

Neither Friend nor Foe: Ethnic Segregation in School Social Networks

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Abstract

High levels of ethnic segregation have been widely observed in school friendship networks, whereas the degree to which school bullying networks are divided along ethnic lines remains uncertain. Using data from 981 students (53% girls, 47% boys; 11–14 years of age) in British schools, we sought to visualize, quantify, and compare the degree of ethnic segregation in friendship and bullying networks. Our findings contradict the common belief that ethnic segregation in friendship networks fosters interethnic conflict; instead, we identified similarly high levels of ethnic segregation in both friendship and bullying networks. Students may therefore simultaneously avoid positive and negative interethnic relationships. The findings indicate that positive and negative networks should both be considered to provide a comprehensive assessment of interethnic relations in the school environment.

Keywords

friendship, bullying, intergroup relations, segregation, social networks

Research often reports high levels of ethnic segregation in school friendship networks, as students predominantly befriend same-ethnic rather than other-ethnic peers (McPherson, Smith-Lovin, and Cook 2001; Moody 2001). It is commonly believed that such segregated school environments have a hostile intergroup climate and may harbor interethnic conflict (Tropp et al. 2022). However, as Brewer (1999) suggested, the prevalence of positive same-ethnic relationships (“ingroup love”; e.g., same-ethnic friendships) may not necessarily coincide with a prevalence of negative interethnic relationships (“outgroup hate”; e.g., interethnic bullying). The extent to which interethnic bullying occurs in ethnically segregated school environments is largely unknown because social network studies of interethnic relations have focused almost exclusively on positive networks, such as friendship networks, rather than negative networks, such as bullying networks. The scarcity of research on negative networks has persisted despite the recent drive in intergroup contact research to commence investigating the prevalence and consequences of negative contact between ethnic groups (Schäfer et al. 2021).

To address this lacuna, we sought to visualize, quantify, and compare the degree of ethnic segregation in both positive and negative networks in schools. We used data from a social network study conducted in two schools in England (Bracegirdle et al. 2022). Our sample consisted of 981

students aged 11 to 14 years in sixth, seventh, and eighth grades. We asked students to nominate up to 10 friends and 10 bullies in their school grades. We then constructed networks visualizing the friendship and bullying links between students and color-coded students by ethnicity. These networks provide visual maps of the extent of ethnic segregation or integration in schools.

The friendship networks and bullying networks for each school grade are shown in Figure 1. In accordance with prior research (e.g., Moody 2001), the friendship networks showed high levels of ethnic segregation: 86% of friendships were between members of the same ethnic group (whereas only 14% of friendships were between members of different ethnic groups). Yet in contrast to common assumptions, we simultaneously identified low levels of interethnic bullying: only 18% of bullying ties were between members of different ethnic groups (whereas 82%

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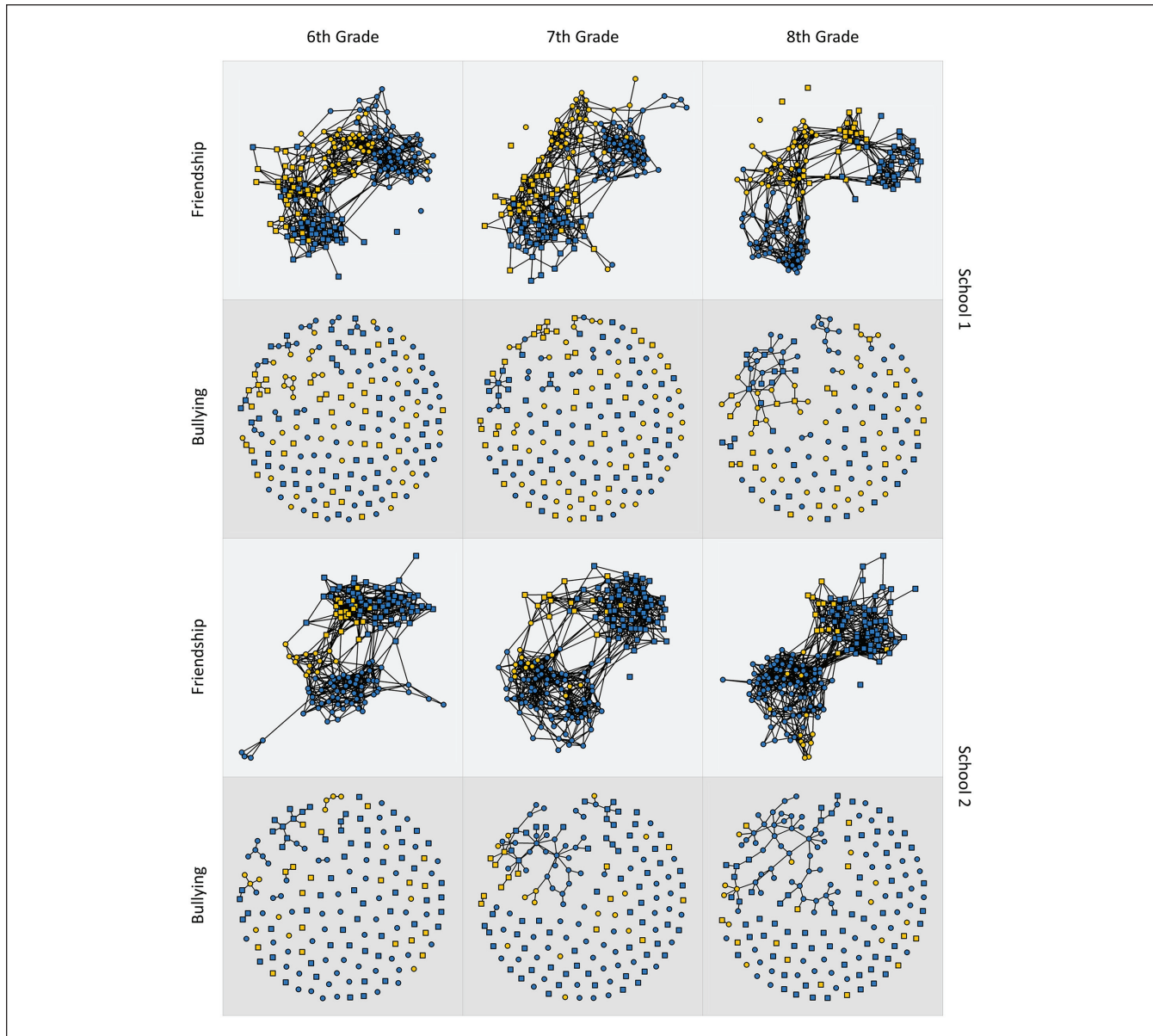


