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Oppositional culture revisited. Friendship dynamics and the creation of social capital among Turkish minority adolescents in Germany

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ABSTRACT

Ethnic differences in the endowment with social capital can exacerbate intergroup inequalities. Pursuing this argument, we first compare the educational compositions of friendship networks between Turkish minority and native majority adolescents in Germany. Second, we pick up notions from Oppositional Culture Theory (OCT) to examine how ethnic differences in the composition of friendship networks come about. In a sample of 2,419 students in 74 secondary schools, we focus on the effort, achievement, and anti-school behaviour of peers and the role these play in adolescents' friendship selection. Results from multilevel stochastic actor-oriented models reveal that Turkish minority adolescents prefer highly engaged and high-achieving peers as friends. Despite these preferences, Turkish minority adolescents' social networks still provide lower levels of social capital on aggregate than majority members' networks. We attribute this to systematic variation in the opportunity structure. Our results speak against the existence of anti-school norms among Turkish minority youth. Still, our study supports the OCT's notion that an ethnic group's structural positioning within society can result in selective acculturation processes and distinct patterns of social embeddedness.

Introduction

According to the concept of social embeddedness, social action constitutes social phenomena by being embedded in structures of social relations that constrain human behaviour (Granovetter 1985). In line with this notion, social embeddedness within *social networks* is considered to be a key determinant for structural adaptation processes among ethnic minority members (Kalter 2015; Portes and Sensenbrenner 1993). *Social capital*, which describes resources that are accessed through social ties to other actors, is considered to play a key role in such processes (Coleman 1988; Lin 2001). For instance, ethnic inequality in structural outcomes such as educational attainment can be

exacerbated when information is differently distributed across the social networks of majority and ethnic minority groups members (DiMaggio and Garip 2012). Following these arguments and given the path-setting role of education for future life chances, it appears tremendously important to examine the social embeddedness of ethnic minority youth within social networks.

Adolescents spend large parts of their time in school. Here, they build informal social networks, particularly based on friendships (Moody 2001). It is now well-established that friendship networks emerge according to *homophily* principles, meaning that adolescents connect with peers who are similar to them in salient characteristics such as ethnic background (McPherson, Smith-Lovin, and Cook 2001). However, the consequences of social embeddedness for ethnic inequality in educational outcomes depend not primarily on the extent to which adolescents are connected with same- and interethnic peers. Following the social capital approach, a student's educational achievements are affected by the distribution of those attributes within her friendship network that enhance educational success (Gremmen et al. 2017; Lomi et al. 2011; Lorenz et al. 2020). We refer to this distribution as the *educational composition* of a student's social network. Due to correlations between educational attributes and ethnic background, scholars assume that the educational composition of social networks differs between majority and ethnic minority members. Moreover, Oppositional Culture Theory (OCT) proposes that anti-school norms among racial and ethnic minority adolescents cause selective acculturation processes and reinforce ethnic inequality in the educational composition of adolescent networks (Fordham and Ogbu 1986; Portes and Sensenbrenner 1993). Still, direct evidence for these assumptions is sparse.

In this study, we compare the educational composition of friendship networks, which we consider a key element of social capital, between ethnic minority and native majority adolescents. Besides looking at ethnic variation in the network compositions on an aggregated level, we test to which extent it emerges due to group-specific *social network dynamics* on the micro-level. With this regard, we draw on propositions offered by OCT and examine (1) whether the academic engagement and achievement of peers influence the likelihood that ethnic minority adolescents select those peers as friends, (2) if this is different when compared to the friendship selection behaviour among native majority adolescents, and (3) if these social network dynamics differ in the comparison between same- and interethnic friendships.

Our empirical study is based on the German subsample of the Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU). These data are particularly well suited for answering our research questions since they provide repeated measurements of friendship networks as well as fine-grained measures of the students' school engagement and scholastic performance. We compare the social network dynamics among native majority adolescents and among Turkish minority adolescents who count to the largest and structurally most disadvantaged ethnic minority groups in Germany. As proposed by OCT, their experiences of structural disadvantage and discrimination make them particularly prone to develop a collective identity that initiates the emergence of an oppositional culture (Ogbu 1974). However, existing evidence on Turkish minority members' academic achievements and aspirations leads us to assume that an oppositional culture emerging among them must not be marked by the avoidance of school success. Contrastingly, we expect that peers from this group enforce social

norms that do not only reward educational success but also friendships with higher-engaging and higher-achieving peers.

We focus on both attitudinal and behavioural aspects of the educational composition of social networks. These include the self-reported effort, anti-school behaviour, and grade point averages (GPAs) of peers. In contrast to studies which addressed ethnic minority students' popularity among peers by using self-report measures (e.g. Ainsworth-Darnell and Downey 1998), we examine actual social ties within classrooms as measured by friendship nominations. This way, we can avoid possible biases related to self-perceptions of the attitudes and behaviours of others (Wang et al. 2018). Moreover, we extend existing social network analyses of OCT (e.g. Lee et al. 2014) by utilising multilevel stochastic actor-oriented models (SAOMs), which are a sophisticated method for the analysis of social network panel data (Snijders 2017; Snijders, Van de Bunt, and Steglich 2010). This method allows us to explore social network dynamics while controlling for several confounding mechanisms that can lead to a clustering of same-ethnic and interethnic friends with similar academic attributes.

