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Can We Bring Notions of Groups Back into Research on Children's Peer Groups? Differentiating Peer Groups at School According to their Functions for Academic Development

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Differentiating Peer Groups at School According to their Functions for Academic Development

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Abstract

Strategies to examine children's peer relationships at school can be broadly distinguished into studies of Sociometric Acceptance (Social Status), studies of Social Crowds, studies of Friendship Groups, and studies or Social Networks of frequent interaction partners. Sociometric groups and social crowds are defined as social categories, that is, groups containing students with similar characteristics or lifestyles who often do not share close relationships. In contrast, friendship groups and groups of frequent interaction partners necessitate close and mutual connections between the members of each group.

This study focuses on *interaction groups* and the ways in which the labels that children assign to groups differentiate the groups according to classroom engagement and according to their academic motivation, specifically, their teacher-rated motivation in the classroom. Traditionally, like friendship groups, interaction groups tend to be treated as one 'generic' peer group composite across all members, and no distinctions are made according to the purposes these groups may have. Using existing data (Kindermann, 2007), this study examined the names and characteristics that students ascribed to groups of peers whom they observed to frequently interact with one another at their school and attempted to categorize these groups in a meaningful way. Based on the literature, the groups were expected to roughly fall into three categories: academically-oriented groups, socially-oriented groups, and location-oriented groups. The analyses describe the groups based on group members' engagement in the classroom, which is a key indicator of children's academic motivation, examine possible differences in processes of peer selection according to academic characteristics, and suggest how different peer groups might influence their members in different ways.

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Introduction

Why are peer relationships important for school-age children? Almost all cultures have formal education organized in a way where there is one teacher (or in some cases several teachers) and many students in a classroom at the same time (Kindermann 2016). There are real relationships between membership in peer groups and outcomes for students (substance use, grades, self-esteem etc.). The better the understanding we have about peer groups and their meanings for students, the better educators and childcare providers can create interventions for at-risk children and provide support for children in areas where they need the most help.

Literature Review

Different Kinds of Peer "Groups"

In the world of children in the education system, different kinds of peer relations have been in the focus of empirical analyses. The most commonly known and most frequently researched relationships are dyadic *friendships* which are close, mutual, high-quality friendships between two children. For the purposes of my paper, I will be focusing on larger groups of peers, beyond dyads known as *peer groups*. Such groups can be captured as groups of friends, but in this study, they will be defined as groups of students who tend to spend time with one another in various activities. Thus, these groups will include students' friends, but also other peer group

members who are not considered close friends.

In the current literature, the term "peer groups" is used to denote several kinds of students that are either similar in some respect or that form groups of people who interact with one another. There are four commonly used forms of peer groups (Kindermann & Gest 2009). In addition, there are studies that use the term "peer group" in an undifferentiated way to describe any kind of grouping of students. A systematization is given in Figure 1.

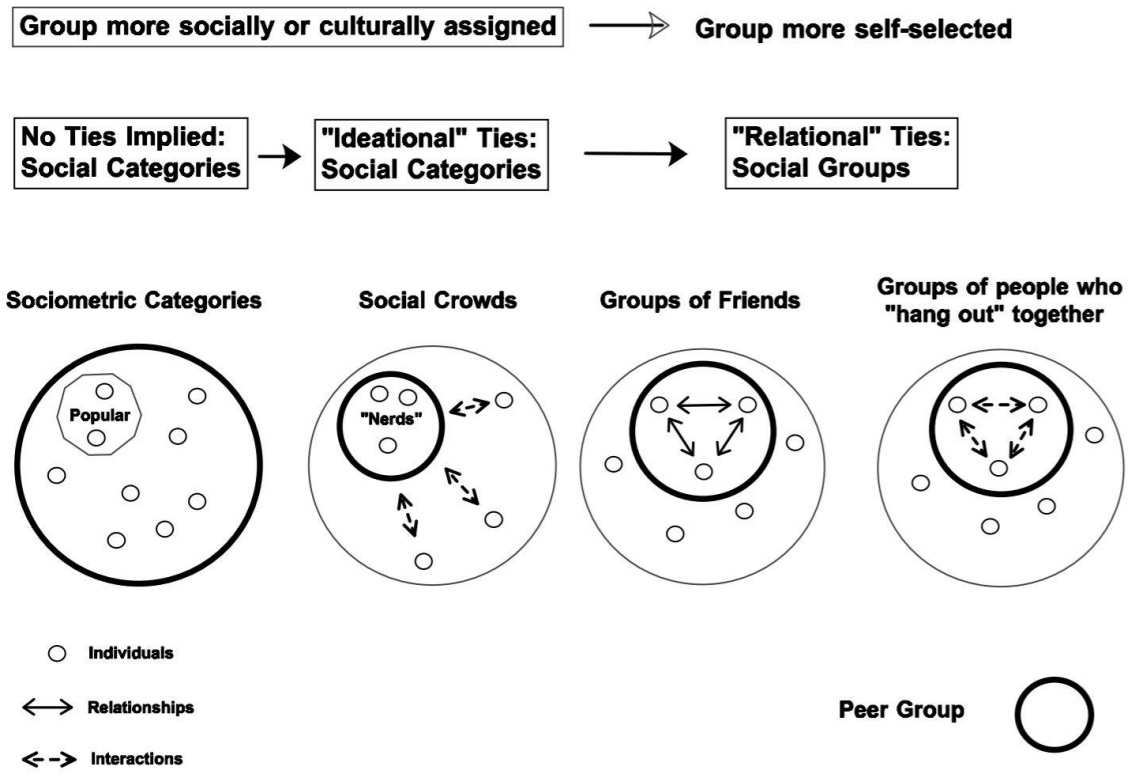

Figure 1: Systematization of different social groups (from Kindermann & Gest 2009)

First there are sociometric groups, which generally categorized how well an individual is generally liked by the other members of a classroom. Generally, sociometry is used to uncover the structure of an entire group of people by mapping alliances, mutual friendships, one-sided friendships, and other kinds of intragroup relationships the sociometric researcher wants to

include.

