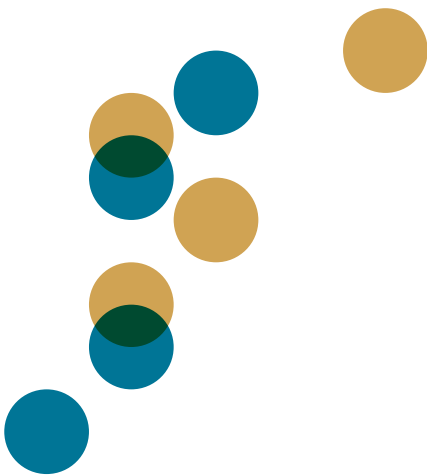


Working Paper

Social Embedding and Educational Achievement of Immigrants

A Review and Appraisal

Benjamin Schulz



mannheimer zentrum
für europäische sozialforschung

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Editorial Note:

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Abstract

The social embedding of immigrants is of crucial importance for their structural integration. Social relations and contexts shape life chances in the educational system as well as on the labor market. The issue is, however, under heavy dispute. While some scholars in assimilation theory reason that a strong reliance on ethnic ties constrains the advancement of immigrants, others argue that ties to co-ethnics can compensate for disadvantages following from other domains of life. Empirically, there is evidence for both kinds of arguments. However, previous studies refer to very different steps within educational careers and to diverse immigrant groups in several contexts. Although recently some progress has been made, empirical evidence for the case of Germany is still scarce. Thus, which line of reasoning holds remains open.

It is necessary to clarify causal mechanisms more precisely. Providing a comprehensive review and appraisal of the state of research the paper brings together results from three streams of literature that hitherto remained rather unrelated: i) integration research, ii) education and stratification research and iii) neighborhood effect studies. The first contribution of this paper is to provide a systematic overview of main insights from these fields. Second, I argue that the pathways in which the social embedding matters for the educational achievement of immigrants have to be specified more precisely and that this might be achieved referring to social capital theory. Third, some directions are provided that future research within and beyond MZES research project "Ethnic Networks and Educational Achievement over the Life Course" could take¹.

¹ This working paper is partly based on the research proposal for MZES project A3.7 "Ethnic Networks and the Educational Achievement of Immigrants over the life-course". Compared to the proposal I updated the review of relevant studies including contributions that have been published since we handed in our proposal in August 2011. Since length restrictions are substantially lower than for DFG research proposals, I could also outline the debate in integration research underlying this project more deeply. This paper, thus, sketches the research agenda and key aims of MZES project A3.7 which is funded by the DFG within Priority Program 1646 "Education as a Lifelong Process" (for details see <http://www.mzes.uni-mannheim.de/d7/en/projects/ethnic-networks-and-educational-achievement-over-the-life-course> or <https://spp1646.neps-data.de>).

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1. Introduction

Many immigrant groups in various receiving contexts build up durable ethnic communities and stick to ethnic networks. This is not only the case for first generation immigrants but also for descending ones (Cheng et al. 2007; Kalmijn and Van Tubergen 2006; Li et al. 2008; Völker et al. 2008). Whether ethnic networks have the potential to foster the structural integration of immigrants or whether they rather are an obstacle to educational achievement is debated controversially. On the one hand side, several scholars expect that a persistent involvement in ethnic communities hinders the educational achievement of immigrants (e.g., Alba 2008; Kalter 2008; Perlmann and Waldinger 1997; Waters and Jiménez 2005). On the other hand, scholars, most prominently proponents of segmented assimilation theory, argue that the embedding in ethnic networks can have positive consequences for the educational achievement of immigrants (Portes 1995, 2003; Portes and Rumbaut 2001; Zhou 2005, 2009). Moreover, empirical evidence on this issue is far from conclusive and the mechanisms linking ethnic networks and educational achievement often remain imprecise. It is thus hard to judge to what extent the embedding of immigrants in ethnic networks adds to the knowledge about the development of ethnic educational inequalities.

Such educational disparities are particularly pronounced in Germany, as international comparisons have repeatedly shown (OECD 2013). Immigrant children often show lower educational achievements and lower competencies than their native counterparts. This holds true throughout educational careers from kindergarten attendance to the vocational training system (Autorengruppe Bildungsberichterstattung 2012; Becker and Biedinger 2006; Biedinger et al. 2008; Hunkler 2010; Kristen 2008; Kristen et al. 2011; Stanat et al. 2010). While both findings—reliance on ethnic networks on the one hand and ethnic educational inequalities on the other—are well known, it is still largely unclear in which way they are interrelated. The crucial question is: How do ethnic networks and communities affect the educational achievement of immigrant children?

Education and stratification researchers largely agree that educational disadvantages of many immigrant groups mainly follow from the fact that, in comparison to natives, immigrant families tend to have fewer resources at their disposal and provide less conducive environments for their children's educational achievement (Alba et al. 1994; Heath et al. 2008; Kristen and Granato 2007). Ethnic inequalities in education thus in great part turn out as social inequalities (Kalter 2006). Yet, we do not fully understand the underlying processes of how ethnic disparities emerge. The social environment might provide a fruitful approach in order to explain how these differences between immigrant groups come about. It might turn out that differences between immigrant groups in their social environments can help to explain ethnic educational achievement gaps (Kristen et al. 2011: 124f).

From the very beginning, assimilation theories stressed the crucial importance of the social embedding for the integration of immigrants. Social contexts shape acculturation strategies, the adoption of norms and values as well as the educational achievements and the labor market integration of immigrants. In particular, social resources and orientations that predominate in ethnic communities are highly relevant for the incorporation of immigrants: "The outside environment—in particular, the co-ethnic community—supplies the other main determinant [of the integration of immigrants]." (Portes and Rumbaut 2001: 64). I thus believe that it is promising to turn to the role of social embedding to better explain ethnic educational inequalities.

