Introduction
INTERETHNIC PEER RELATIONSHIPS IN SCHOOLS

With increasing migration, ethnic diversity is on the rise in many societies. In the Netherlands, the number of inhabitants with a migration background, both first- and second-generation, has increased from 3.4 million in 2010 to almost 4 million in 2018, equal to around 23% of the total population (Statistics Netherlands, 2018b). A bit more than half of these inhabitants has a non-western background. Ethnic diversity brings challenges to society, such as discrimination and prejudice, possibly leading to growing tensions between ethnic groups. With increasing ethnic diversity in society, the ethnic composition of school populations increases as well. In 2019, 27% of the total Dutch population under the age of 15 had a migration background (Statistics Netherlands, 2019b). Research has shown that youth’s interethnic relationships, prejudice and attitudes are important predictors of their interethnic perceptions later in life (Emerson, Kimbro, & Yancey, 2002). This calls for the question whether growing ethnic diversity may be reflected in tensions in schools as well, that is, may give rise to the possibility that ethnically diverse classrooms become clashrooms.

Positive interethnic contact is seen as a key factor for improving intergroup relations and attitudes in ethnically diverse contexts (Allport, 1954; Coser, 1956; Pettigrew & Tropp, 2006). Despite the benefits of interethnic contact among youth (Allport, 1954; Pettigrew & Tropp, 2006), research consistently finds that youth have a preference for associating with same-ethnic over cross-ethnic peers. This preference has been found across countries (e.g., America, England, Germany, Hungary, the Netherlands, Sweden), age groups (elementary and secondary schools), and contexts (classrooms, grades, and schools; Boda & Néray, 2015; Currarini, Jackson, & Pin, 2010; Fortuin, Van Geel, Zibcrna, & Vedder, 2014; Leszczensky & Pink, 2015; Smith, Maas, & Van Tubergen, 2014b; Stark & Flache, 2012). Most studies on interethnic contact focus on (the lack of) positive relationships, such as friendships and liking, but research on the effects of ethnic diversity on negative relationships, such as bullying or disliking, is relatively rare. As youth’s decisions in their positive and negative peer relations are mutually influencing each other, it is important to consider both positive and negative interethnic peer relationships in studying whether growing ethnic diversity may lead to tensions between ethnic groups in schools.

Youth’s peer relationships in schools are embedded in the larger peer network in which multiple processes influence the development of these relationships. For example, youth’s involvement in bullying has an effect on who defends whom: bullies who target the same victims and victims targeted by the same bullies tend to support and defend each other (Huitsing & Monks, 2018; Huitsing, Snijders, Van Duijn, & Veenstra, 2014). Similarly, social processes within the larger peer network in school may influence the role of ethnicity in youth’s relationships. For example, youth may be more likely to become friends with a cross-ethnic peer if another friend already established a relationship with...
this peer (Echols & Graham, 2018). Yet, most studies investigated interethnic peer relationships in isolation. So far, only few studies have considered how interethnic peer relationships are affected by other social mechanisms in the broader peer network in schools (Echols & Graham, 2018; Wittek, Kroneberg, & Lämmermann, 2019).

In this dissertation, I aim to expand our knowledge on interethnic peer relationships by investigating both positive and negative relationships in the context of the broader peer network in schools. I aim to contribute to the literature in three ways. First, I aim to provide a more comprehensive perspective on interethnic peer relationships by examining the role of the broader peer network in which interethnic peer relationships occur. Second, I approach interethnic peer relationships from a social network perspective, investigating who is related to whom. An advantage of this approach is that it enables the investigation of the peer network as a whole. So far, there has been a lack of social network studies into interethnic peer relationships. Third, by differentiating between multiple ethnic groups, I aim to respond to the call to acknowledge the heterogeneity in migrant groups instead of ignoring differences between minority groups by treating them as a homogeneous group. This call has recently been formulated as one of the important challenges in addressing new trends in migration in the Netherlands and beyond both for policy and research (Jennissen, Engbersen, Bokhorst, & Bovens, 2018).

