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Introduction to the Special Section

Value Development from Middle Childhood to Early Adulthood: New Insights from Longitudinal and Genetically-Informed Research

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Introduction to the Special Section

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Daddy*: Always remember that I love you. This is the most important thing.*

Daughter *(6.5 years old): No Daddy, having fun is the most important thing. You have it upside down.*

Daddy*: But I think that love is more important than fun.*

Daughter*: Everybody knows that fun is the most important, then love, and then – I don't know.*

Daddy*: But what do YOU think?*

Daughter*: Emm... Having fun? Love is after having fun, happy is after love, and care is after happy.*

Values convey what is important to a person; they express the key goals that guide us in life. Not surprisingly, values have been identified as core constructs of human existence, and they have been attracting attention since antiquity (Rohan, 2000; Svātmārāma & Akers, 2002). Values are at the core of a person's self-concept and identity, as they define who somebody is (e.g., Hitlin & Pilliavin, 2004). They are, however, not only cold beliefs that we think about, but rather inextricably tied to motivation and clearly directive of our actions (Bardi & Schwartz, 2003; Schwartz, 2005). Thus values determine how we interact with the world, how we shape it, and within the very broad framework of human history, also determine how societies are structured (Schwartz 1999, 2008; Licht, Goldschmidt, & Schwartz, 2007; Inglehart & Baker, 2000).

Values of children are of a special importance, because children, as the next generation, shape the world of the future. Cultures and socialization agents actively attempt to ensure value continuation across generations (Grusec, 2011; Trommsdorf, 2008). At the same time, the youth negotiate these values and explore them in order to adopt the ones that befit them (Meeus, 2011). Despite the importance of children's values, only a few recent studies examined how values emerge early in human life and how they develop throughout childhood. This is in contrast to hundreds of empirical studies about values in adulthood (Roccas & Sagiv, 2010; Saroglou, Delpierre, & Demelle, 2004) and on a smaller scale in adolescence (e.g., Knafo & Schwartz, 2004; Daniel, et al., 2015).

This special section aims to help fill this research gap and give new directions to the field of value development across the ages. Research into values at an early age has only started recently, although it has expanded quickly and dynamically in the past years. With new methods for assessing children's values, and an increased awareness of the role of values in children's and adolescents' development, the field now seems ripe for an in-depth investigation. The special section takes the form of a Quartet, bringing together four new studies of longitudinal and genetically informed evidence of value development from the beginning of middle childhood (Uzefovsky, Döring, & Knafo-Noam), through middle childhood (Cieciuch, Davidov, & Algesheimer), late childhood (Vecchione, Döring, Marsicano, Alessandri, & Bardi), and finally late adolescence through early adulthood (Daniel, Dys, Buchmann, & Malti).

One advantage of the current stream of values research is its use of a widely accepted and highly investigated definition of values, derived from Schwartz's theory. Schwartz (e. g., 1992; Roccas, Sagiv, Schwartz, & Knafo, 2002) describes values as desirable, abstract goals, that are organized based on compatibilities and conflicts in their underlying motivations, and are transsituational, meaning that they are relatively stable across time and

consistent across situations, that vary in importance across individuals and cultures, and that serve as guiding principles for behavior in a person's life.

We use the different components of this definition to sketch the frontiers of value development research, the knowns and unknowns, as they emerge from contemporary research and specifically this special Quartet.

Values as Abstract Goals

Very early in life, children have goals that direct their behavior (Jennings, 2004). But values are not simple goals, but abstract motivations that can motivate different behaviors, across areas in life. For example, a child who values achievement might like to excel in school, and run faster than friends. When and how do children develop values as abstract goals? Self-concept in early childhood typically refers to concrete and often external attributes. Children often describe themselves by observable characteristics, that are specific and not general ("I know how to add and subtract", and not "I am smart"), and are tied to behavior ("I can ran fast. See?"). In middle childhood, children gradually learn to make generalizations ("I am good at math and reading, therefore I am smart") (Harter, 1999). Similarly, in middle childhood, children may make goal generalizations, by learning from their multiple goals about their life goals. During this gradual process, children may hold a precursor version of adults' values that is more concrete, while abstractness gradually expands through development. Future research should examine this developmental process in detail.

