

# VU Research Portal

## **Bullying Contextualized: Changing the Group Process by Changing Outsiders' Involvement**

Pronk, J.

2015

### ***document version***

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### ***citation for published version (APA)***

Pronk, J. (2015). *Bullying Contextualized: Changing the Group Process by Changing Outsiders' Involvement*.

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

**Chapter 6**

**Perceived Popularity and Bullying-related Behavior: Longitudinal  
Pathways for Remaining an Outsider and not Becoming a Defender**

*Article in Preparation*

### **Abstract**

Outsiders have a reputation of avoiding involvement in bullying events — despite an antibullying attitude — although they do defend victims sometimes. Defender behavior seems to decrease during adolescence and therefore more knowledge about how outsiders' defender potential could be activated is necessary. As defenders are higher in perceived popularity than outsiders, two studies are presented in which the longitudinal (in)stability of youth's outsider behavior was investigated in relation to their perceived popularity status. In Study 1 (338 Dutch early adolescents; 47% boys;  $M_{\text{age}} = 10.3\text{--}12.3$  years) this was investigated within a stable fourth- through sixth-grade primary school peer group context. In Study 2 (777 Dutch early adolescents; 47% boys;  $M_{\text{age}} = 12.4\text{--}13.4$  years) this was investigated within an unstable primary to secondary school transitional peer group context. The findings suggest that youth's social dominance (i.e., perceived popularity) does not relate to their future tendency to show defender behavior *or* vice versa. Secondly, a lack of social dominance does relate to youth's future tendency to show outsider behavior *and* vice versa. Finally, the findings suggest that at least some outsiders are able to activate their defender potential. The theoretical and practical implications of these findings are discussed.

*Keywords:* Bullying, Outsider Behavior, Defender Potential, Perceived Popularity, Longitudinal

## Introduction

Contemporary research views bullying as the strategic and repeatedly executed, goal-directed harmful behavior of one or more perpetrators (the bully/bullies) towards another relatively vulnerable individual (the victim; Olweus, 2010; Reijntjes et al., 2013; Salmivalli, 2010). Bullying almost always occurs in a peer group context, in which one or more witnesses are present (Atlas & Pepler, 1998; Hawkins, Pepler, & Craig, 2001; O'Connell, Pepler, & Craig, 1999). These witnesses can behave in ways that are either supportive of the bullies' behavior (e.g., assisting in or reinforcing the bullying), supportive of the victim (e.g., helping the victim), or avoidant of the event (e.g., turning their back on the bullying; Salmivalli, 2010). Within this peer group context, bullying does not only have detrimental short and long term effects on the physical and mental health of victims (Hawker & Boulton, 2000; Troop-Gordon, Rudolph, Sugimura, & Little, 2014), but of every witnessing individual (Nishina & Juvonen, 2005).

The importance of the peer group and the influence of the peer group on youth's attitudes and behaviors increases as children move into adolescence (Dishion & Tipsord, 2011; Steinberg & Morris, 2001). At the same time, this developmental period shows an increase in the prevalence of bullying within the peer group (Pellegrini & Long, 2002). The peer group context is therefore an important focal point for bullying research to counteract the detrimental effects of bullying (Salmivalli, 2010). It is becoming increasingly clear that the best way to achieve this is by activating the defender potential of those youth who have an antibullying attitude (Polanin, Espelage, & Pigott, 2012; Pozzoli & Gini, 2010; Pronk, Goossens, Olthof, De Mey, & Willemen, 2013; Salmivalli, Kärnä, & Poskiparta, 2010). Unfortunately, provictim

attitudes and behaviors become less frequent in the peer group during the transition into adolescence, while at the same time remaining avoidant from victimization becomes more frequent (Pozzoli & Gini, 2013; Pozzoli, Gini, & Vieno, 2012). The present two studies therefore focused on these latter two types of behavior, those of *outsiders* who avoid involvement in witnessed victimization and of *defenders* who help victims by indirect means (i.e., consoling victims, warning teachers).

Defender behavior is specifically defined as indirect defending in the present study. The reason is that victimization was found to have its' negative effects on victims because they cannot effectively cope with victimization (Troop-Gordon et al., 2014). Having others helping them by alleviating their negative feelings through indirect defending may therefore be more beneficial for their future mental health than direct defending (e.g., confronting the bullies), which may effectively end the bullying but not victims' suffering. Moreover, outsiders were recently found to be willing and confident in their ability to perform indirect interventions, despite a lower competence in bullying situations (Pronk et al., 2013). This suggests that *if* outsiders decide to start defending victimized classmates, they are most likely to do so by indirect means. Finally, recent studies have suggested that direct defender behaviors may be reserved for probullying students who seek to defend each other (Huitsing & Veenstra, 2012; Huitsing, Snijders, van Duijn, & Veenstra, 2014). In the present two studies we will focus on investigating the developmental (in)stability of outsider behavior in relation to youth's social dominance — their perceived popularity — within the classroom peer group context. The main aim is to investigate whether outsiders' potential to start showing defender behaviors may be longitudinally related to their perceived popularity status.

The focus on outsiders and on finding conditions that may activate their defender potential within the classroom context is based on the following three observations (Pronk et al., 2013). First, classmates — who are almost always present — are more likely to avoid involvement in witnessed victimization like outsiders do, than to intervene on behalf of victims either indirectly or directly (Hawkins et al., 2001; Nishina & Bellmore, 2010). However, when a classmate decides to intervene, these interventions are mostly effective in ending the event and in alleviating victim suffering (Nishina, 2012). Second, approximately one-third of classroom students frequently act as outsiders (Olthof, Goossens, Vermande, Aleva, & Van der Meulen, 2011; Salmivalli, 2010). And third, outsiders — like defenders — have been found to have a prosocial personality (Pronk, Olthof, & Goossens, 2014), an antibullying attitude (Olthof, & Goossens, 2008; Salmivalli, & Voeten, 2004), and the will to intervene on behalf of victims (Pronk et al., 2013). Moreover, prevalence estimates suggest that at present only about one-fifth of classroom students can be considered defenders (Olthof et al., 2011; Salmivalli, 2010). Increasing our knowledge on how outsiders' antibullying attitude can be activated could therefore result in a more dominant within-classroom subgroup of defenders. As the dominant classroom subgroup exerts a strong influence on the behaviors and attitudes of the entire classroom (Salmivalli & Voeten, 2004; Salmivalli, Voeten, & Poskiparta, 2011), knowledge about potential sources for outsider-activation could both alleviate victimization's consequences on victims and change the classroom bullying dynamic.