The emergence of oppositional cultures

Originally targeted to explain the situation of African Americans in the US, OCT highlights the continuing racial discrimination and disadvantages of involuntary racial and ethnic minority groups that reflect in persistent inequalities in the education system, labour and residential housing market. One reaction of experiencing unfortunate life circumstances can be the development of oppositional cultures that are marked by the refusal of mainstream norms and values among the deprived minority groups (Ogbu 1974; 2004). In the school context, oppositional culture is supposed to primarily take the form of anti-school norms. Among children and adolescents, such social norms can have two main consequences: (1) peer pressure that sanctions school success and labels it as 'acting White' and (2) the bullying and social exclusion of same-ethnic peers if they engage and succeed in school (Fordham and Ogbu 1986).

The selective acculturation of immigrant youth within ethnic enclaves marked by such peer processes has been described as one possible assimilation outcome (Portes and Rumbaut 2001). However, selective acculturation must not necessarily lead to disadvantages in ethnic minority members' social capital endowment. This has been confirmed by studies from the US which showed that racial minority students do not resist schooling (Harris 2006), that being a good student does not harm the peer popularity among blacks (Ainsworth-Darnell and Downey 1998; Fryer and Torelli 2010), that higher-achieving students have large-sized networks and are popular among other high-achievers (Lee et al. 2014), and that schooling behaviour is not affected negatively by minority peers (Harris and Robinson 2007).

However, only a few empirical studies considered that oppositional cultures can emerge in varying configurations (De Vos 1975; Ogbu 1974). 'Voluntary' minority groups (i.e. labour immigrants and their descendants) might develop collective identities that are not based on a sense of inferiority but refer to their cultural heritage in a positive sense (Zhou 1997). Strong reliance on the ethnic ingroup might then be expressed by positive attitudes towards education (Ogbu and Simons 1998). This might also explain why research on the European context has not produced any clear evidence for a

culture of school-disengagement among ethnic minority youth (Stark, Leszczensky, and Pink 2017; van Tubergen and van Gaans 2016).

The role of oppositional culture in friend selection dynamics among ethnic minority youth

OCT addresses the formation and educational composition of minority students' social networks in that it proposes that an oppositional culture among minority members can result in social exclusions of same-ethnic peers. In the following, we will demonstrate how this assertion can be integrated into a general theoretical framework of friendship selection. Afterwards, we will apply this framework to explain the creation of social capital among Turkish minority youth in Germany.

Who is attractive as a friend depends on individual *preferences* and *opportunities* for selecting peers with specific attributes (Martinovic, van Tubergen, and Maas 2009). From various social network studies, we know that the most prominent and best-established preference related to peoples' friendship selection behaviour is ethnic homophily. This is reflected in the empirical findings demonstrating that adolescents tend to connect to peers with the same ethnic background (Leszczensky and Pink 2019; Smith 2018; Wimmer and Lewis 2010). Homophily exists also based on academic attributes such as school engagement (Wang et al. 2018), educational expectations (Lorenz et al. 2020), and academic achievement (Gremmen et al. 2017; Kretschmer, Leszczensky, and Pink 2018). However, little is known about how these homophily tendencies intersect with ethnic homophily and how they produce systematic group differences in the educational composition of social networks (for exceptions, see Flashman 2014).

Apart from preferences, structural opportunities to meet peers with specific attributes are essential for friendship selections. Propinquity describes the opportunities for interethnic contact. If, for instance, there are no peers with the same ethnic background in the immediate vicinity, one cannot satisfy one's ethnic homophily preference (Blau 1977). In contrast, the increasing numerical distribution of same-ethnic peers in a context increases the likelihood of same-ethnic social ties and ethnic segregation even in the absence of any preference for same-group contact (Mouw and Entwisle 2006). Likewise, the number of peers in a context who have similar skills and abilities will increase the likelihood of achievement-related homophily while opportunities for friendships with higher-achieving peers increase in settings marked by a wider distribution of skills and abilities.

Beyond preferences and opportunities, the selection of friends can be driven by *social norms* that are enforced within the peer group (Kalmijn 1998; Koops, Martinovic, and Weesie 2017). A social norm, for instance, that labels social ties to outgroup members as inappropriate, can become a constraint for the selection of intergroup friends by imposing peer pressure and the punishment of deviant behaviour (Martinovic, van Tubergen, and Maas 2009). An oppositional culture among ethnic minority children and adolescents would be one particular kind of such social norms. Anti-school norms among ethnic minority peers, for instance, would impose additional costs for ethnic minority members on befriending higher-engaging and higher-achieving same-ethnic peers. Due to such costs, the attractiveness of same-ethnic peers would decrease when the peers displayed more positive academic attitudes and behaviours and succeeded in school.

Is there an oppositional culture among Turkish minority adolescents in Germany?

Turkish minority students in Germany achieve lower in standardised achievement tests, show lower levels of destination-language proficiency, attend the lower school tracks more often, and attain lower educational qualifications compared to their majority counterparts (Kristen and Granato 2007; Stanat et al. 2017). Additionally, there is extensive and consistent evidence for an 'aspiration-achievement paradox' which describes that, given group differences in socioeconomic status and academic achievement, Turkish minority adolescents have higher educational expectations and aspirations than their majority counterparts (e.g. Gresch 2012). One key explanation is that many minority adolescents stem from immigrant families in which intergenerational upward mobility, in contrast to status maintenance, is a pivotal goal in life (Salikutluk 2016).

