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Developmental Trajectories of Social Justice Values in Adolescence:

Relations with Sympathy and Friendship Quality

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Abstract

This study examined developmental trajectories of social justice values in a representative sample of Swiss adolescents ($N = 1,258$) at 15 (Time 1), 18 (Time 2), and 21 years of age (Time 3). Social justice values and friendship quality were measured via self-reports. Sympathy was assessed via self- and mother-reports. Latent class growth analysis revealed three developmental trajectories of social justice values: high-stable (80%), moderate-decreasing (17%), and low-increasing (3%). Adolescents with low levels of self- and mother-reported sympathy were more likely to be members of the low-increasing than the high-stable or moderate decreasing trajectory groups. Adolescents who reported low levels of sympathy and friendship quality at 15 years of age were more likely to be members of the moderate-decreasing trajectory group than the high-stable trajectory group. Results are discussed with respect to the potential significance of sympathy and friendship quality for understanding the development of social justice values during adolescence.

Keywords: Social Justice Values, Sympathy, Friendship Quality, Longitudinal Study, Latent Class Growth Analysis.

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Social justice values (SJV) pose a special challenge in adolescent development. On the one hand, social justice values are moral values, and define the individual's role within the social world (in contrast, for example, to values of protecting nature; Schwartz et al., 2012). As such, SJV are likely founded on moral principles that develop since childhood (Smetana, 2006). On the other hand, SJV are abstract, and describe principles of justice towards the entire social group, and not only close others (in contrast, for example, to benevolence values; Schwartz, 1992). Therefore, these values are likely to only be fully differentiated and understood by adolescence.

SJV development is important because values are believed to bridge the judgement-behavior gap by promoting the use of moral judgement to induce moral behavior (Benish-Weisman & McDonalds, 2015; Hardy & Carlo, 2011; Vecchione, Döring, Marsicano, Alessandri, & Bardi, this volume). When SJV are important to the self, they have been found to reduce prejudice and enhance tolerance across ages (Davidov, Meuleman, Billiet, & Schmidt, 2008; Killen & Smetana, 2010). For these reasons, we decided to study mean-levels and intraindividual trajectories of SJV, as well as their correlates, in adolescence. Developmental scientists have argued that moral emotions, such as sympathy, are childhood antecedents of SJV (Döring, Daniel, & Knafo-Noam, this volume; Krettenauer, 2011; see Daniel, Dys, Buchmann, & Malti, 2014), and previous research has confirmed these relations concurrently (Myyry, Juuvarvi, & Pesso, 2010; Silfver, Helkama, Lönnqvist, and Verkasalo, 2008). In addition, previous work has shown that sympathy in middle childhood predicts the importance of SJV at 12 years of age (Daniel, Dys, Buchmann, & Malti, 2014). At the same time, it has been suggested that peer and friendship relationships play an important role in moral development

because of their egalitarian qualities (Piaget, 1977/1995). In line with this notion, friendship

quality has been positively associated with moral emotions and moral reasoning (Malti &

Buchmann, 2010; McDonald, Malti, Killen, & Rubin, 2013). However, few if any studies have

examined how sympathy and friendship quality are related to SJV longitudinally. Our study

aimed to fill this research gap, in part, by examining the developmental trajectories of SJV from

middle adolescence to early adulthood, as well as the relations between sympathy and friendship

quality with these trajectories. We utilized a large scale, nationally representative sample from

Switzerland to investigate our research questions.

Developmental Trajectories of Social Justice Values

SJV are defined as beliefs evaluating the desirable end state of justice in the social

treatment of individuals (Killen & Smetana, 2010; Marini, 2000). The importance adolescents

assign to SJV reflects their regard for social justice, and their commitment to pursuing it. Within

the refined Schwartz value theory, SJV are a central component of universalism values

(alongside other components, i.e., protecting nature and tolerance; Schwartz et al., 2012).

Moreover, universalism values were previously associated with a moral orientation of justice

(Helkama, 2011). Research indicates that adults typically value universalism, and specifically

SJV, highly when compared to other values, across cultures (Schwartz et al., 2012). Similarly,

children in middle childhood were found to value values of care for others, such as universalism,

more than other values (Cieciuch, Davidov, & Algesheimer, this volume).

The importance of SJV is founded on principles of fair and just treatment of others. These

principles are acquired through processes of socialization as well as individual exploration and

reasoning (Smetana, 2006). By middle adolescence, individuals are likely to hold a mostly

internalized understanding of moral principles within the interpersonal domain. Developments in

social justice importance are likely to take the form of further differentiation and integration (Nucci, 2001). The little existing cross-sectional research that has been conducted supports a model of mean-level stability in SJV importance during adolescence (Krettenauer, 2011). Schwartz (2005), for example, showed that the importance of universalism values (including SJV) was comparable across ages in a sample of 10- to 17-year-olds. Similarly, large, representative samples of adolescents from 30 countries across Europe showed no difference in the importance of universalism values between ages 15-17 and 18-21 (Schwartz, 2012). Lastly, no age differences in the importance of moral values were found between 12-, 14-, 16-, and 19-year-olds in a Canadian sample. A subsample of these adolescents showed no change in value importance over one year (Krettenauer, 2011). One longitudinal study found a decrease in values of care for others, such as SJV, in middle childhood, however, this decline was followed by stability in early adolescence (Cieciuch et al., this volume).