In light of outsiders' potential value in changing the within-classroom bullying dynamic, an important question regards the stability of outsider behavior over time. Previous research has shown that the behaviors of outsiders and defenders are related, i.e., outsiders

sometimes help victims by indirect means, while defenders sometimes decide to avoid involvement (Goossens, Olthof, & Dekker, 2006; Pronk et al., 2014; Sutton & Smith, 1999). So, while youth can be classified into outsider or defender roles based on concurrent reputational assessments — based on for example percentage criteria (e.g., Goossens et al., 2006) or *z*-score criteria (e.g., Sutton & Smith, 1999) — they do not exclusively act one way (i.e., remain outsiders) or the other (i.e., defend victims). However, while research is starting to disentangle factors differentiating outsiders from defenders at the concurrent level, research is yet to address the longitudinal stability of outsider behavior. How stable is outsider behavior as youth moves from middle childhood into adolescence? And, does a change in this (in)stability coincide with the change in peer group composition as a result of their transition from a primary to a secondary school?

Youth's behavior in the bullying process has been suggested to have a goal-directed and strategic nature. Huitsing et al. (2014) suggested that adolescents' bullying-related behavior is guided by status (i.e., perceived popularity) and affection (i.e., likeability). Olthof et al. (2011) and Reijntjes et al. (2013) suggested that within the bullying context, adolescents reach these goals by using coercion (i.e., antisocial and self-oriented) and/or prosocial (i.e., tit-for-tat cooperative and other-oriented) strategies. While Olthof et al. found that defenders' behavior does not place them in the top positions within classrooms when it comes to social dominance — those were reserved for the bullies — they did have a better social dominance position than other nonbullying classmates. Defenders' helping behavior does earn them a higher perceived popularity, or social dominance position, than it does outsiders. Other studies have shown that defenders are perceived as quite popular by their classmates (Pöyhönen,

Juvonen, & Salmivalli, 2010; Sainio, Veenstra, Huitsing, & Salmivalli, 2011). However, with regards to likeability or affection, defenders have been found to be quite similar to outsiders, i.e., both are liked by classmates (Goossens et al., 2006; Pöyhönen & Salmivalli, 2008). In light of these findings, the present two studies will investigate whether youth's perceived popularity status contributes to explaining the (in)stability of their outsider behavior.

In addition to the differential concurrent link between perceived popularity on the one end and outsider and defender behavior on the other end, there is another reason for studying their potential links at the longitudinal level. Outsiders were found to be low in their ambition to compete for social resources and dominance in their social groups (Olthof et al., 2011). Moreover, outsiders' personality profile suggests that they are socially rather shy (Pronk et al., 2014). Outsiders may therefore not be inclined to defend victimized classmates because it increases their prominence in the peer group, which in turn may accord them a higher perceived popularity status with their peers. Following from this, three hypotheses can be formulated: (1) students' tendency to show outsider behavior and their social dominance position will be negatively related to each other both concurrently and longitudinally; (2) students' tendency to show defender behavior and their social dominance position will be positively related to each other both concurrently and longitudinally; and, (3) a behavioral change from outsider behavior into defender behavior will be mediated by an increase in students' social dominance position. These hypotheses have implications for practice. If social dominance indeed contributes to students' bullying-related reputation longitudinally, interventions that aim at activating outsiders' defender potential should put more emphasis on increasing their assertiveness and on their social and emotional competence. Moreover,

research and practice should then also start focusing on the social drives of outsiders *and* on how outsiders could be stimulated to start showing defender behavior despite their low ambition for social dominance.

In Study 1, a sample of Dutch fourth-grade primary school students were followed for three consecutive years until they reached the sixth-grade (i.e., from the age of 10 through 12), the final grade in Dutch primary schools. As such, Study 1 enabled the investigation of the contribution of students' perceived popularity to the (in)stability of their outsider behavior within a stable peer group context, that is, there was nominator stability. First of all, Structural Equation Modeling (SEM) was used to investigate whether, as would be expected based on previous findings (Olthof et al., 2011; Pöyhönen et al., 2010; Sainio et al., 2011), students' perceived popularity related negatively to their outsider behavior and positively to their defender behavior, irrespective of time point of measurement. Secondly — and following from this — we investigated whether students' perceived popularity did not only concurrently, but also longitudinally relate negatively to their outsider and positively to their defender behavior by using a cross-lagged path model analysis. We expected that students who increased in perceived popularity over time would be more likely to start showing defender behavior, whereas students who did not increase — or who decreased — in perceived popularity would remain showing predominantly outsider behavior.

In Study 2, a sample of Dutch sixth-grade primary school students were followed for two consecutive years until after their transition to a secondary school (i.e., from the age of 12 through 13). The transition from primary to secondary school coincides with considerable changes in classroom peer group context. At the beginning of secondary school, all social

group processes are reassessed and the battle for social dominance will start anew (Pellegrini & Long, 2002). As such, Study 2 enabled the investigation of the (in)stability of students' outsider behavior in the context of a natural experiment, under nominator instability. In Study 2 we investigated whether the findings from Study 1 could be replicated under totally different peer group contextual conditions. Will students' perceived popularity relate negatively to their outsider behavior and positively to defender behavior despite the changing peer group context? Or will students use this transitional period as a means to change their social dominance position by changing from showing outsider behavior to (also) showing defender behavior?

The primary focus of the present study was on investigating the general developmental (in)stability of outsider in relation to youth's perceived popularity status. Therefore, no specific gender-based hypotheses were specified in the models. However, gender has been found to differentially relate to outsider and defender behavior (Goossens et al., 2006; Pronk et al., 2014; Sutton & Smith, 1999) as well as to perceived popularity (LaFontana & Cillessen, 2002; Olthof et al., 2011). Therefore, the potential influence of gender on the hypothesized models for Study 1 and Study 2 will be regarded as well.