The Motivational Structure of Values

A prominent feature of the Schwartz values model that was confirmed in hundreds of studies with adults (e.g., Borg, Bardi, & Schwartz, 2015; Fontaine, Poortinga, Delbeke & Schwartz, 2008) and adolescents (Daniel et al., 2012; Liem et al., 2011) is the motivational relations between single values. Schwartz proposed that the pursuit of each value has

psychological, behavioral and social consequences that make it conflict or correspond with other values. For example, the pursuit of conformity values, by behaving as expected, stands in contrast with the independent thinking prescribed by self-direction values, but promotes the observance of family costums, according to tradition values. Based on these relations, the values are arranged around a circular motivational continuum, which forms two bipolar dimensions: Self-enhancement versus self-transcendence, and conservation versus openness to change (Figure 1).

Novel research, following the development of age-appropriate measures of values suggests that children's and adolescents' value structures are as differentiated as adults' and clearly follow Schwartz's model (e.g., Cieciuch et al., in this special Quartet; Döring et al., in press), even at 7 years of age, the youngest group studied so far (Uzefovsky et al., this special Quartet). We can conclude that children distinguish clearly among the same ten values as adults do.

The early emergence of the value structure suggests that the way values are organized reflects basic psychological structures. Indeed, the two bipolar dimensions (Figure 1) overlap substantially with dimensions of conflict previously studied by developmental theories: self-enhancement versus self-transcendence values describe a focus on the self, versus a focus on others – an extensively studied conflict within the moral development field. While early theorists, hypothesized that children are egocentric, and focus on self-enhancement (Thompson, 2015), current research establishes that self-transcendent goals begin in early childhood (Thompson, 2012). The conflict between conservation and openness to change, in turn, is present across development, as children assert their autonomy in the face of social conventions (Smetana, Jambon, & Ball, 2014).

Stability of Values over Time

Originally, research within Schwartz's theoretical framework followed the long-standing assumption (e.g., Rokeach, 1973) that values are relatively stable across time. Indeed, there is evidence for value stability among adults (e.g., correlations of .75 to .87 over two months, Vecchione, Caprara, Dentale & Schwartz, 2013). In this special Quartet, Cieciuch et al. provide a first investigation of intra individual stability of values in childhood, finding that temporal stability increases from age 7 to age 11. Children have a limited perspective of time in general and thus of their self-concept's stability across time, but both improve as children grow older (Carelli & Forman, 2011; Pathman, Larkina, Burch, & Bauer, 2012). This may explain Cieciuch et al.'s findings.

Recent research, however, showed that values do change, both at the individual level (rank order) and at the mean level (across individuals). Value changes occur following significant life events (Bardi, Buchanan, Goodwin, Slabu, & Robinson, 2014), and may occur with age as well.

Age Trends

Value priorities change as children grow older. Cieciuch et al. suggest that during middle childhood, values of self-transcendence decrease, while values of self-enhancement increase in importance, but this pattern ends by early adolescence, and is replaced by stability. Moreover, conservation values decrease in importance, while openness to change values increase in importance and possibly become the most important values by early adolescence. Along these lines, Daniel et al.'s findings suggest that in middle adolescence, most individuals value social justice highly, and remain stable in these values across time. These mean level patterns can attest to skills acquired throughout development, as well as to life tasks characteristic of developmental periods. For example, the increase in openness to change during adolescence may be attributed to high levels of risk taking (Steinberg, 2010) and exploration (Meeus, 2011), taking place during identity formation. Demonstrating this

process, an association was recently established between gains in cognitive complexity during adolescence, and the importance of self-direction values (Daniel, 2015).

Change Following Significant Life Events and Life Experiences

Although values are relatively stable over time and typically change only gradually with age, significant life events, such as immigration, can trigger substantial value change (Bardi & Goodwin, 2011). Life transitions promote repeated experiences with new behaviors, creating inconsistency with previous values. In order to maintain value-behavior consistency, values are likely to be changed (Bardi & Goodwin, 2011). Finally, the experience of threat was found a strong driver of change: For both adults (Verkasalo, Goodwin, and Bezmenova, 2006) and adolescents (Daniel, Fortuna, Thrun, Cioban and Knafo, 2013), anxiety-based values (Figure 1) became more important and anxiety-free values became less important following terror attacks and war.

Value Consistency across Situations

Experimental evidence, mainly with adults (e.g., Maio, Pakizeh, Cheung, & Rees, 2009), but recently also with adolescents and children shows that small value change can be triggered through manipulation of situational variables. For example, a prosocial intervention (including self-persuasion, consistency maintenance and priming) increase adults' benevolence values (Arieli, Grant, & Sagiv, 2014), and watching an adventurous movie increased the importance of adolescents' stimulation values (Döring & Hillbrink, 2015). Importantly, these changes in value priorities occurred alongside Schwartz's (1992) model of motivational compatibilities and incompatibilities. Thus, an increase in importance of a value occurs in parallel to a decrease in the importance of the motivationally incompatible values (Bardi et al., 2014).

