thus, the value scores represent the relative importance of each value type in relation to the other value types. In the same manner, two higher-order dimensions, openness to change and conservation, were calculated by creating two scales from the original 22 value items that were also used to compute stimulation, self-direction, and hedonism value types and

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security, conformity, and tradition value types, respectively. Alpha values for the 10 value types and two higher-order dimensions are reported in Table 2 and Table 3.

Value congruence. The value congruence index was quantified as the correlation between each individual's direct score on each value item and the average group rating (for each year) for the 42 items. It was transformed using Fisher's *r*.

Psychological symptoms. Our measure included seven items that referred to psychological strain experienced over the past month. These were nervousness or restlessness, tension and anxiety, agitation and difficulty to stay still, depression, feeling fearful, overstrained, and feeling a lump in the throat. Answers were given on the following scale: 1 (*very rarely*), 2 (*sometimes*), and 3 (*often*). A summated scale was obtained that considered the frequency of the symptoms; a high score represented more symptoms with high frequency. Cronbach's alpha was .78 for the sample of 1993 and, .77 for 2007.

Control variables. Age and gender were controlled for in our analyses as they have been shown to relate to value priorities (Puohiniemi, 2002).

RESULTS

Table 1 shows the mean scores for values, life events, and psychological symptoms measures in 1993 and 2007 and results from the *t*-tests. As expected, there was a significant increase in security, in the conservation value dimension, and marginally in conformity values when comparing the samples from 1993 and 2007. Furthermore, variance in the conservation value dimension had decreased significantly, suggesting greater agreement on the importance of conservation. Achievement values, on the other hand, decreased in importance. Psychological symptoms also decreased in frequency in 2007.

Table 1. Means, standard deviation, and -tests for the 1993 and 2007 samples

	Sample				
Variable	1993 ($n = 174$)	2007 ($n = 226$)	t	df	p
1. Age	42.1 (12.6)	44.3 (12.8)	−1.76	398	0.08
2. Gender	0.46 (0.50)	0.50 (0.50)	–0.89	398	0.38
3. Tradition	0.79 (0.26)	0.80 (0.23)	–0.42	398	0.68
4. Conformity	1.06 (0.20)	1.09 (0.19)	−1.92	398	0.06
5. Security	1.12 (0.19)	1.16 (0.17)	−2.43	344	0.02
6. Power	0.44 (0.30)	0.47 (0.25)	–0.91	331	0.37
7. Achievement	0.83 (0.28)	0.76 (0.23)	2.51	329	0.01
8. Hedonism	1.03 (0.29)	1.05 (0.26)	–0.68	398	0.50
9. Stimulation	0.78 (0.27)	0.74 (0.28)	1.38	398	0.17
10. Self-direction	1.02 (0.21)	1.04 (0.21)	–0.70	398	0.49
11. Universalism	1.13 (0.20)	1.13 (0.18)	–0.02	398	0.99
12. Benevolence	1.16 (0.17)	1.18 (0.16)	−1.36	398	0.17
13. Openness	0.94 (0.17)	0.94 (0.16)	0.11	398	0.91
14. Conservation	1.00 (0.15)	1.03 (0.12)	−2.29	332	0.02
15. Controllable events	0.71 (1.15)	0.76 (1.17)	–0.42	398	0.67
16. Uncontrollable events	0.37 (0.62)	0.43 (0.61)	–0.99	398	0.32
17. Psychological symptoms	1.32 (0.33)	1.24 (0.32)	2.27	398	0.02

Gender: 0 = male, 1 = female.

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Table 2 shows the correlations among the variables included in this study for 1993. In 1993, six values correlated significantly with controllable life events, in line with our hypothesis: Stimulation and hedonism showed positive correlations and tradition, and conformity and security showed negative correlations. The highest correlation was for stimulation. Also, the higher-order value dimensions, openness to change and conservation, showed substantial correlations. Achievement but not self-direction was also positively correlated with controllable events. Although achievement values belong to the self-enhancement dimension, they are adjacent to the openness to change values; thus, following the sinusoid curve of value associations, it is expected that they are also positively related to the outcome variable.

The correlations among study variables for 2007 are presented in Table 3. In 2007, life events showed only two significant correlations with values: for stimulation and openness. Thus, correlation analysis for 1993 provides overall support for our hypothesis that openness to change values would be positively and conservation values negatively related to controllable life events during the last 6 months. Furthermore, as expected (Hypothesis 3), values predicted life events more weakly in 2007 than in 1993. On the contrary, uncontrollable life events were not significantly related to any value type.

To further test Hypotheses 1 and 2, we conducted two sets of regressions, including openness to change values in one regression and conservation values in another to avoid problems of multicollinearity. All continuous predictors were standardised. As the outcome variable–number of controllable events–had many low-count values and zero as the mode value, we decided to analyse the data using Poisson regression instead of ordinary linear regression (on Poisson regression, see e.g. Coxe, West, & Aiken, 2009).

Results from the first Poisson regression analysis for the 1993 sample, controlling for age and gender in Model 1 and including stimulation, hedonism, an self-direction values in Model 2, showed that these variables predicted life events [pseudo $R^2 = 0.20$, $\chi^2(5) = 52.4$, $p < 0.001$], age ($B = -0.29$, $p < 0.01$), and stimulation values ($B = 0.41$, $p < 0.001$) contributing uniquely. Entering the three openness to change values in Model 2 improved the model's fit significantly [$\chi^2(3) = 24.8$, $p < 0.001$], reducing its deviance by 11%. The second regression controlling for age and gender in the first model and conservation values (tradition, conformity, and security) in the second showed that age ($B = -0.37$, $p < 0.01$) and conformity values ($B = -0.32$, $p < 0.01$) predicted fewer events. Entering the values in the second model reduced the first model's deviance significantly [$\chi^2(3) = 16.3$, $p < 0.001$], by 7%.

We repeated the same analyses for 2007 comparing Model 1 (including age and gender) with Model 2, including hedonism, stimulation and self-direction values and showed that these values predicted life events [pseudo $R^2 = 0.18$, $\chi^2(5) = 66.9$, $p < 0.001$]; again, age ($B = -0.47$, $p < 0.001$) and stimulation values ($B = 0.35$, $p < 0.001$) contributed uniquely. Model 2 improved the model's fit significantly [$\chi^2(3) = 17.1$, $p < 0.001$], although this time reducing its deviance by 5%. Unlike in 1993, the second regression, controlling for age and gender in the first model and tradition, conformity, and security values in the second model, did not show any improvement while entering the values [$\chi^2(3) = 0.83$, $p = 0.84$]. None of the conservation values predicted number of controllable events significantly.