Analyzing the stability of ethnic disparities in competence and skill transmission across immigrant generations, Borjas (1992, 1999) coined the concept of ethnic capital. He defines ethnic capital "as the whole set of ethnic characteristics – including culture, attitudes, and economic opportunities that the children in par-

ticular ethnic groups are exposed to“ (Borjas 1999: 148) and concludes that ethnic capital is one of the decisive moderators that regulate the pace of intergenerational integration (Borjas 1992: 124; Borjas 1999: 149). However, linking social environment and structural integration in this way is too vague because his definition still addresses many different processes. This objection holds more generally: Assimilation theories often only sketch the link from social environments to educational achievements in rough terms. This paper is dedicated to help overcoming this conceptual fuzziness. I seek to elaborate more precisely the pathways in which the social embedding shapes the educational achievement of immigrants. More specifically, I aim at: i) providing a comprehensive review and clear-cut appraisal of the state of research bringing together results from different streams of literature that hitherto remained rather unrelated; ii) I seek to more precisely elaborate the mechanisms in which ethnic networks and communities matter for the educational achievement of immigrants. To this end, I argue that explicit reference to social capital theory is promising because this might support a better understanding of how the social environment of immigrants matters for the development of ethnic disparities throughout educational careers.

In chapter 2, I will start bringing together results from i) integration research that mainly addresses the role of ethnic communities, ii) studies in education and stratification research that analyze the role of social capital, and iii) the broad field of neighborhood effect studies. I will close by summarizing key findings and identifying shortcomings and open tasks. In chapter 3, I will describe social capital mechanisms that may prove to capture most of the pathways found in the literature. How I suppose to include these mechanisms into a micro model explaining the development of ethnic educational inequalities will be lined out as well. Looking ahead to empirical applications in chapter 4 I will finally propose some directions which future research, within and beyond our current project “Ethnic Networks and the Educational Achievement of Immigrants over the life-course”, could take to better evaluate the role of the social embedding for the educational achievement of immigrants.

2. The Role of Ethnic Networks, Communities and Neighborhoods for the Educational Achievement of Immigrants

Assimilation scholars unisonous stress the importance of ethnic networks and communities as I have argued above and as I explain in greater detail in the appendix² to this paper. Yet, different assimilation theories arrive at somehow opposing views whether ethnic networks and communities can be expected to foster educational achievement or to thwart it (see, e.g., Kroneberg 2008). I will therefore start the review in this chapter with a summary of main arguments from integration research. This picture will then be complemented with studies on the role of social capital for educational achievement which have been conducted in education and stratification research that usually do not explicitly refer to assimilation concepts. Finally, I will briefly report key findings from the broad field of neighborhood studies. The chapter will close with preliminary conclusions and a brief discussion of main shortcomings that remained unresolved hitherto.

² In the appendix I provide a brief reconsideration of the debate in assimilation theory that forms the background of this study and puts the whole project into context. What is more, this supplement also demonstrates that assimilation theories from all camps again and again stressed the crucial role that the social embedding plays for the incorporation of immigrants.

2.1 Evidence from Integration Research: Do ethnic networks help or hinder the educational achievement of immigrants?

Several authors expect that a persistent involvement in ethnic communities hinders the educational achievement and the labor market integration of immigrants (e.g., Alba 2008; Esser 2004; Kalter 2008; Perlmann and Waldinger 1997; Waters and Jiménez 2005). In this vein, three main reasons can be distinguished:

a) Strong ethnic ties impede building more helpful ties to the host society, and fewer contacts to the host society are supposed to increase social distance and to diminish chances to get crucial information on the receiving context (see, e.g., Farwick 2009). Consequently, immigrants may lack knowledge about the functioning of the educational system which reduces their chances to take the right steps to a successful educational career (Haug and Pointner 2007; Kristen et al. 2011), or they may be less informed about vocational training positions or how to apply for them.

b) Another mechanism refers to the socio-structural composition of immigrant groups: Main immigrant groups in Germany are in overall lower socio-economic positions or stem from families of lower educational backgrounds. Therefore, strong ethnic networks on average bring along less contacts with someone in a high occupational position. As a consequence, information and support from ethnic networks are constrained (for an analogous argument on labor market integration, see Lancee 2012). For the same reason immigrants find fewer role models within their ethnic community that could stimulate educational acquisition, transfer orientations or knowledge (Portes and MacLeod 1999).

c) Strong ethnic networks diminish opportunities to acquire a good command in the host country's language, which usually is the language of instruction at school. Recently, this mechanism has received a lot of attention because it is assumed to be a major pathway in which disparities in competence development and in educational achievement emerge at the very beginning of the educational career in kindergartens and preschools (see e.g., Bialystok 2009; Esser 2006; Hopf 2005; Kaushanskaya and Marian 2007; Lesemann et al. 2009).

On the other hand, scholars, most prominently proponents of segmented assimilation theory, argue that the embedding in ethnic networks can have *positive consequences* for the educational achievement of immigrants (Portes 1995, 2003; Portes and Rumbaut 2001; Zhou 1997, 2005, 2009). Again, several mechanisms have been proposed as to how immigrants may benefit from ethnic networks:

a) Zhou and Xiong (2005) as well as already Zhou and Bankston (1994) find that Asian Americans (in contrast to many other groups) do very well in the US school system. They argue that this is a result of specific encompassed resources, especially of high *cultural values towards educational achievement* that are supposed to be widespread within the Asian-American community. In a similar vein, Shah et al. (2010) argue that shared norms amongst families of Pakistani origin in the United Kingdom can explain why these children strive for higher education more often than children of other immigrant groups, despite their overall disadvantaged economic situation.

b) Next to the positive impact of motivating cultural norms and values, it is argued that certain "protection effects" may arise from a strong embedding in ethnic communities (Portes and Rumbaut 2001; Garcia-Reid 2007). In particular, a protection against the danger of downward assimilation is assumed if ethnic communities prevent immigrants from adopting counterproductive attitudes or behaviors of disadvantaged groups in the host society. Immigrants are often highly exposed to the behavior of such groups because

their weak labor market positioning only allows for cheap housing and thus they tend to reside in more disadvantaged neighborhoods. This relationship has mainly been studied for strongly segregated neighborhoods in the US. It is an open question whether this holds true for the German context as well because residential segregation is far less pronounced than in the US, maybe it is below a critical threshold.

c) In this vein, another “protection mechanism” has been proposed. Immigrants might profit from ethnic networks in contexts where discrimination is common or if policies and regulations exclude them from certain opportunities, such as specific schools or promising educational tracks. Under such circumstances, ethnic networks are supposed to be particularly beneficial, if they are accompanied by strong ethnic identities and solidarity, because this can reduce confrontations, avoid negative experiences, and can thereby strengthen immigrant students to strive for educational achievement – even in hostile environments (Portes and Rumbaut 2001).