Secondly, there are crowds which are formed through reputation. The existing literature generally agrees on five general groups, "Jock," "Popular," "Nerd," "Deviant," and "Other/Average." Membership within a crowd does not necessitate friendships with anyone else in the crowd and usually reflect shared lifestyles or interests.

In addition, there are friendship and interaction groups, which are less personal than dyadic pairs but are much more personal and interactive than a crowd. These groups are comprised of clusters of mutual friends who share close relationships and or *do things together*.

Currently, the primary mode of analyzing these groups is through "actor-oriented" analyses, which place a child as the center of the group and map any detectable relationships (such as friends, peer group partners, or crowd members) around that child. This is statistically advantageous because people have their own "groups" (and individuals remain the unit of analysis, not groups), but this gives up on notions that there would be groups that exist beyond individuals. Thus, this method does not differentiate between the kinds of connections that are mapped, and it overlooks many different ways in which those connections might function for a child. For example, connections made through academic or work groups may end up coexisting with connections made through extracurricular activities, even though those relationships look very different. The importance of peer groups cannot be overstated; the current study aims to examine differences among the different kinds of peer group members that a child has. Firstly, the goal is to examine differences between those sets of members of a child's peer group who are seen as serving academic purposes, versus other members who fulfill more social functions.

Is it possible to Use Crowd Category Labels to describe Peer Groups?

Sherif and Sherif (1967) showed that negative or positive behavior outcomes were not

predictable by socio-economic status, but instead by the agreed upon rules and culture of the peer group in which a youth belonged. The paper reveals the deliberate way in which children organize themselves around their identity as a member of their chosen peer group. The choices that children make with regards to their peer group identity matter.

Sherif and Sherif also conducted a famous study on 12-year-old boys called the Robber's Cave Experiment to test their theory called *Realistic Conflict Theory* (Sherif 2010). This theory posited that conflict arises when groups compete over limited resources. The Sherifs studied two groups of boys, who were randomly assigned together as strangers to two different groups and were allowed time to bond and independently develop a culture within their specific group. These groups were named "Eagles" and "Rattlers."

After this bonding stage, the two groups then competed against each other in a series of competitions. The winners of these competitions would receive prizes, while losers received nothing. The researchers then began to artificially create tension between the groups by making one group win over the other. This resulted in increased intergroup aggression such as theft, vandalism, and physical fighting. The boys even held prejudices against members of their opposing groups (UA, CCHP. 2015).

Finally, the researchers attempted to reduce tension between the groups by making all the boys work together toward common goals. The Sherifs correctly predicted that simple coexistence of the boys, even in the absence of competition, would not eliminate the intergroup tension (UA, CCHP. 2015). It was only when these boys had to cooperate for a common goal beyond their group identity as a "Rattler" or "Eagle" that intergroup discrimination and prejudice could be overcome.

The realistic conflict theory reveals something important about peer groups: Peer groups

can in fact produce their own cultural norms and codes at the cost of prejudicing themselves against other groups. These peer groups norms and identities cannot be overlooked when studying children in education as they can, in some cases, drastically influence the behavior and attitude of individuals against other children outside of their peer group.

When peer groups are not experimentally assigned and instead natural groups are studied, peer crowd labels have been shown to be helpful for differentiating different kinds of individual students according to their peer affiliations. For example, crowd labels can help to predict behavioral and intrapersonal outcomes for individual students in schools: Findings indicate that crowd membership in "deviant" groups is correlated with negative behavioral outcomes such as smoking, drug use, and poor academic performance (Urberg, Değirmencioğlu, Tolson, Halliday-Scher 2000; Dubow & Cappas, 1988: Lynn & Mitchell, 1997), whereas being a "Nerd" and "Brain" correlated with higher academic performance (Prinstein et al 2002) and positive behavior outcomes (Urberg, Değirmencioğlu, Tolson, Halliday-Scher 2000).

The Current Study

In 2007, as a part of a longitudinal study of sixth graders, Kindermann published a study examining how naturally existing peer groups affected the academic engagement of students. Kindermann found that there were consistent peer influences on individual students' engagement, so that the average motivation levels of a child's peer group members predicted changes in the individual child's academic motivation over time. The data were collected via student questionnaires, student achievement scores and grades in Mathematics and English, teacher questionnaires, and network assessments using a method of Socio-Cognitive Mapping (SCM). SCM goes beyond children's self-reports of peer group affiliations (the typical method in the friendship literature), in that it uses participant observations that children provide of groups

they see at their school. This has the advantage that if a student chooses not to participate in a study himself or herself, he or she can still be observed interacting in a group by others. SCM data tend to be more complete, because they tend to include students as members of the network whose close friends did not participate.