## **Study 1**

### **Method**

#### **Participants**

The data were collected in 19 classrooms of 16 Dutch primary schools for three consecutive years between April and June (2006-2008) with the permission of the schools and

classroom teachers. The participants were the fourth-grade students (T1; 2006) from Olthof et al. (2011) for whom data were also collected in fifth-grade (T2; 2007) and in sixth-grade (T3; 2008; see also Reijntjes et al., 2013). In agreement with the schools' preferences and the Faculty's Ethical Review Board guidelines, the parents of the potential participants were sent informed passive consent letters ( $N = 410$ ). The parents could decline their child's participation in the study by signing a preprinted objection note ( $n = 16$ ; 4.0%). The participants themselves were also informed that they could stop participating in the study whenever they wanted to before they started a testing session, but none did. As a result, fourth-grade data were available for 394 early adolescents (T1; 48.7% boys; 84.3% Dutch ethnicity;  $M_{\text{age}} = 10.3$  years,  $SD = 6$  months). Due to attrition at T2 ( $n = 22$ ) and at T3 ( $n = 34$ ), the final sample consisted of 338 students (47% boys). Attrition was mainly due to participants moving to other schools, that did not participate in this study. Students participating in the study at every time point did not significantly differ from those who only participated at T1 and/or T2, with regards to gender, bullying-related behavior, or perceived popularity. As peer reports were used, no missing data points were encountered.

### **Measures**

**Involvement in bullying.** The Bullying Role Nomination Procedure (BRNP; Olthof et al., 2011) was used to measure students' reputation with their classmates as defender or outsider in bullying situations. Participants' received within-classroom outsider and defender nominations were aggregated into behavioral outsider and defender scores. This aggregation procedure is inherent to peer nomination procedures and ascertains reliable assessment of each

participants' behavioral scores (Olweus, 2010; Pellegrini, 2002). Previous studies (Olthof et al., 2011; Pronk et al., 2013; Pronk et al., 2014) have evidenced the validity of the BRNP measures for outsider and defender: (a) BRNP-reported outsiders were found to be low in resource control, dominance, extraversion, and to have a lower competence in bullying situations; (b) BRNP-reported defenders were found to be prosocial and agreeable, to have resource control, and to have competence in bullying situations and intervening in them.

The BRNP starts with the universal definition of bullying (stressing the following three aspects: repetition, intention, and power imbalance; Olweus, 2010; Salmivalli, 2010).

Subsequently participants completed 18 peer nominations to measure their classmates' involvement in bullying, with one item each for outsider behavior ("Some classmates do not want to have anything to do with bullying. They stay away from the bullying, pretend not to see what is going on, or do not take sides with either the bullies or the victim") and for defender behavior ("Some classmates try to help the victim. They tell them not to feel bad about the bullying, try to console them, are nice to them during recess, and or contact the teacher to talk about the bullying"). Participants were left free to nominate as many classmates as they liked, so they could theoretically nominate all classmates by reporting their names from a list containing all classmates' names (self-nominations were excluded from further analyses).

Finally, within-classroom proportion scores for outsider and defender behavior were calculated to correct for unequal numbers of students across classrooms, i.e., participants' received nominations were divided by the total number of within-classroom nominators. The mean scores (including standard deviations) for outsider and defender behavior at all three time points can be found in Table 1 and were comparable to those found in previous studies (Pronk

et al., 2013; Pronk et al., 2014). All proportion scores were normalized per class with SPSS's Rankit normalization transformation procedure, to prevent class-related variance from influencing further data analysis.

Table 1. *Descriptive statistics and correlations for all variables of Study 1 (N = 338).*

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Outsider behavior (T1)	0.12	0.14	-								
2. Defender behavior (T1)	0.13	0.12	.35	-							
3. Perceived popularity (T1)	0.01	0.97	-.29	.11	-						
4. Outsider behavior (T2)	0.11	0.13	.58	.24	-.30	-					
5. Defender behavior (T2)	0.12	0.12	.30	.46	.11	.25	-				
6. Perceived popularity (T2)	0.01	0.97	-.28	.11	.77	-.36	.11	-			
7. Outsider behavior (T3)	0.13	0.17	.51	.14	-.41	.60	.15	-.47	-		
8. Defender behavior (T3)	0.13	0.13	.30	.50	.11	.26	.54	.09	.19	-	
9. Perceived popularity (T3)	-0.03	0.96	-.30	.10	.78	-.38	.08	.81	-.55	.12	-

*Note.* All correlations equal to or greater than .11 have a per test significance level of  $p < .05$ .

**Perceived popularity.** A standard procedure was used to measure students' perceived popularity status with their classmates. Participants completed two peer nominations to assess their perception of the most popular ("Who are the most popular kids in your classroom") and the least popular ("Who are the least popular kids in your classroom") students within their classroom by using similar procedures as for the BRNP. Like in previous studies (e.g., LaFontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998), no definition of popularity was provided to the participants. Within-classroom continuous perceived popularity scores were created by calculating the standardized difference score of participants' standardized most popular and least popular nominations received (LaFontana & Cillessen, 2002; Olthof et al., 2011). This within-classroom standardization procedure was used to correct for unequal numbers of students across classrooms and to prevent class-related variance from influencing

further data analysis. The mean scores (including standard deviations) for perceived popularity at all three time points can be found in Table 1.

### **Procedure**

The data were collected as part of a longitudinal study including, but not limited to, the measures used in the present study. At all three time points, participants were individually interviewed by a research assistant in a separate and quiet room within their school. Before the interviews started, participants were informed that their responses would be treated confidentially and anonymously. Also, the participants were urged not to talk about the testing procedures or their answers with their classmates. The research assistants were trained to follow a written research protocol to make sure all data were collected consistently and correctly.

## **Results and Conclusion**

### **Descriptive statistics**

The means and standard deviations of all study variables, as well as their intercorrelations, can be found in Table 1. As can be seen from Table 1, perceived popularity was significantly positively correlated with defender behavior and significantly negatively correlated with outsider behavior within each time point. Also, outsider and defender behavior were significantly positively correlated within each time point.

Gender differences between the study variables were investigated by means of *t*-tests. Significant gender effects favoring girls were found for both outsider and defender behavior at

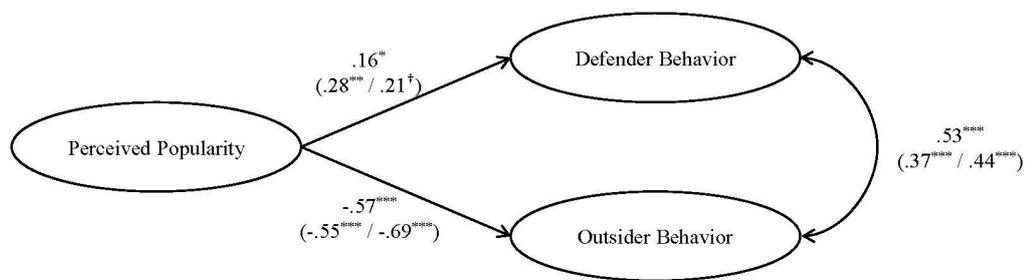
every measured time point, all:  $t(336) \geq 4.58$ ;  $p < .001$ ;  $d \geq .50$ . For perceived popularity no significant gender differences were found (all  $p$ 's  $> .10$ ).