### 1.1 INTERETHNIC PEER RELATIONSHIPS

Homophily, the “principle that a contact between similar peers occurs at a higher rate than among dissimilar peers” (McPherson, Smith-Lovin, & Cook, 2001, p. 416), is a strong regularity in social life. Homophily occurs on several dimensions, including ethnicity (Echols & Graham, 2018; Fortuin et al., 2014; Jugert, Leszczensky, & Pink, 2018; Rivas-Drake, Umaña-Taylor, Schaefer, & Medina, 2017; Wittek et al., 2019), gender (Dijkstra, Lindenberg, & Veenstra, 2007; Mehta & Strough, 2009), and academic achievement (Flashman, 2012; Gremmen, Dijkstra, Steglich, & Veenstra, 2017; Kretschmer, Leszczensky, & Pink, 2018). Homophily is partially imposed by social structures as similar peers are more likely to meet and have therefore more chances to form peer relationships than dissimilar peers (Feld, 1982). Another important source of homophily is the preference to affiliate with similar peers (Kandel, 1978; Lazarsfeld & Merton, 1954; McPherson et al., 2001). In general, individuals prefer similar peers because similarity is assumed to facilitate agreement and understanding (McPherson et al., 2001). Similarity also simplifies relationships through increasing the predictability of other people’s behavior (Hamm, 2000; Ibarra, 1992). Consequently, similarity in relationships leads to balance, whereas dissimilarity leads to tensions and imbalance, as has prominently been suggested by classic sociological and psychological theories (Cartwright & Harary, 1956; Heider, 1946). With regard to ethnicity, same-ethnic peers are likely to have a more similar cultural background than cross-ethnic peers which relates to more similar norms and values that are important to establish and maintain relationships. Consequently, the costs of establishing and maintaining positive peer relationships with similar peers are
lower than for relationships with dissimilar peers (Felmlee, Sprecher, & Bassin, 1990).

A theory which can specifically be applied to explain individual's preference for same-ethnic affiliations is social identity theory (Tajfel, 1982; Tajfel & Turner, 1979). This theory argues that individuals are intrinsically motivated to achieve a positive social identity, defined as "that part of the individual's self-concept which derives from their knowledge of their membership of a social group (or groups) together with the value and emotional significance of that membership" (Tajfel, 1981, p. 255). Group membership is thus an important element in the process of achieving a positive social identity. Aiming to achieve a positive social identity, individuals categorize their environment into groups and, specifically, compare their own group to other groups. In this process of differentiating the in-group from out-groups, individuals can develop in-group favoritism, referring to the preference individuals give to others whom they perceive to belong to their in-group (Tajfel & Turner, 1979). Consequently, individuals are likely to prefer same-ethnic over cross-ethnic peers.

In contrast to ethnic homophily in positive relationships, it has been proposed that negative relationships, such as rejection, aggression, or bullying, are more likely between cross-ethnic than same-ethnic peers (Boda & Néray, 2015; Kisfalusi, Pál, & Boda, 2018; Wittek et al., 2019), suggesting tensions between ethnic groups in school. In achieving a positive social identity, individuals compare their in-group to out-groups in ways to find a clear distinction from and devaluation of out-groups (Tajfel, 1982; Tajfel & Turner, 1979). Moreover, categorizing groups along ethnic boundaries signals differences between groups, for example in terms of cultural norms and practices (Strohmeier, Spiel, & Gradinger, 2008). Consequently, categorizing and comparing groups may lead to more negative evaluations of and negative behavior toward out-group members (Schütz & Six, 1996). Furthermore, negative peer relationships are argued to be more likely between cross-ethnic peers because of the potential feelings of threat between ethnic groups (Blalock, 1967; Bobo & Hutchings, 1996; Horowitz, 1985). These feelings of threat can result from perceived or real competition between ethnic groups over scarce resources, such as social status in the classroom, and may result in negative attitudes and behaviors toward cross-ethnic peers.