To sum up, both Hypotheses 1 and 2 that suggested that openness to change values would be positively and conservation values negatively related to the number of controllable life events were supported by the 1993 sample. Specifically, when controlling for other variables, age, stimulation, and conformity values remained as the main predictors of life events. In

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Table 2. Intercorrelations and reliabilities for values, life events and psychological symptoms for the 1993 sample (N = 174)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Age	-																	
2. Gender	-.12	-																
3. Tradition	.44**	-.10	α = .63															
4. Conformity	.26**	.11	.33**	α = .62														
5. Security	.15*	-.02	.06	.30**	α = .49													
6. Power	.10	-.24**	.00	-.06	.04	α = .71												
7. Achievement	-.18*	-.17*	-.14	-.21**	-.06	.49**	α = .78											
8. Hedonism	-.13	-.09	-.09	-.26**	-.22**	-.06	-.10	α = .50										
9. Stimulation	-.31**	-.23**	-.22**	-.47**	-.36**	.17*	.25**	.32**	α = .59									
10. Self-direction	-.03	-.05	-.24**	-.47**	-.26**	-.09	.04	.03	.25**	α = .57								
11. Universalism	.17*	.01	.01	-.04	-.12	-.44**	-.38**	-.08	-.16*	.16*	α = .72							
12. Benevolence	-.08	.27**	-.10	.24**	.04	-.35**	-.19*	-.11	-.34**	-.28**	.06	α = .60						
13. Openness	-.23**	-.19*	-.28**	-.60**	-.41**	.02	.12	.56**	.79**	.68**	-.03	-.37**	α = .75					
14. Conservation	.42**	-.02	.71**	.73**	.65**	-.01	-.18*	-.26**	-.48**	-.44**	-.07	.06	-.60**	α = .80				
15. Controllable Events	-.29**	-.02	-.18*	-.29**	-.17*	.06	.18*	.23**	.34**	.05	-.15	-.10	.30**	-.30**	-			
16. Uncontrollable Events	-.10	.09	.00	.05	-.09	-.08	.00	-.13	.07	-.08	-.07	.10	-.06	-.02	.12	-		
17. Congruence	-.14	.24**	-.21**	.17*	.21**	-.48**	-.26**	.03	-.27**	-.03	.28**	.22**	-.15*	.05	-.15	.04	-	
18. Psychological Symptoms	-.08	-.15	-.14	-.15*	-.22**	.08	.05	.19*	.18*	.14	-.06	-.20**	.25**	-.25**	.09	-.05	-.18*	-

Note.
*$p < 0.05$,
**$p < 0.01$. Gender: 0 = male, 1 = female.

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Table 3. Intercorrelations and reliabilities for values, life events and psychological symptoms for the 2007 sample (N = 226)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Age	-																	
2. Gender	-.02	-																
3. Tradition	.10	-.04	$\alpha = .66$															
4. Conformity	-.02	-.10	.26**	$\alpha = .68$														
5. Security	.14*	-.17*	-.10	.22**	$\alpha = .55$													
6. Power	.01	-.23**	.02	-.16*	-.01	$\alpha = .66$												
7. Achievement	-.14*	-.23**	.09	-.15*	-.23**	.41**	$\alpha = .78$											
8. Hedonism	-.29**	-.18**	-.16*	-.10	-.07	.09	.10	$\alpha = .55$										
9. Stimulation	-.22**	-.28**	-.06	-.26**	-.28**	.26**	.28**	.34**	$\alpha = .68$									
10. Self-direction	-.03	.06	-.35**	-.42**	-.26**	-.15*	-.04	.00	.14*	$\alpha = .63$								
11. Universalism	.26**	.26**	-.21**	-.23**	.01	-.43**	-.51**	-.31**	-.22**	.31**	$\alpha = .78$							
12. Benevolence	-.05	.19**	-.11	.18**	-.01	-.40**	-.43**	-.12	-.37**	-.04	.20**	$\alpha = .71$						
13. Openness	-.24**	-.19**	-.29**	-.42**	-.33**	.09	.17**	.54**	.77**	.66**	-.06	-.28**	$\alpha = .76$					
14. Conservation	.12	-.15	.64**	.73**	.57**	-.06	-.14*	-.17*	-.30**	-.53**	-.23**	.02	-.53**	$\alpha = .82$				
15. Controllable Events	-.35**	-.05	-.05	.03	-.06	.08	.12	.08	.27**	.06	-.05	-.06	.21**	-.04	-			
16. Uncontrollable Events	-.06	.09	-.01	-.03	-.02	-.07	-.13	-.04	-.12	.01	.14*	-.01	-.08	-.03	.10	-		
17. Congruence	-.11	.22**	-.11	-.01	.26**	-.49**	-.31**	.01	-.24**	.06	.35**	.26**	-.10	.07	.02	.03	-	
18. Psychological	-.15*	.12	.00	.03	-.11	-.09	-.04	-.06	.06	.02	-.04	-.03	.02	-.04	.18**	.20**	-.19**	-

Note.
*$p < 0.05$,
**$p < 0.01$. Gender: 0 = male, 1 = female.

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2007, conservation values had no relation to life events, and the relation between controllable life events and openness to change values was weaker than in 1993 (Hypothesis 3a).

Direct relations between values and psychological symptoms also emerged in 1993. Symptoms were negatively related to security, conformity, and benevolence values and positively related to hedonism and stimulation values (Table 2). Highest correlations were found for openness (more symptoms) and conservation (fewer symptoms) value dimensions. It is noteworthy that the relations of values and symptoms did not appear in 2007 (Table 3), which supports Hypothesis 3b, suggesting that the relation of values with psychological variables would weaken as a consequence of increased community levels of conservation values.

Surprisingly, symptoms were unrelated to the number of controllable or uncontrollable life events in 1993. In 2007, psychological symptoms were negatively related to age and positively related to controllable and uncontrollable life events. Thus, Hypothesis 4 suggesting that life events would predict more symptoms received partial support as the relation was present in 2007 only.

Psychological symptoms were negatively related to value congruence in 1993 and 2007 (Table 2 and Table 3). People whose values were more similar to average community values reported fewer symptoms, thus supporting Hypothesis 5. The correlation of value congruence with each value type also deserves attention as it shows which values determine higher or lower agreement with the group profile. The importance of conformity and security related to higher congruence, whereas stimulation values were related to lower value congruence, showing that those persons who value novelty and change do not resemble the majority in these community groups (1993 and 2007).