### **Structural relations of perceived popularity with outsider and defender behavior**

As described in the introduction, perceived popularity was expected to relate negatively to outsider behavior and positively to defender behavior at an overall concurrent level. Moreover, it was expected that outsider and defender behavior would be positively correlated. Finally, the differential influence of gender on the hypothesized model was also investigated.

The hypothesized model was investigated by running SEM analyses in LISREL 9.10 with maximum likelihood estimation. Perceived popularity was an independent latent variable identified by the three perceived popularity variables (T1-T3). Outsider and defender behavior were dependent latent variables identified by respectively the three outsider and the three defender behavior variables (T1-T3). The goodness of model fit was evaluated with the chi-square statistic ( $\chi^2$ ), the root mean square error of approximation (RMSEA), the standardized root mean square residuals (SRMR), the comparative fit index (CFI) and the Tucker-Lewis index (TLI). Chi-square difference tests ( $\Delta\chi^2$ ) were used to enable between-model comparisons by testing for each model's contribution to the adjustment of model fit. Nonsignificance of the  $\chi^2$ , a CFI and TLI above .95, and a RMSEA and SRMR below .05, indicate a close model fit (Hu & Bentler, 1999). A CFI and TLI between .90 and .95, and a RMSEA and SRMR between .05 and .08, indicate acceptable model fit. Finally, significance of the  $\Delta\chi^2$  indicates a significant contributions to model fit adjustment.

First, the hypothesized model was run on the whole sample. The model offered an acceptable to close fit to the data,  $\chi^2(24) = 64.85, p < .001$ ; RMSEA = .07; SRMR = .05; CFI = .98; TLI = .97. As can be seen from Figure 1, perceived popularity related negatively to outsider behavior and positively to defender behavior. Moreover, outsider and defender behavior were positively correlated. The hypothesized model explained 33% of the variance in outsider behavior and 3% of the variance in defender behavior.



*Figure 1.* Conceptual final structural model with standardized path coefficients for the relationship of perceived popularity with outsider and defender behavior.  
*Note.* The values in between parentheses indicate the standardized path coefficients for girls (left) and boys (right).  
 \*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$ ; †  $p < .10$ .

Second, a multigroup model was run to investigate whether gender differentially influenced the relationships within the hypothesized model. Specifically, measurement equality across gender was investigated by comparing the fit of a model in which all parameters were constrained to be equal across gender, with the fit of a model in which the parameters were not constrained to be equal across gender. The model comparison indicated that the hypothesized model was gender nonidentical,  $\Delta\chi^2(14) = 24.43, p = .04$ .

Therefore, as a final step, the models were run separately for boys and girls. For girls, the hypothesized model was confirmed,  $\chi^2(24) = 42.28, p = .012$ ; RMSEA = .07; SRMR = .05; CFI = .98; TLI = .97. As can be seen from Figure 1, girls' perceived popularity related negatively to their outsider behavior and positively to their defender behavior. The final model explained 30% of the variance in outsider behavior and 8% of the variance in defender behavior in girls. For boys, the hypothesized model was not completely confirmed,  $\chi^2(24) = 32.12, p = .12$ ; RMSEA = .05; SRMR = .05; CFI = .99; TLI = .99. As can be seen from Figure 1, boys' perceived popularity did relate negatively to their outsider behavior, but the positive relation between perceived popularity and defender behavior was not significant ( $p = .053$ ). The final model explained 48% of the variance in outsider behavior and 4% of the variance in defender behavior in boys.

### **Longitudinal relations of perceived popularity with outsider and defender behavior**

Based on the hypothesized model tested above, perceived popularity was expected to relate negatively to outsider behavior and positively to defender behavior longitudinally (across time points). The hypothesized model was tested by means of a cross-lagged path model analysis in LISREL 9.10, to enable the testing of the directionality of the longitudinal relationship of perceived popularity with outsider and defender behavior. Does perceived popularity predict outsider and defender behavior longitudinally, do outsider and defender behavior predict perceived popularity longitudinally, or do both explain each other?

First, a full cross-lagged path model was run that included perceived popularity, outsider behavior, and defender behavior at all three time points (see Figure 2). Within time

points, the covariances between the variables were estimated. Across time points, autoregressive paths were specified for all variables to estimate their stability coefficients. Also across time points, cross-lagged paths were specified from perceived popularity to outsider and defender behavior and from outsider and defender behavior to perceived popularity, to estimate their longitudinal associations. The full model offered an acceptable to close fit to the data,  $\chi^2(10) = 28.98, p = .001$ ; RMSEA = .08; SRMR = .05; CFI = .99; TLI = .96.

Second, nonsignificant paths were removed from the model to obtain a more simplified and parsimonious model. Specifically, two cross-lagged paths from defender behavior to perceived popularity and two cross-lagged paths from perceived popularity to defender behavior were removed from the model. Also, the cross-lagged path from outsider behavior at T1 to perceived popularity at T2 was removed from the model. This second model offered an acceptable to close fit to the data,  $\chi^2(15) = 38.44, p < .001$ ; RMSEA = .07; SRMR = .05; CFI = .99; TLI = .97. Moreover, this second model did not significantly worsen model fit compared with the full model and offered a more parsimonious model,  $\Delta\chi^2(5) = 9.51, p = .09$ ;  $\Delta$ RMSEA = .01;  $\Delta$ TLI = .01. However, modification indices suggested that adding the cross-lagged paths from outsider behavior at T1 to defender behavior at T2 and from outsider behavior at T2 to defender behavior at T3 would improve model fit. Adding these two cross-lagged paths to the model offered a close fit to the data,  $\chi^2(13) = 24.29, p = .03$ ; RMSEA = .05; SRMR = .04; CFI = .99; TLI = .98. This final model improved model fit compared with the second model,  $\Delta\chi^2(2) = 14.15, p = .001$ ;  $\Delta$ RMSEA = .02;  $\Delta$ SRMR = .01;  $\Delta$ TLI = .01. Moreover, this final model did not significantly worsen model fit compared with the full model and offered a more

