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CHAPTER 2

Empirical test of bullies' status goals: Assessing direct goals, aggression, and prestige

Abstract

The literature suggests that status goals are one of the driving motivations behind bullying behavior, yet this conjecture has rarely if ever been examined empirically. This study assessed status goals in three ways, using dyadic network analysis to analyze the relations and goals among 10-11 and 14-15 year olds in 22 school classes (N boys = 225; N girls = 277). As a validation bullies were contrasted with victims. Bullies had direct status goals (measured with the Interpersonal Goal Inventory for Children) and showed dominance as measured with proactive aggression. Moreover, as predicted from a goal-perspective, bullying behavior was related to prestige in terms of perceived popularity. In contrast, victims lacked status goals, were only reactively aggressive, and low on prestige. That being popular is not the same as being liked could be shown by the fact that bullies were just as rejected as victims by their classmates. Eighth grade bullies had more direct status goals than fourth grade bullies, possibly indicating that striving for the popularity component of status increases in early adolescence.

2.1 Introduction

Why do some children and adolescents bully? Recently, it has been suggested that bullies' behavior might best be explained from the point of view of their goals (Pellegrini & Long, 2002; Salmivalli & Peets, 2008; Veenstra et al., 2007). Attaining status in a group is considered a universal goal (see Barkow, 1989), but in the course of evolution, status on the basis of dominance (achieved by eliciting coercion) was probably somewhat sidelined without being replaced by the quest for prestige (achieved by eliciting admiration, see also Gilbert and McGuire, 1998). The idea is that bullies have a stronger status need (combining dominance and prestige) than most others and particularly than the victims they choose to bully. So far, the evidence of status-goal-driven behavior of bullies is indirect (Pellegrini & Long 2002; Veenstra et al., 2007). This study aims to address the question of status goals of bullies in three different ways. First, we assess the status goal directly in bullies and in victims. Then we will turn to looking at the means for achieving a dominance status goal. Aggression may be merely reactive, but if it is related to a status goal, it should be proactive for bullies. Finally, we will look at the possible result of pursuing a status goal: popularity. Does bullying really contribute to one's status in the class, i.e. is the result in some way linked to the presumed goal?

Bullying

We know that in many elementary and secondary school classes there exists a certain social hierarchy that is partly the result of aggressing against peers. When this concerns repetitive acts of aggression, the term bullying is appropriate. More specifically, bullying is defined as repeatedly aggressive acts in which one or more persons intend to harm or disturb another person physically, verbally, or psychologically (Olweus, 1978). Bullying often happens in stable environments, like school classes, where victims have no possibility of escaping their bullies (Salmivalli, Lagerspetz, Bjorkqvist, Osterman & Kaukiainen, 1996). Although bullying can be the result of being provoked by the victim, some bullies openly admit that they want to be dominant and achieve social status (Boulton & Underwood, 1992). This implies that some children and adolescents have stronger status goals than others which may have an effect on their behavior. Therefore, bullying other children should yield a highly valued outcome, in the sense of actually dominating others or being regarded as popular (Hawley, 2003; Lindenberg, 1996; 2001). However, we are aware of the fact that bullying does not only result from goals, but may also be related to other factors, such as temperament or parenting (see also Veenstra et al., 2005).

Goals

A goal perspective has proven useful in developmental psychology (see for example Ojanen, Grönroos, & Salmivalli, 2005; Pellegrini & Long, 2002; Veenstra et al., 2007). However, there are also problems when using this perspective; goals cannot easily be inferred from behavior. For example, antisocial children do not openly endorse antisocial goals (see

Renshaw & Asher, 1983). Also, it is not entirely clear whether children are aware of their goals, so simply asking them is not a sinecure either. Of particular interest is the fact that goals may have some trait-like characteristic but also are sensitive to changing situations (see Erdley & Asher, 1996; Crick & Dodge, 1994; Ojanen et al., 2007). This makes direct assessment even more difficult. For all these reasons, we decided to combine direct and indirect goal assessment for the same dataset. The direct assessment in our case will tap into more trait-like goals (a stronger status goal). However, this does not link the goal to situations of bullying. If such a link exists, it should be revealed by the bully's disposition to use unprovoked aggression for dominance. Thus, bullying should be linked to proactive (i.e. dominance directed), rather than reactive aggression. This will show indeed whether there is the willingness to use a coercive tool of showing oneself superior. In terms of a goal perspective, this use should satisfy the domination part of the status goal. But what about the prestige part? Can we establish a link of bullying to the achievement of prestige as well? If so, we should find that it pays to bully in terms of prestige. These are the questions we will deal with in this research.