DISCUSSION

This study supported the idea that values are motivational personality variables that also influence individuals' life events. In 1993, respondents who accorded high importance to openness to change values, specifically stimulation, hedonism, but also achievement, reported that they had had a higher number of controllable life events. By contrast, supporters of conservation values, conformity, tradition, and security reported a lower number of such events. This finding is consistent with the results of Roccas et al. (2002), showing that openness to change values share the motivational goal of openness to experience personality trait, which inclines people to expose themselves to new and challenging situations. However, values did not predict the occurrence of uncontrollable events, which supports the idea that values would guide the selection of behaviours over which individual had certain degree of control or choice.

Based on results on value change from representative samples of Finns, we expected and found an increase in the importance of conservation values. Extrapolating from studies showing moderation effects for conformity values, we hypothesized that the increase in conservation values would be accompanied by a weakening of the associations of other values with controllable life events. This expectation was supported by the finding that in contrast to 1993 when as many as six values were associated with controllable life events, in 2007, stimulation remained the only value correlated with such events. Regression coefficients for stimulation values also decreased from 0.41 in 1993 to 0.35 in 2007.

Conceptually, conservation is related to the tightness versus looseness cultural dimension. It opposes countries that have many strong norms and a low tolerance of deviant

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behavior with those that have weak social norms and a high tolerance of deviant behavior. Northern European countries are tight compared with other European countries (Gelfand et al., 2011). As suggested by Bardi and Schwartz (2003) and Lönnqvist et al. (2006), values may guide behavior more strongly in loose, low normative cultures. This is consistent with what we found in our community, where a small increase in mean levels of conservation values seemed to weaken the associations of values to life events and psychological symptoms.

Surprisingly, there was not a direct effect of life events on symptoms in 1993. In retrospect, we should add that there was a massive economic recession in Finland at the time. We may speculate that all participants felt stress to some extent independently of their personal life events. It is also possible that the difficult situation in Finland made some events more normative in the sense that a large proportion of the population were experiencing them (e.g. loss of job, financial difficulties), and therefore, they had a weaker effect on symptoms. This could also be a contextual cause for psychological symptoms being significantly higher in 1993 than in 2007.

In accordance with our hypothesis, congruence between personal and group values was related to fewer symptoms in both samples. Our results supported the value–environment congruence hypothesis: When personal values match the prevailing values in the environment, people enjoy higher well-being.

Direct relations between values and symptoms were found in 1993 but not in 2007, when weaker associations between personal values and outcome variables were expected (Hypothesis 3b). In 1993, we found that conservation (security, conformity) and benevolence values predicted less and openness to change (hedonism and stimulation) values more stress symptoms. These results do not fit in with the 'growth' and 'defensive' or 'anxiety-based' distinctions of values (Schwartz, 2009; Bilsky & Schwartz, 1994). Among the 'growth values', benevolence was the only one related to fewer symptoms. These findings suggest that what are the values associated with well-being depend not only on the indicator of well-being but also on the social context, as shown by the findings of Sagiv and Schwartz (2000) as well as ours. Perhaps having high regard for conservation and benevolence (and low for openness to change) values was beneficial in 1993 in the exceptional circumstances in which unemployment was as high as 20%. The findings from the same community also highlight the sensitivity to the value–well-being associations to the indicator of well-being. In 1993, self-esteem, another indicator of well-being, was predicted by self-direction (Lönnqvist et al., 2009, p. 46).

Limitations and future research

The correlational design prevents us from claiming that individuals seek changes in their life because of the personal importance of stimulation in their value hierarchy, rather than vice versa. To argue so, experimental and longitudinal designs are required. As the value measures were not obtained prior to but simultaneously with self-reports of past life events, the desire to appear consistent might have been operative (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, other studies have found links between values and behaviour using more varied methods (e.g. peer and spouse ratings, Bardi & Schwartz, 2003).

Our measure of life events did not ask for the subjective evaluation of the controllability of the events included in the list. It is plausible to assume that events such as marriage, childbirth, and possibly divorce are more likely to be actively initiated than uncontrollable

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events such as bereavement and miscarriage (Luhmann et al., 2011). The list of 'controllable' events, however, includes events which vary in terms of their degree of control. To better understand the values–life events link, future studies could include personality traits in their design to examine whether openness to experience and neuroticism personality traits mediate the relation of openness to change and conservation values and life events reported in this study.

Our results suggest that the state of the community makes a difference for the degree to which values predict indicators of well-being and life events, which we interpreted as due to the increase of conservation or possibly tightness (Gelfand et al., 2011) at the community level. This interpretation could be tested in studies in contexts other than our culturally rather homogenous target community.

The values that were positively related to health (lack of stress symptoms) in our community 1993 (but not in 2007) were 'social values' (Schwartz, 2006), benevolence, tradition, and conformity. The fact that these values were associated with lower psychological stress, unexplainable by life events, in 1993, in the circumstances of high unemployment and high stress, calls for further studies, focusing on the mechanisms behind the historically and culturally varying associations between values and indicators of health.

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The role of career values for work engagement during the transition to working life

Florencia M. Sortheix [a,*], Julia Dietrich [b], Angela Chow [c], Katariina Salmela-Aro [d,e]

[a] University of Helsinki, Finland
[b] University of Jena, Germany
[c] University of Alberta, Canada
[d] Helsinki Collegium of Advanced Studies, Finland
[e] University of Jyväskylä, Finland

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ABSTRACT

The present longitudinal study examined the role of career values for work engagement across the transition from university education to working life. Finnish young adults reported on their career values (intrinsic, rewards, and security values) at the age of 23; and the degree of person–organization fit (value congruence, and congruence between one's education and the job), subjective income and economic stress two years later at the age of 25. Work engagement was assessed at both measurement points. Structural equation modeling results showed, first, that intrinsic but not rewards or security career values were related to work engagement. Second, value congruence and having a job which was related to young adults' educational field were positively associated with work engagement. Our findings suggest that along with person–organization fit, intrinsic career values are a significant factor in shaping and facilitating successful transitions from education to work.