According to OCT, the persistent experiences of discrimination and disadvantages in structural outcomes among ethnic minority members can become an integral part of their collective identity (Ogbu 2004). This can translate into the rejection of success in mainstream society and the social exclusion of peers who perform successfully in school. However, the history and the current situation of the African American group in the US and the Turkish group in Western Europe are very different. Particularly, the Turkish minority in Germany (as well as in other European countries) comprises mainly labour migrants and their descendants and in contrast to African Americans in the US, it can be regarded as a voluntary minority group. This might also be part of the explanation of why the collective identity of Turkish minority members is marked by elements such as a strong will for upward mobility, success in the labour market, and high educational aspirations. According to the theoretical framework delineated above, this can mould social norms that result in a distinct friend selection behaviour of adolescents belonging to this group. In particular, we expect that the high educational ambitions among Turkish minority adolescents translate into social norms that reward friendships with peers who engage and succeed in school. Therefore, peers' high academic engagement and achievement might be a more important criterion for the selection of friends among Turkish minority adolescents than among their native majority counterparts (*Hypothesis 1*).

However, the relationships between peers' academic engagement and achievement and their attractiveness as friends might be different when it comes to same-ethnic as opposed to interethnic friendships. This is because social norms emerging from an oppositional culture should control especially the selection of same-ethnic friends (depending on their academic engagement and achievement) (Ogbu 2004). Under the assumption of a collective identity among Turkish minority members that rewards academic striving, same-ethnic peers who engage or are successful in school might be particularly attractive as friends since they serve as role models and behave according to the social norms emerging among this ethnic minority group. Interethnic friendship with majority peers, in contrast, might be guided by other social norms or even ostracised by same-ethnic peers (Kruse and Kroneberg 2019). Therefore, Turkish minority adolescents should consider the academic engagement and achievement of peers as more important when selecting same-ethnic friends than when selecting majority friends (*Hypothesis 2*).

Methodological challenges

The educational composition of adolescents' social networks can result from various mechanisms that cannot be disentangled with conventional regression methods. First, homogeneity within networks along with one attribute such as scholastic performance must not necessarily stem from homophily regarding this attribute. Rather, secondary forms of homophily can reinforce network homogeneity if different forms of homophily are intertwined (Shalizi and Thomas 2011). For instance, ethnic homophily can reinforce the clustering of adolescents with a similar scholastic performance (Wimmer and Lewis 2010).

Second, friendship dynamics are not only determined by the preferences and opportunities of single actors but also by the social network structure itself (McFarland et al. 2014). This issue refers to endogenous *social network mechanisms* such as the tendency to reciprocate friendships or the tendency to befriend and remain friends with friends of friends. These mechanisms operate independent of the preferences, opportunities, and social norms we are interested in, yet they can enhance the clustering of adolescents with similar attributes (such as scholastic performance) within friendship networks (Rivera, Soderstrom, and Uzzi 2010). Failing to consider these mechanisms in an analysis of friendship dynamics will most probably lead to biased estimates of individual preferences and social norms (Wimmer and Lewis 2010).

Finally, relationships between the ethnic background of adolescents and the academic attributes of their friends can stem from the social influence of friends (Steglich, Snijders, and Pearson 2010). That is, friends can affect a student's values and behaviours through social comparisons, social contagion, social learning, and social norms (DiMaggio and Garip 2012). Social selection and influence are intertwined and both processes lead to the establishment of distinct peer milieus within classrooms (Gremmen et al. 2017; Lorenz et al. 2020). Similarly, Turkish minority students might adapt their academic engagement and achievement towards that of their same- and/or interethnic friends independently from their friend selection behaviour. In fact, social influence plays a key role in OCT. For instance, the theory implies that anti-school norms among minority youth, which are supposed to punish school engagement, affect the school engagement of same-racial and same-ethnic peers (Ainsworth-Darnell and Downey 1998).

As we will demonstrate, our analytic framework, the multilevel SAOM, allows us to meet these challenges as follows: in our investigation of Turkish minority adolescents' friendship selection behaviour, we control for various forms of homophily and endogenous network processes, and we simultaneously test whether same- and interethnic friends (as well as changes in same- and interethnic friendships over time) shape the students' academic engagement and achievement.

Data and method

Data

We used data collected in Germany during the first two waves (T_1 and T_2) of the CILS4EU (Kalter, Irena, and Dollmann 2019). This longitudinal survey was designed to study students from immigrant families and their ethnic majority peers, starting at age 14, in England, Germany, the Netherlands and Sweden. We restricted the analysis to Germany where Turkish minority member form one of the largest and structurally

most disadvantaged minority groups. Due to the size of this minority group, their members are represented in most classrooms of the German sample. Moreover, the German data have been proven to be specifically suitable for our analytical framework (the multilevel SAOM) which requires longitudinal information about social networks that are at least moderately stable in their structure over time.

In Germany, the first wave of school surveys took place with 5,013 fourteen-year-old students who attended 9th grade (T_1). The students were surveyed again one year later when they were in the 10th grade (T_2).

Analysed sample

The CILS4EU's Sociometric Fieldwork Reports (Kruse and Jacob 2016; Kruse, Weißmann, and Jacob 2016) and previous applications of multilevel SAOMs (Boda 2018, 2019; Lorenz et al. 2020) propose the exclusion of network settings in which more than 25% of the network units did not participate in the survey. We followed this approach and reduced the data to classrooms in which at least 75% of the adolescents participated during each survey wave. The analysed sample consisted of 2,419 students in 115 classes and 74 schools.