At the same time, stability in mean importance of SJV across adolescence may mask intraindividual developments in value importance, and differences between individuals in these development patterns. The development of SJV importance during adolescence may reflect a process of crystallization of individual differences; while many adolescents are likely to show stability in value importance, others may experience gains or losses (Krettenauer, 2011). Increases and decreases in SJV importance may reflect changes at the individual level, such as the ones derived by changes in circumstances (Bardi, Buchanan, Goodwin, Slabu, & Robinson, 2014; Döring, et al., this volume). However, they are more likely to be reflective of developmental processes, in which adolescents explore their identity, and the society in which they live (Meeus, van de Schoot, Keijsers, Schwartz, & Branje, 2010).

Although intraindividual development and stability in SJV during adolescence have not

been previously studied, such patterns have been found in other aspects of moral development. For example, research has shown that positive youth development (e.g., caring, confidence) developed in four trajectories from early to middle adolescence, including high-stable, medium high-stable, increasing and decreasing trajectories (Zimmerman, Phelps, & Lerner, 2008). Three to four stable and declining developmental trajectories of prosocial behavior were found between early and mid-adolescence (Nantel-Vivier et al., 2009), and high, medium and low developmental trajectories of prosocial behavior were found between early and late-adolescence (Flynn, Ehrenreich, Beron, & Underwood, 2015). Lastly, research has provided evidence for high-stable, increasing, and low stable/decreasing trajectories of moral emotions and cognitions across middle childhood (Malti, Eisenberg, Kim, & Buchmann, 2013; see Malti & Ongley, 2014). The above-mentioned aspects of moral development are conceptually and empirically associated with SJV (Schwartz, 2010; Silfver et al., 2008). We therefore expected to find differential trajectories of social justice value importance between middle adolescence and early adulthood.

The Role of Sympathy and Friendship Quality in Trajectories of Social Justice Values

In the process of moral identity formation, values develop on the basis of individual and socialization antecedents (Daniel, et al.,, 2014; Malti & Buchmann, 2010). Specifically, we hypothesize that intra-individual value development will be associated with other-oriented feelings of sympathy, as well as close friendships.

Sympathy is an emotional response of sorrow or concern for someone else and requires the apprehension or comprehension of another's emotional state or condition. Unlike empathy, sympathy is not necessarily an identical emotional response to what the other person is feeling or is expected to feel. For that reason, sympathy is not likely to lead to personal distress, a negative

affective reaction that is self-focused (Eisenberg, Spinrad, & Morris, 2014). We hypothesized sympathy to be an important motive for holding and abiding by justice principles because adolescents who are more sensitive to the negative effects of injustices on their victims may be more likely to judge these injustices as wrong, and as a result increasingly value justice. For example, an adolescent's sympathy for a person in need may lead to resentment toward the social institution they deem responsible for not meeting this need (Hoffman, 2000). In support of this notion, sympathy has been shown to be concurrently associated with SJV in both adolescence and early adulthood (Silfver et al., 2008). Moreover, sympathy in middle childhood has been shown to predict the importance of SJV in early adolescence (Daniel et al., 2014).

We also investigated the socializing role of perceived quality of friendship with a best friend on trajectories of SJV. According to the social constructivist perspective, individuals learn abstract moral values in the context of cooperative, close relationships (Müller & Carpendale, 2000). Friendship relationships, characterized by egalitarian roles, are especially important for moral development, as they offer opportunities for social perspective-taking, discursive exchanges, negotiations and support (Keller, 1996; Piaget, 1977/1995). Consequently, early adolescents who held a mutual high quality friendship were concurrently more likely to use moral reasoning in their discussion of social and moral dilemmas (McDonald et al., 2014). The qualities of close, trusting relationships may also be related to positive expectations related to interpersonal connectedness, which may include concern for others (Rotenberg, McDonald, & King, 2004). The warmth and support provided by high quality friendship relationships has been found to concurrently foster the motivation to act fairly and morally in a sample of 21-year old Swiss young adults (Malti & Buchmann, 2010). Thus, close friendships may provide a milieu which enables adolescents to regularly and concretely apply their other-orientation in a manner

that they find satisfying (Carlo, Randall, Rotenberg, & Armenta, 2010; Rubin, Malti, &

McDonald, 2012), ultimately facilitating the generalization of their concern for others from those

they know to all individuals (Daniel et al., 2014; Wray-Lake & Syvertsen, 2011).