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1. Introduction

Psychological research on work engagement has flourished in the last decade in the context of an increased attention placed on the positive aspects of human functioning (Bakker, Schaufeli, Leiter, & Taris, 2008; Seligman & Csikszentmihalyi, 2000). Recent research has identified work engagement as a key research topic for career development, performance and well-being (Bakker et al., 2008; Salmela-Aro, Tolvanen, & Nurmi, 2009, 2011; Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). Work engagement is defined as a positive and psychologically fulfilling state of mind characterized by high levels of energy, involvement, and concentration in work and study situations (Bakker et al., 2008; Schaufeli et al., 2002). Prior studies have found that higher levels of engagement predict academic (Salanova, Schaufeli, Martinez, & Bresó, 2010) and work performance (Bakker, Demerouti, & Ten Brummelhuis, 2012; Demerouti & Bakker, 2006; Salanova, Agut, & Peiro, 2005), organizational commitment (Hakanen, Bakker, & Schaufeli, 2006) and personal initiative at work (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008). Given that work engagement is a critical factor to subsequent performance, it is important to investigate the extent to which personal motivation, such as career values, contributes to engagement.

Substantial longitudinal research on young adults has indicated that career values play a vital role in career outcomes, for example, working hours and job features (Johnson & Monserud, 2010; Johnson & Mortimer, 2011). Although career values are important for individuals' vocational development (Dawis & Lofquist, 1984), decision making behavior (Schwartz, 1992) and career choice (Judge & Bretz, 1992), it is surprising that their potential relation with work engagement has not yet been studied.

* Corresponding author at: Department of Social Research (Social Psychology), Faculty of Social Sciences, P.O. Box 54, Unioninkatu 37, 00014 University of Helsinki, Finland.
E-mail address: florencia.sortheix@helsinki.fi (F.M. Sortheix).

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To fill this gap, this study aims to examine career values as an important personal resource for prospective engagement in the transition from education to employment.

1.1. Personal resources for work engagement

Work engagement is conceptualized by three key characteristics: feelings of vigor, strong dedication, and high levels of absorption (Schaufeli et al., 2002). Feelings of vigor involve high levels of energy, mental resilience to overcome setbacks, and persistence. Dedication conveys a sense of significance, enthusiasm, inspiration, pride and challenge that arise from being involved in an activity. Absorption is characterized by fully concentrating and being happily engrossed in one's work. From a developmental perspective, the presence of high levels of work engagement is an important indicator of a successful transition from education to employment (see Dietrich, Parker, & Salmela-Aro, 2012). The experience of engagement indicates the adaptation to the new life situation and reflects the interplay between personal characteristics and the available resources in the environment (Bakker, Demerouti, & Schaufeli, 2003; Hakanen et al., 2006).

The job demands–resources model (Bakker & Demerouti, 2007; Bakker et al., 2003; Hakanen et al., 2006) is a major framework for studying engagement. Within this model, job resources refer to the sources of support, such as job control, supervision, information and feed-back, and social climate that facilitate the experience of work engagement. Personal resources refer to characteristics and traits that allow individuals to maintain a sense of mastery in their lives, feel in control and able to impact upon their environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003). Personal resources include positive characteristics such as optimism, self-efficacy and self-esteem which have been shown to predict work engagement (Mäkikangas, Kinnunen, & Feldt, 2004; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). For example, across the transition from university to work, Salmela-Aro et al. (2009, 2011) found that the ways in which university students approached and responded to academic and social situations predicted levels of work engagement even seventeen years later. In the present study, we propose that career values are important personal resources that may help young adults to cope with the challenges in the transition from education to work. Based on self-determination theory (SDT, Deci & Ryan, 1985; Ryan & Deci, 2000), we examine the extent to which career values (i.e., intrinsic vs. extrinsic) serve a positive function maintaining motivation in terms of engagement.

1.2. Self-determination theory perspective on career values

Career values are defined as evaluations of the desirability of different kinds of job attributes (Johnson & Monserud, 2010) and play an important role in young adults' exploration of their role as a worker (Super, 1980). The most widely used classification for career values has been the classic distinction into intrinsic career values, which are defined as the rewards derived from participating in the work tasks themselves, such as interest and autonomy; and extrinsic career values, defined as the rewards that are external to the work experience, such as income and prestige (Dawis & Lofquist, 1984; Johnson, 2001b; Mortimer & Lorence, 1979; Ros, Schwartz, & Surkiss, 1999). In line with most previous research on work values, we focus on extrinsic and intrinsic career values.

Self-determination theory (SDT, Deci & Ryan, 1985) provides a comprehensive theoretical framework for distinguishing motivations underlying career values, describing the consequences associated with different types of motivation, and outlining the conditions which may foster motivation. According to SDT, three basic human needs are crucial for sustaining and fostering motivation: the needs for autonomy, competence and relatedness. Autonomy represents the need to be the perceived origin or source of one's own behavior. Competence refers to feelings of effectiveness in one's ongoing interactions with the social context. Lastly, relatedness refers to the need to belong (Baumeister & Leary, 1995) and be connected with other human beings. In fact, based on SDT perspective, the job demands–resources model has suggested that job resources fulfilling these basic human needs can foster work engagement (Deci et al., 2001; Van Den Broeck, Vansteenkiste, De Witte, & Lens, 2008). Specifically, recent study showed that job resources, such as task autonomy, skill utilization and feedback were related to higher need satisfaction which in turn predicted higher vigor and lower exhaustion (Van Den Broeck et al., 2008). Similarly, support for autonomy from supervisors predicted greater satisfaction of employees' needs for competence, autonomy and relatedness, which led to increased positive psychological adjustment and higher level of work performance (Baard, Deci, & Ryan, 2004).

In accordance with other motivational research, SDT highlights that autonomy—the behavior is volitional and self-endorsed—is central to feelings of well-being. Central to SDT is the distinction between autonomous and controlled regulations. Autonomous regulation emerges when the behavior is identified as personally important, performed out of own choice and internalized, felt in accordance with the person's own characteristics and values (see, Deci & Ryan, 2000; Ryan & Deci, 2000). On the contrary, controlled regulation is evident in behaviors that are instrumental or done for consequences separable from the activities per se and when people act out of a sense of pressure or obligation (Ryan & Deci, 2000). Autonomous regulation is closer to intrinsic motivation of which behavior is pursued by the inherent satisfactions. As a long-term drive, it has been found that intrinsic motivation and autonomous regulation move individuals towards their goals based on interest and enjoyment (Deci & Ryan, 1985; Sheldon & Elliot, 1999). Intrinsic motivation directs and amplifies attention towards the tasks involved in a goal and predicts the levels of investment and progress towards goals (Dietrich, Shulman, & Nurmi, in press; Sheldon & Elliot, 1999). On the other hand, controlled forms of motivation have been shown to result in higher anxiety and lower well-being (Deci & Ryan, 1985; Sheldon & Elliot, 1999). Recently, Van Beek, Taris, and Schaufeli (2011) showed that engaged employees were driven by autonomous forms of motivation, while employees experiencing burnout had higher controlled forms of motivation. The

distinction between autonomous and controlled sources of motivations provides a basis for our conceptualization of intrinsic and extrinsic career values as we will outline below.