Direct Status Goals

In the first step we look at the status goals of bullies. These directly assessed status goals are asked from a person in a way that taps into both dominance (being heard by or being visible to others) and prestige (respect), though we are aware of other goals that adolescents have as well (e.g. to goal to perform academically well; Kiefer & Ryan, 2008). A way to validate the direct goal assessment of bullies is to assess the goals of victims as well. The imbalance of power between bullies and victims makes it likely that they strive for different goals. If bullies really want to dominate they should select victims who are easier to dominate, e.g., who do not have strong status goals, lack certain skills, or do not have the dispositions to fight back. Whereas bullies are suggested to have the goal to dominate and being visible, victims might seek harm avoidance (Veenstra et al., 2007). Though bullies and victims may not endorse status goals to an equal extent, victims are known to be submissive (Schwartz, Dodge & Coie, 1993), and are thus likely to be low on status goals. Therefore, we contrast the goals of bullies and victims. We hypothesize that status goals are more strongly related to being a bully than to being a victim.

Inferring Status Goals from the Means Being Used

Next to the direct assessment of status goals, we link bullies' status goals to dominance. Often two forms of aggression are distinguished: proactive (or instrumental) and reactive aggression (Dodge & Coie, 1987; Little, Henrich, Jones, & Hawley, 2003; Poulin & Boivin, 2000; Raine et al., 2006). Proactive aggression is deliberate behavior directed towards an expected outcome, i.e. it is a means to an end. Reactive aggression, on the other hand, is an angry, defensive response to frustration or provocation (Crick & Dodge, 1996), meaning that harmful behavior from a peer can lead to an impulsive or aimless retaliation. That the two forms of aggression are distinct becomes apparent in their different correlates. Reactive aggression is associated with a variety of social and behavioral difficulties (see Card & Little,

2006), whereas proactive aggression is often but not always negatively perceived by peers, and not related to negative peer-status and victimization (Poulin & Boivin, 2000).

Here, proactive aggression is seen as an indicator of dominance goals. This is supported by the finding that bullies dominate others by the use of aggression (Pakaslahti & Keltikangas-Jarvinen, 1998; Pellegrini, Bartini, & Brooks, 1999; Vaillancourt & Hymel, 2006). Salmivalli, Ojanen, Haanpää, and Peets (2005), found that children with a positive self-perception and a negative peer-perception (referring to the dismissing peer-relational schema) scored high on dominance goals, which was in turn positively related to proactive aggression and negatively to both prosocial behavior and withdrawal. In addition, agentic goals (i.e. attaching importance to power, status, and dominance, see Locke, 2003) were associated with higher levels of aggression (Ojanen et al., 2005). Pellegrini (2002) further suggested that aggression is, amongst others, related to dominance when new group structures are formed (e.g., when children are in a transition from elementary to secondary school). These findings make it likely that proactive aggression is a telltale sign of status goals.

Contrasting bullies and victims can help us again to test the hypothesis. If proactive aggression is a means to dominate, victims should be less proactive and much more reactive in their aggression than bullies. Victims find themselves more often in threatening situations where retaliation is a possible reaction to bullying. In short, we hypothesize that being a bully is positively related to proactive aggression. In contrast, being a victim is not related to proactive aggression and positively to reactive aggression.

Inferring Status Goals from Popularity

Our third way to assess the status goals of bullies is to look at the presumed result of bullying in terms of prestige. It is useful to distinguish 'perceived popularity' and 'sociometric status' or 'social preference' (see Farmer, Estell, Bishop, O'Neal, & Cairns, 2003; Little, Brauner, Jones, Nock, & Hawley, 2003; Prinstein & Cillessen, 2003). Sociometric status (referring to being liked) has traditionally been used to identify the high- and low-status youth. However, this is not a good measure of popularity when one wants to focus on respect in a group. A recent study showed that perceived popularity, assessed by asking students to directly nominate the most popular classmates, was more strongly linked to perceptions of power than social preference (Vaillancourt & Hymel, 2006). Many individuals who are perceived by classmates as being popular, are not necessarily well liked. The reverse is also true. Children can be liked, but perceived as unpopular. The distinction is shown in the different correlates. For instance, aggression, and especially reactive aggression, is likely to lead to social rejection (Cillessen & Mayeux, 2004; Pakaslahti & Keltikangas-Jarvinen, 1998), whereas both relational and more proactive aggression are likely to predict perceived popularity (Cillessen & Mayeux, 2004).