Taken together, these studies provide support for a link between sympathy and friendship

quality with SJV across adolescence. However, these studies have been primarily concurrent

and have not examined the relations between sympathy and friendship quality with SJV

trajectories, which is noteworthy because conceptually they are deemed essential for the

development of values (Lapsley & Narvaez, 2004).

The Current Study

In summary, the aims of the present study were twofold: first, we aimed to investigate

trajectories of SJV from 15- to 21-years of age. In line with previous cross-sectional research

(Schwartz, 2012), we hypothesized that adolescents will show no mean-level age-related trends

in SJV. Establishing this mean-level stability in a large, representative, longitudinal sample

would extend previous findings. We also extended previous research by using a person-centered

approach, which could identify patterns of development that were previously masked by

aggregating across individuals (Laursen & Hoff, 2006). We expected that individual differences

will be found in the pattern of development (Krettenauer, 2011), forming three developmental

trajectories. Based on studies showing stability in social justice value importance across time

(Schwartz, 2012), we hypothesized that these trajectories will include a large high-stable

trajectory group. At the same time, because moral emotions, cognitions and behaviors, which are

conceptually and empirically associated with SJV (Schwartz, 2010; Silfver et al., 2008), were

found to develop intra-individually over time (Flynn, et al., 2015; Malti et al., 2013), we

hypothesized that smaller increasing and decreasing trajectory groups will be found.

Second, we aimed at examining the role of sympathy and friendship quality at 15 years of age in trajectories of SJV. We assumed that both high levels of sympathy and friendship quality would be associated with a high-stable trajectory group, or an increasing trajectory group. In light of previous findings indicating that sympathy and friendship quality are concurrently associated with justice values (Malti & Buchmann, 2010; Silfver et al., 2008), we also hypothesized that low sympathy and low friendship quality would be associated with a trajectory group with low initial or decreasing levels of SJV.

Previous studies revealed that universalism values, including SJV, are typically more valued by females than males (Schwartz & Rubel-Lifschitz, 2009; Uzefovsky, Döring, & Knafo, this volume). Moreover, sympathy and high friendship quality are more prevalent among girls than boys in adolescence (Malti & Buchmann, 2010; Daniel et al., 2014). We therefore hypothesized that girls would report higher levels of sympathy, friendship quality and SJV, but would not necessarily show different developmental trends than boys. Also, since socioeconomic status (SES) has been associated with higher levels of adolescents' moral emotions and SJV (e.g., Eisenberg, Zhou, & Koller, 2001; Uzefovsky, et al., this volume), we controlled for SES at T1 and sex in all multivariate analyses.

Method

The data were taken from the first three waves of the Swiss Survey of Children and Youth, including representative samples of three age cohorts (6, 15, and 21 years at the first time point) in the German- and French-speaking parts of Switzerland. The present study is based on the data of the 15-year-olds, who were reassessed at ages 18 and 21.

Participants

The sample was drawn from the population by a two-stage process in which 131 communities (divided by community type and size) were first selected. Using information provided by the official community register, residents were then randomly sampled. The response rate was 63% (i.e., based on a number of 1997 initially selected addresses). The final sample consisted of 1,258 adolescents (683 girls) with an average age of 15.30 years ($SD = .21$) at the first assessment (T1). The primary caregiver (89% mothers, henceforth termed "mothers") of 1,056 participants participated at this assessment as well. At the second assessment (T2), 952 (76%) adolescents participated (M age = 18.49, $SD = .22$), while 814 (65%) adolescents (M age = 21.39, $SD = .22$) participated at the third assessment (T3).

We analyzed sample attrition in terms of demographic variables (i.e., sex, socioeconomic status) and primary study variables (i.e., SJV, sympathy, friendship quality). We contrasted adolescents of the T1 sample who participated at T3 ($n = 813$) with the adolescents who did not participate at T3 ($n = 445$). In line with previous samples, (e.g. Carlo, Mestre, Sampler, Tur, & Armenta, 2011), the T3 non-responders had lower levels of SES than the T3 responders $t(1148) = -2.98, p < .01$, Cohen's $d = .18$. In addition, the mothers reported that the T3 non-responders had lower levels of sympathy than the T3 responders $t(1047) = -2.98, p < .01$, Cohen's $d = .19$.

Procedure

In all assessments (in spring 2006, spring 2009, and spring 2012), the adolescents were individually interviewed in a quiet room at their home using a computer-assisted personal interview (CAPI) for about 60 minutes regarding their social and moral development and socialization conditions. At T1, mothers completed a questionnaire regarding their adolescent's social and moral development, returned by mail. Both the participant and the mother supplied written informed consent for participation. The interviews were conducted by 42 interviewers at

T1, 41 at T2, and 37 at T3, recruited from a professional research institute specializing in social science interviews. They had been trained extensively by the research team on interview techniques.