Within segmented assimilation theory the positive role of ethnic networks is assumed to be conditional on further characteristics of immigrant groups and the receiving context. Segmented assimilation scholars thus consider negative consequences as well. Portes and Rumbaut (2001) address processes of *dissonant acculturation* pointing to ‘role reversals’ within immigrant families, i.e., situations in which parents and their children persistently change their responsibilities within the family: “Role reversal [in immigrant families, BS] occurs when children’s acculturation has moved so far ahead of their parents’ that key family decisions become dependent on the children’s knowledge. Because they speak the language and know the culture, second-generation youths are often able to define the situation for themselves, prematurely freeing themselves from parental control” (Portes and Rumbaut 2001: 53).

Role reversals within immigrant families are a special case of inner-familial processes that are usually referred to as ‘parentification’ or ‘adulthoodification’ (see e.g., Walsh et al. 2006). Situations are addressed where children are forced to take over “developmentally inappropriate levels of responsibility in the family” (Hooper and Wallace 2009: 2). Parentification can endanger educational achievement, because children may not only be psychologically overstrained, but they may also lack parental attention, control and support. Obviously, how susceptible children and adolescents are to negative parentification effects crucially depends on their age and stage of development. While from adolescence onwards its impact is minimal, younger children can be harmed severely. For the psychological adaptation of ethnic German adolescents from the former Soviet Union in Germany, Titzmann (2012) finds positive as well as negative parentification effects. On the one hand, adolescents are more prone to report exhaustion or stress if they emotionally take over parental roles. On the other hand, parentification fosters self-efficacy if adolescents take over instrumental tasks in the family (ibid.: 892f).

Immigrants’ children are more prone to parentification than natives. Following (parental) migration experience and acculturation challenges, immigrant parents may be less able to fulfill their parental roles (Portes and Rumbaut 2001; Titzmann 2012). Language brokerage is an additional aspect of parentification likely to matter because children usually learn the host country’s language faster than their parents, soon outperforming them. In particular if host and home country’s languages differ strongly, language brokerage occurs. Similarly, parentification is more likely to develop if dissonant acculturation is more widespread (Titzmann 2012: 888). Accordingly, parentification should occur more often in families with first generation parents than in subsequent generations. Furthermore, the bigger the differences in values, orientations and institutional settings between sending and receiving countries the more likely dissonant acculturation.

Yet, what is important for the purpose of this paper, parentification risks are affected by the social embedding of immigrants: Ethnic communities may compensate parental deficits if they offer guidance or support. On the other hand, ethnic networks may also enhance hardships in immigrant families if they reinforce language difficulties or if they do not provide helpful but misleading information, e.g., on school or work

related affairs. In particular, immigrants may be bound to lower labor market segments if they exclusively rely on ethnic networks which may further increase parentification risks.

To conclude, within integration research, conclusive arguments have been proposed for both negative and positive consequences of ethnic networks on the educational achievement of immigrants. Effects seem to depend on further characteristics of immigrant groups and ethnic networks. We thus have to deal with a *conditional view* which calls for a better specification of the conditions under which the resources, orientations and values within ethnic communities as well as structural characteristics of ethnic groups are likely to have positive consequences—and when they rather represent an obstacle to educational achievement. It is an empirical question which line of reasoning predominates. This holds particularly true for the case of Germany, for which empirical evidence is scarce.

2.2 Evidence on the Role of Social Capital and Social Networks for the Educational Achievement of Immigrants

Recent studies in education and stratification research suggest a conditional view as well, as was just observed for assimilation research. Structural network characteristics in combination with the resources within them determine whether ethnic networks affect educational achievement positively or negatively (Bankston 2004; Ream and Palardy 2008). For instance, even if certain cultural values towards educational achievement predominate within an ethnic group, they are not enough to bring about better educational achievement. These values also have to be supported by the immediate social environment of students (Zhou and Kim 2006). Similarly, Altschul et al. (2008) show that pronounced ethnic identification along with a strong integration into ethnic networks foster academic achievement.

Many studies, especially those conducted at lower educational stages, mainly focus on parental networks (see e.g., Carbonaro 1998; Cheng et al. 2007; Ream and Palardy 2008). Jungbauer-Gans (2004) finds negative effects of inner-familial support and achievement climate within schools on reading competencies. She argues that positive effects of inner-familial support, especially in immigrant families, depend on parental competencies, which may also be counterproductive (Jungbauer-Gans 2004: 395). Cheng et al. (2007) examine the track placement of German and non-German students. Their results are mixed. On the one hand, students benefit from parental extra-familial networks as well as from parental group-specific activities and involvement in community-based organizations. Furthermore, contacts to majority group members are beneficial for the track placement of immigrant children. On the other hand, family-based social capital has no impact on track placement.

For parental networks, Coleman's (1988, 1990) idea that "inter-generational closure" fosters the educational achievement has often been acknowledged (see, e.g., Perna and Titus 2005). For students in the US, Portes & MacLeod (1999) finds small but reliable effects of the closure of parental networks on grades and test scores. Carbonaro (1998) reports that inter-generationally closed networks are positively associated with math achievement but not with the achievement in other fields.

Regarding the classical functional-communities-argument (Coleman 1990), it is less likely that inter-generational closure of networks emerges in disadvantaged neighborhoods. Coleman (1990) also stresses the importance of inter-generational closure for the effectiveness of parental control. He argues that in neighborhoods or schools (or other social contexts that enable repeated interactions), where parents know each other and each other's children, and where they share a basis value system regarding "good behavior" of their children, they can mutually control their children, and enforce concordant behavior (Coleman

1990: 318f). In disadvantaged neighborhoods, chances for (inter-parental) control are lower—communities are dysfunctional, which may increase children's risk for deviant behavior. Again, this would especially hold for immigrants and their descendants because they more often live in disadvantaged neighborhoods. Language problems may additionally constrain chances to set up functional communities.