It has also been argued that there is no simple relationship between in-group favoritism and negative out-group contact (Brewer, 1999; Phinney, Jacoby, & Silva, 2007; Tajfel, 1982). In-group favoritism and social competition could just as well result in the absence of relationships, both positive and negative, between ethnic groups. Moreover, it has been found that violence is more likely between same-ethnic peers than cross-ethnic peers (Wittek et al., 2019). Whereas there is strong theoretical and empirical support for the principle of ethnic homophily in individuals' positive peer relationships, the role of ethnicity in negative peer relationships is less straightforward. In fact, most studies on interethnic relationships focus on (the lack of) positive relationships, such as friendships, but research on the effects of ethnic diversity on actual negative peer relationships is relatively rare (Boda & Néray, 2015; Kisfalusi et al., 2018; Wittek et al., 2019).
1.2 INTERETHNIC PEER RELATIONSHIPS IN THE BROADER PEER NETWORK

The idea that relationships are embedded in a larger context originates from work on individuals' position in social space, examining individuals' involvement in multiple dimensions in social life (McPherson, 1983; Simmel, 1950). That is, individuals are affected by multiple social processes, such as ethnic and sex homophily, and opportunity structures. In order to understand both theoretically and empirically how the broader peer network in school affects youth's interethnic peer relationships, I investigate the effects of two processes in this dissertation: 1) how youth's interethnic peer relationships are affected by and related to their involvement in other peer relationships by examining the interplay between (positive and negative) peer relationships and 2) how (dis)similarity in multiple dimensions, that is, multidimensional similarity, affects the role of ethnic homophily in youth's peer relationships.

A classical theory that is well suited to understand the interplay between peer relationships is structural balance theory (Cartwright & Harary, 1956; Heider, 1946). Balance theory describes how people's relations to persons, events, or attributes influence their relationship to another person. Specifically, structural balance theory argues that imbalance in such triadic relationships (referring to relationships between two people and a third person, event, or attribute) cause tension. Relationships are perceived as imbalanced when they involve contradictions. Consider, for example, friends of the same third peer who dislike each other. Individuals are triggered to form relationships which create a balanced state. In the example, the peers who disliked each other might be triggered to change the relationship into a positive tie or to break up the dislike relationship. In this way, individuals' relationship choices depend on the relationships they already have as well as on other's relationships in their network. For example, individuals' tend to become friends with friends of their friends (called transitivity, Feld & Elmore, 1982; Veenstra & Steglich, 2012) and have the tendency to reciprocate positive relationships. Moreover, the formation of positive relationships may depend on the existence of negative relationships and vice versa. For example, individuals have the tendency to dislike those peers whom their friends dislike as well, resulting in a balanced triadic relationship (Berger & Dijkstra, 2013; Fujimoto, Snijders, & Valente, 2017; Pål, Stadtfeld, Grow, & Takács, 2016; Rambaran, Dijkstra, Munniksm, & Cillessen, 2015). Furthermore, individuals create balanced relationships by forming positive ties to peers with whom they share a negative connection, an 'enemy'. For example, bullies who target the same victims are likely to befrend each other (Rambaran, Dijkstra, & Veenstra, 2019). Similarly, youth’s peer relationships are likely to influence the choices they make in their interethic peer relationships. Whether youth form relationships with their cross-ethnic peers may depend, for example, on whether they bully or are bullied by the same classmates. Such structural embeddedness may allow youth to overcome the hurdle to cross-ethnic avoidance.
Multidimensional similarity entails that individuals can be similar to their peers on several dimensions, such as individual characteristics, attitudes, or behaviors. Similarity in multiple dimensions matters for the formation of peer relationships because being similar in more than one dimension creates more meeting opportunities, shared experiences, and interests, resulting in an increased likelihood of forming and maintaining relationships (Block & Grund, 2014). Research on multidimensional similarity found that the likelihood of becoming affiliated increases with the number of dimensions on which peers are similar (Block & Grund, 2014; Kuipersmidt, DeRosier, & Patterson, 1995; Schaefer, 2010). Another way of interpreting the influence of multidimensional similarity is that being similar in one dimension might make dissimilarity in another dimension less salient (Block & Grund, 2014). This interpretation is important if we look at interethnic peer relationships because it provides insights in how ethnic boundaries can be crossed. Although homophily is assumed to be the main driver of social segregation in peer relationships in contexts such as schools (McPherson et al., 2001), multidimensional similarity enables the formation of cross-group relationships due to similarity in other dimensions. Considering how multidimensional similarity affects youth’s interethnic peer relationships therefore provides insights in ways in which the potentially negative effect of dissimilarity in ethnicity on peer relationships can be diminished.