In one study, adolescents reported their values across several contexts: family, school, and country of residence. Overall, rank-order correlations showed that values are consistent

across these contexts, supporting the idea that values are trans-situational (Daniel, Schiefer, & Knafo, 2012). However, the importance of the different values varied by context, implying that individuals tend to change their values based on the context they think about (Daniel et al., 2012). Importantly, this study also showed that consistency is reduced with age. More research is needed to provide a developmental perspective on value consistency.

Individual and Cultural Differences in Values

Values are typically thought to develop as a joint product of society and culture, personality (an individual's needs, traits, temperament), and personal experiences (e.g., Bardi & Goodwin, 2011).

Cultural Similarities are evident in the literature: across cultures, individuals show a similar value structure, (Figure 1), and value hierarchy (Schwartz & Bardi, 2001). Thus, across the world people tend to find values of benevolence, self-direction, and universalism most and values of power, tradition, and stimulation least important. The few studies with children and adolescents (e.g., Döring et al., 2015) confirm this pattern, as do all the papers in the current Quartet (Cieciuch et al., Daniel et al., Uzefovsky et al., Vecchione et al.). In addition, patterns of sex-differences in value priorities have been found to be the same across cultures, where females find self-transcendence (and to a smaller extent conservation) more important and self-enhancement (and to a smaller extent openness to change) less important than males (Schwartz & Rubel, 2005; Knafo & Spinath, 2011; Döring et al. in press). Again, the studies in this special Quartet confirm that pattern for self-enhancement versus self-transcendence values (Daniel et al., Uzefovsky et al.,).

Cultural differences are also evident, of course. Across student samples from 67 cultural groups, culture accounted for 8-25% of the individual variance in the different Schwartz values (Schwartz & Rubel, 2005). Among children and adolescents, differences were found in value priorities between individuals from different cultural groups (Döring et

al., 2015; Knafo, Daniel, & Khoury-Kassabry, 2008). Future studies may examine whether the cultural differences between children and adolescents stand in line with the cultural differences between adults.

Individual Differences

Although values are a core component of culture (Hofstede, 2001), as noted, they do not account for most of the variance across individuals. Schwartz (2014) proposed that cultures provide an initial starting point by affecting social institutions, while within-culture forces, such as schools and the family, operate to affect individuals differently.

The family, specifically, plays an important role in the socialization of children to specific values, a role that is maintained during childhood and adolescence (Grusec, 2011). Parents can influence their children's values through a variety of parenting practices, as well as through selection of social contexts, such as schools, for them (Knafo & Schwartz, 2012; Roest, Dubas, & Gerris, 2009). As a result, cross-sectional (Barni, et al., 2011; Friedlmeier, & Trommsdorff, 2011) and longitudinal studies (Roest, et al., 2009) found similarities between the values of parents and adolescents. These similarities are often interpreted as indicating value transmission within the family but may also reflect children's effects on their parents (Knafo & Galansky, 2008). Moreover, evidence suggests that the tendency for holding certain values may also be genetically transmitted within families (Knafo & Spinath, 2011; Uzefovsky et al., this Quartet).

Individual Differences as Drivers of Value Development

Values develop as generalization of a system of personal characteristics, including concrete motivations that arise at an early age. For example, moral emotions (e.g., sympathy) and cognitions (e.g., moral reasoning), that develop during childhood were longitudinally associated with value priorities (Daniel, Dys, Buchmann & Malti, 2015; Daniel et al., this special Quartet). Among adults, values were found to be related to personality traits (Roccas

et al., 2002). Similarly, future studies may examine the association between temperament and values.

Values as Guides to Behavior

Among adults, values were established as important considerations in the choice of variety of behaviors (Bardi & Schwartz, 2003; Roccas & Sagiv, 2010), ranging from voting and recycling, to studying hard. The role of values in motivating behaviors in childhood and adolescence is less clear. A few studies have shown that values of self-transcendence versus self-enhancement are related to prosocial versus aggressive behavior (Pulfrey & Butera, 2013; Uzefovsky, Döring, & Knafo, 2013); but longitudinal evidence was published only this year: Benish-Weisman (in press) found that self-enhancement values predicted future aggression in adolescence, and Vecchione et al. (in this special Quartet) found that values predict a variety of behaviors in childhood. Importantly, these longitudinal results indicate that values not only play an important role in motivating subsequent behavior, but behavior may also have some role in promoting value importance.