In the present study, intrinsic career values refer to the interest, the learning possibilities, and the feeling that the career is in accordance to the self. Young people with intrinsic career values may feel a sense of ownership of their behavior and may also be more likely to experience increasing amounts of fulfillment from the activities they undertake, in our case their first work experiences. Accordingly, we propose that intrinsic career values are positive antecedents of work engagement as these values are based on autonomous forms of motivations and foster the satisfaction of autonomy and competence needs (Gagné & Deci, 2005). On the contrary, we conceptualize as extrinsic career values those with a focus on having a good salary and promotion (rewards career values), and on secure working conditions and possibilities of employment (security career values). Extrinsic career values are based on external sources of motivation which undermine feelings of autonomy. When expressed in early, career values may predict lower levels of work engagement by focusing on extrinsic rewards and undermining the internalization of behaviors.

1.3. The role of person–organization fit for work engagement

When studying the role of career values for engagement across the transition to working life, a number of other relevant factors need to be considered. First, prior research on work motivation (Maslach & Leiter, 1997) has shown that the degree of person–organization fit influences individuals' levels of stress and increases the likelihood of burnout, considered the opposite motivational state of engagement. Person–organization fit refers to the congruity between the person and the work place in key aspects, such as workload, control, rewards, community feelings, fairness, and values. This last area of person–organization fit was conceptualized as value congruence and was identified as a key dynamic mechanism for sustaining motivation at work (Leiter, 2008; Maslach & Leiter, 2008). Value congruence is relevant for our study as it involves the subjective perception of the compatibility between personal and organizational values and goals. We expect that the greater the perceived congruity between personal and organizational values and goals, the greater the likelihood of work engagement (Leiter, 2008; Leiter, Jackson, & Shaughnessy, 2009).

Second, the extent of person–organization fit is also influenced by the match between the individuals' educational background and the job tasks (Robst, 2007). The possibilities of having a job that matches young adults' education and training played an important role for work motivation, especially at early stages of the career (Dawis & Lofquist, 1984). Individuals that work in their study field will experience greater feelings of competence by being able to put what they have learnt at the university into practice. Moreover, having the necessary financial resources for independent living fulfills needs for autonomy and independence during young adulthood. Vocational development and economic independence emerge as the major developmental tasks during young adulthood and positive outcomes in terms of engagement are expected when individuals are able to fulfill these demands (Dietrich, Jokisaari, & Nurmi, 2012; Dietrich, Parker, et al., 2012; Ranta, Punamäki, Tolvanen, & Salmela-Aro, 2012). Thus, we included these two relevant variables when analyzing young adults' work engagement.

1.4. Gender differences in career values

Gender has been identified as an important antecedent of value orientations (Marini, Fan, Finley, & Beutel, 1996; Schwartz, 1992). Previous studies have found that young men had higher extrinsic work values while young women had higher intrinsic work values (Johnson, 2001a, 2002). These gender differences are consistent with Schwartz and Rubel's (2005) findings on personal value priorities: across cultures men attribute more importance to values related to power (status, dominance) and achievement (demonstrate own competence) than women do. Accordingly, we took into account the effect of gender on career values in our study. In line with prior work, we expect to find higher intrinsic career values among women and higher reward and job security work values (i.e. extrinsic career values) among men (Bridges, 1989; Marini et al., 1996).

1.5. The present research

Despite the extensive research on work engagement, longitudinal studies addressing the role of career values for work engagement are missing. This study aims to fill this gap with a focus on young adults at the transition from education to working life.

Based on SDT (Deci & Ryan, 2000) we propose that intrinsic career values prospectively predict high levels of work engagement (Hypothesis 1a) and extrinsic career values (i.e., rewards and security values) predict low levels of work engagement (Hypothesis 1b). We further propose that person–organization value congruence will be positively associated with work engagement (Hypothesis 2). Moreover, we hypothesize that work engagement is higher where individuals have made a transition to employment that is in line with their qualifications (Hypothesis 3), and where they are in a financial situation characterized by financial satisfaction and low economic stress (Hypothesis 4). Finally, we examine whether female gender predicts higher intrinsic and lower extrinsic career values (Hypothesis 5).

2. Method

2.1. Participants and procedure

This study is part of an ongoing longitudinal survey, titled *Finnish Educational Transitions* (FinEdu) conducted in Finland. The data were collected from all upper secondary schools in a medium-sized city in Middle Finland. At the beginning of the study, participants were in the third year of their upper secondary school with an academic orientation (18 years old) and they were followed up four times until they were 25 years old. This study covers only the last two measurement points which concern the transition from higher education to further education or employment collected at 2009 and 2011 during times of economic downturn. In Finland, university graduates are on average older that in other European countries (between 25 and 29 years of age). There are at least two reasons for that: first, entrance examinations to access university studies are very hard, in some faculties the acceptance rates are about 10%, so students may take more than a year until they are able to enter university. Second, compulsory military service delays access to further studies, university or vocational training.

At both measurement points, questionnaires and instruction letters were sent to participants' homes. The sample of the study (N = 571) consisted of participants aged 23 at Time 1 (N = 422) and 25 at Time 2 (N = 497). Seven hundred and twenty individuals were contacted at Time 1 and participation rate was 59% (N = 422). At Time 2 a total of 712 individuals were contacted again and 497 responded which represents a 70% response rate. Participants of Time 2 were rewarded with a 10 € gift voucher. The number of participants at Time 2 was 571, with 149 of them not being present at Time 1. The longitudinal sample, present at both time points, was 348.

Students reported their career values (intrinsic, rewards, and security values) and work engagement at Time 1, and their work engagement, the degree of person–organization fit, life situation, subjective income and economic stress at Time 2. We examined whether or not those who dropped out after the first measurement point differed from those who continued to participate with respect to our key variables. Dropouts did not differ from those who continued study participation in intrinsic ($t(378) = .71$, $p = ns$), rewards ($t(379) = -.69$, $p = ns$) and security ($t(379) = -.67$, $p = ns$) career values and engagement at T1 ($t(366) = -2.05$, $p = ns$). Moreover, the group that dropped in (who participated at Time 2, but were not present at Time 1) did not differ in engagement ($t(452) = -1.23$, $p = ns$) or value fit ($t(451) = .03$, $p = ns$) from those participating at both measurement point. However, gender was related to both dropout ($t(418) = 3.16$, $p < .01$) and drop-in ($t(491) = 2.52$, $p < .01$), such that males were overrepresented in those groups. Missingness was dealt with in the analysis by using full information maximum likelihood estimation which takes into account all available data.