1.3 SOCIAL NETWORK PERSPECTIVE

In this dissertation, I approach interethnic relationships in schools from a social network perspective. This means that I study peer relationships by investigating who is related to whom. In line with the idea that multiple mechanisms in the broader peer network influence the development of peer relationships at the same time, a social network perspective perceives individuals and their relationships in a network as interdependent (Steglich, Snijders, & Pearson, 2010).

There are several benefits of using a social network perspective to investigate youth’s interethnic peer relationships (Kalter, 2016; Wölfer & Hewstone, 2017). By focusing on ties between individuals as the smallest analytical level, social network data provide more detailed information than data focusing only on the individual. For example, research has shown that youth do not differ much in the extent to which they are victimized or involved in bullying behavior by their ethnic background (Vervoort, Scholte, & Overbeek, 2010; Vitoroulis & Vaillancourt, 2015, 2018). In these studies, it is suggested that “the assessment of ethnicity as a descriptive variable is not sufficient to account for group differences” (Vitoroulis & Vaillancourt, 2018, p. 752). Looking only at the prevalence of bullying or victimization among ethnic groups, however, does not give information on whom individuals bully or by whom they are targeted. Are youth mainly bullied by their in- or out-group peers? Does cross-group bullying happen primarily between minority and majority peers, or also among peers from different minority groups? Moreover, by whom are victims defended in bullying situations? Using detailed
social network information to examine interethnic peer relationships will help to unravel the complexity of these relationships.

Moreover, longitudinal analyses to investigate social network data, such as stochastic actor-based models (Snijders, Van de Bunt, & Steglich, 2010), allow to control for multiple social mechanisms which influence the formation of such ties. For example, it enables to control for the tendency to reciprocate relationships. Also, modern methods of social network analysis model factors that shape the likelihood for existence or formation of ties between individuals, taking into account the chances that such ties can occur at all in a given context. As Blau (1987, p. 79) said ‘one cannot marry an eskimo, if no eskimo is around’. Methods of social network analysis resolves the problem to disentangle preferences (not wanting to marry an eskimo), from the opportunity structure (not having an eskimo around). Furthermore, social network data measure more precisely the actual interpersonal contact than questions measuring degree of self-reported interethnic contact. Respondents are not asked about their own or their peers’ ethnicity in relation to the peer nomination questions. Consequently, respondents’ answers regarding their relationships may be less subject to social desirability.

Despite these benefits, there is a lack of the use of social network data in studies into interethnic peer relationships (Kalter, 2016; Wölfer et al., 2017; Wölfer, Schmid, Hewstone, & Van Zalk, 2016). Most studies have focused primarily on self-reported peer relationships without taking into account the influence of the broader network. Studies using social network data have found, for example, that cross-ethnic peers were more likely to become friends if they have a mutual friend (Echols & Graham, 2018), that ethnic segregation in youth’s friendship networks is related to more cross-ethnic disliking (Wittek et al., 2019), and that ethnic homophily in friendships is related to youth’s identification with their ethnic group (Jugert et al., 2018; Leszczensky, Jugert, & Pink, 2019; Leszczensky, Stark, Flache, & Munniksma, 2016).

In this dissertation, I employ the social network perspective in two ways. First, in all chapters, the data on youth’s peer relationships that I use is collected using social network questions. Second, I use advanced longitudinal social network analyses to analyze these data in two chapters. Using a social network perspective in this dissertation enables to take into account the complex network dependencies as a whole which deepens our understanding of interethnic peer relationships.