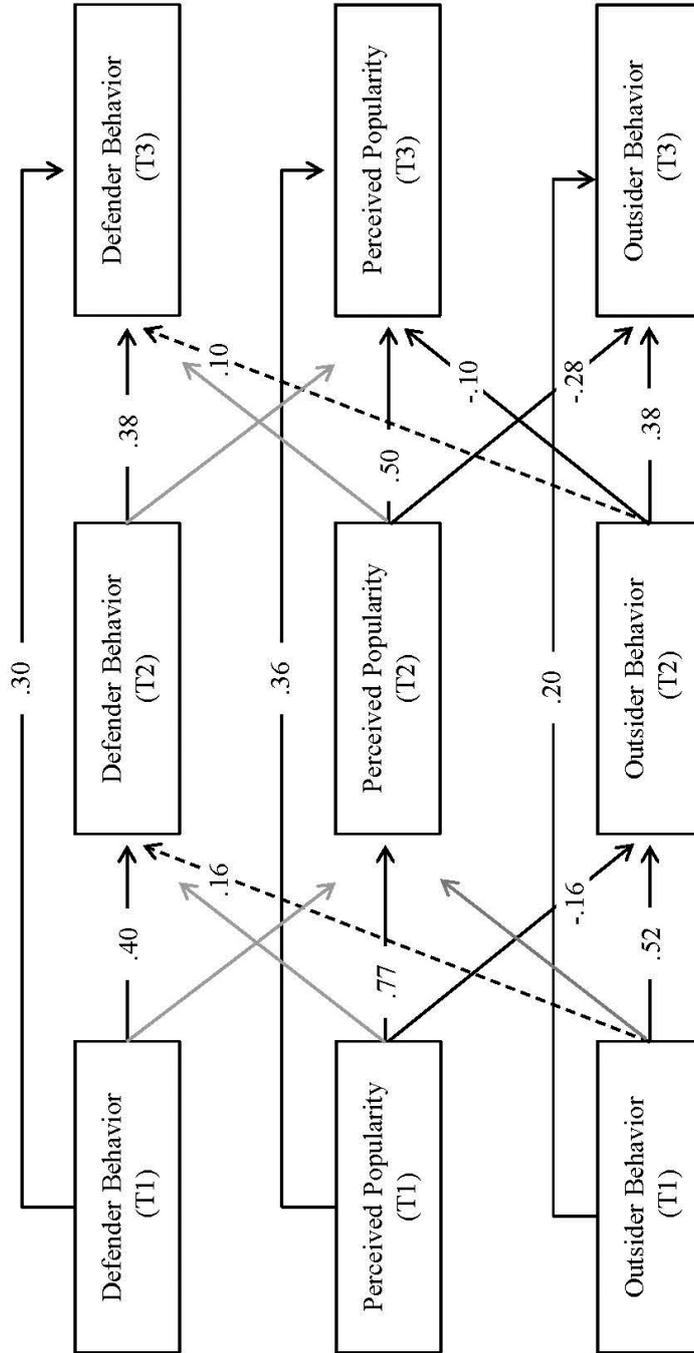


Figure 2. Conceptual final path model with standardized path coefficients for the longitudinal relationship of perceived popularity with outsider and defender behavior from the final three grades in primary school (Study 1).  
 Note. The solid arrows (black and grey) represent the full path model. The grey solid arrows were removed from the final model. The black dashed arrows were added to the final model. All standardized path coefficients shown are significant by at least  $p < .01$ .

parsimonious model,  $\Delta\chi^2(3) = 4.69, p = .20$ ;  $\Delta\text{RMSEA} = .03$ ;  $\Delta\text{SRMR} = .01$ ;  $\Delta\text{TLI} = .02$ . The final model was therefore preferred over the full and second model based on parsimony.

As a final step, a multigroup model was run to investigate whether gender differentially influenced the relationships within the final model. Specifically, measurement equality across gender was investigated, like described above. The model comparison indicated that the final model was gender identical,  $\Delta\chi^2(12) = 15.84, p = .20$ . As gender did not differentially influence the relationships in the final model, the general model presented in Figure 2 will be interpreted. Standard errors of the estimates and within-wave covariances are not reported to not overcomplicate the visual presentation of the final model.

Within-wave covariances were strongest at T1. The within-wave covariances between outsider behavior and perceived popularity were negative (ranging from  $-.25$  to  $-.09$ ), those between defender behavior and perceived popularity were positive (ranging from  $.02$  to  $.09$ ), and those between outsider and defender behavior were positive as well (ranging from  $.03$  to  $.28$ ). The standardized path coefficients in Figure 2 show the following stability effects: (a) defender behavior positively related to defender behavior longitudinally (T1-T2, T1-T3, and T2-T3); (b) perceived popularity positively related to perceived popularity longitudinally (T1-T2, T1-T3, and T2-T3); and (c) outsider behavior positively related to outsider behavior longitudinally (T1-T2, T1-T3, and T2-T3). Figure 2 also shows the following transfer effects: (a) perceived popularity negatively related to outsider behavior longitudinally (T1-T2 and T2-T3); (b) outsider behavior at T2 negatively related to perceived popularity at T3; and (c) outsider behavior positively related to defender behavior (T1-T2 and T2-T3).

### **Conclusion**

The concurrent analysis suggests that girls who were perceived as popular were more likely to show defender behavior and were less likely to show outsider behavior. Boys who were perceived as popular were less likely to show outsider behavior, but boys' perceived popularity status did not relate to their defender behavior. The longitudinal analysis suggests that students who were perceived as popular were not more likely to show future defender behavior, while students who lack in perceived popularity were more likely to show future outsider behavior. Moreover, while students' defender behavior did not seem to help them in obtaining perceived popularity, students' outsider behavior was negatively related to their future perceived popularity status. Finally, at least some students who showed outsider behavior started showing defender behavior at later time points.

### **Study 2**

The findings of Study 1 were obtained under nominator stability, i.e., the same classmates nominated the participants' perceived popularity, outsider and defender behavior, at all three time points. Moreover, participants remained within a relatively stable peer group context throughout Study 1, that is, students were followed from fourth- to sixth-grade, while they remained in the same social classroom group context. In Study 2, we investigated whether the findings obtained in Study 1, also hold under nominator instability. More importantly, we investigated how and whether the longitudinal path model obtained in Study 1 would hold under a sudden change in peer group environment due to participants' transition to a secondary

school, that is, a transitional period after which the peer group processes are being reassessed and after which the struggle for social dominance starts anew.