In short, bullies are likely to be perceived as popular, but not as socially preferred. Again, we can add an extra validation to this hypothesis by looking at victims. If bullies want to gain popularity by bullying other children, then they must pick on children who are neither

liked nor popular. In other words, bullying must be selective in order to serve the prestige goal (see also Veenstra et al., 2007). We formulate this in the following hypothesis: being a bully is positively related to being perceived as popular, whereas being a victim is negatively related to being perceived as popular. Both being a bully or a victim is negatively related to social preference. It might be that in preadolescence children want to affiliate with the socially preferred children, whereas in adolescence they want to affiliate with those are popular and visible in the classroom. In addition, based on Pellegrini (2002), one might expect that status goals are more pronounced in the adolescent cohort than in the preadolescent cohort. Adolescents attach more value to goals in order to gain access to the other sex, whereas preadolescents are not yet involved in romantic relationships as much as adolescents and may thus have fewer status goals. In the following, we will test these three ways of assessing a status goal in bullies. We adopted a dyadic analysis approach to analyze our data to the full extent.

2.2. Method

Sample

The data were collected in a small-sized town, Kaarina (ca. 20.000 inhabitants), in the southwest of Finland. The fourth and eighth grade children from all the elementary and middle schools in Kaarina filled in a questionnaire concerning bullying, aggression, self- and peer-perception, self-efficacy, goals, and status. Questions derived from existing scales were translated into Finnish. Respondents consisted of two age groups: thirteen fourth grade (10-11 year olds) school classes with a mean age of 10.6 years ($SD = .37$) and twelve eighth grade (14-15 year olds) school classes with a mean age of 14.6 years ($SD = .30$). Peer nomination data were collected separately for boys and girls; therefore, we only analyzed same-sex dyads. As is common in Finland for school surveys, passive consent by the parents was given for participation. First, the research assistants informed the children about the procedure. Subsequently, the children filled in the questionnaire in the classrooms, while being supervised by two research assistants. During the completion of the questionnaire it was made sure that the children were not influenced by their peers. Questions were based on self- and peer-reports. Peer-reports were focused on same-sex reports.

The original sample constituted 25 boy and 25 girl networks with sizes ranging from two to nineteen. Classrooms containing less than eight same-sex children were left out of the analyses, leaving a sample of 21 boy networks ($N=251$), consisting of twelve fourth grades and nine eighth grades, and 22 girl networks ($N=277$), consisting of twelve fourth grades and ten eighth grades.

Measures

Peer-observed networks. Bully-victim dyads were identified with the question ‘who bullies whom?’. Participants were instructed to draw arrows between two columns containing the names of all same-sex children in a class to denote the bullies and their victims. These arrows

represented the ties in the bully-victim networks. We measured the degree of victimization by summing up the number of ties directed towards a person; the bullying degree was measured by summing up the ties directed away from a person. We then used a cutting point value of two to exclude the dyads that were only observed once. For the construction of the matrices the Ucinet 6.0 program for social network analysis was used (Borgatti, Everett, & Freeman, 2002). Matrices were constructed per classroom and sex. Therefore, analyses were conducted separately for boys and girls and for both age groups. In the boy sample, there were some victims who also bullied. This goes against the clear identification of being either a bully or a victim and therefore we left these cases ($N = 26$) out of the analyses. These boys were denoted as clear bully-victims, meaning that their bullying and victimization degrees were of equal size. Among girls there were no bully-victims. The final sample thus consisted of 225 boys and 277 girls.

Direct status goals. For the direct measurement of status goals we used the Interpersonal Goals Inventory for Children (IGI-C), based on self-reports (Ojanen et al., 2005). The IGI-C distinguishes between agentic and communal goals. We used the subscale agentic goals ($\alpha = .68$), consisting of three items relating to status goals. Children were asked how important they find it that 'you appear self-confident and make an impression on the others', 'the others think you are smart', and 'the others respect and admire you'. The scores of the individual items ranged from 0 (of no importance to me at all) to 3 (very important to me).

Reactive and proactive aggression. The scales for reactive aggression (RA) ($\alpha = .85$) and proactive aggression (PA) ($\alpha = .83$) were developed by Dodge and Coie (1987). RA consists of the items 'when teased fights back', 'blames other in fights', and 'overreacts angrily to accidents' and PA consists of the items 'uses physical force to dominate', 'gets others to gang up on a peer', and 'threatens and bullies others'. The scores on these items were based on same-sex peer-reports. The number of times someone was mentioned by peers as being aggressive were counted and then divided by the possible number of nominations. The scores could range from 0 to 3. Confirmatory factor analysis in Mplus (Múthen & Múthen, 2004) showed a sufficient fit of the two-factor model, $\chi^2(8) = 119.54$, $p < .01$, CFI = .95, RMSEA < .01, thereby showing that it was useful to distinguish between proactive and reactive aggression.