Measures

All of the measures were translated from German to French by bilingual native speakers and then back-translated to correct ambiguous meanings. The adolescents were interviewed in their native language. A pilot study was conducted with 236 15-year-old adolescents to ensure the adequacy of the interview techniques and to test the validity of the vignettes and other items.

Social justice values (SJV). Adolescents' SJV were reported using a three-item scale taken from the German Youth Survey (DJI). The DJI is a representative, large-scale survey; the social justice value scale has shown to be reliable and valid in the DJI (Gille, Sardei-Biermann, Gaiser, & de Rijke, 2006) and our pilot study. The scale asks how important it is to "interact with others in a fair way", "treat all humans equally", and "minimize inequalities between humans." Responses were given on a 10-point Likert scale, ranging from *not important at all* to *extremely important*. Mean scale scores were computed, with higher scores indicating greater importance of SJV. Internal consistency was derived from CFA model parameters, using Hancock and Mueller's (2001) coefficient *H*. The coefficient *H* for the value scale was .68 at T1, .77 at T2, and .77 at T3. We compared a model in which paths were constrained to equality in the three time points to a model in which paths varied freely. The models did not differ significantly χ^2 (6) = 11.47, *p* = .07, indicating invariance in structure across time. We correlated SJV with parent- and teacher-reported prosocial behavior at T1. The correlations within time and across time were positive and significant, ranging between *r* = .09 and *r* = .15, all *p*s < .01, indicating that the scale was valid.

Sympathy. At T1, adolescents' sympathy was assessed via self- and mother-reports. The adolescents' scale consisted of five items from Zhou, Valiente, and Eisenberg (2003). A sample item was "When I see another child who is hurt or upset, I feel sorry for him or her." Items were rated using a 6-point scale ranging from *not at all like me* to *very much like me*. The coefficient *H* for the self-reported sympathy scale was .81.

In addition, at T1, the mothers rated their children's sympathy on three items from Zhou et al. (2003). A sample item was "My child usually feels sorry for other adolescents who are being teased." Items were rated using a 6-point scale ranging from *not at all like my child* to *very much like my child*. The coefficient *H* for the mother-reported sympathy scale was .73.

Perceived quality of friendship. Friendship quality was measured using revised versions of four items from Parker and Asher (1993; see Malti & Buchmann, 2010). Good relationships were characterized as involving help and intimacy. We included two items from the help subscale (e.g., "My friend and I trust each other's advice") and two items from the intimate exchange subscale (e.g., "My friend and I tell each other private things"). The questions were asked only if the participant had a best friend (>99% did). The items were rated on a 6-point scale ranging from *never* to *always*. The coefficient *H* for the friendship quality scale was .81.

Socioeconomic status (SES). The SES of participants' families was measured at T1 using the Socio-Economic Index of Occupational Status (ISEI). This is an international index of occupational prestige that was constructed in order to maximize the role of occupational prestige in mediating the association between education and income (Ganzeboom, De Graaf, & Treiman, 1992). The occupations were coded based on mother-reported information on current or last profession of both caregivers. The mean SES score in the sample was 52.80 (*SD* = 15.78), and the scores ranged between 16 and 88.

Treatment of Missing Data

The percentage of missing data due to attrition was 24% at T2 and 35% at T3. Little's

MCAR test was significant, $\chi^2(43) = 306.81$, $p < .01$, indicating that the variables were not

missing completely at random. We chose to use multiple imputations to account for missing data,

using Mplus version 6.11 (Muthén & Muthén, 2010), as this method is suggested as a golden

standard to unbiased longitudinal analysis (Enders, 2013).

Results

Descriptive Statistics

Table 1 shows the mean scores of the study variables by sex. Independent samples t-tests

indicated that girls assigned higher importance to SJV at T1-T3 than boys, Cohen's d = .45, .48

and .45, respectively. Girls also showed higher sympathy at T1, according to mother- and self-

reports (Cohen's ds = .38 and .54, respectively), and reported higher quality friendships at T1

(Cohen's d = .90).

The correlations among the study variables are presented in Table 2. Stability in SJV was

moderate at first, and increased over time r_{T1-T2}= .27, $p < .01$; r_{T1-T3}= .24, $p < .01$; r_{T2-T3}= .54, $p < $

.01.