1.4 GROUP DIFFERENCES
Research into interethnic peer relationships calls for a differentiation between different ethnic groups, specifically ethnic minority groups. So far, most studies treat ethnic minority groups as a homogeneous group, ignoring differences between ethnic minorities (Jennissen et al., 2018). Especially in a context such as the Netherlands, with a long and complex history of immigration from multiple countries, youth’s interethnic peer relationships may vary between ethnic groups. This dissertation adds to the existing knowledge by paying attention to differences between ethnic groups.
Differences between ethnic minority groups may be explained by the concept of cultural distance (Beiser, Puente-Duran, & Hou, 2015; Berry, 2003; Lundborg, 2013; Schiefer, Möllering, & Daniel, 2012; Sortheix & Lönnqvist, 2015). Cultural distance entails the distance between ethnic groups’ cultural backgrounds in terms of, among others, religion, language, and norms and values. Cultural distance is often used to explain why different groups of ethnic minorities differ in their relationships to the societal majority. Perceived cultural closeness or similarity between groups is associated with more positive attitudes between these groups (Berry, 2003). In contrast, groups who are culturally more distant experience more discrimination from each other (Beiser et al., 2015) and have more difficulties to integrate (Lundborg, 2013; Schiefer et al., 2012; Sortheix & Lönnqvist, 2015). Hence, in examining youth’s interethnic peer relationships, it is important to consider cultural differences between groups.

In this dissertation I focus on the Dutch context in which there are multiple minority ethnic groups. Although the society’s ethnic composition is changing, with immigrants from more diverse ethnic backgrounds coming to the Netherlands, there are three groups which remain to be the largest minority groups: Turkish, Moroccans, and Surinamese (Statistics Netherlands, 2018b). Immigrants from Suriname, a former colony of the Netherlands, are culturally the closest to the societal majority: most of them speak Dutch and share similar religious beliefs as most Dutch majority. Turkish and Moroccan immigrants are more distant from the Dutch culture in terms of language, religion, and cultural traditions. Consequently, it can be expected that Surinamese adolescents have less difficulties with integration than Turkish and Moroccan adolescents. Surinamese adolescents may therefore also be more likely to have interethnic peer relationships with their Dutch societal majority peers than Turkish or Moroccan adolescents, and vice versa. In line with the idea of cultural distance, research on ethnic hierarchies in the Netherlands has shown that Dutch majority adolescents prefer northern European immigrants and members of ex-colonial groups, such as Surinamese, over immigrants from Islamic countries, such as Morocco and Turkey (Verkuyten, Hagendoorn, & Masson, 1996; Verkuyten & Kinket, 2000).

1.5 OVERVIEW OF THE DISSERTATION

In this dissertation I aimed to investigate how the broader peer network in school affects youth’s interethnic peer relationships (see Table 1.1 for an overview). Specifically, I investigated how the interplay between multiple peer relationships (Chapters 2, 3, and 4) and multidimensional similarity (Chapter 4) influence and relate to the role of ethnicity in peer relationships. Furthermore, I used insights into youth’s interethnic peer relationships to examine its relation to intergroup attitudes (Chapter 5). Throughout the dissertation, I considered a social network perspective and the heterogeneity of ethnic minority groups.

The study in Chapter 2 was set up to investigate how adolescents’ aggressive behavior toward same- and cross-ethnic peers relates to the nominations they receive for
friendship and rejection by same- and cross-ethnic classmates. Data from the first wave of the Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU; Kalter et al., 2016) were used. The CILS4EU project was designed to analyze the intergenerational integration of children of immigrants in the Netherlands, Germany, Sweden, and England. Using social network data on aggression, friendship, and rejection by same- and cross-ethnic classmates, I aimed to provide a first grasp of interethnic peer relationships in the context of multiple peer relationships and behaviors. Furthermore, I accounted for differences between ethnic groups by doing analyses separately for Turkish, Moroccan, and Surinamese adolescents.