Dependent variables

SAOMs allow for the joint modelling of social ties and individual attributes over time, by specifying both social ties and actor attributes as dependent variables (these are called 'network-dependent variables' and 'behavioural dependent variables', respectively), and explaining each dependent variable by a separate set of independent variables (Snijders, Van de Bunt, and Steglich 2010). In our analyses, we modelled the co-evolution of friendship (network dependent variable) and two individual characteristics (behavioural dependent variables) that are supposed to display the adolescents' level of school engagement: effort and anti-school behaviour. All dependent variables were measured twice, once in grade 9 (T_1), and once in grade 10 (T_2).

To measure *friendships*, students were asked to nominate up to five classmates as their best friends ('Who are your best friends in class?'). We used these to construct friendship networks in each classroom.

Self-reported effort in school was measured by asking students how strongly they agreed with the statement 'I put a great deal of effort into my school work'. The variable contained five answer categories, ranging from 'strongly agree' to 'strongly disagree'.

Self-reported anti-school behaviour was a summative scale created from four items. The questions were 'How often do you argue with teachers?', 'How often do you get a punishment in school (e.g. being kept in detention, being sent out of class, writing lines)?', 'How often do you skip a lesson without permission?', and 'How often do you come late to school?'.

Independent variables

We used the adolescents' self-reported *GPA at T_1* as a measure of academic achievement. This variable was used to predict how the achievement of peers is related to the likelihood

to select them as friends. Additionally, the GPA at T_1 was used to predict the development of the adolescents' effort and anti-school behaviour. This variable was obtained from student answers to the question 'What grades did you get in your last school report?' at T_1 and reflects the average of the grades earned in German, mathematics, and English. The variable ranged from values 1–6 and was reversed so that higher values can be interpreted as better performance. Students pass a course if they get grades at least as high as 4.

The classification of different *ethnic minority groups* followed the procedure described in Dollmann, Jacob, and Kalter (2014). We differentiated between majority students, Turkish minority students, and other ethnic minority students.

We used the highest values among the parents concerning the international socioeconomic index of occupational status (*HISEI*) (Ganzeboom et al. 1992) as an indicator of the students' socioeconomic background. This information was obtained from interviews with the parents. If parents did not provide any information on their occupation, we used the information on their occupational status provided by the students.

Finally, we used students' gender to predict both friendship and school engagement.

Analytic strategy: Multilevel social network analysis

Multilevel SAOMs represent the dynamics of network choices among students while accounting for the classroom composition, the attributes of the students attending the classrooms, and the structure of the classroom networks (Snijders 2017; Snijders, Van de Bunt, and Steglich 2010). Therefore, these models allow us to account for social network mechanisms as well as different forms of homophily while investigating how the academic attitudes and behaviours of same- and interethnic peers are related to the attractivity to be selected as friends by Turkish minority and majority adolescents. Further, by modelling social ties and individual attributes over time simultaneously, they help us disentangle social selection from social influence.

SAOMs rely on simulations to reconstruct the creation of a social network observed at a later time point as a sequence of many small changes between an earlier and the later observation of the network. They consider an actor-oriented perspective by assuming that actors (e.g. students in a classroom) control their outgoing ties (i.e. establishing new friendship ties or maintaining or terminating existing friendship ties). During the simulation process, single actors are randomly selected and given a chance to change a single outgoing friendship tie. In our case, the models simulate that a random adolescent creates, maintains or terminates a friendship tie to one other classmate. These decisions are simulated based on independent variables which can be based on actor attributes (e.g. the effort of a student), the attributes of the other actors in the network (e.g. the effort of a classmate), the combination of these (e.g. effort similarity between student and classmate), and endogenous network processes (e.g. reciprocity). This way, SAOMs allow for disentangling different determinants of friendship selection, such as own preferences and the attributes and social ties of other network members. Also, SAOMs take into account opportunities to select friends with certain attributes. This provides us with the advantage to focus on individual preferences for selecting friends and group differences in these preferences.

Another advantage of SAOMs for our study is that these models can be used to disentangle processes of social selection from processes of social influence by including *behavioural dependent variables* (e.g. a student's effort) in addition to friendship ties which are always a dependent variable. In this way, SAOMs allow modelling of the co-evolution of social ties and actor attributes. Therefore, it is possible to consider the interdependencies between the formation of friendship ties and the development of the students' academic engagement throughout the two survey waves.

The described simulation process refers to single classrooms. However, our data have a multilevel structure that is common for statistical analyses in educational research; 2,419 students were nested in 115 classes. We analysed the classrooms simultaneously by applying a recent methodological addition to SAOMs that enables fitting random coefficient multilevel network models (Koskinen and Snijders 2020). These models use a Bayesian estimation technique. Compared to the two-step procedure of meta-analyses used in many previous studies, multilevel SAOMs offer more statistical power. The multilevel approach enables us to assume that some parameters vary randomly among the school classes according to a multivariate normal distribution. Other parameters can be assumed to be fixed across the classes. Thus, multilevel SAOMs account for multilevel dynamics via a similar method as random-coefficient regression models.

For the simulations, missing values of both the dependent variables and covariates were imputed as described by Ripley et al. (2020, Section 4.3.2).