Social preference and perceived popularity. Social preference was measured using peer nominations of liked-most and liked-least peers; perceived popularity was assessed by asking participants to directly identify the "popular" members of their grade (Cillessen & Mayeux, 2004). Children were allowed to nominate up to three same-sex peers for each question. Subsequently, nominations were summed up and divided by the number of possible nominations. To measure social preference we subtracted the dislike nominations from the like nominations. The same was done for perceived popularity, where children had to nominate the most and least popular peers.

The p2 model

In our study we deal with bully-victim dyads. Because the data were collected in a dyadic manner, we needed a program that could handle these data properly by taking into account the

fact that some bullies harass/target several victims and some victims are being bullied by several bullies (i.e. the dependencies between the nominations). In addition, we need to consider the fact that we analyze school classes. In other words, we have to control for the dependencies between the dyads and the dependencies of dyads within the same classroom. Logistic regression analysis is unable to do this. We used the $p2$ model, which was developed to explain the relationships between actors in a network, using characteristics of nominators, targets, and dyads (Van Duijn, Snijders & Zijlstra, 2004; see also: Baerveldt, Van Duijn, Vermeij & Van Hemert, 2004). The $p2$ model can be regarded as a logistic regression model for dyads and complements the well-known Social Relations Model (Kenny & La Voie, 1984; Snijders & Kenny, 1999), which is suited for continuous dyadic outcomes. The multilevel version of $p2$ made it also possible to analyze multiple networks at the same time, which increases the power to detect possible actor or dyadic covariate effects (Zijlstra, Van Duijn & Snijders, 2006). Another great advantage of the $p2$ model was the fact that no arbitrary choices had to be made about who were bullies and victims. For example, both a child who bullied three peers and another child who bullied six peers are taken into account only once in a normal multilevel regression, whereas $p2$ was able to take, respectively, the three and six separate relations into account. Unlike a univariate logistic regression model the $p2$ model controls for dependencies in the network data, namely differences in nominating (nominator variance) and receiving nominations (target variance), reciprocity, and density between the networks. We will shortly explain these network parameters.

Density. The density of the network indicates the quantity of relations in the network. In our case the density effect points to the likelihood of the presence of a bully-victim relationship in a given network.

Reciprocity. The reciprocity parameter indicates the mutuality of the relations in the network. A positive effect thus means that ties between individuals are likely to be reciprocated.

Nominator and target variance. The nominator variance parameter displays the amount of variation between bullies in their bullying behavior. The target variance parameter on the other hand, displays the variation between victims in the number of bullies that bully them. The covariance between the two gives us information about the co-occurrence of being nominated as a bully and as a victim.

Our data had a three-level structure: Networks of school classes (level 3) with 528 individuals (level 2) and their ties to classmates (level 1). Because individuals can have more than one relation inside the classroom, the $p2$ model controls for the fact that several ties can be embedded in one individual.

2.3. Results

First, we calculated descriptive results and Pearson correlations between the dependent and independent variables. Next to that, independent samples t-tests were performed to see whether there were any significant sex differences. Subsequently, bully-victims dyads were

analyzed with the $p2$ model for network data. The independent variables in the $p2$ model were standardized by gender.

Table 2.1 Sex Differences in Bullying and Victimization and All Individual Characteristics

	Sample			Boys			Girls			Differences		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	<i>t</i>	<i>df</i> ^a	<i>p</i>
Status goals	514	1.47	0.67	241	1.52	.64	273	1.43	.70	1.49	511	.14
Reactive aggression	562	0.36	0.51	264	.42	.50	298	.32	.50	2.99	540	<.01
Proactive aggression	562	0.29	0.45	264	.38	.49	298	.22	.41	4.12	517	<.01
Social preference	562	0.08	0.35	264	.10	.38	298	.06	.31	1.46	510	.15
Perceived popularity	562	0.02	0.44	264	.02	.42	298	.02	.45	0.26	558	.80
Victimization degree	543	0.07	0.15	253	.11	.19	290	.03	.07	5.76	313	<.01
Bullying degree	543	0.07	0.14	253	.11	.18	290	.03	.08	6.31	340	<.01

^aEqual variances are not assumed.