In addition to the traditional SCM assessment, students were asked to give names to the peer groups/crowds which they observed. In many cases, these would be names by which such groups would be known in the school; if there was no commonly known name, students were asked in addition to give a description of what the members of a group would typically do when they were together.

The current study aims to make sense of the names that children gave to themselves, to their own groups, and to other groups they observed among their peers. The research question was: What significance do these peer group "names" have for peer groups, and what do they mean? The goal was to better understand how peer groups work at school, and by extension what relationships might exist between how the groups are named and how they function. A specific goal was to examine how the categories of the peer group names can be used to find out whether differences exist in how different kinds of groups influence individuals' academic development. To give an example, when groups are formed around academics, they may exert different influences than groups that are formed around versus non-academic issues (e.g., the journalism club versus the lunch-bunch).

Human Subjects Approval

The first part of this thesis was a formal human subjects IRB application. Because the data have already been collected through IRB-approved means and the data have been anonymized, the current study was approved by the Portland State Human Subjects Review

Committee.

This study is a reanalysis of Kindermann's 2007 study and focuses on an entire cohort of sixth graders in their first year of middle school, which was located in a rural/suburban town in the northeast of the United States. The middle school was the only public school for this age group in the town of around 15,000 inhabitants, 90% of whom were of European American descent, and which had 87% of its adults with an education at or above the high school level.

Setting and Sample.

Of the 366 total sixth graders (48% female), 340 participated who consented and had parental permission. The school had placed students into homeroom classrooms with the intent that one designated teacher was primarily responsible for the students and had daily contact with them. For this study, all 13 teachers participated and all reported strong familiarity with their students.

Design and Measures.

Questionnaires were administered to students at two time points during regular classroom time. There was one measurement point during the first three months of the academic year, and another within the last three months of the academic year. The teachers also completed questionnaires on students' school engagement within one month of both assessments.

Engagement and Disaffection. Academic engagement was measured through teacher's perceptions of each student using a 14-item scale (Wellborn, 1991) which assessed both behavioral and emotional engagement (e.g., "This student works as hard as he/she can": "In my class, this student appears happy"). These two components are moderately intercorrelated (r = .31, n = 144) and they form an internally consistent indicator of engagement (α = .95, n = 185; Wellborn, 1991). Over an 8-month period, engagement ratings were highly stable (r = .73, p <

.001, n = 144) and moderately correlated with grades and achievement scores (Kindermann 2007).

At the beginning of the academic year, teachers provided information on 318 students (93% of the students permitted to participate). Of the 22 students that were missed, seven had changed homerooms, eight had recently enrolled and were not well known by their teacher, and seven had not yet arrived at school. By the end of the school year, a total of 322 students had reports submitted about them: 18 of the original participants had left, but the 22 that were missed at the beginning of the year were then included. 300 students had teacher reports on them during both assessment periods (Kindermann 2007).

Peer Groups. Student peer networks were assessed using SCM (Cairns et al., 1985). Students were asked through questionnaires to list as many groups of students whom they knew to "hang out" frequently, including their own groups, dyadic groups, and students who belonged to multiple groups. The questionnaires allowed room for up to 20 groups, 20 students each, which no student completely utilized. A report would typically denote, for example, Child A, B, and C to form one group and D, E, F, G to form another). Student were also prompted to supply descriptive names to each group that characterized *what the group was about* (although many groups received no names). This method relies on free recall and public knowledge of peer groups and affiliations. Networks are assumed to exist when many observers agree on affiliations between students.

Of the total 366 student population, 280 students (57% girls) provided information about peer networks in their grade at the beginning of sixth grade, while 60 students (18% of population) did not provide such information (5 students' entries were illegible, 15 students indicated they didn't know anything, 33 left this portion of the questionnaire blank, and 7 had not

yet arrived for the fall term). At the end of sixth grade, 219 students (60% of cohort) provided peer group network information, for the purpose of examining group stability.

Network Identification. At the beginning and at the end of the year, students reported that individuals had peer groups with between 2 and 15 members. At the beginning of the year, 280 students made 3,047 group member nominations totaling to 694 groups (on average, one student would nominate 2.7 groups of 5 members), and 293 students (80% of the cohort) were members of social networks. At the end of the year, 219 students reported 3,590 nominations for 664 total groups, averaging at 3 group nominations of 5.4 members per child.

Group affiliations were identified by arranging nominations in a co-occurrence matrix which denoted how often every single child was nominated to belong to the same group as any other child across the entire grade. To examine the likelihood that any given child being nominated with another child in the same was more than could be expected by chance alone, *binomial a-tests* were used. *Fisher's exact test* was also used, due to the prevalence of low expected cell frequencies, and so only connections that were significant ($p < .05$) using both strategies were accepted. In addition, connections that were based on single co-nominations were not accepted as in most cases, these were self-nominations.

The approach is individual oriented, meaning the method identifies connections between students and *does not identify distinct groups*. This means that a student can have multiple memberships in several groups, and so connections between that student and multiple different groups (outside of his/her primary group) are preserved. One may see this as a strategy to capture a student's group context, regardless of sub-group and cross-group differentiations. This allows for examination interindividual differences in context influences.