Figure 1. Ethnic segregation in school friendship and bullying networks.

Note: The figure visualizes 12 networks depicting the friendship and bullying relationships among 981 students (53% girls, 47% boys; 11–14 years of age) in sixth, seventh and eighth grades at two British schools (school 1: 59% Asian, 41% White; school 2: 82% Asian, 18% White). Each node (square or circle) represents a student, and each tie (link between nodes) represents a friendship or bullying relationship. Blue nodes represent Asian students, yellow nodes represent White students, squares represent boys, and circles represent girls. The networks ranged in size from 144 to 184 students. Whereas 99% of students had one or more friends, only 36% of students had one or more bullies. Thus, as expected on the basis of prior research, the bullying networks were sparser than the friendship networks, as visualized by the lack of ties between most students in the bullying networks. Both the friendship and bullying networks showed high levels of ethnic segregation, as visualized by the greater prevalence of ties between members of the same ethnic group than between members of different ethnic groups, which leads to the visual clustering of students by ethnicity. The networks also showed high levels of gender segregation typical for this age group, both for friendship and bullying. The networks were visualized using the *igraph* package in R, and the coordinates of each node in the network plot were determined using the default force-directed Fruchterman-Reingold layout algorithm. For further information regarding the data, method, visualization, and analysis, see the online supplemental information. The data, analysis code, and survey are provided on the Open Science Framework, available at <https://osf.io/hmf25>.

of bullying ties were between members of the same ethnic group). The percentage of same-ethnicity ties did not significantly differ between friendship and bullying (Cohen's $d=0.02$). We therefore identified similarly high levels of ethnic segregation in positive and negative networks.

Furthermore, the percentage of same-ethnicity friendship ties and bullying ties did not significantly differ across grades or schools ($d \leq 0.18$), despite differences in students' age and the ethnic composition of the networks. The percentage of same-ethnicity friendship and bullying ties was, however,

higher among Asian students than White students ($d \geq 0.32$), which may result from there being greater opportunity for same-ethnic relationships among Asian students.

Overall, our findings contradict the common belief that ethnically segregated environments, characterized by a high prevalence of same-ethnic friendships, foster interethnic hostility. Instead, we found that ethnic segregation in friendship networks cooccurs with ethnic segregation in bullying networks, as students tended to avoid both positive and negative relationships with other-ethnic peers. The whole picture is one of pronounced ethnic segregation in social relationships regardless of the form they take.

Our findings additionally demonstrate the value of simultaneously studying positive and negative networks in order to provide a comprehensive assessment of interethnic relations in schools. Yet, as social network studies serve as case studies of specific social contexts, more research is needed that considers positive and negative networks across a range of diverse contexts. Importantly, although ethnically segregated school environments may not entail intergroup hostility, the lack of positive interethnic relationships may still be harmful as the benefits of interethnic contact for individuals (e.g., greater social capital) and society (e.g., lower prejudice and discrimination) may not be obtained (Brown and Hewstone 2005).

Data Availability Statement

We provide the data, analysis code, and survey on the Open Science Framework, available at <https://osf.io/hmf25>.

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Supplemental Material

Supplemental material for this article is available online.

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