The majority of school-based studies analyze the impact of students' social embedding, especially of friendship networks and ethnic class as well as school composition. Using Add Health data and multi-level models Ryabov (2011), for instance, finds that African-American students in US high and middle schools indeed profit from co-ethnic friendship networks. African-American students with segregated friendship networks show better academic achievement which might indicate the positive role that ethnic capital can play (Ryabov 2011: 925). Lynch et al. (2013) analyze the effect of the quality of peer relations within schools on school engagement and academic performance using panel data. For students in grades 5 (wave 1) and 6 (wave 2) they find that aspects of peer culture within schools, such as friendship quality and care, are associated with academic achievement. Song (2011) analyzes 15-year-old students of Turkish origin in Austrian, German and Swiss schools based on PISA (2006) data. Overall, these students have fewer resources at home and mostly visit schools that are less well equipped. This tends to translate into disadvantages in test scores compared to native students.

Rather than describing in detail the results of all empirical studies included, table 1 provides a concise overview of contemporary international studies. It summarizes main findings that test ethnic and social capital mechanisms. I subdivided table 1 with regard to educational stages. Furthermore, it is indicated which of the variety of educational outcomes is analyzed, which aspect of the social embedding of immigrants is tested and how both aspects are operationalized. Countries as well as immigrant groups are included as well. The last column, finally, indicates whether the respective study finds positive, negative or no effect of ethnic networks on immigrants' educational achievement.

It turns out that empirical evidence is remarkably mixed. The studies presented here refer to very different aspects and steps in the educational career, to diverse immigrant groups and to various receiving contexts. Moreover, mechanisms clearly change over the life-course: It depends on the specific stage and on respective processes which pathway is likely to matter. Previous results are thus difficult to compare and hypotheses are hard to judge. For the case of Germany, it remains open which line of reasoning holds because only a few large-scale studies have been conducted until now. Furthermore, most studies do not allow to specifically test in which way exactly the social environment affects the educational achievement of immigrants. To make progress in this debate it seems necessary to clarify pathways more precisely and to test mechanisms more directly.

2.3 Evidence on the Role of Neighborhoods for the Educational Achievement of Immigrants

In the previous sections we already saw that empirical applications often use neighborhood and school composition measures (see column 4, table 1) to address the role of the social embedding for educational achievement. In many cases, this certainly is a result of a lack of more precise measures on the individual level. However, several theoretical arguments also suggest that neighborhoods affect human behavior regardless of network relations (see, e.g., Leventhal and Brooks-Gunn 2000). In what follows in this subsection I seek to identify such distinct neighborhood mechanisms, i.e., those pathways that cannot be captured by social capital or network mechanisms.

Finding that ethnic disparities remain even after controlling for parental socio-economic background, individual human and social capital, Portes and MacLeod (1999) point to the importance of school and neighborhood characteristics. In education and integration research but particularly in the economics of education, an extensive body of literature on neighborhood effects has emerged. Some more recent studies aim at specifying precisely how, for whom, and when neighborhood characteristics matter, especially how its impact changes with the developmental period that a child has reached (Dupéré et al. 2010; Greenman et al. 2011; Harding et al. 2011). With regard to developmental periods, timing and duration of exposure have been emphasized (Aber et al. 1997). Directly, neighborhood characteristics are less important in early childhood, but as soon as children start to go to school, and even more as they reach adolescence and spend more time outside home neighborhoods are increasingly influential because adolescents are more and more exposed to peers in their neighborhood (see, e.g., Steinberg and Morris 2001). Sampson et al. (2008) find evidence that African-American children who grow up in disadvantaged neighborhoods show much lower verbal abilities than African-Americans in less disadvantaged contexts (p. 851). Sampson and his colleagues discuss direct and indirect neighborhood mechanisms (Sampson et al. 2008: 845f): In advantaged neighborhoods children have higher chances of coming into contact with high-brow language, which may stimulate their own language competencies. Furthermore, in affluent residential districts childcare facilities and schools are generally better equipped (see also, Dupéré et al. 2010). On the other hand, children may suffer from growing up in disadvantaged neighborhoods for several reasons: It is argued that reciprocated exchanges in neighborhoods would diminish as socio-economic disadvantages, (fear of) crime and violence increase. Thereby interactions, “communication infrastructures”, and learning opportunities would decrease, which would lead to fewer models for learning. Additionally, parents as well as children would be more stressed in such contexts, which again would lead to less interactions and weaker social networks, so that access to social capital diminishes further (ibid.).

Mollenkopf and Champeny (2009) conclude that neighborhoods with high unemployment rates or poor economic situations affect the structural integration of second-generation immigrants negatively, and that this in turn is correlated with high co-ethnic shares (p. 1198). Similarly, it has been reported that segregation “often means that many immigrants live in areas characterized by substantial social problems” (Bygren and Szulkin 2010: 1306). They argue that this is a major pathway to how “social marginalization” is transferred from one generation to another; segregation would constrain immigrants’ opportunities to acquire the knowledge and manners to succeed in school and to climb the social ladder (ibid.).

Dupéré et al. (2010) analyze the impacts of neighborhood and school composition on competence development. They reveal positive effects of affluent neighborhoods on competencies in terms of vocabulary and reading. Crosnoe (2009), however, finds that math and science achievements for children from low-income and ethnic minority families decrease as the proportion of children from high SES-families increases. For the case of Germany, Helbig’s (2010) analyses suggests that children benefit from resourceful neighborhoods, whereas less favorable neighborhoods have no (negative) impact on competence development.