Model specification

Our main results stem from three multilevel SAOMs which all had friendships as a first dependent variable. One subset of models used the students' effort as the behavioural dependent variable (see models 1a and 2a in Table 2), and another subset used the the students' anti-school behaviour (see models 1b and 2b in Table 3). In the following, we introduce the independent variables (so-called *effects*) that were used to explain the evolution of these dependent variables.

The *friendship part* of the models included a selection of effects that represent endogenous network processes commonly included in SAOMs (Snijders and Lomi 2018). We used the reciprocity effect, three degree-related effects ('*indegree-popularity*', '*ego's popularity*', and '*ego's activity*'), the geometrically weighted edgewise shared partners effect (*'GWESP'*), and the interaction between '*GWESP*' and reciprocity (for a more detailed description, see Block 2015).

For each of our indicators of academic engagement and achievement (i.e. effort, anti-school behaviour, and GPA), we included three effects to test if students with higher values on any of the variables tended to nominate more friends ('*effort ego*', '*anti-school behaviour ego*', and '*GPA ego*'), if they tended to get nominated by peers more often ('*effort alter*', '*anti-school behaviour alter*', and '*GPA alter*'), and if students with similar values on a variable had a higher likelihood to become and stay friends ('*similar effort of ego and alter*', '*similar anti-school behaviour of ego and alter*', and '*similar GPA of ego and alter*').

To test if peers who engage and succeed in school were more attractive as friends for Turkish minority adolescents than for majority adolescents (Hypothesis 1), we interacted

the effects 'effort alter', 'GPA alter' (Model 1a in Table 2), and 'anti-school behaviour alter' (Model 1b in Table 3) with the ethnic background of ego, while majority background served as the reference category.

Models 2a and 2b followed the aim of considering differences in the likelihood of students to create and maintain friendship ties to same- and interethnic peers and, thus, to test Hypothesis 2. To do so, we included dyadic covariates to our SAOMs that indicated the ethnic backgrounds among pairs of students (that is, not just the ethnicity of ego, but also that of alter). The dyadic covariate 'Turkish-Turkish', for instance, was 1 if among a pair of students both had a Turkish background and 0 otherwise. Since the reference category in all models was the combination 'Turkish-majority', the effect of 'Turkish-Turkish' indicates if Turkish students had a higher probability of befriending same-ethnic peers compared to befriending majority peers. Interacting these dyadic covariates with 'effort alter', 'GPA alter' (Model 2a in Table 2), and 'anti-school behaviour alter' (Model 2b in Table 3) allowed us to examine if the attractiveness of differently engaged and achieving peers as friends among Turkish minority adolescents differed depending on whether the peers had the same or another ethnic background.

To account for a possible social influence of friends, we modelled the effect of the share of same-ethnic friends on effort and anti-school behaviour in the behavioural parts of our models (i.e. those parts predicting effort and anti-school behaviour). In models 1a and 1b, we interacted the 'share of same-ethnic friends' effect with the ethnic-background effect of ego to find out if the effect of the share of same-ethnic friends on effort (Model 1a) and anti-school behaviour (Model 1b) varied with the ethnic background. In models 2a and 2b, the 'share of same-ethnic friends' effect was, instead, weighted with the dyadic covariates that indicated the ethnic back-grounds of pairs of students, while treating 'Turkish-Turkish' (as well as 'majority-majority' and 'other minority-other minority') as the reference category. The 'share of same-ethnic friends' effect weighted with 'Turkish-Turkish', for instance, informed us if an increasing share of same-ethnic friends among Turkish minority students (in comparison to the share of majority friends) changed the Turkish students' effort or anti-school behaviour (see Table 4).

In models 3a and 3b, that were otherwise identical to models 2a and 2b respectively, we additionally included a social influence effect which tested whether the students' own effort (Model 3a) and anti-school behaviour (Model 3b) converged towards the average effort and anti-school behaviour of their friends. This followed the aim of finding out if a possible effect of the share of same-ethnic friends (as tested in models 2a and 2b) was mediated by a process in which students adapt their academic engagement towards that of their friends (the results from Model 3a can be found in Appendix C while the results from Model 3b are provided in Table 4).

All models take into account a possible homophily regarding gender, HISEI, effort, and grades in the friendship part. In the behavioural part, the adolescents' grades, ethnic background, HISEI, and gender are accounted for. A full description of all effects is provided in Appendix A.

We tested the convergence of our models, as described in Ripley et al. (Ripley et al. 2020, Section 11.3.7).

Results

Descriptive results

Descriptive statistics of the dependent variables, the individual predictor variables, and the social networks in the sample can be found in Appendix B. We find that Turkish minority students reported significantly higher effort in school than majority members, while the average effort of members of other ethnic minority groups laid in-between. The average anti-school behaviour did not differ significantly between Turkish minority members and the majority group. The significant group differences in GPA confirm earlier studies on the structural integration of ethnic minority youth in Germany (e.g. Kristen and Granato 2007): Turkish minority students attained the lowest GPAs on average, followed by other minority members for whom the achievement gap to the majority group was slightly smaller (but still statistically significant). Overall, these ethnic differences in the outcomes were similar across T_1 and T_2. The fact that Turkish students reported higher effort than majority students while lagging behind in terms of educational outcomes is in line with evidence for the 'aspiration-achievement paradox' among this group (see Salikutluk 2016).