2.2. Measures

2.2.1. Engagement

Study/work engagement was assessed by the abbreviated students' version (Salmela-Aro et al., 2009, 2011) of the Utrecht work Engagement scale (UWES; Schaufeli et al., 2002). The scale includes three questions related to vigor (e.g. "When I'm studying/At my work, I feel that I'm bursting with energy"), three to dedication (e.g. "I find my studies/the work that I do full of meaning and purpose"), and three to absorption ("time flies when I am studying/working"). Responses were given on a Likert scale from 0 ("*never*") to 6 ("*daily*"). Cronbach's alpha reliabilities for whole engagement scale were .94 at Time 1 and .94 at Time 2.

2.2.2. Career values

We used an adjusted version for career values from Meaning of Working study (MOW, 1987, see also Feij et al., 1995). Our measure of career values included eight questions about different things that could be important and affect career choice. Intrinsic values were measured by four items ("interesting work", "a lot of opportunity to learn new things", "a good match between my job requirements and my abilities and experience", and "work that is important and valuable to me"). Career values focused on material rewards (rewards) were assessed by two items ("good pay" and "good opportunity for upgrading and promotion"). Security career values focused on the conditions of the working place included two items ("convenient work hours and good physical working conditions", and "work that has good promising view of employment"). Answers were given on a scale from 1 ("*strongly disagree*") to 7 ("*strongly agree*"). Cronbach's alpha reliabilities for intrinsic, rewards and security career values were .71, .71 and .54, respectively.

2.2.3. Value congruence

Two items measuring person–organization value congruence adapted from the Areas of Worklife Scale (Maslach & Leiter, 1997) were used: "My values and the values of my study/workplace are similar", "my career goals are in line with my employer/place of study's objectives". Answers were given on a scale from 1 ("*strongly disagree*") to 7 ("*strongly agree*"). Cronbach's alpha reliability was .73.

2.2.4. Life situation

We classified work and study situation into five categories, based on the following information: whether young adults were in any study program; whether they were employed or unemployed; if they were working, whether the work was relevant to their level of education. Based on this we arrived to six final categories: studying and working in a job relevant to the person's

education (N = 143), study and work in a job not relevant to studies (N = 54), full-time studying (N = 133), working in a job relevant to one's studies (N = 112), and moratorium activities (N = 39), that is working in a job not relevant to one' education (N = 21) or being neither working nor studying (N = 18).

2.2.5. Subjective income

Subjective income was examined by asking participants: "Do you think your income covers your expenses at the moment?" Answers were given on a scale ranging from 1 ("*extremely well*") to 5 ("*poorly*").

2.2.6. Economic stress

Economic stress was measured by summing up across 13 items asking for financial difficulties. For example, items included questions such as: "Have you used long-term savings for daily expenses?", "moved into more affordable housing?", "postponed large purchases?", or "bought things on credit more than before?" The summated scale ranged from 0 to 13 ($M = 3.91$; $SD = 2.78$).

2.2.7. Gender

Gender was coded as 0 (female) and 1 (male).

2.3. Data analyses

In order to investigate the longitudinal relations between career values and engagement, we used exploratory structural equation modeling (ESEM, Asparouhov & Muthén, 2009; Marsh et al., 2009) using Mplus software (version 5.21, Muthén & Muthén, 1998–2009). ESEM is recommended when researchers have no definitive factorial structure and avoids using confirmatory factor analysis procedures with specified factor loadings for exploratory purposes. The items used to measure career values had not been used in structural models before and we had no factorial structure to rely on. Thus, this method allowed us to use the best fitting measurement model for our career value items without imposing fixed loadings.

The relative fit of our model was assessed by: the Comparative Fit Index (CFI), the Normed Fit Index (NFI), and the Tucker–Lewis Index (TLI). RMSEA values smaller than .05 are indicative of an excellent fit, whereas values greater than .1 should lead to model rejection (Browne & Cudeck, 1993). For the other indices, as a rule of thumb, values greater than .90 (and preferably greater than .95) are considered to indicate a good fit (Hu & Bentler, 1999).

3. Results

3.1. Descriptive statistics

The distributions of work–study arrangements at Time 1 (age = 23) and Time 2 (age = 25) are presented in Table 1. The percentage of individuals that were full-time studying dropped from 43.1% to 27.6%; whereas those who were full-time working in a job relevant to their studies increased from 10.3% to 23.2%. Table 2 shows the mean values, standard deviations and correlations between the variables used in our analyses at Time 1 and Time 2.

3.2. Measurement models for engagement and career values

Measurement invariance for engagement was tested using longitudinal CFA. Work engagement was indicated by three item parcels reflecting the subscale vigor, dedication and absorption at Time 1 and Time 2, respectively. We established strong measurement invariance (Cheung & Rensvold, 2002) for engagement at T1 and T2 ($\chi^2(13) = 60{,}72$; $p < .001$; CFI = .96; RMSEA = .08).

In order to establish the best fitting model for career values, we used ESEM. We used an oblique geomin rotation, which allows the resulting factors to be correlated, and MLR estimation. The ESEM model identified three underlying factors of career values and had an excellent fit ($\chi^2(7) = 12.05$; $p < .10$; CFI = .99; RMSEA = .043). On the contrary, a highly restricted confirmatory factor analysis model provided an unacceptable fit ($\chi^2(17) = 137.05$; $p < .001$; CFI = .79; RMSEA = .14). Besides poor fit, requiring loadings to be zero in confirmatory factor analysis has been shown to lead to inflated factor correlations that could lead

Table 1
Percentage of people in each of the work–study categories at Time 1 (N = 422) and Time 2 (N = 571).

	Time 1 %	Time 2 %
1—Studying and working in a job relevant	12.1	29.7
2—Study and work in a job not relevant	20.8	11.2
3—Full-time studying	43.1	27.6
4—Full-time working in a job relevant	10.3	23.2
5—Moratorium activities	13.8	8.3

Table 2
Correlations, means (*M*) and standard deviations (*SD*) for observed variables in the study.