Identified peer groups. At the beginning of the school year, 293 students (80% of the

cohort) were identified as a member of a peer group, and 73 students were found to have no network connection and to be by themselves

Group Names: Students were asked to nominate themselves and their classmates to peer groups, and name those groups in a way that described the essence of the group. Many identified groups did not get any names assigned. Of the 695 reported groups, 44.75% did not receive a group name nomination. In total, only 56 children (15% of the sample) were reported to be in a group that had no name. Most of the children with no group name also had no identified group. Of those groups that had names, their names reflected the many interests, activities, and lifestyles that these students shared with each other. Names indicated associations such as sports, academics, social groups, and popularity.

Data Analyses

The data have already been collected for this study. The focus of this re-analysis was to re-categorize the existing data, and to run statistical analyses. The data were collected from 340 sixth graders and 13 teachers at one school, the data on social networks cover all 366 sixth graders at the school. No further data were collected.

The goal was to try to understand what these peer group names could mean. In most prior studies that examined something like names of peer groups, group names were (experimentally) assigned to students. This analysis attempted to gather additional information from how students themselves perceived their peer groups.

It was expected that the analysis would reveal that academic groups would have the highest scores in teacher-perceived academic engagement. Academic groups were expected to be more selective of their members based on academic characteristics and criteria. Academic groups also tend to influence their members more significantly than do other groups. Additionally, it

was expected that peer groups based around sports and athletics will have mixed results. This is consistent with the findings of peer crowd trends in the literature for athletes. Lastly, social groups should have the lowest scores in engagement and lowest grades.

Results

The results will be presented in 3 steps. Since the goal of the study was to examine the extent to which the *names* that children gave the groups they observed at their school, first, there will be a descriptive overview of the nominations. The second part is an analysis of specific categories that were generated from the overall names, as well as their relationship with students' teacher-rated classroom engagement. In specific, most attention was focused on Academic Groups (when names indicated any academic purpose of the group). First, students' *Primary Groups* were determined. Categories of groups were formed by using the names on which most of the members of every child's peer group agreed upon. *Secondary Groups* were determined from the other names for which there was a sizeable portion of agreement.

The third part of the results will be specifically about *Academic groups.* In this analysis, all groups that were seen as Academic contained *at least one member* who described this group as academic in nature (CNAMES). This category will be contrasted with a category consisting of groups that had mainly social purposes (groups of friends, social cliques hanging out at the mall), and with groups that just met at school (the lunch group; groups of children who walked home together). Children without a group or with a group that did not receive a name by anybody will be included for comparison.

Descriptive Data

Overall, the 366 sixth graders reported a total of 1431 group names, many of which with similar or equivalent meaning. An individual student reported, on average, about 4 group names. There were 56 students who were not reported to be in any group with a name (including groups named "no name" and illegible nominations). There were 120 unique names in total. Table 1 gives an example using the most frequent as well as some less frequent names.

Most students whose peer groups were reported to have names did receive many different names. For many groups, there was little consensus. In order to find the best descriptors of children's groups, two strategies were used: Decisions about a Child's Primary Group, and decisions about Combined Groups.

Table 1

A Selection of More and Less Frequent Group Name Assignments

Group Names	**Number of Times Reported**	**Percentage of Total Names**	**Number of Students**
Cool	202	12.09%	99
Nerds	101	6.54%	60
…			
Lunch	49	2.61%	47
Soccer Team	23	1.96%	23
…			
Buffalo Bills	12	0.65%	12
The Snatzis	4	0.33%	4

Group Name Sorting: Primary Groups. The names given by the students were examined and sorted into characteristic groups. Firstly, names were sorted into seven dominant name groups (name1): Academic, Social, Friends, Nerds/Geeks, Sports, Popular, and Derogatory Names such as "nerd group," "brains," and "beegs" were sorted into Nerds/Geeks, and names such as "class," "school group," and "preps" into Academic. Names such as "weirdos," "bimbos," and "stupids," were sorted into a Derogatory category. The frequency of those names was then tallied as shown below in Table 2.

Then each student was assigned a *primary peer group* according to consensus among reporters, that is to say, based on how frequent names of a certain *kind* were nominated to each student. For example, BRH had seven total group name nominations, 6 of which were either "Nerd" or "Glasses," thus earning BRH the "Nerds/Geeks" Name 1 assignment.

Table 2

Frequencies of each Primary Name Group through the entire sample

Name1 Assignment	**Frequency**
Academic	25
Sport	48
Social	66
Popular	43
Nerds/Geeks	47
Friends	59
Derogatory	22
Unassigned	56
Total	366

Unassigned groups contained students with either no nominations at all, or illegible nominations.

Primary group names and members' engagement in the classroom. Table 3 shows the mean teacher-rated engagement levels of the individual students who were affiliated with the eight different categories of peer groups (plus the set of students who had no groups or did not receive any group names).

Table 3

Primary Peer Groups and their Member's Teacher-Rated Classroom Engagement at Beginning of 6th Grade

Name	N	Mean	Std. Deviation	Minimum	Maximum
No Name (00)	56	3.0650	.25168	2.33	3.76
Social (1)	66	3.1217	.39348	1.69	4.00
Friends (2)	59	3.2827	.33077	2.55	3.94
Popular (3)	43	2.9614	.32186	2.06	3.47
Sports (4)	48	3.0969	.35495	2.03	3.68
Nerds (5)	47	3.1764	.42073	2.16	4.00
Derogatory (6)	22	2.8464	.32479	2.09	3.25
Academic (7)	25	3.1708	.18899	2.82	3.57
Total	366	3.1107	.35519	1.69	4.00

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An analysis of variance (ANOVA) showed that the different groups' engagement levels were overall different from one another, $F(7, 358) = 3.506$, $p < .01$). As expected, Academic

Groups were among the highest in engagement. Unexpectedly, however, Groups of Friends, Social Groups, and Groups of Nerds were rated by their teachers on similar and even higher engagement levels. A follow-up analysis used the (expected) highly engaged Academic Groups as the standard: Students' Academic Groups were used as the comparison group to which the mean levels of each of the other groups were compared. The details are shown in Table 4.