Descriptive Statistics

Table 2.1 shows the means, standard deviations, and sex differences of the different variables. There was no difference in importance attached to direct status goals between boys and girls. Scores for both reactive and proactive aggression were significantly higher for boys than for girls, as were the bullying and victimization degrees. For both status measures, the means were quite similar. In addition, we conducted independent sample *t*-tests on all variables for grade level, but the means of the two grades did not differ significantly. Table 2.2 shows the correlations between the used variables, separated by grade level. We saw that the bullying degree correlated negatively with both social status measures among eighth graders. The bullying and victimization degrees also correlated positively with sex, indicating that boys scored higher on both. Among eighth graders status goals correlated positively with both proactive aggression ($r = .15$) and bullying degree ($r = .14$). Furthermore, perceived popularity was positively associated with proactive aggression and, in the eighth grade, with reactive aggression, whereas social preference was negatively associated with both forms of aggression. Although the *t*-tests showed no grade differences, Table 2.2 shows that reactive and proactive aggression were associated among boys in the eighth grade, but not in the fourth grade. Moreover, perceived popularity and reactive aggression were positively associated in the eighth, but not in the fourth grade. Last, the association between victimization degree and proactive aggression was strongest in the fourth grade.

P2 Analyses

We took a two-step approach to analyzing our dyadic data with the $p2$ model; first, we estimated the parameters separately per hypothesis, that is, in the first set we only included

direct status goals, in the second set only the aggression variables, and in the third set only the social status variables. In addition, we estimated a full model containing all five target (victim) and nominator (bully) covariates (Tables 2.5 and 2.6). In the full models we also presented information about random and network effects. All analyses were conducted separately for sex and grade, because the children were only allowed to make same-gender classroom nominations.

Table 2.2 *Correlations between Sex and the Independent and Dependent Variables*

	1	2	3	4	5	6	7	8
1. Sex	-	-.02	.03	.06	.07	-.02	.18**	.17**
2. Status goals	.18**	-	.10	.10	-.04	.11	.07	.02
3. Reactive aggression	.21**	.10	-	.87**	-.42**	.03	.64**	.23**
4. Proactive aggression	.26**	.15*	.86**	-	-.35**	.13*	.63**	.17**
5. Social preference	.08	-.10	-.24**	-.19**	-	.51**	-.23**	-.37**
6. Perceived popularity	.03	.05	.27**	.30**	.44**	-	.06	-.30**
7. Victimization degree	.30**	.03	.27**	.29**	-.13	.06	-	.17**
7. Bullying degree	.21**	.14*	.23**	.18**	-.34**	-.22**	.25**	-

Note. Grade 4 (M age = 10.6) Above and Grade 8 (M age = 14.6) Below the Diagonal.

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

Model 1 of Table 2.3 and 2.4 show the result of direct status goals on being a bully or a victim for boys and girls respectively. In our first hypothesis we stated that status goals would be more strongly positive related to being a bully than to being a victim. As Table 2.3 and 2.4 show, this was the case only for eighth grade boys. Eighth grade male bullies attached importance to direct status goals (.99, $p < .05$), whereas male victims attached significantly less importance to these goals (-1.58, $p < .05$). Eighth grade female victims attached less importance to direct status goals (-1.06, $p < .05$).

Secondly, in Model 2 we tested our second hypothesis that being a bully would be positively related to proactive aggression. In contrast, being a victim would not be related to proactive aggression and positively related to reactive aggression. Our results were partly in line with this hypothesis though they included marginally significant outcomes. Both fourth and eighth grade male bullies displayed proactive aggression (respectively, 3.18, $p < .05$ and 2.29, $p < .10$), whereas victims do not. The results for reactive aggression were non-significant. For girls, bullies scored only significantly higher on reactive (2.44, $p < .05$) and not on proactive aggression than victims.

Thirdly, Model 3 presents the results regarding the third hypothesis about popularity and social preference. We argued that being a bully would be positively related to prestige (i.e., being perceived as popular), whereas being a victim would be negatively related to being perceived as popular. In addition, both being a bully or a victim would be negatively related to social preference. For boys, we found that bullies were typically low on social preference, as were fourth grade victims (-2.94, $p < .05$). However, we did not find the expected positive link between bullying and perceived popularity. The results on social status for fourth grade female

bullies were clear: they are low on social preference (-5.43, $p < .05$), but are perceived as popular (2.06, $p < .05$). This is in contrast to female victims, who were perceived as unpopular and, in the case of eighth grade victims, significantly rejected by their peers (-3.11, $p < .05$).

Table 2.3 *Nominator and Target Effects of the Multilevel ρ^2 Model for Observed Boy Networks (separately estimated effects)*

	Nominator (bully)		Target (victim)	
	Posterior Mean	S.E.	Posterior Mean	S.E.
<i>Fourth grade</i>				
Model 1				
Status goals	.44	.41	.05	.41
Model 2				
Proactive aggression	3.18**	.90	-1.88	1.51
Reactive aggression	.38	.72	1.54	1.29
Model 3				
Social preference	-2.38†	1.29	-2.94*	1.24
Perceived popularity	1.61	1.23	-1.19	1.11
<i>Eighth grade</i>				
Model 1				
Status goals	.99*	.52	-1.58*	.64
Model 2				
Proactive aggression	2.29†	1.72	.92	1.54
Reactive aggression	-.57	1.57	.76	1.56
Model 3				
Social preference	-2.43*	1.27	-2.58	2.46
Perceived popularity	1.46	1.15	-1.01	2.46