	M	*SD*	1	2	3	4	5	6	7	8	9
1. Gender	.34	.47	–								
2. Intrinsic (T1)	6.18	.64	−.20**	–							
3. Rewards (T1)	4.54	1.30	.15**	.15**	–						
4. Security (T1)	5.37	1.22	−.13**	.19**	.38**	–					
5. VC (T2)	4.78	1.27	−.06	.08	.10	.10	–				
6. Subj. inc. (T2)	2.46	.86	.11*	−.02	−.05	−.05	.06	–			
7. Econ. stress (T2)	3.91	2.78	−.10*	.05	.05	−.05	−.04	−.58**	–		
8. Engagement (T1)	4.31	1.12	−.05	.35**	.08	−.00	.29**	.06	−.02	–	
9. Engagement (T2)	3.48	.88	−.16**	.27**	.06	.08	.49**	.09	−.00	.43**	–

Notes. T1 (N = 422; age = 23 years), T2 (N = 571; age = 25 years). Gender (female = 0; male = 1). VC = value congruence; Subj. inc. = subjective income, Econ. stress = economic stress.
* $p < .05$.
** $p < .01$.

to biased estimates in structural equations (Asparouhov & Muthén, 2009; Marsh et al., 2011). Therefore, ESEM is the superior method to set up the measurement model of career values.

3.3. Structural model for work engagement

Our hypothesized structural model was one in which: (a) gender predicted career values; (b) career values predicted engagement at Time 1 and Time 2; (c) person–organization value congruence (Time 2) predicted engagement (Time 2); (d) current work–study life situation, subjective income and economic stress (all measured at Time 2) predicted engagement (Time 2) (see Fig. 1). This model showed a good fit, $\chi^2(184) = 357.92$; $p < .001$; CFI = .94; TLI = .93; RMSEA = .04. In

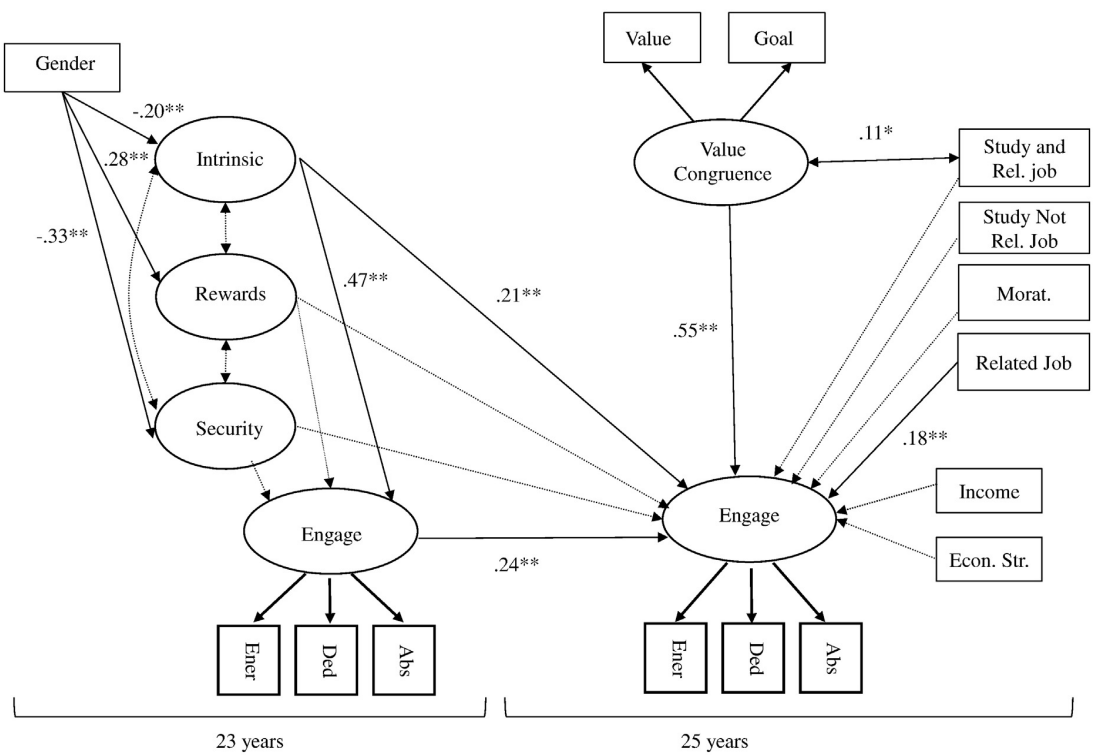

Fig. 1. Model of career values, value congruence and work–study situation predicting engagement. Study and Rel. Job = Study and work in a job relevant to the person's education, Study Not Rel. Job = Study and work in a job not relevant to studies, Morat. = Moratorium activities; Related Job = Work full-time in a job relevant to the person's studies. Reference category = Study full-time. * p < .05, ** p < .01.

accordance with our *hypothesis 1* intrinsic career values predicted engagement at Time 1 ($\beta = .47$, $p < .01$) and Time 2 ($\beta = .21$, $p < .01$). *Hypothesis 1b* suggesting that extrinsic career values would be negatively related to engagement was not supported. Person–organization value congruence ($\beta = .55$, $p < .01$) was also associated with higher levels of engagement at Time 2, thus supporting our *hypothesis 2*. Furthermore, person–organization value congruence was correlated ($r = .11$, $p < .05$) with the category part-time working and studying. In line with *hypothesis 3* the results showed that having a full-time job that was in line with one's qualifications related to higher levels of engagement ($\beta = .18$, $p < .01$) in comparison with the reference category (full-time studying). Neither financial satisfaction nor economic stress was related to work engagement at Time 2, thus *hypothesis 4* was not supported. Finally, the results showed that gender was associated with the importance of different job attributes: women were more oriented towards intrinsic ($\beta = -.20$, $p < .01$) and security ($\beta = -.33$, $p < .01$) career values, while men valued extrinsic rewards more ($\beta = .28$, $p < .01$). Thus, *hypothesis 5* was partially supported.

4. Discussion

The primary aim of this study was to examine the role of young adults' career values for their work engagement during the transition from education to working life. Research on work engagement has shown that personal resources help workers to cope with job demands more efficiently and keep work engagement (Baard et al., 2004; Bakker & Demerouti, 2007; Van Den Broeck et al., 2008; Xanthopoulou et al., 2007). Our study further advances the knowledge on motivation at work. First, in line with hypothesis 1a, our results showed that individuals with higher intrinsic career value motivation during university years were more engaged with work subsequently. Thus, intrinsic career values are an important personal resource when young people enter the work force. Second, our results showed that intrinsic career values contributed to young people's work engagement above the effect of other variables, such as person–organization fit, life situation and financial situation.