Thus far, neighborhood mechanisms refer to the student (or his/her parents). Another theoretically striking argument also addresses the structural conditions regarding socio-economic and ethnic compositions of neighborhoods and schools in the so-called “frog pond framework” (Crosnoe 2009: 725). Immigrant students and those from lower-SES families are “at greater competitive disadvantage” in schools with an overall high SES, because they have to compete for scarce (or at least finite) resources with more students from families that are endowed with better preconditions. Consequently, in such schools pupils from lower-SES families or immigrant groups are less likely to get good grades, access to higher courses or even to more promising educational tracks. This negative effect is assumed to be stronger than potential

positive effects that follow from better learning conditions in high-SES schools. This argument shifts the perspective from the individual student or his family to teachers and structural school conditions and regarding scarce resources even to school regimes and policies. Hence, structural school characteristics should be taken into account as well.

As said above, many findings on the neighborhood and school level refer to social network or to social capital mechanisms. However, especially in neighborhood research several effects have been proposed that are independent of social networks. Recently, Galster (2012) has provided a comprehensive review, assessing and analyzing theoretical approaches as well as empirical evidence on neighborhood effects. He differentiates four broad rubrics of mechanisms that aim at explaining the link between the “dose of neighborhood” and the “observed individual ‘response’” caused by it (ibid: 5). These rubrics are:

- a) Social interactive, referring to social processes endogenous to neighborhoods;
- b) Environmental, referring to natural and human-made attributes of the local space;
- c) Geographical, referring to the neighborhood’s location relative to political and economic forces;
- d) Institutional, referring to actors who control resources located in the neighborhood.

Galster (2012) reports a total of fifteen mechanisms which he subsumes under these rubrics. However, as stated above, most mechanisms can be reframed as social network or social capital mechanisms that I already addressed briefly above and which will be explained more deeply in section 4.2. I thus take up as much as necessary and as little as possible of the explanation just mentioned. Therefore, rather than repeating each and every single mechanism proposed by Galster here, I will first select and discuss such mechanisms as seem likely to turn out as social capital or social network effects. After that, I will mention those mechanisms indeed endogenous to neighborhoods.

The social contagion and collective socialization mechanisms, e.g., can be subsumed under the reference group mechanism. Galster (2012) describes social contagion as changes in a person’s behaviors, aspirations or attitudes brought about through the contact with peers or neighbors. This is indeed very similar to the reference group mechanism, which comprises the copying of the behavior of role models and/or adopting predominant aspirations within peer groups. Peers can also effect sanctions and enforce norms. This, in turn, fits the description of the collective socialization mechanism, which is about the conformity to local social norms or pressures. The social cohesion and control mechanism also reflects, at least partly, the sanctioning aspect of the reference group mechanism. On the other hand, the social network mechanism proposed by Galster is captured by the information aspect of social capital: Information, e.g. about the educational system or labor market opportunities, and resources are transmitted through neighbors or other social ties. Last but not least, the parental mediation mechanism with its aspect of affecting children’s home and learning environment alludes to the support mechanism, especially to the idea of parental support being crucial for a child’s school performance. Since all the just mentioned mechanisms are part of the social interactive rubric, it is not surprising that they fit our framework of social network and social capital mechanisms quite well. The two remaining mechanisms of this rubric, namely those of competition and relative deprivation, however, are more closely related to the ideas of competitive (dis-)advantage and scarce resources of the so-called frog pond framework (see the description of Crosnoe’s argument above).

As scholars from various fields have argued, there are distinct neighborhood effects that cannot be reduced to social network effects. These distinct effects deserve an appreciation. All mechanisms subsumed under the environmental (exposure to violence, physical surroundings, toxic exposure) and geographical (spatial mismatch, public services and facilities), as well as those under the institutional rubric (stigmatization, local institutional resources, market actors) can indeed be said to be endogenous of neighborhoods. Most of them are external to social networks, such as toxic exposure, the provision of public services, or the stigmatization of a neighborhood. Yet, the access to institutions and organizations at least partly de-

depends on the information an individual can obtain about those, and social networks are a main transmission platform for valuable information.

What this section shows is that neighborhood effects are not to be neglected. Indeed, independent neighborhood mechanisms should be appreciated and scrutinized in future research. On the other hand, it is also clear that too many differently labeled mechanisms will not be of much help, since they more likely obscure than enlighten our understanding of the effects of networks and neighborhoods on the educational achievement of immigrants. Therefore, a careful disentangling of mechanisms with the aim of embedding them within a few, but solid overarching mechanisms seems fruitful. I will outline such a scheme and how this can be integrated into explanations of ethnic educational inequality in chapter 4. Before that a quick stopover to summarize the key findings from our review has to be provided.

Table 1: Recent Studies on the Role of Ethnic Networks and Neighborhoods for the Educational Achievement of Immigrants

<i>Study</i>	<i>Country</i>	<i>Ethnic Group</i>	<i>Operationalization</i>	<i>Educational Outcome</i>	<i>Direction of SC Effect</i>
Early Childhood and Kindergarten					
Kingston et al. 2013	USA	No differentiation of ethnicity in the analyses, but the sample consists of Blacks, Latinos, Whites, Asians, and children of mixed backgrounds	<i>SES (predictor):</i> a) Neighborhood resources: proportion affluent households, prop. individuals in professional occupation, childcare burden (combination of child-to-adult-ratio, male-to-female-ratio and percentage elderly); b) Family resources: marital status, parent educational attainment, income; <i>Parental involvement (moderator):</i> Teacher perceptions of parental involvement as assessed with the Involvement Questionnaire	School readiness skills: 1) Social-emotional-behavioral components (teacher evaluations of children, using adaptive skills and externalizing behavior scales); 2) Cognitive-academic components (scores on a standardized test, Developmental Indicators for the Assessment of Learning-3, covering the domains motor, language and conceptual skills)	+ (higher family and neighborhood SES associated with higher levels of school readiness) +/- (complex interactions of SES and parental involvement, especially moderation of a)-1) relationship)
Klugman, Lee & Nelson 2012	USA (Early Childhood Longitudinal Study Kindergarten Class (ECLS-K))	Hispanics (immigrant families with young children)	School composition: 1) Proportion of Hispanic students in the child's school (key ind. var.) 2) Proportion of co-nationals	Parental involvement in their children's education: school involvement, home activities, parental ties; parental perceptions of barriers to school involvement	+ (for Hispanic immigrant parents) <i>No effect</i> (for Hispanic US-born parents)
Dupéré et al. 2010	USA (Early Child Care & Youth Development Study)	Ethnicity: black, other ethnic group, whites (ref.)	Neighborhood socio-economic situation; schools' composition and quality; quality of childcare facilities	Achievement tests (vocabulary, reading & math; five waves from age 54 months to 15 years)	+
Primary School and Transition to Upper Secondary School					
Contini 2013	Italy (Indagine sugli Apprendimenti, stand. learning assessment)	Students from native and immigrant (1 st and 2 nd generation) backgrounds	Proportion of children of immigrant origin; Social background (number of books, ESCS index)	Learning outcomes: Italian and math test scores	- (effect larger for immigrant and low-SES children)