In Chapter 3 I follow up on Chapter 2 by using social network analysis (stochastic actor-based models; Snijders et al., 2010) to examine the interplay between multiple peer relationships. Given the complexity and innovativeness of the analytical strategy needed to address interethnic peer relationships, I decided to first look at same- and cross-sex relationships which are based on a simplified, dichotomous variable, instead of immediately looking at interethnic relationships which are based on a more complex categorical variable. This allowed me to develop the methodological basis for tackling interethnic peer relationships in this dissertation. Specifically, I investigated in Chapter 3 how children's similarity in their position in the bullying network influences their same- and cross-sex friendship choices. In this chapter I used longitudinal social network data on both the school- and classroom-level from the Dutch KiVa anti-bullying program.

In Chapter 4, I examined how multidimensional similarity affects children's interethnic defending relationships. Building on the analytical approach in Chapter 3, I investigated how similarity in network position regarding bullying or victimization, sex, and being in the same classroom affected children's same- and cross-ethnic defending relationships. Given the potential benefit of multidimensionality on children's peer relationships, I examined whether similarity in these factors fostered children to form cross-ethnic defending relationships. Similar to Chapter 3, I used longitudinal social network data on both the school- and classroom-level from the Dutch KiVa anti-bullying program.

Chapter 5 was set up to examine how the broader peer network relates to adolescents' intergroup attitudes. I examined how exposure to, and friendships with out-group peers related to adolescents' out-group attitudes. Adding to previous research on the benefits of interethnic exposure and contact (Allport, 1954; Pettigrew & Tropp, 2006), I specifically tested group differences in the relation between out-group exposure, friendships and attitudes. In this chapter, I did not only differentiate between societal majority and immigrant adolescents, but also between immigrants from different cultural backgrounds. Moreover, I focused on an understudied group of immigrants: second- and third-generation adolescents. Similar to Chapter 2, I used data from the first wave of the CILS4EU data project.
Table 1.1. Overview of the dissertation

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Data source (year of data collection)</th>
<th>Number of students, classrooms and schools</th>
<th>Student sample by ethnic group</th>
<th>Average age</th>
<th>Analytical strategy</th>
<th>Main variables</th>
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| Chapter 2 | CILS4EU wave 1 (2010/2011) | 1,042 students in 85 classes in 56 schools | 917 Dutch 125 Turkish | 3rd grade of secondary school; 14.9 years old | Multilevel Poisson and negative binomial regression models | • Friendship: “Who are your best friends?”  
• Rejection: “Who would you not want to sit by?”  
• Aggression: “Who is sometimes mean to you?” |
| Chapter 3 | KiVa wave 1 to 3 (2012-2013), control schools | 2,130 students in 17 schools | 1,705 students in 124 classes in 71 schools | 2nd to 6th grade of primary school; 10.0 years old | Stochastic actor-based models (RSiena) | • Friendship: “Who are your best friends?”  
• Bullying (classroom level): “Who starts when you are victimized?”  
• Bullying (school level): “By which students are you victimized?” |
| Chapter 4 | KiVa wave 1 to 3 (2012-2013) | 1,325 students in 8 schools | 612 Dutch 98 Turkish 176 Moroccan 120 Surinamese 20 Dutch Antillean 116 Western 148 Non-western | 2nd to 6th grade of primary school; 10.0 years old | Stochastic actor-based models (RSiena) | • Defending (classroom level): “Which classmates defend you when you are victimized?”  
• Defending (school level): “Which children from other classrooms defend you when you are victimized?”  
• Bullying (classroom level): “Who starts when you are victimized?”  
• Bullying (school level): “By which students are you victimized?” |
| Chapter 5 | CILS4EU wave 1 (2010/2011) | 2,680 students in 169 classrooms in 92 schools | 2,141 Dutch 187 Turkish 188 Moroccan 164 Surinamese | 3rd grade of secondary school; 14.8 years old | Multi-group structural equation modelling | • Friendship: “Who are your best friends?”  
• Attitudes: “How do you feel about [Dutch, Turkish, Moroccan, Surinamese]?” (0 negative – 100 positive) |