Developmental Trajectories of Social Justice Values

To test our hypothesis regarding distinct developmental trajectories of SJV, we ran a

Latent Class Growth Analysis (LCGA; Jung, & Wickrama, 2008) using Mplus 6.11 (Muthén &

Muthén, 2010). The objective of LCGA is to identify homogenous clusters of developmental

trajectories within a sample (Nagin, 1999). We used the Bayesian Information Criterion (*BIC*),

the Vuong-Lo-Mendel-Rubin Likelihood Ratio Test (*LMR-LRT*), and the Bootstrap Likelihood

Ratio Test (*BLRT*) to determine the number of trajectory groups and whether the intercept only

(stable), linear, or quadratic shape fit the data best. The model fit the data best when *BIC* scores

were closest to zero, and when *LMR-LRT* and *BLRT* scores were significant. In addition to the fit

indices, we used parsimony, theoretical justification and interpretability to determine the number

of classes (Jung & Wickrama, 2008).

We first estimated a one class model. An insignificant linear slope indicated that the

intercept only model described the data best, *BIC* = 11155.89, Intercept = 9.05, $p < .01$, slope = -

.03 $p = .71$. Thus, there was no change in value importance over time, across participants.

Second, we estimated two-, three- and four-class models. The fit indices (Table 3) indicated that

the one- and two-class models did not fit the data well. The three- and the four-class models

improved the fit to the data according to two indices each. However, the three-class model

provided the most parsimonious solution. In the three-class model, each class captured a distinct

developmental pattern. In contrast, the four-class model showed two groups starting in initial

moderate levels and decreasing significantly. We therefore chose to use the three-class model.

In Figure 1, the largest group (80%, $n = 1,009$) showed high-stable levels of SJV over

time. The second group (17%, $n = 214$) followed a developmental trajectory characterized by

moderate levels of SJV, which decreased significantly over time. The last and smallest group of

the sample (3%, $n = 34$) followed a trajectory characterized by low initial levels of SJV, but

increased significantly over time. Adding quadratic terms did not improve the model based on

the criteria described above. The mean assignment probabilities were good (.84, .83, .95,

respectively).

SES did not predict SJV at T1, $b = .00$, $p = .33$. Sex predicted the intercept of SJV, $b = -$

.39, $p < .001$, and membership in the moderate-decreasing trajectory group versus the high-stable

trajectory group $b = .78$, $p = .01$, with girls reporting higher initial SJV, and being less likely to

belong to the moderate-decreasing versus the high-stable group. In contrast, sex did not predict the slope of SJV, membership in the low-increasing group versus the high-stable trajectory group, or the low-increasing group versus the moderate-decreasing group.

Sympathy and Friendship Quality as Predictors of Trajectories of Social Justice Values

To test our hypotheses regarding the role of sympathy and friendship quality in SJV group membership, we used multinomial logistic regression models. Specifically, we investigated whether adolescents with high scores in mother- and self-reported sympathy, as well as friendship quality at T1, were overrepresented in specific trajectory groups. The logistic regression coefficients obtained express the log-odds of belonging to a specific trajectory group relative to the reference group of the high-stable SJV (Table 4). In contrasting the high-stable group with the moderate-decreasing group, we found the log-odds of belonging to the latter versus the former decreased by .70 with one unit increase in self-reported sympathy, and by .42 with one unit increase in friendship quality. In contrasting the high-stable and low-increasing groups, we found that the log-odds of belonging to the latter versus the former decreased by .55 with one unit increase in mother-reported sympathy, and by .37 with one unit increase in self-reported sympathy.

Finally, we contrasted the low-increasing and the moderate-decreasing trajectory group (Table 5). We found that the log-odds of belonging to the low-increasing SJV group versus the moderate-decreasing group decreased by .57 with one unit increase in mother-reported sympathy, and by .39 with one unit increase in self-reported sympathy.

All models controlled for participants' SES at T1 and for sex. SES did not predict SJV at T1 $b = -.002$, $p = .21$. Sex did not predict the intercept or slope of social justice value development $b = -.39$, $p = .24$; $b = .04$, $p = .04$, respectively.

Discussion

The present study investigated developmental trajectories of SJV over the course of six years from middle adolescence to early adulthood in a large-scale, representative sample from Switzerland. We also tested the role of sympathy and friendship quality in the development of SJV. Most adolescents (80%) reported high and stable levels of SJV between middle adolescence and early adulthood. These findings extend previous cross-sectional findings by demonstrating stability in values longitudinally. Cieciuch, et al., (this volume) documented increases in intra-individual stability of values between 7 and 13 years of age, which may substantiate the high stability depicted in middle adolescence. Similarly, it has been suggested that the socio-cognitive skills underlying sympathy are fairly developed by mid-adolescence. After this age, sympathy levels may be more related to dispositions than age-related skills (Eisenberg, Cumberland, Guthrie, Murphy, & Shepard, 2005). Value stability may also be explained by the genetic underpinning of values (Uzefovsky et al., this volume). Genetic differences may contribute to stable individual differences in value importance.