## Method

### Participants

The data for the first time point were collected in 57 Dutch sixth-grade primary school classrooms over a three year period between April and June (2006-2008; T1) with the permission of the schools and classroom teachers. The data for T1 also included the sixth grade data of the 338 students participating in Study 1. Aggregated sixth-grade data were available for 1214 participants. For 64% of these participants ( $N = 777$ ), data could also be collected between 2007 and 2009 after their transition to the first year of secondary school (i.e., seventh-grade). The data were aggregated into a second time point (T2). To ensure that the social group processes in participants' new classroom context were stabilized, data were collected at the end of the school year (between April and June). Attrition after the transition was largely due to not receiving permission for data collection from the participants' secondary schools or classroom teachers. Classroom compositions change substantially in the Netherlands when students transition to a secondary school. Secondary schools are usually located in different buildings and many participants were reallocated to new classrooms with few or none of their old classmates. Therefore, T2 data were collected for all T1 participants (i.e., the active participants) *and* for their new secondary school classmates ( $N = 6758$ ; 48.1% boys; 324 Dutch secondary school classrooms). Collecting data in the entire secondary school classrooms was necessary to ensure that the peer observations for the bullying-related behaviors and for perceived popularity of the active participants were obtained reliably. Recruitment procedures

were the same as for Study 1. The final sample consisted of 777 participants (47% boys; 87.2% Dutch ethnicity;  $M_{\text{age-T1}} = 12.4$  years,  $SD = 7$  months). The students participating in the study at both time points did not significantly differ from those who only participated at T1, with regards to gender, involvement in bullying, or perceived popularity. As peer reports were used, no missing data points were encountered.

### Measures

**Involvement in bullying.** The BRNP procedures used were the same as for Study 1, with one exception. At T2, an internet version of the BRNP (Pronk et al., 2013) was used and participants could nominate a maximum of ten classmates by indicating their names in drop-down lists including the names of all classmates. The mean scores (including standard deviations) for outsider and defender behavior at both time points (see Table 2) were comparable to those found in Study 1 and in previous studies using an internet version of the BRNP (Pronk et al., 2013; Pronk et al., 2014).

Table 2. *Descriptive statistics and correlations for all variables of Study 2 (N = 777).*

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.
1. Outsider behavior (T1)	0.12	0.16	-					
2. Defender behavior (T1)	0.13	0.13	.31	-				
3. Perceived popularity (T1)	0.03	0.95	-.44	.13	-			
4. Outsider behavior (T2)	0.11	0.13	.46	.19	-.30	-		
5. Defender behavior (T2)	0.09	0.10	.22	.36	.02	.29	-	
6. Perceived popularity (T2)	0.04	1.00	-.40	.05	.64	-.46	.02	-

*Note.* Gender was coded as 0 (Girls) and 1 (Boys). All correlations equal to or greater than .08 have a per test significance level of  $p < .05$ .

**Perceived popularity.** The procedures used were the same as for Study 1, with one exception. At T2, an internet procedure — with the same nomination procedure as for the

BRNP — was used. The mean scores (including standard deviations) for perceived popularity at both time points can be found in Table 2.

### **Procedure**

The data were collected as part of a longitudinal study including, but not limited to, the measures used in the present study. Testing procedures at T1 were the same as for Study 1. At T2 — due to the large increase in number of participants — the questionnaires were administered via internet-linked computers. Participants received a login name and password to enter a website, to ensure correct, anonymous and confidential data collection. Participants were tested in quiet classrooms in their own school building under the guidance of two trained research assistants who were unfamiliar with the participants and who followed a written research protocol to ensure consistent data collection. Participants were seated in such ways that they could not talk with each other or see each other's responses. Before the testing session started, the participants were informed that their responses would be treated both anonymously and confidentially.

## **Results and Conclusion**

### **Descriptive statistics**

The means and standard deviations of all study variables, as well as their intercorrelations, can be found in Table 2. As can be seen from Table 2, perceived popularity was significantly negatively correlated with outsider behavior at both time points, but only significantly positively correlated with defender behavior at T1. Also, outsider and defender behavior were significantly positively correlated at both time points.

Gender differences between the study variables were investigated by means of *t*-tests. Significant gender effects favoring girls were found for both outsider behavior and defender behavior at both measured time point, all:  $t(775) \geq 8.20$ ;  $p < .001$ ;  $d \geq .59$ . For perceived popularity no significant gender differences were found (all  $p$ 's  $> .10$ ).

### **Longitudinal relations of perceived popularity with outsider and defender behavior**

The longitudinal relationship of perceived popularity with outsider and defender behavior was investigated using the same path model procedures as used in Study 1. The hypothesized model was similar to the model used in Study 1 with one exception. In Study 2 the full model already included the path to investigate students' tendency to use the transitional period between primary and secondary school to change their behavior unrelated to perceived popularity, i.e., to start showing defender behavior.

First, a full cross-lagged path model was run that included perceived popularity, outsider behavior, and defender behavior at both time points (see Figure 3). Within time points, the covariances between the variables were estimated. Across time points, autoregressive paths were specified for all variables to estimate their stability coefficients. Also across time points, cross-lagged paths were specified from perceived popularity to outsider and defender behavior, from outsider and defender behavior to perceived popularity, and from outsider to defender behavior, to estimate their longitudinal associations. The full model offered a mixed fit to the data,  $\chi^2(1) = 7.99$ ,  $p = .005$ ; RMSEA = .10; SRMR = .02; CFI = 1.00; TLI = .91. Specifically, the RMSEA and TLI estimates were unsatisfactory.

Second, nonsignificant paths were removed from the model to obtain a more simplified and parsimonious model. Specifically, the cross-lagged paths from defender behavior to