Table 4

Multiple Comparisons of the Engagement levels of Children who were Members of Academic Groups against children who were Members of other Groups (teng5ES; Dunnett t-tests (a)

(I) Group Name	Mean Difference to Academic Group	Std. Error	Significance
No Name (00)	-.31426	.13521	.045*
Social (1)	-.09064	.13201	.553
Friends (2)	. 01428	.13414	.850
Popular (3)	-.28198	.14138	.091
Sports (4)	-.22369	.13864	.181
Nerds (5)	-.17214	.13915	.312
Derogatory (6)	-.52640	.16432	.004**

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

(a) Dunnett t-tests treat one group as a control and compare all other groups against it.

Only the students who had no peer groups or were affiliated with groups without a name, and the Derogatory Groups showed significantly lower engagement than the Academic Groups at the beginning of the year. It was concluded that individually, students who had no peer groups, were affiliated with groups that had no defined purpose, or were with groups that received

derogatory labels were students who tended to be less academically engaged than children who were with any other kind of peer group.

However, the study was based on the assumption that *contexts do matter* and that there would be differences between different kinds of groups. All researchers in this area agree that children's peer relationships should be influential for their academic development. So, a second analysis examined whether the average engagement levels of the members of these peer groups were different across the nine categories. The overall ANOVA showed strong differences between the groups; $F(7, 358) = 5.77$, $p < .001$.

In combination, both analyses suggest that children who had no peer group (or a peer group without a discernible purpose), as well as children with groups that received derogatory labels were both academically less engaged than other children. Additionally, the peer group members of children who were with popular groups were also less engaged (although the individuals were not).

Table 5

A Selection of Students with Clear and Unclear Primary Group Assignments

Student	**Name1**	**Name2**	**Name3**
CGR	Friends (1)	Popular (1)	Academic (1)
BRH	**Nerds/Geeks (6)**	Social (1)	---
JOM	Sport (3)	Social (1)	Nerds/Geeks (1)

Table 3: Frequency of Name1, Name2, Name3 nominations given in parentheses

Including non-dominant Groups: Multiple group assignments. Students were also assigned up to three other *non-dominant groups* to describe the other frequent name nomination categories they were given. This was an especially important consideration for students who

lacked any clear dominant group naming pattern. Table 5 gives a selection of Name1, Name2, and Name 3 nominations using students both with clear primary group assignments, and those with no clear primary group assignments.

As can be seen, student CGR has no clear uniform pattern of group name nominations, and has been assigned Name1, Name2, and Name3 in an arbitrary order. In comparison, BRH was regarded to be clearly defined as a member of a "Nerds" group. To remedy this problem of assigning students with no identifiable dominant group names, a multiple or combined name strategy was then employed.

Table 6

Multiple Comparisons of the Engagement levels of the Members of Children's Peer Groups when the Members denoted an Academic Group against Secondary Categories Describing Members of other Groups (NAME2)

(I) Group Name2	**N**	**Mean Difference to Academic Group Name2**	**Std. Error**	**Significance**
No Name2 (00)	119	(excluded)		
Social (1)	67	.069	.067	.691
Friends (2)	33	.183	0132	.456
Popular (3)	28	-.053	.091	.758
Sports (4)	19	.218	.128	.281
Nerds (5)	21	.091	.136	.672
Derogatory (6)	20	-.074	.139	.709

* $p < .05$. Academic N = 11

An analysis of Secondary Names was conducted on the groups' Secondary Names to make sure that the analysis of primary names did not miss important differences. As Table 6 shows, no significant differences were found.

Multiple Group Names. One issue was that several of the group categories were relatively small in terms of members. In order to create larger categories of students for analyses, children were re-sorted into four larger groups: MSocial, MAcademic, MSchool, and NoName. MSocial contained all students whose group nominations mostly described social groupings or clubs. The idea was to create broader groups for students with unclear dominant name groups so that one might emerge.

For the most part, friend groups, popular groups, neighborhood groups, and non-school related clubs were sorted into this category. MAcademic contained all students whose group nominations reflected characteristics of smartness, dedication to schoolwork, or studying. MSchool contained all students who had a prevalence of school-related group nominations such as "Lunch table," school sports teams, and other school-based clubs. Students with no group nominations or illegible group nominations were sorted into Noname.

Table 7

Frequencies of each combined Multiple Name Assignments

MName Assignment	**Frequency**	**Percent of Total**
Macademic	67	18.3%
Msocial	160	43.7%
Mschool	83	22.7%
No Name	56	15.3%
N Total = 366		

To use the previous example of CGR (Table 5), who had no clear dominant grouping, under this new system of categorization, MSocial emerges as a clear dominant group: the nominations of Name 1 (Friends) and Name2 (Popular) combined under MSocial, and Name3 (Academic) categorized under MAcademic.