Despite the overall stability of SJV, some adolescents reported changes in SJV across time. Specifically, a smaller group of adolescents (17%) showed moderate-decreasing levels of SJV. This may be the result of adolescents' tendency to embrace self-focused, hedonistic values, which stand in opposition to the goals motivating SJV (Schwartz, 1992, 2012). This focus can be evident in high levels of sensation seeking and risk taking found in adolescence (Collado, Felton, MacPherson, & Lejuez, 2014). Due to the value structure, the increased pursuit of self-focused values may be accompanied by a decreased pursuit of SJV (Bardi, Lee, Hofmann-Towfigh, & Soutar, 2009; Cieciuch et al., this volume; Döring et al., this volume). Even to the extent that value priorities show age-specific trends, the pace and timing of any development may differ

among individuals, making some adolescents more likely to show decreases in value importance during late adolescence than others.

Decreases in the importance of SJV during adolescence may also be attributed to a process of context differentiation. Adolescents increasingly judge moral transgressions differently according to their context, using factors such as severity of moral transgressions, level of need, merit, and intentions (Chaparro, Kim, Fernandez, & Malti, 2013; Smetana, 2006). Similarly, adolescents were previously found to increasingly differentiate their value importance across contexts, judging some values as more important in one context than another (Daniel et al., 2012). As a result, adolescents may not value social justice in specific contexts, for example, when disadvantaged persons have caused their own poor conditions. Consequently, some adolescents may interpret this increased contextualization of values as a decrease in value importance. Nevertheless, research indicates that although values are increasingly contextualized, individual differences in values remain meaningful (Daniel, Schiefer, & Knafo, 2012).

Interestingly, we found a very small group of adolescents (3%) who showed low levels of SJV at 15-years of age but increased in value importance until it was comparable to those of the high-stable group, displaying a pattern of late emergence. Related moral skills, like needs-oriented moral reasoning, have been found to increase between middle adolescence and early adulthood. These increases have been attributed to age-related developments in sophisticated perspective taking (Eisenberg, et al., 2005). Additionally, given that SJV are typically promoted by sympathy and moral understanding (Daniel et al., 2014; Döring et al., this volume), it is possible that adolescents who lack sympathy at early ages compensate for it at later ages through the development of cognitive aspects of morality, such as advanced perspective taking.

It is important to note that across trajectory groups and ages, individuals reported high levels of SJV. These results stand in line with previous studies, indicating SJV to be of high importance to individuals across cultures (Schwartz et al., 2012). Despite this consistently high level, individual differences in universalism values have been found to predict attitudes and behaviors in a meaningful way (Schwartz, 2005).

We also examined the role of sympathy and perceived friendship quality in trajectories of SJV. As expected, high levels of self- and mother-reported sympathy in mid-adolescence were associated with lower likelihood of membership in the initially low (and increasing) SJV group, versus the high-stable and the moderate-decreasing SJV groups. These findings are in line with previous related studies which have documented the role of sympathy in the development of prosocial behavior (Eisenberg et al., 2014). They support the notion that sympathy is associated with a commitment to social justice, as individuals who feel concern for the distress of injustice victims are more likely to feel committed to such principles (Hoffman, 2000). At the same time, sympathy in the current study was related to higher initial levels of SJV. It was not related to increases in SJV, as the low-increasing group reported lower levels of sympathy than the high-stable and the moderate-decreasing groups. The finding that sympathy relates to starting levles, but not growth, of SJV, may be due to the extensive development of sympathy during childhood (Eisenberg et al., 2005; Hoffman, 2000).

Interestingly, an association between sympathy and membership in the high-stable versus moderate-decreasing trajectory group was found with self-reported sympathy, but not mother-reported sympathy. However, sympathy predicted membership in the high-stable and moderate-decreasing trajectory groups versus the low-increasing trajectory group. Support children felt from their parents has been found to predict their development of sympathy and moral reasoning

(Malti et al., 2013). It may be that mothers who identify their children as having low sympathy begin to socialize their children toward an other-orientation (Hardy, Padilla-Walker, & Carlo, 2008), a socialization pattern associated with increases in social justice value importance between middle adolescence and early adulthood.

Our findings also revealed that low friendship quality was associated with higher likelihood of inclusion in the moderate-decreasing SJV trajectory group. Thus, friendship quality was associated with changes in SJV, and not only their initial level. Close, egalitarian social interactions are believed to promote the construction of fairness and equality principles, due to the opportunities they offer to cooperate and negotiate (Keller, 1996; Müller & Carpandale, 2000). Furthermore, it may motivate children to increasingly consider the well-being of others and eventually facilitate the generalization of other-oriented concerns to broader social values (Rubin, Bukowski, & Laursen, 2011). Consistent with this idea, previous studies have found that friendship quality was positively associated with moral motivation and reasoning, concurrently (Malti & Buchmann, 2010; McDonald et al., 2013). The current study extended these findings and demonstrates that the lack of a high-quality friendship may be associated with the development of value importance. Adolescents without a very close friendship are exposed to fewer opportunities to develop advanced perspective taking skills (Stiller & Dunbar, 2007), as well as need-based moral reasoning (McDonald et al., 2013), and trust (Rotenberg, Boulton, & Fox, 2005), which in turn may be related to decreases in SJV. Based on the current results, interventions that aim at social justice value promotion during middle adolescence may be advised to focus on opportunities to practice principles of fairness and justice within peer groups.