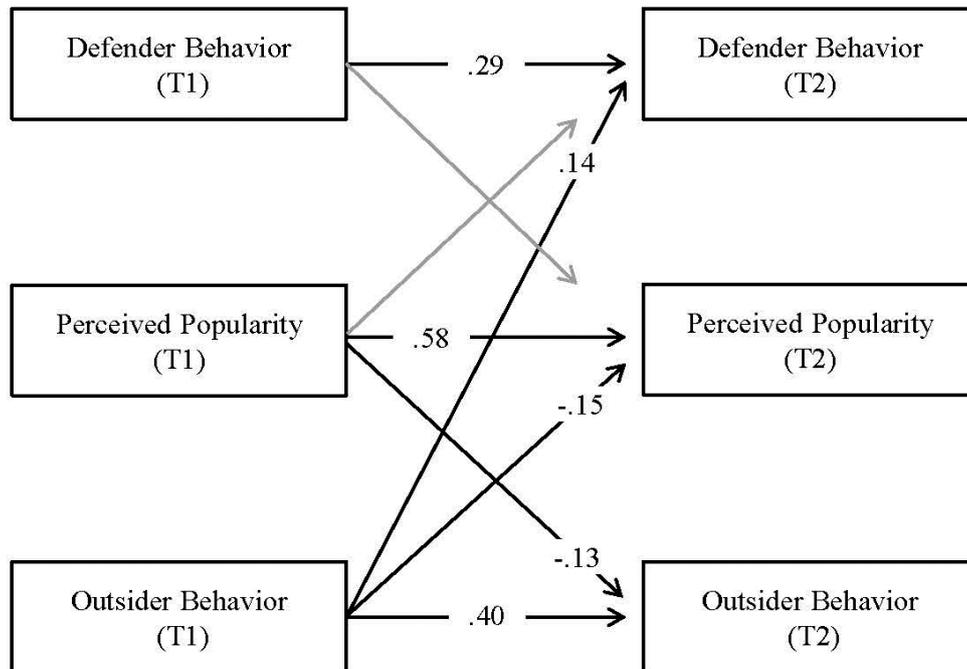


Figure 3. Conceptual final path model with standardized path coefficients for the longitudinal relationship of perceived popularity with outsider and defender behavior during the transition from primary to secondary school (Study 2).

Note. All arrows together represent the full path model. The grey arrows were removed from the final model. All standardized path coefficients shown are significant by at least  $p < .01$ .

perceived popularity and from perceived popularity to defender behavior were removed from the model. This final model offered an acceptable to close fit to the data,  $\chi^2(3) = 13.37, p = .004$ ; RMSEA = .07; SRMR = .02; CFI = .99; TLI = .96. Moreover, the final model did not significantly worsen model fit compared with the full model in terms of chi-square differences,  $\Delta\chi^2(2) = 9.51, p = .07$ ; and was more parsimonious,  $\Delta$ RMSEA = .03;  $\Delta$ TLI = .05 despite a slightly lower CFI in the final model,  $\Delta$ CFI = -.01. The final model was therefore preferred over the full model based on parsimony.

Finally, a multigroup model was run to investigate whether gender differentially influenced the relationships within the final model. Specifically, measurement equality across gender was investigated as described in Study 1. Model comparison indicated that the final model was gender identical,  $\Delta\chi^2(9) = 15.54, p = .08$ . As gender did not differentially influence the relationships in the final model, the general model presented in Figure 3 will be interpreted. Standard errors of the estimates and within-wave covariances are not reported to not overcomplicate the visual presentation of the final model.

All within-wave covariances were strongest at T2. The within-wave covariances between outsider behavior and perceived popularity were negative (-.36 at T1 and -.39 at T2), those between outsider and defender behavior were positive (.24 at T1 and .19 at T2), and those between defender behavior and perceived popularity were positive or mildly negative (.11 at T1 and -.01 at T2). The standardized path coefficients in Figure 3 show the following stability effects: (a) defender behavior at T1 positively related to defender behavior at T2; (b) perceived popularity at T1 positively related to perceived popularity at T2; and (c) outsider behavior at T1 positively related to outsider behavior at T2. Figure 3 also shows the following transfer effects: (a) perceived popularity at T1 negatively related to outsider behavior at T2; (b) outsider behavior at T1 negatively related to perceived popularity at T2; and (c) outsider behavior at T1 positively related to defender behavior at T2.

### **Conclusion**

The findings from Study 2 support the findings from Study 1, despite the difficult transitional period from a more strongly controlled primary school setting with a stable peer group context to a less controlled secondary school setting with a changed peer group context.

Like in Study 1, no longitudinal relationships between perceived popularity and defender behavior were found, while perceived popularity and outsider behavior did show negative longitudinal relationships. Moreover, the results also suggest that at least some students who showed outsider behavior before the transition to secondary school, started showing defender behavior in secondary school.

### **General Discussion**

During adolescence, bullying behaviors become more accepted and normative within the classroom peer group (Pellegrini & Long, 2002). Youth becomes less likely to defend and help victimized classmates by alleviating the negative consequences of victimization (Goossens et al., 2006) and more likely to remain outsiders when they witness victimization (Pozzoli & Gini, 2013; Pozzoli et al., 2012). While outsiders do not act as defenders — or at least not often — they are prosocial individuals (Pronk et al., 2014) who are attitudinally against bullying (Olthof, & Goossens, 2008; Salmivalli, & Voeten, 2004) and who claim to be willing to intervene on behalf of victims (Pronk et al., 2013). As defender behavior is positively related to a socially dominant peer group status, the present study investigated whether students' tendency to show outsider behavior — and the behavioral change from outsider into defender behavior — may be longitudinally related to their perceived popularity status.

First of all, consistent with expectation and with previous studies (Pöyhönen et al., 2010; Sainio et al., 2011), the present findings show that at the concurrent level students' perceived popularity status related negatively to their tendency to show outsider behavior and positively to their tendency to show defender behavior. However, for boys, perceived

popularity did not relate positively — or at least not significantly — to their tendency to show defender behavior. Still, for girls, perceived popularity only explained a relatively small proportion of the total behavioral variance in defender behavior as well. In comparison, perceived unpopularity explained a substantial proportion of the total behavioral variance in outsider behavior, that is, almost one-third of the variance for girls and almost half of the variance for boys. It seems as if within the peer group, outsider behavior is viewed as an undesirable response to witnessing others being victimized for both boys and girls. As such, students who are viewed by their classmates as frequently showing outsider behavior will also be bestowed with a low social dominance position by these same classmates and vice versa.

Secondly, the longitudinal findings from both studies suggest a negative spiral is at work between students' outsider behavior and their perceived popularity status. Students who show outsider behavior were more likely to be perceived as unpopular by their classmates a year later and students who were perceived as unpopular were more likely to show outsider behavior a year later. The peer group context seems to be influencing students' tendency to show outsider behavior. This negative spiral between perceived popularity and students' tendency to show outsider behavior may be the result of a low desire to obtain social dominance within the peer group (Olthof et al., 2011). Of course, the directionality of this relation may also work the other way around. Outsiders may have stopped desiring a socially dominant position as a result of the negative spiral between their perceived popularity and their behavior, which may be due to their socially, emotionally, and behaviorally inhibitive personality profile (Pronk et al., 2014).