† $p < .10$; * $p < .05$; ** $p < .01$

Table 2.5 and 2.6 show the results of the full models for boys and girls. To account for the fact that dyads are embedded in larger networks, we control for two network effects: density and reciprocity. Density is the number of ties in a network and in this case it gives information about the likelihood of the presence of bully-victim relations in the classrooms. The negative density effect shows that a bully-victim relation between children is less likely than the lack of such a relation. The reciprocity effect tells whether ties between actors are mutual. There was a significant positive reciprocity effect for boys, implying that male bullies were likely to be bullied by other classmates as well. For girls there was no significant reciprocity.

The random effects show that there was significant variation among participants in being bullies or victims. Random effects indicated significant differences between participants in bullying (nominator variance) and being victimized (target variance) in boys and girls. The negative nominator-target covariance among fourth grade boys means that participants who bullied a lot were not likely to be victimized, and vice versa. Class variances showed no significant differences between classes. The effects for direct status goals remained in the full models for eighth graders and showed that whereas direct status goals were associated with being a bully it was unrelated to being victims. The full models also showed that girls' direct status goals were negatively related to being a fourth grade victims (-1.20, $p < .05$). Moreover, social preference and proactive aggression were negatively related to being a victim among eighth grade girls. However, the effect for proactive aggression was marginal.

Table 2.4 Nominator and Target Effects of the Multilevel p2 Model for Observed Girl Networks (separately estimated effects)

	Nominator (bully)		Target (victim)	
	Posterior Mean	S.E.	Posterior Mean	S.E.
<i>Fourth grade</i>				
Model 1				
Status goals	.21	.93	-.92	.71
Model 2				
Proactive aggression	1.42	1.47	-3.46	2.16
Reactive aggression	2.44*	1.12	2.45	1.56
Model 3				
Social preference	-5.43**	1.18	-.51	1.39
Perceived popularity	2.06**	.76	-1.78*	.94
<i>Eighth grade</i>				
Model 1				
Status goals	.80	.55	-1.06*	.50
Model 2				
Proactive aggression	.49	2.00	-8.37	7.06
Reactive aggression	1.26	1.67	-4.06†	2.30
Model 3				
Social preference	-.47	1.35	-3.11*	1.30
Perceived popularity	1.05	.75	-2.05*	.95

† $p < .10$; * $p < .05$; ** $p < .01$

Table 2.5 Nominator and Target Effects of the Multilevel p2 Model for Observed Boy Networks

Effects	Fourth grade		Eighth grade	
	Posterior mean	S.E.	Posterior mean	S.E.
Network effects				
Density	-7.90**	1.43	-8.07**	2.15
Reciprocity	4.28**	1.86	4.08**	1.62
Random effects				
Nominator variance	2.66**	1.68	4.91**	2.67
Target variance	4.80**	2.11	14.16**	6.70
Nominator-target variance	-2.92**	1.75	-3.27	3.01
Class variance	.61	.53	.92	1.15
Nominator (bully) covariates				
Status goals	.26	.36	1.24*	.60
Proactive aggression	3.85**	1.03	.70	.85
Reactive aggression	.44	.90	.10	.91
Social preference	1.76	1.67	-1.89	1.28
Perceived popularity	-1.69	1.28	.98	1.03
Target (victim) covariates				
Status goals	.06	.38	-2.15*	.90
Proactive aggression	-1.56	1.36	1.45	1.37
Reactive aggression	-0.24	1.07	1.11	1.10
Social preference	-5.15**	2.22	-2.29	2.00
Perceived popularity	.04	1.55	-.90	1.62

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

2.4. Discussion

At beginning of this paper we asked: ‘why do some children bully their peers whereas others do not?’ We tried to answer this question by linking status goals, dominant behavior and prestige to bullying. As a test of our theorizing and hypotheses, we contrasted bullies’ goals with those of victims. Furthermore, we assessed status goals in three different ways; we focused on the direct status goals, the means for achieving status goals and the result of pursuing status goals.