In line with previous literature (e.g., Malti & Buchmann, 2010) we found that girls showed higher levels of SJV, mother- and self-reported sympathy, and friendship quality, as

compared to boys. These differences may result from social expectations, directing girls to express more caring feelings and behaviors than boys. Interestingly, before controlling for sympathy and friendship quality, we found that boys were more likely to have lower initial levels of SJV, and to decrease in their SJV from middle adolescence to early adulthood. However, no differences between the genders were found in the likelihood of belonging to the low-increasing group versus the high-stable group. These findings are in line with previous cross-sectional findings documenting growing gender differences in adolescents' moral values from early to late adolescence (Schwartz, 2005).

Despite several strengths, this study was not without limitations. First, due to the large-scale nature of the study, our assessment of SJV was limited to three items. However, typical value scales (Schwartz et al., 2001) employ a similar number of items to measure each value. In addition, the SJV scale showed modest reliability. It also showed high means and low standard deviations, limiting the ability to detect strong findings pertaining to inter-individual differences. However, the current measure has been shown to be a reliable and valid measure in previous large-scale longitudinal studies (Gille et al., 2006). Moreover, the SJV scale was equivalent in meaning across time, stable across six years of development, and meaningfully related to external scales, such as parent- and teacher-reported prosocial behavior. In addition, the reliability found here was higher than those found in previous value studies which employed a similar number of items (e.g., Verkasalo, Lönnqvist, Lipsanen, & Helkama, 2009). The typically lower reliabilities of value scales have been attributed to the small number of items, as well as the broadness of the concept (Schwartz et al., 2001). Lastly, previous studies indicate that values of care for others are highly endorsed across cultures and individuals (Schwartz & Bardi, 2001), yet form meaningful individual differences, predictive of behavior (Schwartz, 2010). Second,

most of our measures relied on self-reports, which can be subject to a social desirability bias. However, self-report measures are an invaluable tool for the study of moral development, as it is difficult to observe or gather by other-report. Moreover, social desirability has been shown to not be a bias which interferes with the report of values, but a personality trait that is meaningfully related to value importance (Schwartz, Verkasalo, Antonovsky, & Sagiv, 1997). Third, as previously mentioned, our measure of SJV was abstract, and context-free. Although stable individual differences in values were found across contexts (Daniel et al., 2012), future studies would benefit from measuring changes in value importance across different contexts. Fourth, the current study examined the development of a specific value, SJV. Other values may also show patterns of intra-individual change, that should be studied in the future. Lastly, the current study used Time 1 sympathy and friendship quality to predict value development. Future studies may look at the joint development of the concepts, and inspect whether changes in sympathy and friendship quality were associated with changes in SJV.

Despite these limitations, this study provides fruitful insights into the developmental trajectories of SJV between middle adolescence and early adulthood, and the role of sympathy and friendship quality in differential trajectories of SJV. These findings suggest that mean-level patterns of value development may conceal different trajectories of value development. The results also suggest that individual and social factors may promote value development, and that these elements may exert their influence at different points in development.

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Table 1

Means and Standard Deviations of the Main Study Variables by Sex

Variable	Girls (n = 683)		Boys (n = 574)		t	$p<$	Cohen's d
	M	SD	M	SD			
Social justice values T1[a]	8.90	1.11	8.38	1.19	8.00	.01	0.45
Social justice values T2[a]	8.94	1.02	8.39	1.28	7.53	.01	0.48
Social justice values T3[a]	8.87	0.94	8.38	1.18	6.50	.01	0.45
Mother-reported sympathy T1[b]	5.08	0.91	4.67	1.18	6.32	.01	0.38
Self-reported sympathy T1[b]	4.99	0.70	4.59	0.78	9.50	.01	0.54
Friendship quality T1[c]	5.68	0.51	5.10	0.75	16.24	.01	0.90

Notes. T1 = Time 1. T2 = Time 2. T3 = Time 3. [a] Possible range = 1-10. [b] Possible range = 1-6. [c] Possible range = 1-6.