Table 1 informs us about the average educational composition of the friendship networks of Turkish minority and majority adolescents. Turkish adolescents had friends with significantly higher effort, significantly higher levels of anti-school behaviour, and significantly lower grades than their majority counterparts. Same-ethnic friends of Turkish minority students showed significantly higher effort but similar anti-school behaviour and similar grades than the majority friends of these students. If one compares these numbers with the descriptive statistics of our dependent variables (see Table B1 in Appendix B), it appears as if the same-ethnic friends of Turkish minority adolescents showed similar levels of academic engagement and achievement than the Turkish adolescents in the analysed sample overall. However, Turkish adolescents' majority friends differed from the overall majority subsample: their levels of effort, anti-school behaviour, and GPA were significantly lower than among majority members in the sample.

Although providing detailed and novel information about the educational composition of Turkish minority adolescents' friendship networks, these numbers do not take possible group differences in the opportunity structure as well as endogenous network mechanisms into account. Moreover, the numbers can be a result of both the

Table 1. Average effort, anti-school behaviour, and GPA of Turkish minority adolescents' friends.

	Effort		Anti-school behaviour		GPA	
	M	SD	*M*	SD	*M*	SD
Turkish students						
All friends	2.74	0.40	3.60	1.01	3.82	0.48
Majority friends	2.52	0.65	3.47	1.71	3.78	0.74
Turkish friends	2.81	0.51	3.43	1.27	3.78	0.57
Other minority friends	2.74	0.66	3.70	1.54	3.91	0.58
Majority students						
All friends	2.59	0.39	3.25	1.06	4.07	0.45
Majority friends	2.56	0.49	3.20	1.24	4.09	0.54
Turkish friends	2.79	0.75	3.31	1.75	3.96	0.58
Other minority friends	2.62	0.61	3.40	1.51	4.02	0.59

friendship selection behaviour and the social influence of friends among Turkish minority adolescents.

Friend selection among ethnic minority youth: results from multilevel SAOMs

Table 2 presents the main results from a multilevel SAOMs which had effort as the behavioural dependent variable (the full results are provided in Appendix C). Model 1a indicates that majority adolescents preferred befriending peers with lower effort over befriending other peers (ß = −0.06, $p \leq 0.01$). The positive interaction of this effect with 'Turkish ego' (ß = 0.08, $p \leq 0.1$, see Table C1 in Appendix C) confirms Hypothesis 1 and indicates that this tendency was different among Turkish minority students. The insignificant joint effect in Table 2 shows that for Turkish students, *alter's* effort was not a significant predictor of friendship (ß = 0.02, $p > 0.1$).[1] Furthermore, peers with higher GPAs were more attractive as friends for majority adolescents than peers with lower GPAs (ß = 0.12, $p \leq 0.001$). As the significant joint effect for the Turkish group (ß = 0.12, $p \leq 0.01$) indicates, this preference existed similarly among Turkish minority adolescents. This contradicts our Hypothesis 1.

Model 2a informs us if the relationships between effort, GPA, and attractiveness as a friend differed between same- and interethnic friendships dynamics. It turns out that Turkish minority students preferred befriending majority peers who reported lower effort over befriending higher-engaged majority peers (ß = −0.19, $p \leq 0.05$). As the interaction effect of these variables with the dyadic covariates reveals, this relationship was significantly different for creating and maintaining same-ethnic friendships (the interaction effects are reported in Table C2 in Appendix C). Among same-ethnic peers of Turkish minority adolescents, those with higher effort were preferred over those with lower effort (interaction of ß = 0.13, $p \leq 0.1$). This confirms our Hypothesis 2.

Table 2. Selection results from multilevel SAOM with effort as behavioural dependent variable.

	Model 1a			Model 2a		
	ß	p		ß	p	
Effect of alter's effort based on ego's ethnic background						
Majority ego to any alter	−0.06	0.01	*	–		
Turkish ego to any alter	0.02	0.30		–		
Other minority ego to any alter	0.09	0.01	**	–		
Effect of alter's effort based on alter's ethnic background among Turkish minority egos						
Turkish ego to majority alter	–			−0.19	0.04	*
Turkish ego to Turkish alter	–			0.13	0.08	+
Turkish ego to other minority alter	–			0.02	0.20	
Effect of alter's GPA based on ego's ethnic background						
Majority ego to any alter	0.12	0.00	***	–		
Turkish ego to any alter	0.12	0.01	**	–		
Other minority ego to any alter	0.09	0.01	*	–		
Effect of alter's GPA based on alter's ethnic background among Turkish minority egos						
Turkish ego to majority alter	–			0.37	0.00	***
Turkish ego to Turkish alter	–			0.22	0.09	+
Turkish ego to other minority alter	–			0.09	0.45	

Notes:
1. ß: posterior mean.
2. *p*: posterior probability for the parameter to have the same sign as ß; *** $p \leq 0.001$ ** $p \leq 0.01$ * $p \leq 0.05$ + $p \leq 0.1$.
3. Both models achieved sufficient convergence.
4. $N_{students}$ = 2,419, $N_{classes}$ = 115.
5. Sources: CILS4EU, authors' calculations.

Table 3. Selection results from multilevel SAOM with anti-school behaviour as behavioural dependent variable.