Table 2.6 *Nominator and Target Effects of the Multilevel p2 Model for Observed Girl Networks*

Effects	Fourth grade		Eighth grade	
	Posterior mean	S.E.	Posterior mean	S.E.
Network effects				
Density	-7.88**	1.57	-10.49**	1.88
Reciprocity	-2.32	5.31	-.97	5.62
Random effects				
Nominator variance	3.01**	1.60	6.22**	4.22
Target variance	5.08**	2.93	6.37**	4.41
Nominator-target variance	-3.18	2.36	-4.79	2.52
Class variance	.95	1.19	2.47	4.39
Nominator (bully) covariates				
Status goals	-.71	.73	1.23†	.70
Proactive aggression	.32	2.10	.37	2.25
Reactive aggression	3.00†	1.78	1.43	2.26
Social preference	-1.94	1.77	.64	2.16
Perceived popularity	2.00	1.54	.12	1.15
Target (victim) covariates				
Status goals	-1.20*	.63	-.53	.92
Proactive aggression	-2.59	2.78	-7.12†	4.25
Reactive aggression	2.68	2.04	-.70	3.16
Social preference	-.16	2.00	-4.97**	2.08
Perceived popularity	-2.22	1.40	-.83	1.33

† $p < .10$; * $p < .05$; ** $p < .01$

Our separate analyses (Table 2.3 and 2.4) showed that among eighth graders directly measured status goals are important predictors of being a bully, except for 8th grade females. Status goals also made a clear distinction between male bullies and victims; while high status goals was associated with being a bully, it was not associated with being a victim. The lack of direct status goals among fourth graders is consistent with other studies (Pellegrini & Long, 2002; Ojanen et al., 2005). This might suggest that as bullies become adolescents, status goals (and especially the prestige component) become more important, whereas in childhood bullying is less strategic and immature. Thus, the striving for status increases when children are coming closer to adolescence. According to Pellegrini (2002) 14- to 15-year olds attach more value to status goals to gain access to heterosexual relationships. For 10- to 11-year olds heterosexual relationships are not yet of great interest. Ojanen and colleagues (Ojanen et al., 2007; 2005), who used an extended agentic score, found that boys had more agentic goals than girls. In

contrast, our descriptive analyses did not show differences between boys and girls on direct status goals.

In 4th grade boys, we found evidence for the assumption that proactive aggression is used as a means of fulfilling status goals. High proactive aggression was related to being a male bully, which is in line with earlier research (see Camodeca & Goossens, 2005; Dodge & Coie, 1987; Salmivalli & Nieminen, 2002). Among female bullies this was less obvious; status goals were unrelated to being a bully and in the 4th grade sample reactive aggression was associated with being a bully. There are several reasons that might account for these differences between boys and girls. It might be that the items in our reactive aggressive scale are more applicable to girls, whereas the proactive items are more applicable to boys. Another explanation for the difference between boys and girls is that boys are more focused on dominating (Pellegrini & Long, 2002) and thus use more proactive aggression as a means to achieve this. Next to that, the proactive aggression items we used had a more physical than relational nature.

The third way to assess status goals was to look at a goal-related outcome of bullying behavior by measuring prestige. Popularity was associated with being a bully for 4th grade girls but not with being a victim among 4th and 8th grade girls. These findings are in line with previous studies (e.g., Vaillancourt & Hymel, 2006). For boys we found no popularity effects. In the case of 4th grade girls, rejection by classmates and perceived popularity were associated with being a bully. For this group of females bullying seems mostly aimed at prestige, but at the cost of social preference. On the other hand, in both grades, low perceived popularity was associated with being a female victim. In addition, for 8th grade girls, low social preference was related to being a victim. The latter has also been shown by previous research (e.g., Salmivalli et al., 1996; Veenstra et al., 2005; 2007). This provides some evidence for the idea that they are easy targets for bullies' domination, because it is likely that their victimization elicits little support from peers. Bullies do not have to fear retaliation, because many victims are rejected or unpopular (Hodges, Malone, & Perry, 1997; Perry, Kusel, & Perry, 1988). Again, as mentioned above, 8th graders may be better able to focus on victims with low status goals than 4th graders.

All in all, the results showed the importance of focusing on status goals when it comes to bullying. Though the results were sometimes ambiguous, in general bullying can be regarded as intentional, in particular among adolescent bullies. Some bullies are able to dominate their weaker classmates. That is, they select victims who are low on social status and who refrain from using proactive aggression. On top of that, in the case of 4th grade females, bullies receive prestige from their classmates which reinforces their bullying behavior. For the sake of intervention, the results suggest that teachers should stress that realizing status goals by bullying is undesirable. As a solution, schools and teachers should provide different ways for these youths to fulfill their status goals (e.g., sport activities, group work). Moreover, bullying others is self-reinforcing because it can in some groups lead to dominating peers and prestige, which a bully can regard as a confirmation of his or her behavior. As a consequence, without intervention, bullies are likely to continue their behavior, which may lead to deviance and

delinquency in (late) adolescence and even further in life. Even more important would be interventions for the ones who are victimized. In two of the four groups, these youths are heavily rejected and harassed by their classmates, which increases the risk of unhealthy effects for further development (Kaltiala-Heino, Rimpela, Rantanen, Rimpela, 2000; Kumpulainen & Rasanen, 2000; Loeber & Dishion, 1983; Nansel et al., 2001; 2004; Olweus, 1993a; 1993b; 1993c). For them, having status goals may be encouraged.