Estell & Perdue 2013	USA (Early Child Care and Youth Development)	No differentiation in the analyses, but sample is ethnically mixed	Support from: a) Parents (school involvement); b) Teachers (child-t. relationship); c) Peers (children's perceptions)	School engagement: 1) Behavioral (in-class behavior, teacher-reported); 2) Affective (child's school percept.)	+ (esp. for a) on 1) and c) on 2))
Lauen & Gaddis 2013	North Carolina, USA	Natives (ref.), Blacks, Hispanics, and other ethnic backgrounds	Classroom poverty: High-poverty classroom, cumulative exposure to high-poverty classrooms, %reduced/free lunch	Test score achievement: Math and reading	(-) (high-poverty classrooms on achievement; however, no causal claims possible)
Lynch, Lerner & Leventhal 2013	USA (4-H Study of Positive Youth Development)	Whites (ref.), Hispanics, African-Am., Am-Indian, Asian, others	School-wide peer culture: a) Relational and b) behavioral components (at school-level)	Individual GPA (1) and school engagement (2)	+ (b) predicting 1; a) and b) predicting 2))
Agirdag, Van Houtte & Van Avermaet 2012	Belgium ("Segregation in Primary Education in Flanders (SIPEF)" & the Flemish Educ. Department)	Native and non-native pupils (Turks, Moroccans, others; Western European- origin students considered native)	School composition: ethnic (proportion of Non-Western immigrants) and SES (proportion of working-class pupils); pupils' sense of futility and school futility culture	Math achievement	- (SES composition being the stronger predictor, with futility mediating its impact)
Helbig 2010	Germany (ELEMENT Study, Berlin)	Immigrants (by generation) vs. Germans	Ethnic and socioeconomic neighborhood composition (affluent vs. poor)	Achievement tests in math & literacy, pupils in grade 6 in primary schools in Berlin	+
Cheng et al. 2007	Germany (GSOEP)	Pupils' ethnicity: Non-German vs. German origin	Family SC (no. of contacts to family members, childcare at home); extra-familial (sports activities, involvement in ethnic community, going out)	Track placement (<i>Hauptschule</i> vs. higher tracks) of students aged between 11 and 16	+ (extra-familial SC) <i>No effect</i> (familial SC)
Garcia-Reid 2007	New Jersey, USA	Hispanics in low-income district (no ref. group)	SC sources: support from family, friends, teachers; perceived neighborhood dangerousness	Index of school engagement of low-income Hispanics, 13-14 yrs. in Middle Schools	+ (support) - (dangerousness)

Upper Secondary School: Academic and Vocational Track					
McNulty, Bellair & Wattsy 2013	USA (1997 National Longitudinal Survey of Youth)	Non-Hispanic Whites (ref.), Blacks	Neighborhood disadvantages (poverty, unemploy., female-headed households); family SES; delinquent peers; disrupt. school climate	Verbal ability (test scores) → direct and indirect (through school achievement/grades) effects on violence (protective factor)	- (disadvantages hinder acquisition of verbal ability; Blacks more affected)
Okamoto, Herda & Hartzog 2013	USA (National Longitudinal Study of Adolescent Health)	By generational status: Whites, Blacks, Hispanics, Asians and Natives (ref.)	School composition: proportion minority students by school SES (high vs. low)	Participation in extracurricular activities (clubs and sports)	+ (for clubs in high-SES schools) - (for clubs in low-SES schools)
Ryabov 2011	USA (National Longitudinal Study of Adolescent Health)	African-American, Asian, Latino, Non-Hispanic white (ref.)	School-level predictors: average SES (summed scores for parental income and education, ref. high SES), percentage minority students, peer network ethnic segregation index	Educational achievement: GPA; Educational attainment: high school completion	- (SES (strongest predictor)) + (segregated peer NWs for African-Am.; prop. minority students for Latinos)
Song 2011	Austria, Germany and Switzerland (PISA 2006)	Second-generation Turkish and native students	Family/home resources (parental ISCED and ISEI); School resources (e.g. teachers, materials, computers)	Achievement gap: test scores (math, reading and science)	+/- (home resources stronger predictor; depending on national context, use of resources)
Xie & Greenman 2011	USA (National Longitudinal Study of Adolescent Health)	Asian and Hispanic immigrants (ref. natives)	Interaction of assimilation (partial vs. full) and social context (neighborhood and school context; low-SES vs. high-SES)	Educational outcomes: high school completion, college enrollment, and self-reported grades (Other dep. var.: psychological well-being and at-risk behavior)	+ vs. - (assimilation in non-poor vs. poor neighborhoods) <i>No clear effects</i> (for interaction coefficients of assim. & social context)