Students received a tally into each multiple name group category if they had *any* name nominations which fit any of the three categories, regardless of whether it was their dominant name group. So, if a student had one or many academic-related group nominations, they would receive one tally mark for MAcad, and so on for the other groups. Students then received a dominant MName nomination based on the most frequently nominated MName category. Table 7 shows the frequency of those nominations.

Combined names and members' engagement in the classroom. Table 8 shows the mean teacher-rated engagement levels of the individual students who were affiliated with the three different combined categories of peer groups (plus the set of students who had no groups or

Table 8

Combined dominant peer groups, MName and their Member's Teacher-Rated Classroom Engagement at Beginning of 6th Grade

Name	N	Mean	Std. Dev.	Minimum	Maximum
MAcad (09)	67	3.2694	.5381	1.94	4.00
MSocial (10)	160	3.0497	.5432	1.65	4.00
MSchool (11)	83	2.9341	.6467	1.69	4.00
NoName (12)	56	3.1435	.5394	2.09	4.00
Total	366	3.0992	.5669	1.84	4.00

did not receive any group names).

An analysis of variance (ANOVA) showed that the different groups' engagement levels were significantly different from one another, ($F(3, 362) = 4.711$, $p < .01$). Further analysis using the Academic category as a comparison once again showed that combined social and combine school groups differed significantly from the control, and that combined school differed the most dramatically. Details are shown in Table 9.

Table 9

Multiple Comparisons of the Engagement levels of MAcadmic group against peer groups of other Combined Name group categories.

(I) Group Name	N	Mean Difference to No Name Group	Std. Error	Significance
MSocial (10)	160	.2198	.0429	.0030*
MSchool (11)	83	.3353	.0710	.0003**
MNoname (12)	56	.1258	.0721	.0998

* p < .05;** p < .01 N Academic = 67

(a) Dunnett t-tests treat one group as a control and compare all other groups against it.

These results show that group membership matters, and that the kind of group membership is also important. As expected, academically focused peer groups are characterized by high classroom engagement scores, higher than any other group on average. Students who tended to engage in school-related groups, which encompasses those with extra-curriculars (sports), or groups which are based on school-related but not academically-focused activities (such as lunch table group) underperformed when compared to other groups.

Discussion

This study aimed to be among the first to examine the role of publicly known purposes of children's peer group affiliations. Traditionally, quantitative studies on the academic impact of children's peer groups have ignored how these groups are perceived by members as well as other non-member students at school. Only quasi-experimental, qualitatively oriented, and social crowd studies have delved into issues of group reputation and functional aspects (e.g., Sherif & Sherif, 1967; Susman, et al., 2007; Urberg, Değirmencioğlu, Tolson, & Halliday-Scher, 2000). To adopt group categorizations that have been developed in crowd research and to use those in a large sample of unselected individuals (all 6th graders in a small town) is a new endeavor.

Most recent studies have tended to treat peer groups as undifferentiable clusters. The current study assumed that many children, naturally, maintain affiliations with many different groups at the same time, and that the different kinds of affiliations could impact academic development. Because this is an exploratory study, the specific strategies of how peer group names were used in the current analyses are tentative. The findings will need to be replicated.

The findings are promising and conform well with the literature. More engaged students, who 'like' to put in more time for academically related things are typically found to affiliate with other similar students, and are typically more successful in school (Kindermann, 2007). The current study did not consider peer selection processes specifically and only assumed selection tendencies according to academic characteristics. Academically oriented groups appeared to be overall strongest with regards to teacher-rated classroom engagement. Social and more broadly school related groups fared well but did not outperform academically oriented groups. However, those groups also, unexpectedly, outperformed the outlier groups: derogatory and groups without a name.

The study highlights the importance for students to have a social group at school. In the first year of middle school (6th grade), making social connections seems to be an issue that rivals the newly emerging academic pressures. Groups with derogatory names, perhaps not unlike groups without names, may have been excluded from the main network of students at school. Since they were generally disliked or thought of negatively, they will also be likely to have negative school experiences.

Additionally, in the combined names portion of the results, it seemed that when one considers all students who are engaged in school-related but not academically-focused activities, the engagement is impacted again. This could be because that category captures a wide range of students who are more engaged in activities outside the classroom: lunch-bunch for example describes a social group centered around proximity. It doesn't imply quality friendships in the same way that social group names might, and it doesn't imply anything about how much these students want to be involved in schooling. Another aspect of the school category is sports: these groups of students are centered around a time-intensive and physically demanding extra-curricular, and while this might imply that these students are involved in school as a place, it does not imply anything about how engaged they might be in the classroom. While this paper did predict that these students would be more engaged in the classroom due to the fact that these students are already engaged in school-related activity, the data suggests that classroom engagement is not a measure of overall engagement with the school institution.

Strengths and Limitations

A main strength of the study is that students' group names were self- or other-ascribed by students themselves; students participated as expert participant observers of peer relationships at school. Students' academic engagement was measured independently, by teacher reports. Shared

variance among reporters cannot be a problem.

Another strength is that the data set (Kindermann, 2007) is one of a very small set of studies that have examined peer group influences within a complete and naturally confined system, in this case a small town. Too many studies have relied on samples of convenience within school districts, without attention to natural borders of network systems. Of course, this raises a new question of whether data from a small town in the Northeastern states of the US can be generalized to larger cities in different parts of the country.