Also, the change in peer group context after the secondary school transitional period did not seem to affect the negative spiral. Negative links between perceived popularity and

outsider behavior were found regardless of the (in)stability of the peer group context (i.e., in Study 1 *and* in Study 2). Moreover, outsider behavior was its own strongest positive predictor. This suggests that once students' reputation within their peer group is set — both with regards to involvement in bullying and with regards to social dominance — it is difficult to transcend this reputation, even when the peer group context changes. In fact, it may even be hypothesized that outsiders have a preference for the status quo and therefore strive to keep a low social profile. Compared to defenders, outsiders were already found to lack in social competence (Pozzoli & Gini, 2010), social self-efficacy (Gini, Albiero, Benelli, & Altoè 2008), and extraversion (Pronk et al., 2014). It was suggested that these factors negatively affected their skills to intervene on behalf of victims (Pronk et al., 2013). The present findings suggest that outsiders' lower social dominance position — which may be related to their lower social qualities — could be both the cause and effect of their tendency to avoid involvement in bullying events.

With regards to defender behavior and perceived popularity, no longitudinal links were found. Students' tendency to show defender behavior does not seem to earn them a socially dominant position and being socially dominant does not make someone more likely to show defender behavior. As defender behavior did strongly predict future defender behavior, it seems that students' tendency to show defender behavior is related to something else than to a drive for social dominance. It could be that students decide to defend victims of bullying because it is the morally right action in response to witnessed victimization (Forsberg, Thornberg, & Samuelsson, 2014), rather than being driven by some social dominance related strategy. However, based on Huitsing et al. (2014) it could also be hypothesized that students' tendency to show defender behavior may be driven by a need for affection (i.e., likeability)

rather than by a need for status (i.e., popularity). In line with this idea, both outsiders and defenders have been found to be relatively well-liked by their classmates (Goossens et al., 2006; Pöyhönen & Salmivalli, 2008).

The hypothesized drive for affection or being liked by peers may also explain the link that was found between outsider behavior and defender behavior a year later in the present study, as this behavioral change was unrelated to students' perceived popularity status. The findings of both studies suggest that at least some students who show outsider behavior were able to transcend their social dominance position. Outsiders were already found to have a prosocial nature like defenders (Pronk et al., 2014), a will to perform provictim interventions (Pronk et al., 2013) and a desire to be liked by their defender classmates (Olthof & Goossens, 2008). It may be that the outsiders who start showing defender behavior do so because they start copying the behaviors of their more popular and prosocially active — like-minded — defender classmates in an attempt to increase the closeness between them. Based on Olthof and Goossens (2008), at least outsider girls could be expected to use some kind of a behavioral copying strategy.

This line of reasoning would be consistent with the principles of the information goods theory (Henrich & Gil-White, 2001). The information goods theory suggests that within social groups not the dominant individuals (i.e., those who use force and intimidation), but rather the prestigious individuals (i.e., those who are valued and looked up to) earn both affection and a positive peer status (Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013; Henrich & Gil-White, 2001). While force and intimidation may help bullies to obtain the alpha positions within their social groups (Olthof et al., 2011; Reijntjes et al., 2013), their behavior does not accord them a positive peer status in terms of affection, like defenders (Goossens et al., 2006;

Olthof & Goossens, 2008; Pöyhönen & Salmivalli, 2008; Sainio et al., 2011). According to the information goods theory, the behaviors of the prestigious peer group members are infocopied (i.e., learned and imitated from the source via proximity) by those who seek closeness to them (Cheng et al., 2013; Henrich & Gil-White, 2001). This may have been the strategy that was used by those students in the present study who were able to change from primarily showing outsider behavior to (also) showing defender behaviors. It may therefore be a worthwhile strategy for practice to promote the connectedness between outsiders and defenders by increasing peer interaction between them and as such increasing outsiders' possibilities to infocopy and learn from defenders' behaviors. For example, intervention programs that aim at promoting prosocial intervention behaviors in outsiders, may need to strategically include defenders in their training groups and use them as role models for behavioral change.

The present study has some limitations. First of all, as both students' bullying-related behavior and their perceived popularity were measured through peer reports, it is possible that shared method variance has influenced the findings. However, as peer reports for perceived popularity and bullying-related behavior are based on the aggregated observations of all classroom members, we believe they provide a reliable assessment of students' actual perceived popularity status and for their tendency to show outsider and defender behavior. Moreover, peers spend most of their time interacting with peers during adolescence (Dishion & Tipsord, 2011; Steinberg & Morris, 2001). Self-reports on the other end may result in biased measures due to social desirability in responding and teacher reports may result in biased measures due to the underreporting of participants' actual behavior. These aspects together strengthen our belief that peers are the most reliable source for reporting on each other's behaviors and popularity status. Nevertheless, future studies that use different informants for

bullying related behaviors and perceived popularity are needed to strengthen the present findings. Another limitation of the present study was that although we used longitudinal analyses, we cannot pinpoint whether outsider behavior or a lack of perceived popularity is the starting point of the negative spiral. The findings suggest that both mutually negatively influence each other and Figure 2 suggests that in the present study perceived popularity (or lack thereof) is the starting point of the negative spiral. However, outsider behavior did already occur at T1 in Study 1 and it is therefore likely that the process has an earlier onset (i.e., before fourth-grade). Similarly, it may also be that another factor starts the process, that is, a third variable — like dominance ambition — may influence students' social dominance or may influence their tendency to show outsider behavior. Future studies with a more extensive longitudinal design are necessary to shed light on this issue.

Notwithstanding these limitations, to our knowledge, this study was the first to use a longitudinal design to investigate the role of the social peer group context on students' propensity to show outsider and defender behaviors. Contemporary research views outsiders as the bullying subgroup that can have a strong influence on changing the within-classroom bullying dynamic (Polanin et al., 2012; Pozzoli & Gini, 2010; Pronk et al., 2013; Salmivalli et al., 2010). Moreover, this study investigated the longitudinal (in)stability of students' outsider behavior in two types of social contexts, that is, a stable primary school peer group context and an unstable secondary school transitional peer group context. As such, it was possible to investigate whether a sudden change in peer group composition would influence the longitudinal (in)stability of students' outsider behavior. While the results were similar regardless of peer group (in)stability, Study 2 offered an elegant replication of Study 1, thereby strengthening the present findings.

In sum, the present findings suggest that students' tendency to show outsider behavior and their social dominance position mutually influence each other negatively. As defender behaviors become less frequent during adolescence (Goossens et al., 2006) the negative spiral between students' outsider behavior and their social dominance position needs to be broken if we want to activate their defender potential. From a peer group perspective, intervention programs may be able to achieve this by using defenders as role models for behavioral change. Finally, the findings suggest that at least some students are able to transcend their outsider behavior niche, which strengthens the assumption that outsiders have the potential to change the bullying dynamic and can increase victims' support system.