	Model 1b			Model 2b		
	ß	p		ß	p	
Effect of alter's anti-school behaviour based on ego's ethnic background						
Majority ego to any alter	0.02	0.09	+	–		
Turkish ego to any alter	−0.03	0.03	*	–		
Other minority ego to any alter	−0.01	0.18		–		
Effect of alter's anti-school behaviour based on alter's ethnic background						
among Turkish minority egos						
Turkish ego to majority alter	–			0.00	0.50	
Turkish ego to Turkish alter	–			−0.02	0.38	
Turkish ego to other minority alter	–			−0.06	0.03	*

Notes:
1. ß: posterior mean.
2. p: posterior probability for the parameter to have the same sign as ß; *** $p \leq 0.001$ ** $p \leq 0.01$ * $p \leq 0.05$ + $p \leq 0.1$.
3. Both models achieved sufficient convergence.
4. $N_{students} = 2{,}419$, $N_{classes} = 115$.
5. Sources: CILS4EU, authors' calculations.

Additionally, Model 2a reveals that Turkish minority students preferred befriending majority peers who attained higher GPAs (ß = 0.37, $p \leq 0.001$) over befriending other majority peers. Likewise, increasing GPAs made same-ethnic peers more attractive as friends (ß = 0.22, $p \leq 0.1$). However, contradicting Hypothesis 2, this tendency was significantly less pronounced than in terms of interethnic friendships with majority peers.

Table 3 displays the results from our multilevel SAOMs focusing on anti-school behaviour. Model 1b shows that majority members preferred to become and maintain friends with peers who reported higher levels of anti-school behaviour over befriending other peers (ß = 0.02, $p \leq 0.1$). The opposite was the case for Turkish minority members. As predicted in Hypothesis 1, they had a higher likelihood of creating and maintaining friendships with peers who reported a relative lack of anti-school behaviour (ß = −0.03, $p \leq 0.05$). Distinguishing between inter- and same-ethnic friendship in Model 2b did not reveal any significant differences.

Social influence of friends: results from multilevel SAOMs

Our results revealed no evidence for the social influence of friends on self-reported effort (see tables C2 and C3 in Appendix C). In particular, the share of same-ethnic friends did not affect the development of effort over time, and this did not vary with the ethnic background of the adolescents (models 1a and 2a). Additionally, adolescents in our sample did not change their effort towards the average effort of their friends over time (Model 3a).

However, friends mattered for the development of anti-school behaviour (see Table 4). Model 1b shows that an increasing share of same-ethnic friends was associated with increasing anti-school behaviour (ß = 0.14, $p \leq 0.1$). According to Model 2b, Turkish minority adolescents increased their anti-school behaviour with increasing shares of same-ethnic (ß = 0.60, $p \leq 0.01$) and other minority students (ß = 0.43, $p \leq 0.001$) (in comparison to the share of majority students). This tendency decreased but remained significant (ß = 0.46, $p \leq 0.05$) when we controlled for the general (and statistically significant) tendency of adolescents to adapt their anti-school behaviour towards the average anti-school behaviour of their friends in Model 3b.

Table 4. Social influence results from multilevel SAOM with anti-school behaviour as behavioural dependent variable.

	Model 1b		Model 2b		Model 3b	
	ß	p	ß	p	ß	p
Effect of share of same-ethnic friends			–		–	
Majority	0.14	0.90 +				
Turkish minority	0.15	0.33	–		–	
Other minority	0.08	0.57	–		–	
Effect of share of Turkish friends (in reference to share of majority friends)						
Majority	–		−0.32	0.11	−0.28	0.10
Turkish minority			0.60	1.00 **	0.46	0.98 *
Other minority			0.43	1.00 ***	0.35	0.99 *
Effect of share of other minority friends (in reference to share of majority friends)						
Majority	–		−0.02	0.44	−0.01	0.44
Turkish minority	–		0.63	0.99 **	0.47	0.94 +
Other minority	–		0.18	0.89	0.18	0.91 +
Effect of average anti-school behaviour of friends	–		–		0.54	1.00 **

Notes:
1. ß: posterior mean.
2. *p*: posterior probability for the parameter to have the same sign as ß; *** $p \leq 0.001$ ** $p \leq 0.01$ * $p \leq 0.05$ $^{+} p \leq 0.1$.
3. All models achieved sufficient convergence.
4. $N_{students} = 2,419$, $N_{classes} = 115$.
5. Sources: CILS4EU, authors' calculations.

Conclusion

In this study, we demonstrated that the educational composition of Turkish minority adolescents' friendship networks in Germany differs systematically from that of native majority adolescents. On aggregate, Turkish students have more engaged but lower-achieving friends and friends who report more anti-school behaviour than the friends of majority adolescents. This result points to ethnic differences in the adolescents' endowment with social capital.

We applied multilevel SAOMs on social network panel data from the CILS4EU to find out to which extent this aggregated pattern emerged from social network dynamics among majority and Turkish minority youth on the micro-level. The results contradict the assumption that Turkish minority adolescents socially exclude higher-engaged and successful peers. In contrast, we found that majority adolescents tend to exclude peers who report higher effort while this is not the case for Turkish minority adolescents. Similarly, we found that Turkish minority adolescents exclude peers with higher levels of anti-school behaviour which is not the case for the majority group who prefer such peers as friends. We conclude from this that friendship dynamics vary systematically between Turkish minority and majority adolescents in Germany. Such variation might be the result of a selective acculturation process in which ethnic minority youth relies on cultural distinctions and transforms their parents' strong will for upward mobility into high educational aspirations which, in turn, mould social norms that affect the adolescents' friend selection behaviour (Ogbu and Simons 1998; Portes and Sensenbrenner 1993; Zhou 1997).