The most glaring limitation of this study is the fact that so many students did not provide names or functional descriptors of the characteristics of the peer groups they observed. It may be the nature of children's peer groups at this age that most have no specific function (e.g., see the large number of groups called "friends"). However, it is also likely that the strategies to elicit such names or functional characteristics need refinement. At the very least, strategies need to be explored that promise to minimize that written student information cannot be read; one example is to use of laptops for data collections.

It is important also to consider the nature of the no name group. This group captures many different kinds of student groups which do not relate to one another in the same way as the groups in the other categories do. The Academic group category tries to capture students who have similar interests, as does the social groups and the school groups. However, students who end up in the no name groups end up there for many reasons: For example, they were assigned to a group but not assigned a name, or they were assigned a name that was unreadable, or finally they were not assigned any group at all. This make the no name category difficult to consider and makes the absence or presence of its statistical significance hard to analyze.

Finally, the traditional peer group literature gives many examples that peer group names

can be very different depending on which students give the descriptions. Most prominent are differences depending on whether informants are group members (in-group descriptions) or outsiders. To give an example from the current data, the girls' hockey team had just beaten the boys' team shortly before the data collection. Consequently, boys described this group very differently and more negatively than did most girls.

Future Studies

The current strategy to use student-generated names or descriptors of peer groups with the goal of differentiating different kinds or peer groups according to their functions appears promising. However, the current study is just a first step. Likely, the specific categorizations and data transformations need further development. The goal of these methodological developments is to become able look further into Kindermann's (1996) assertion that individuals are likely very different in terms of how much they are influenced by their peers, and peer groups are likely very different in terms the influences they exert. Differentiating different groups according to their functions and examining how different kinds of individuals become members of these groups, is a first step in that direction. Such qualitative distinctions, then, can be used in multilevel models that would examine peer group influences not from one generic "group" but from groups that are different in terms of their relation to academic functioning.

Finally, further development on these research strategies may also have implications for educational practices. Most research on children's peer relationships is not much interested in the role of the teacher in organizing classroom social interactions. However, a small strand of such research explicitly focuses on the "invisible hand of the teacher" (Farmer, Lines & Hamm, 2011) in the social structure of a classroom. For example, van den Berg, Segers & Cillessen (2012)

reported on how efforts to change the seating arrangements in classrooms can affect students' patterns of interpersonal liking; Kindermann (2011) points out how sociometric data collections that some teachers can use can give information for psychosocial interventions. The current study leads to expect that efforts to embed apparently isolated students into the classroom ecology and to create peer relationships may need to pay attention to the different kinds of peer groups with whom children may become affiliated.

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Appendix

In the following, readers can find annotated bibliographies about those studies that were most influential for my thesis.

Dubow, E. F., & Cappas, C. L. (1988). Peer social status and reports of children's adjustment by their teachers, by their peers, and by their self-ratings. ***Journal of School Psychology, 26*****(1), 69-75.**

This short study sought to confirm previous studies about peer crowds. The study analyzed data from 238 children between third and fifth grade through peer nominations, self reports, and teacher reports on likeability and trait characteristics of the children. The study found that, like previous literature had found, rejected children displayed more behavioral problems in the classroom and with peers, while popular, well liked children were the most well-adjusted. The other three groups, "neglected," "average," and "nonconformists" performed well in school, with neglected children facing adjustment problems limited to their peers.

This study is interesting for my paper as it only seeks to confirm previous studies in its field up to that point. Again, it confirms many of the same peer crowds as other papers and identified the issues related to socially-rejected children in schools. While the paper is very short and shallow in its analysis, it does serve to support other studies in this bibliography.

Kindermann, T. A. (2007). Effects of naturally existing peer groups on changes in academic engagement in a cohort of sixth graders. *Child Development, 78(4),* 1186-1203.

This article seeks to answer the question of how students peer groups affect classroom engagement over one year in a sixth-grade class. This study gathers data via student and teacher surveys, interviews, and observations. This paper found that there were consistent peer influences on individual students' engagement, and that peer groups motivation over time also predicted changes in student engagement.

The most important aspects of this paper to consider with respects to my own research is the methods and limitations of the data. High student engagement could be due to peer influence, or conversely, students with high engagement may naturally form groups anyway. Additionally, peer influences on academic measures should change depending on the nature of the peer group, i.e. whether it is an academic group or social group. Secondly, my paper will be drawing from the same data set as this paper, but with the inclusion of some omitted data on group "naming." The data was collected via surveys answered by students and teachers, as well as analysis of student grades in mathematics. The surveys collected data on student-identified social groups of themselves and others, as well as perceptions of teacher and parent involvement. Students also reported group names, such as "jocks", "nerds", etc to social groups. The names are described by the students themselves, so should unveil more information about the nature of these groups.

Michell, Lynn. (1997). Loud, sad or bad: young people's perceptions of peer groups and smoking. *Health Education Research, 12(1),* 1–14

This study sought to understand how peer influences and peer groups affected smoking habits of 11-13 year olds in Scotland. The study used a series of focus groups, one on one interviews, and questionnaires, which helped uncover distinct groups which fell into a hierarchy of popularity. Top Girls, driven by status and fashion smoked a lot to maintain their image as sophisticated and sexy. Top Boys, while as popular as Top Girls did not smoke as the priority of this group was not to attract girls and maintain popularity, but was to remain fit enough to engage in sports. Middle groups, which were neither popular nor rejected, comprised mostly of do-gooders, academically-minded students. They didn't smoke and in fact were repulsed by the idea: they felt no inclination to smoke as a means to gain popularity. However, at the bottom of the pecking order, low status groups comprising of socially-rejected students and troublemakers smoked quite regularly. Socially rejected students were trying to gain status, which troublemakers operated more outside of the pecking order smoked as a part of the rebellious lifestyle. Loners were the final group recognized by the study and were found not to smoke at all, likely due to their inclination to go against the grain or to engage in unconventional activities and therefore feeling to pressure to smoke for popularity.