Value Development in Perspective

The conversation between daughter and father above reflects the findings from the special Quartet and further recent studies. However, it also leaves many questions open: At the age of six, the daughter clearly has an understanding of values and differentiates among them. One might have expected some values not to exist in childhood (e.g., the abstract universalism with its broad scope of the whole world). Or, one might have expected naïve decision makers (i.e., children) to value opposed values with no problem, until they grow up and realize their incompatibilities. However, recent evidence from this special Quartet and beyond clearly shows that children's value structures are as differentiated as adults' and clearly follow Schwartz's model.

Values were found to be relatively stable across the ages researched so far (from six years to old age) and also relatively stable across situations and contexts. ‘Relatively’ means that values do change over time and across situations. The newest evidence points to consistent patterns of change, as depicted for openness to change values (OCV) in Figure 2: These values peak in importance in adolescence and then decrease as people grow old. Around this overall age trend, there is individual variation, which is created by individual characteristics, environments, personal experience, and significant life events. For example, males value OCV more than females (e.g., Döring et al., 2015). Also, OCV are less important to persons in collectivistic cultures, but increase upon immigration to an individualistic country (Bardi, Lee, Hofman-Towfigh, & Soutar, 2009). Similarly, growing up in a religious family decreases OCV importance (Uzefovsky et al., in this special Quartet). Finally, after threatening life events, such as war, OCV become less important (Daniel et al., 2013).

Interestingly, the newest evidence may also help us understand HOW values change: Across ages and studies, it appears that values change alongside motivational compatibilities and incompatibilities: As openness to change values in the studies cited above became more important, the opposing values of conservation became less important (and vice versa). The same may be true for self-transcendence versus self-enhancement. This pattern was identified for change across situations (e.g., Arieli et al., 2014; Döring & Hillbrink, 2015; Maio et al., 2009; Verkassalo et al., 2006) and over time (e.g., Cieciuch et al. and Vecchione et al., in this special Quartet). We are curious to see if future evidence will confirm this pattern.

At 6.5 years of age, the abovementioned daughter is at the youngest age for which values are documented. We hope that this special Quartet will inspire more research in this field that will provide insights into the onset of value development.

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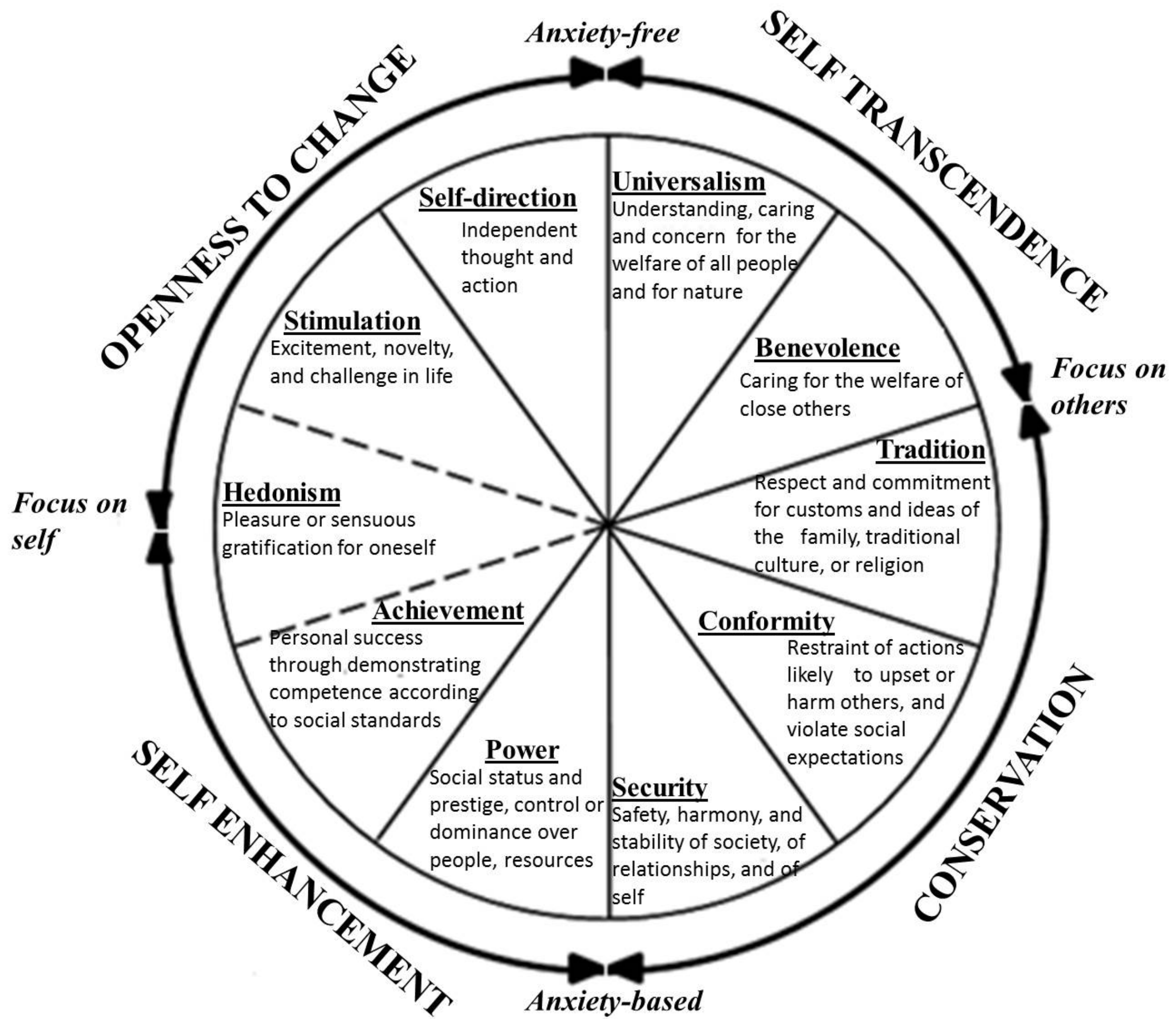