Crosnoe 2009	USA (National Longitudinal Study of Adolescent Health)	African, Latino origin, Non-Hispanic whites (ref.)	School composition (proportion of students from middle- and upper-class families)	Grade point average; coursework measures of math and science; psychosocial personality traits of high school students	- (on achievement of ethnic minority students) + (on psych. problems of students from low-income families)
Altschul, Oyserman & Bybee 2008	Midwestern Cities, USA	Pupils of Hispanic Origin (no ref.)	SC, integration into ethnic networks within low-income neighborhoods	GPA of core subjects, pupils of Hispanic origin in Middle Schools (8 th grade)	+ (conditional on content of ethnic group identity and strength of identification)
Kroneberg 2008	USA (Children of Immigrants Longitudinal Study)	Several immigrant groups, esp. from Latin America, Asia, and South America	Co-ethnic network; Community characteristics (average education, percentage self-employed, social closure, bounded solidarity, aspirations)	Test scores from standardized math and reading achievement tests, students grade 8 to the end of high school	+ (co-ethnic Networks, conditional on socioeconomic characteristics and predominant values)
Ream & Palardy 2008	USA (NELS 1988)	African-, Asian-, Hispanic-, White Americans (ref.)	Parental SC (helping child, parent-teacher-association, school involvement and influence)	Track placement of courses in core subjects; scores from standardized tests, students from grade 8 on	+ (conditional on familial SES)
Zhou & Kim 2006	California, USA (Qualitative study of Language Schools)	Chinese and Korean American (no ref. group)	Predominant values, structural characteristics of ethnic peer groups, ethnic institutions (language schools)	Educational achievement and modes of incorporation	+ (interaction of educational values and ethnic networks)
Ream 2005	USA (NELS 1988)	Mexican Americans vs. Non-Lat. Whites	Peer group SC (value of education, connectedness); network characteristics (trust, density)	Test score index (math and reading achievement tests in 12 th grade)	+ (peer group SC)
Jungbauer-Gans 2004	Germany, Switzerland and France (PISA 2000)	Natives versus immigrants (1 st and 2 nd generation)	Familial (support homework, communication within family, family structure); Achievement climate	Achievement test scores in reading competencies	-

Portes & MacLeod 1999	USA (NELS 1988)	Chinese, Filipino, Korean, Mexican, other Immigrant, Native Whites (ref.)	Intergenerational closure of parental networks; parental school involvement; neighborhood SES and ethnic composition	GPA; test score average (math and reading scores composite), immigrant students grade 8	+ (intergenerational closure) - (low-SES neighborhood)
Caldas & Bankston 1998	Louisiana, USA	African-American vs. Whites	Racial school segregation (proportion of African-American)	Scores in exit examination of high school students	-
Carbonaro 1998	USA (National Education Longitudinal Study)	Asian, African or Hispanic origin whites (ref.)	Functional communities, intergenerational closure (parents know each other)	Grade point achievement tests and school dropout, students grade 12	+ (for math achievement and school dropout)
Teachman, Paasch & Carver 1997	USA (NELS 1988)	African American vs. White American	Family structure, parent-child interaction, school involvement, intergenerational closure	High school dropout of students from grade 8 onwards	-
Tertiary Education and Life-long learning					
Shah, Dwyer & Modood 2010	U.K. (Qualitative Study, 64 interviews)	Pakistani families (no ref. group)	Value of education; orientation towards social advancement; ethnic community organizations	Educational achievement of young adults, aged 16 to 26 from Pakistani families	+
Mollenkopf & Champeny 2009	New York City, USA (ISGMNY study)	2 nd generation immigrants in NYC	Neighborhoods poverty rates, level of ethnic segregation (share of first generation immigrants in district)	Educational attainment; labor market success of immigrants aged 18 to 32	-
Perna & Titus 2005	USA	African-, Hispanic-American, Whites (ref.)	Parent-student involvement; parent-to-parent involvement; peer group influence (friends' plan for college)	College/university enrollment after high school graduation	+

2.4 Summary and Evaluation of Key Findings

The main finding of the literature review in this chapter is that empirical evidence is remarkably mixed. Some studies report positive effects, others negative, and still others find no association of ethnic networks, communities or other contextual aspects on the educational achievement of immigrants at all. Having discussed results from integration research (see subsection 2.1) as well as contributions from more general education and stratification research (see section 2.2) a conditional view seems most appropriate: Whether the social embedding of immigrants fosters or hampers their educational achievement depends on further aspects of immigrant groups and on network characteristics. This conditional view calls for a better specification of the conditions under which the resources, orientations and values within ethnic communities as well as structural characteristics of ethnic groups are likely to have positive consequences—and when they rather represent an obstacle to educational achievement.

Previous studies, however, refer to very different aspects and steps in the educational career, to diverse immigrant groups and to various receiving contexts. Moreover, mechanisms change over the life-course. For different immigrant groups and at different educational stages different mechanisms are at work (Cheng et al. 2007: 42; Helbig 2010: 676; Völker et al. 2008: 345). It therefore also depends on the specific stage in the educational career and respective processes which pathways matter. Hence, mechanisms have to be specified separately for different immigrant groups, especially for their particular socio-economic characteristics, as well as for predominant orientations within them.

The inconclusive picture partly follows from measurement inconsistencies. While some authors use indirect information like the “number of contacts to family members” or “childcare at home” to operationalize social capital (see, e.g., Cheng et al. 2007), others employ more direct measures, such as “relationship quality” or “network density” (see, e.g., Ream 2005). This heterogeneity in measurements, of course, handicaps comparisons and therefore reliable conclusions. Furthermore, the positive or negative impact of ethnic networks on educational achievement also depends on specific contexts and the respective educational outcome. Finally, table 1 does not only show that the impact of these mechanisms changes across the life-span, but it also reveals that empirical evidence within educational stages is far from conclusive.

Besides measurement inconsistencies, the literature review uncovers another critical issue: large-scale data sets providing appropriate measurements for testing mechanisms more directly are scarce (Helbig 2010: 676; Li et al. 2008: 393). These data limitations already point to serious methodological problems that have often been acknowledged regarding the estimation of social capital effects. As Häuberer (2011) discusses, a whole set of severe methodological challenges and potential measurement pitfalls center on the operationalization of social capital. Precise and selective social capital measures are hard to reach, and very seldom in large-scale studies. Often indirect or proxy measures are applied to catch at least some kind of social capital (see table 1). However, these “proxies” are not able to test conflicting ethnic and social capital mechanisms directly or even comparatively. Yet, this is what is urgently needed (Kroneberg 2008; see also Blossfeld et al. 2011).