Moreover, based on SDT we predicted that extrinsic career values—contingent upon external rewards and secure working conditions—would be negatively related to engagement (hypothesis 1b). Our results, however, did not support this hypothesis. One explanation could be that personal motivations are influenced by the contingencies found in the socio-economic context (Schwartz & Bardi, 1997). The recent economic crisis impacted Finland, where the present study was carried out, and youth unemployment rates reached around 20% in early 2010 (Official Statistics of Finland, 2010). It is possible that under such insecure situations a focus on career advancement and security emerges as a strategy to deal with it in the short term. Another possibility is that extrinsic career values also brought some desired outcomes in the work context. Schaufeli and Bakker (2004) have proposed that job resources may play a two-sided motivational role: an intrinsic one, fostering employees' growth and learning, or extrinsic, being instrumental in achieving work goals. Thus, whether our study participants had achieved work goals related to their extrinsic career values or not might moderate the non-significant relation reported here.

A second aim of this study was to examine the role of person–organization fit in terms of value congruence on work engagement. Our findings supported hypothesis 2 and were in line with prior research indicating that a match between the individuals' values and goals and those of the organization is also strongly associated with work engagement (Leiter, 2008; Leiter et al., 2009). Our results showed that value congruence was significantly associated with work engagement during the first working years of working experience, controlling for the career values as such. While previous research which had not yet covered career values and value congruence simultaneously, and had not much focused on young adults, this finding provides a valuable addition to the existing literature.

The degree of person–organization fit was further examined in relation to two other variables: the possibilities to develop a career in the field of specialization (hypothesis 3) and a good economic situation (hypothesis 4). We found that having moved from university to a job which was in accord with one's education was related to higher engagement. In contrast, other types of work status, such as working in a field not related to one's education, were not related to work engagement. Individuals who have successfully mastered the education-to-work transition can put into practice what they had learnt during university years. In this sense, one explanation for this finding is that well-matched employees enjoyed greater feelings of competence and autonomy in comparison to those in moratorium activities or still studying (Deci & Ryan, 1985, 2000). Another explanation is that attaining one's career goals, such as getting a job in one's field, contributes to individuals' well-being (see, e.g., Dietrich, Jokisaari, et al., 2012) which, in turn, potentially increases work engagement.

In contrast to what we expected (Hypothesis 4), neither subjective income satisfaction nor economic stress (loans, financial aids from state) had a significant association with engagement. This finding suggests that for young people engagement as a work related psychological state is not so much dependent on economic factors, perhaps because they were in an development stage to explore different career opportunities before settling down for a long-term employment (Arnett, 2004), of which financial concern would not be their priority. Instead, intrinsic career values and the match between individuals' values and those emphasized in their organizations played a more significant role to their work engagement.

In accordance with previous research and our hypothesis 5, we found that female participants endorsed intrinsic career values more than men did; and that men endorsed rewards career values more than women did (Bridges, 1989; Marini et al., 1996). Our results, however, did not fully support our assumptions. We expected that security career values (extrinsic) would be higher for men but our results showed that security career values were higher for women. A possible explanation is that advancing in a career and having a good salary in contemporary society imply adopting new changes and sometimes taking risks which may feel incompatible with having a stable and secure job. In this sense, men who attributed high importance to rewards career values did not endorsed security career values.

4.1. Theoretical implications and further studies

Our results agree with recent research on how positive personal and environmental factors increase work engagement, which in turn predicts work performance (Bakker et al., 2012; Demerouti & Bakker, 2006; Salanova et al., 2005) and personal initiative at work (Hakanen et al., 2008). A contribution of this study is that we identified intrinsic career values as a *personal resource* that contributed to a higher engagement in the transition to work. As such, it would be important to examine the role of intrinsic career values for coping with job demands at the work place as previous research has suggested that job resources have a particular impact when demands are high (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007). Moreover, future research could examine whether it is through the attainment of work goals (including measures of goal progress) or satisfaction of basic needs, that intrinsic career values promote engagement.

Career values as well as occupational aspirations develop and change to adjust to the opportunities present in the environment. Future studies could analyze how the adjustments in aspirations, including career values, relate to work engagement. In this study we used a subjective measure of person–organization value congruence ("to what extent do organization values and goals match your own?"). Thus, we do not know which specific values are prevalent in the worker's organization. Further organizational studies could examine how personal and specific organizational values interact to predict work engagement.

Furthermore, Johnson (2001b) suggested that career values change in response to attainment or frustration of valued rewards during the first working experiences. For example, young workers who obtained more intrinsic work rewards (their jobs allow them to put their skills into practice, learn new things, etc.) placed greater importance on the intrinsic characteristics of their jobs later on (Johnson, 2001b). In this sense, it would be particularly interesting to test the influence of different job characteristics and the rewards reinforced in the work place on career value change.

Finally, future studies could examine whether extrinsic career values, if sustained for a longer period of time, would lead to work burnout, as previous research suggests (Van Beek et al., 2011). Moreover, the relationship between other work values than those studied here and engagement warrants attention in future studies. For example, values related to self-direction, freedom and creativity seem to be increasingly relevant to motivate the new millennial generation (Leiter et al., 2009).

4.2. Limitations

A number of limitations need to be considered when interpreting the results of the present study. First, our sample consisted of Finnish young adults, thus characteristics of the educational system may have influenced our results. Features of Finnish universities, such as a higher age at entry to university, tuition-free studies, and the difficulty in gaining admission to university, may mean that some of the results would have been different in countries with a different education system. Second, our study relied on self-report measures, which raises the question of common method bias. Given that we are studying psychological motivational processes, however, it would have been difficult to obtain this information with another method. Finally, the design of our longitudinal study is correlational, therefore caution with respect to causal interpretations is needed.

4.3. Practical implications and conclusions

The results from this study have practical implications for career development during educational years. First, we found that the participants who got a job which was in line with their qualifications reported higher engagement at work. During university years, a career development program to help graduate students identify the importance and possibilities of finding the type of jobs that they are being trained for seems crucial. Educational institutions need to offer resources, networking activities and guidance in the search for a well fit job. Furthermore, fostering intrinsic motivation during college years seems a helpful strategy to increase work engagement later on (Salmela-Aro, Mutanen, & Vuori, 2012). In addition, our study revealed a positive association between value congruence and work engagement during early stages of the career. Undergraduate education offering help to young people to seek for jobs in organizations holding compatible values seems helpful in promoting higher levels of work engagement.

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