Table 2

Correlations Matrix of the Study Variables

Variables	1	2	3	4	5	6
1. Social justice values T1[a]	-	.25**	.27**	.20**	.32**	.16**
2. Social justice values T2[a]	.27**	-	.45**	.13**	.18**	.06
3. Social justice values T3[a]	.24**	.54**	-	.15**	.19**	.02
4. Mother-reported sympathy T1	.16**	.15**	.12**	-	.17**	.02
5. Self-reported sympathy T1	.41**	.22**	.23**	.21**	-	.21**
6. Friendship quality T1	.14**	.10*	.02	.08	.24**	-

Notes. Correlations for girls are above the diagonal. Correlations for boys are below the diagonal. T1 = Time 1. T2 = Time 2. T3 = Time 3. * $p < .05$; ** $p < .01$.

Table 3

Fit Indices of Latent Class Growth Analysis Models

Models	*BIC*	*LMR-LRT*	Δ*df*	*p*	*BLRT*	Δ*df*	*p*
Two class	11185.19	447.95	4	<.001	447.95	4	<.001
Three class	11110.99	102.74	4	=.05	102.75	4	=.10
Four class	11020.22	113.43	4	=.14	113.43	4	<.001

Table 4

Sympathy and Friendship Quality as Predictors of Group Membership in the Moderate-

Decreasing and the Low-Increasing versus the High-Stable Group

Variable	Moderate-decreasing group vs. high-stable group		Low-increasing group vs. high-stable group	
	Estimate	SE	Estimate	SE
Intercept	5.54**	1.32	7.13**	2.37
Mother-reported sympathy T1	-0.19	0.16	-0.60**	0.20
Self-reported sympathy T1	-0.35*	0.17	-0.99**	0.34
Friendship quality T1	-0.86**	.22	-0.56	0.35

Notes. The high-stable group was the reference group. $^*p < .05.$ $^{**}p < .01.$

T1 = Time 1. T2 = Time 2. T3 = Time 3.

Table 5

Sympathy and Friendship Quality as Predictors of Group Membership in the Low-Increasing versus the Moderate-Decreasing Group

Variable	Low-increasing group vs. moderate-decreasing group	
	Estimate	SE
Intercept	6.96**	2.03
Mother-reported sympathy T1	-0.56**	0.21
Self-reported sympathy T1	-0.95**	0.31
Friendship quality T1	-0.31	0.30

Notes. The moderate-decreasing group was the reference group. $^{*}p < .05.$ $^{**}p < .01.$
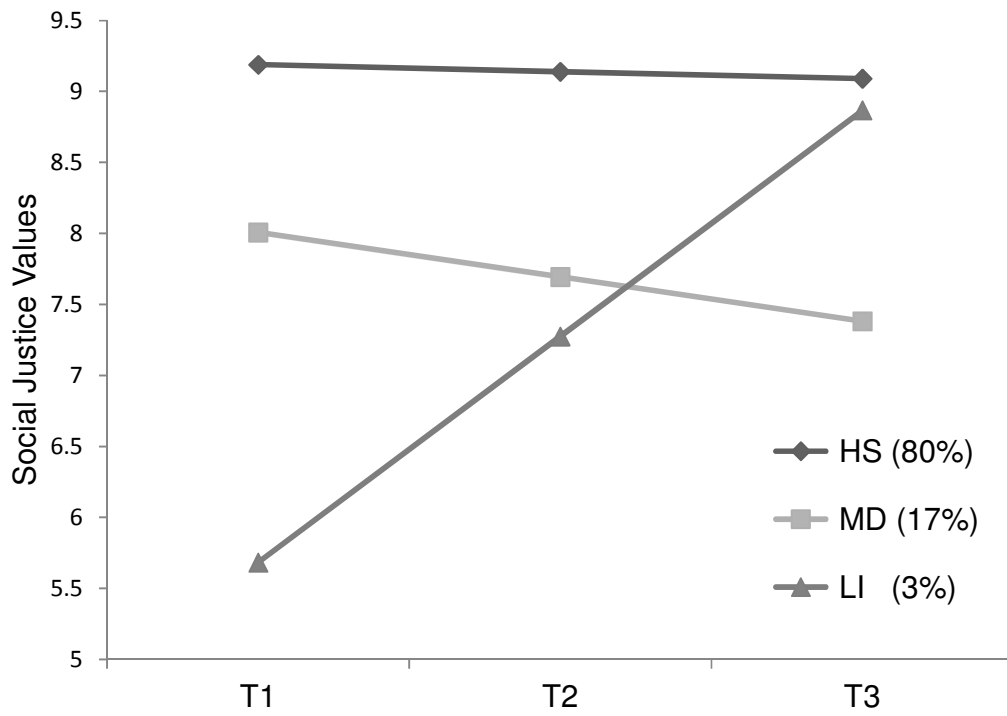
T1 = Time 1. T2 = Time 2. T3 = Time 3.

Figure 1. Fitted mean trajectories for social justice values.

HS = High-stable group. MD = Moderate-decreasing group. LI = Low-increasing group.

T1 = Time 1.   T2 = Time 2.   T3 = Time 3.