Another finding of our study is that Turkish minority adolescents, although to a lesser extent than majority adolescents, prefer befriending higher-achieving peers over befriending lower-achieving peers. However, this preference seems to be more important in guiding the selection of majority friends than the selection of same-ethnic friends. This indicates that interethnic friendships follow the instrumental aim of acquiring access to

valuable resources and that cross-ethnic friendships (especially those with majority members) provide a bridging type of social capital that yields particularly positive returns to ethnic minority members' human capital formation (Burt 1992).

Our application of multilevel SAOMs revealed that micro-level network dynamics play a key part in creating ethnic variation in the endowment with social capital. For instance, among majority adolescents, the social exclusion of more engaged peers constitutes social networks that comprise less-engaged friends than the networks of Turkish minority students. Furthermore, the social influence of friends on Turkish minority adolescents' anti-school behaviour seems to account for the higher levels of anti-school behaviour we observed among this group on aggregate. However, another part of the story is ethnic variation in the opportunity structure. For instance, Turkish minority youth have lower achieving-friends than majority youth on average despite their preferences for befriending higher-achieving peers. This might be explained with the fact that interethnic friendships with majority peers occur much less frequent among Turkish minority adolescents than same-ethnic friendships (as is reflected in the pronounced ethnic homophily we observed among the Turkish group). Another explanation for our finding could be rejections from high-achieving majority students. However, due to disadvantages in track placement (see Heath and Brinbaum 2007), Turkish minority adolescents simply have fewer high-achieving peers around them than their majority counterparts. One major implication from our study is thus that between-school tracking appears as an institutional feature that hampers opportunities for ethnic minority youth to fulfil their preferences for highly engaged and high-achieving friends. Future studies should therefore investigate if ethnic minority adolescents can build more social capital in comprehensive schools which are a rather mixed setting in terms of the student body's skill and achievement levels.

In theoretical terms, our results lend support to the basic idea of OCT according to which aspects of ethnic identity are related to peer processes and eventually result in group differences in social embeddedness (Ogbu 2004). However, due to the very different history and current situation of the Turkish minority group in Germany in comparison to that of African Americans in the US, oppositional cultures in Europe seem to be configured differently than those assumed to emerge among African Americans in the US. One might even speak of a positively configured oppositional culture that prevents Turkish minority youth from being embedded in social networks comprising of (same-ethnic) peers who are refusing school success and appraising failure. Since high aspirations are also well-documented for other ethnic minority groups in other European countries (e.g. Jonsson and Rudolphi 2011; Teney, Devleeshouwer, and Hanquinet 2013), such positively configured oppositional cultures might not be restricted to the Turkish minority in Germany. Future studies should test this assumption.

Concerning the particular situation of Turkish minority students in Germany, it seems as if they are faced with a double disadvantage in terms of their social capital endowment: despite their preferences for bonding with engaging peers, they are surrounded by majority peers who engage less and achieve worse than majority adolescents on average, and they have same-ethnic friends who are disadvantaged from the beginning. Given that friends can impose social influence on key academic outcomes, our evidence justifies the assumption that the social embeddedness of ethnic minority youth exacerbates ethnic achievement gaps. This case should be investigated directly in

future studies. We also leave it for future studies to examine if the social norms among Turkish minority youth spill over and affect the friendship behaviour and scholastic performance of students belonging to the majority group.

Our study has some limitations that should be noted. First, the empirical account focused solely on Turkish minority adolescents in Germany. Although we compared their friend selection behaviour with that of majority and other minority adolescents, it is unclear to what extent our results can be generalised to other ethnic minority groups and other countries. Still, since Turkish minority members form the largest ethnic minority group not only in Germany but also in other European countries, and since it counts to the structurally most disadvantaged ethnic minority groups, we believe that providing evidence against anti-school norms among its members is of tremendous importance. Nevertheless, replications in other contexts appear worthwhile. Second, we investigated self-reported academic engagement and achievement. We recommend that future research provides evidence that is based on observations of academic engagement and achievement by third-parties, such as researchers or teachers. Third, we were not able to assess the social influence of friends on a key indicator of structural assimilation, namely on scholastic performance. This is because this outcome was measured by asking students about their grades in the last school report. Thus, whereas information on friendship applies to the time when the questionnaires were filled out, the grade information stems from some (unknown) time before each survey wave. This violates the assumption of our analytical framework that network and behavioural dependent variables are observed at the same time, which allows for simultaneous simulations of changes through which the second observed friendship and behaviour states emerge starting from the first wave. This prevented us from treating school grades as another behavioural dependent variable. Future studies should investigate the social influence on scholastic performance to examine the role of social embeddedness in structural assimilation more thoroughly.

Overall, our study provides novel evidence on ethnic differences in the creation of social capital among adolescents. In particular, we demonstrate that the basic principles of OCT help to explain ethnic differences in the educational composition of adolescents' social networks. However, we also show that the OCT's conclusions must be suited to the particular situation of an ethnic minority group within society and that oppositional cultures must not necessarily be configured as being directed in opposition to engagement and success in school.

Note

1. To identify the significance of the joint effects, we calculated Mahalanobis distances of the elements of the posterior sample from the posterior mean for linear combinations of multiple effects. The p-values achieved from this procedure reflect the relative frequency that the calculated distances are greater than the distance between the tested value and the posterior mean.

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