Figure 1. Schwartz’s model of values.

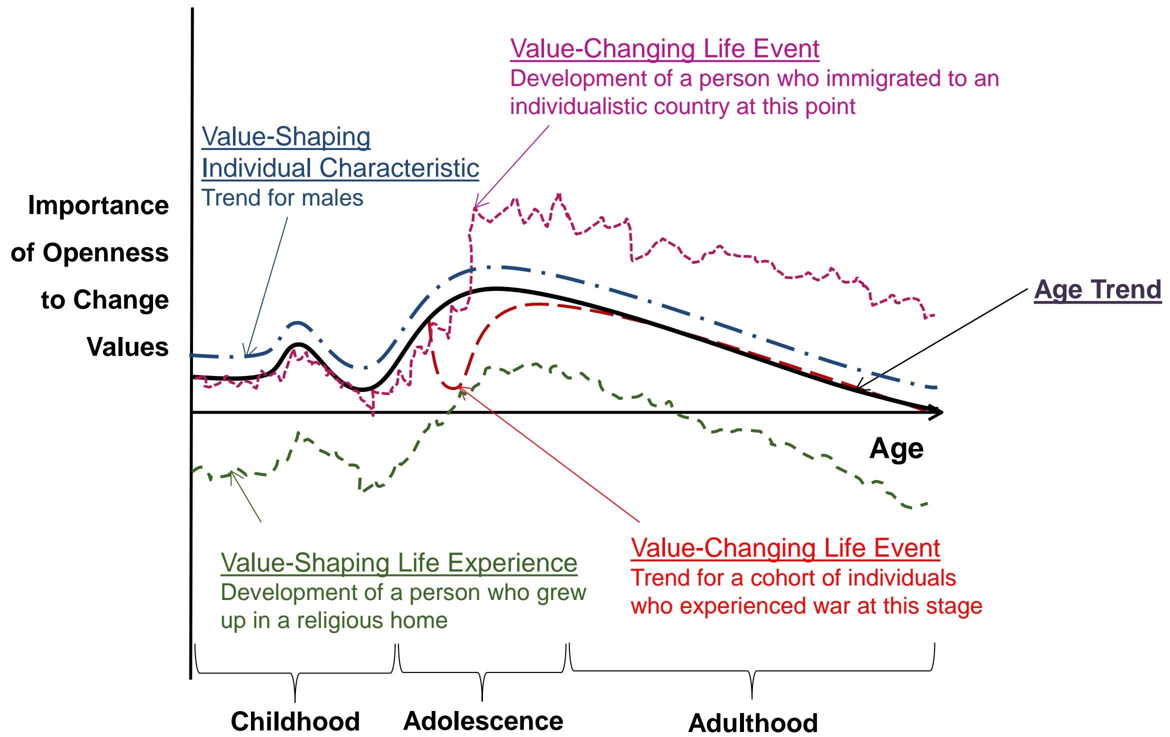

Figure 2. Schematic model of value change from childhood to adulthood: Trends and individual variation in openness to change values.