While this study did focus mainly on how social crowds influenced a student's likelihood to smoke, it did reveal something about how the intentions of crowds influence student behavior. When popularity became a value of the group, it pressured its members to participate in unhealthy behavior. For the purposes of my thesis, when trying to make sense of how groups are named by insiders and outsiders of those groups, the intentions, morals, and culture of the groups may be an important factor. Clearly these groups operate with their own self-negotiated rules, and these rules make tangible impacts on its members.

Prinstein, M. J. and La Greca, A. M. (2002), Peer Crowd Affiliation and Internalizing Distress in Childhood and Adolescence: A Longitudinal Follow-Back Study. *Journal of Research on Adolescence, 12*, 325-351.

This longitudinal study followed 246 youths from middle school to high school, and attempted to find correlations between peer crowd identification and reported self concept, self esteem, depression, anxiety, and loneliness. The study identified five peer crowds, consistent with other studies on peer crowds: Populars, Jocks, Burnouts, Brains, Non-conformists, as well as Average. Through self-report measures and peer-report measures partnered with questionnaires about the above measures, the youths were samples at two time points (preteen and adolescent). The results showed that adolescent peer crowd affiliation was, in some way, correlated to self-concept and internalized distress. Adolescents self-identified stronger aptitudes depending on their peer crowd affiliation (jocks found themselves stronger in athletics, brains in academics, etc). Additionally, most crowds found a decrease in internalized distress (anxiety, depression, etc) over time, with the exception of brains, who exhibited an increase over time.

While this study could not identify a causal relationship between peer crowd affiliation and internalized distress, they could identify a relationship with a certain "type" of crowd and increasing distress. Additionally, this study is one of the few that attempts to find a relationship between crowds and internal distress, which makes it a useful paper to add to the growing literature on peer crowds. Internal distress is an important aspect of pre-teen and adolescent life, and may provide some pointers for at-risk groups for depression/anxiety. Additionally, this paper provided an excellent introductory section, which gives a lot of information about the existing literature on peer crowds.

Sherif, M., & Sherif, C. W. (1967). Group Processes and Collective Interaction in Delinquent Activities. ***Journal of Research in Crime and Delinquency, 4(1),*** **43–62.**

This article is a collection and review of then-current theory and literature on the nature of social groups and their influence on boys' delinquent behavior. The article begins by reviewing why groups form, saying that adolescents developmentally rely more on peers than adults to negotiate their changing status from child to adult, and that group membership is important for this process. Sherif and Sherif posit that groups do not necessarily produce delinquent behavior in adolescents, though many theorists of the time believed that to be so. Additionally, Sherif and Sherif also outline the ways in which delinquent or non-delinquent adolescent groups are not dependent on social class as it was once thought, and in fact, regardless of class, groups encouraged or discouraged delinquent behavior based on group-negotiated norms and current environmental influences.

This article, despite being outdated, reveals a lot about the changing ways in which researchers looked at youth crowds and dealt with groups deemed "delinquent." Additionally, the importance of reputation, membership, and belonging have been identified by developmental researchers for a long time, though the literature on social crowds has only been around for a few decades. Sherif and Sherif were importance theorists for the development of a charitable and honest look at adolescent group behavior and its promotion (or lack thereof) of delinquent behavior.

Urberg, K. A., Değirmencioğlu, S. M., Tolson, J. M., & Halliday-Scher, K. (2000). Adolescent social crowds: Measurement and relationship to friendships. *Journal of Adolescent Research, 15(4),* 427-445.

By studying the middle school and high school age students through self-reports and questionnaires, Urberg et al. sought to understand the relationship between peer crowds and the extent to which they facilitate friendships, and to analyse the congruency between self-identified and peer-identified membership to those crowds. Crowds consist of a collection of students which are related through reputation and do not necessarily imply friendships or interactions between all its members. The study identified six different peer crowds through student surveys, which were named "Burnouts," "Preps," "Jocks," "Whiggers," "Nerds," and "Average," with two additional crowds occuring at the high school age: "Alternatives" and "Brains."

The results of the study showed that self-identified and peer-identified crowds were reasonably congruent, and even correlated to delinquent behavior patterns (such as alcohol and drug use) and grade point average. The results also revealed that crowds did in fact serve as a basis for at least half of students' friends, with larger groups such as "Preps" or "Average" students showing greater variation in friend-crowd membership, and smaller groups such as "burnouts" showing greater preference for intra-crowd friendships. Additionally, friendliness toward other crowds depending largely on how related students perceived other crowds to be to their own.

For the purposes of my thesis, this article helps to uncover relationships between crowds as well as relations within crowds. It is important to know that students generally prefer to remain within their own crowd, and generally make friendships with people that relate closely to their own crowd. The study also confirmed information from other studies, such as the prevalence of crowds such as "Jocks," "Delinquents," and "Nerds" across cultures, studies, and schools.