Another issue we want to stress is that more attention needs to be drawn to dyadic and group processes (Rodkin & Berger, 2008; see also Haynie et al., 2001). Bullies are often being assisted and reinforced by the group (Salmivalli et al., 1996, O'Connell, Pepler and Craig, 1999) and in general they interact in large groups (Boulton & Underwood, 1992). Especially as children come closer to adolescence and status goals become more apparent, the groups in which they are embedded will likely provide aggressive youths with social status. Indeed, Rodkin, Farmer, Pearl, and Van Acker (2006) have shown that nominating the 'cool' children in the class is heavily dependent on the groups in which these children are embedded. Therefore, one way to study bullying relations more thoroughly is to include friendship or affiliation groups in order to control for popularity nominations within the bully's friendship group (see also Ellis & Zarbatany, 2007).

Limitations

Clearly, our study has some limitations. One limitation was the way the data were gathered. As only same-sex nominations were available, we could only use same-sex networks in the analyses, which meant that bullying relationships between boys and girls were excluded. This is an omission, because bully-victim relations are likely to occur in same-sex as well as opposite-sex dyads (Veenstra et al., 2007). One additional concern is that this decreased the size of our sample. Considering that bullying is a relatively uncommon behavior, increasing the sample size provides more powerful analyses.

A second limitation resulting from the peer-reported data was the difference in reporting between classmates. Some children drew very dense bully-victim networks, while others in the same class stated that there was no bullying at all. These contrasting perceptions made us treat the data with care. We avoided most of this problem by leaving the bully relations that were only perceived by one person in the classroom out of the analyses. Another drawback with peer reported data on bully-victim relations is that more subtle forms of bullying are unlikely to be perceived by the class, and thereby one misses out on some victims. In return, we suffered less from underreporting of bullies (Monks & Smith, 2006). Compared to the method of self-proclaimed bullies and victims (Veenstra et al., 2007), both have their advantages and shortcomings.

Another limitation was that our study provides no information about bully-victims. We excluded bully-victims because they probably have neither a clear dominance nor a clear harm avoidance goal. Nonetheless, future research may want to look at the motivations behind bullying behavior in bully-victims.

The last limitation concerned the assessment of proactive aggression, consisting of three items. One item asked 'who bullies and threatens others', which caused an overlap between the dependent and the independent variable (the bullying degree). This partly caused high correlations between proactive aggression and the bullying degree. However, this overlap is not as problematic as it may seem. Correlations showed that reactive aggression also correlated highly positively with the bullying degree, indicating that the overlapping proactively aggressive item is not solely responsible for the high correlation, but that aggression itself is. Furthermore, we did not want to leave out any items of these existing scales, for it would decrease the comparability of this study with other studies on aggression.

The greatest strength of our study was the assessment of status goals in three ways. We were able to show that attaching importance to dominance status goals was to some extent associated with being a bully. Furthermore, it is tempting to speculate that bullies use proactive aggression as a means for achieving dominance status goals. In addition, pursuing status goals via bullying may contribute to popularity but at the cost of low social preference. As a test, we contrasted these findings to those of victims. Another strong point of this study lies in the method of analyzing. We analyzed the individual effects, while taking the dyadic nature of all bullying relations and the fact that these relations were nested within school classes into account. Analyzing all these data in one model increased the power to detect nominator and target effects (Zijlstra et al., 2006). Hence, we were able to show differences in status goals between bullies and victims.

To conclude, this study has cleared a part of the path towards studying bullying and status goals in a dyadic manner. Future studies, with data from different informants, a longitudinal set-up, and a broader assessment of status goals may advance upon our study. This way, the age differences in the means to achieving dominance status goals could be assessed as well as the direction of the effects (i.e. do goals lead to behavior, which in turn leads to prestige?). Furthermore, we showed that the dyad plays an important role, because bullying is something that can only occur between two or more persons. Taking characteristics of both bullies and victims into account improves our insight in the motivations behind bullying and the results of this behavior, which may lead to better interventions and preventions of bullying. Moreover, we want to emphasize that for dealing with bully-victim relations it is useful to distinguish between effects caused at the individual, dyadic, and group level. Interventions should focus on providing possibilities for children to achieve status in different ways, thereby avoiding the bullying strategy to which seemingly many children with status goals have adapted their behavior.