Furthermore, causal interpretations of social capital effects are questioned fundamentally because of ‘causal reversals’. Especially the non-random formation of social networks is a serious objection (Mouw 2006: 99). Similarly, the challenging task to account for endogeneity when estimating the effects of social capital, has to be considered (Kalter 2010). To overcome these challenges, panel data are required that allow to detect changes over time, and to test causes and consequences severely, e.g. by differing potential availability and actual use of social capital (Mouw 2003, 2006; Van der Gaag and Snijders 2004).

What the review finally shows is that neighborhood effects are not to be neglected. Independent neighborhood mechanisms should be appreciated and scrutinized in future research. However, several neighborhood effects are likely to turn out to be the results of social network or social capital mechanisms. Most (German) data sets do not allow for specifically testing in which way the social environment matters. To make progress here it seems necessary to clarify pathways more precisely and to test mechanisms more directly. To this end, I propose to turn to the mechanisms proposed in social capital theory. Four mechanisms are typically differentiated that propose distinct ways in which social capital affects educational achievement. This approach seems promising because it should help to refine and systematize the manifold pathways in which the social embedding of immigrants shapes their educational achievement.

3. Ethnic Networks, Social Capital Mechanisms and the Development of Ethnic Educational Inequalities

To develop a comprehensive theoretical model that captures the role of the social embedding of immigrants for their educational achievement, it seems promising to start from social capital theory (Lin 2001). Employing concepts and hypotheses that have been developed in this comprehensive field should help to more precisely elaborate the mechanisms and conditions that account for positive or negative effects of ethnic networks. These mechanisms, then again, have to be placed within a micro model that explains the development of ethnic educational inequalities. Such a model has to be able to capture the manifold processes addressed by various social capital mechanisms.

The literature review in the previous chapter collected answers to the question how ethnic networks and communities affect the educational achievement of immigrants and to what extent differences in the social embedding between immigrant groups can contribute to the explanation of differences in educational inequality between them. Such inequalities are commonly regarded as consequences of a) diverging competence developments or school performance and b) differences in educational choices. In this regard, Boudon (1974) differentiates a) primary and b) secondary effects of social origin. Analyzing primary effects in a life-course perspective, it is necessary to take psychological theories of competence development into account. In this respect, one finding is crucial to our objectives: If children fall behind in competence development early, it is very likely that this will cause cumulative negative effects throughout their educational career, because later gains crucially depend on earlier achievements.

Educational inequality that follows from educational decisions (secondary effects) is mostly explained using rational choice models (see, e.g., Erikson and Jonsson 1996; Breen and Goldthorpe 1997; Stocké 2010). Respective applications usually demonstrate how group differences in resources and opportunities lead to differences in educational decisions. Parents from lower social classes, for instance, are less familiar with higher institutions of the educational system in general and with actual requirements of higher educational tracks in particular. They thus underestimate the chances of their children to succeed in higher tracks; consequently they are less likely to send their children to higher school tracks (Erikson and Jonsson 1996). In the same way immigrant specific aspects can be related to the evaluation of costs, benefits and probabilities of success (see, e.g., Heath et al. 2008). Since immigrant groups differ substantially with regard to resources, values and opportunities channeled through their social networks (see, e.g., Kalmijn and Van Tubergen 2006; Völker et al. 2008), the group's social embedding may turn out as an important pathway in which ethnic educational inequalities emerge.

3.1 Social Capital Mechanisms

Many studies that investigate the impact of social networks on educational achievement are based on Coleman's concept of social capital outside of the family (for a discussion see e.g., Stecher 2001; with regard to integration issues see, e.g., Cheng et al. 2007; Zhou 2005). Within this framework, social capital is defined as those resources an actor can access due to his or her embedding in social networks (Bourdieu 1983; Coleman 1988; Lin 2003). The amount of social capital that an actor can access thus depends on the configuration of resources in the network and further network characteristics (see Lubbers et al. 2010). It is important to differentiate between social networks and social capital. Not each and every contact that somebody has represents social capital. Rather, the resources that someone's network contacts controls must be effectively available or ready for use (Anthias 2007: 788f).

Coleman (1988) differentiates social capital within and outside of the family. For children's competence development and for early educational decisions social capital within the family, especially the parent-child relation is of crucial importance. Inner-familial social capital depends mainly on parents' capacities and resources, which usually define children's learning environments, opportunities, incitement and motivation. Of course, parents offer explicit guidance and support as well (cf. section 2.2 above).

At least four mechanisms are typically differentiated that propose distinct ways of how social capital affects educational achievement: reference groups, direct support, information and obligations (for a similar classification scheme see, Stocké et al. 2011):

a) From the very beginning, it has been argued that functional communities and closed networks can enforce positive norms and orientations towards education (Coleman 1988; Dijkstra et al. 2003; Thorlindsson et al. 2007; Sewell et al. 1970; Singer 1981; Stocké 2009; Stocké et al. 2011). Already Sewell et al. (1970) stressed the importance of "value communities" for educational achievement and respective differences that follow from differences in socio-economic status. Such mechanisms can be subsumed best under the label of reference groups. They refer to processes where the behavior of role models is copied or predominant aspirations within peer groups are adopted. This aspect comes close to the norm-and-values mechanisms assumed in segmented assimilation theory (cf. sections 2 and 3.1 above). Social control, group identification, and a group's power to sanction delinquent behavior have been found to be important boundary conditions for the efficiency of reference group effects on educational achievement (Farwick 2009; Granovetter 1973; Helbig 2010; Portes and MacLeod 1999; Stocké 2009).

Another set of three mechanisms addresses social capital more directly as a resource for individual goal attainment, i.e., for instrumental action:

b) Support is a crucial aspect of social capital. Well-educated parents, for instance, can give their children better advice or more help in school-related affairs (McNeal 1999; Teachman et al. 1997). Furthermore, parental support is important for school performance as well, since pupils can esp. profit from help with their homework, from parents who can explain certain issues, or who give hints for far-reaching transition decisions (Conley 2001; Furstenberg and Hughes 1995). The same holds true for help from friendship networks.

c) A further mechanism stresses the importance of information as a crucial resource that is accessible through social networks (Coleman 1990; Lin 2001). In this line of reasoning especially network characteristics such as its heterogeneity, positioning and strength are emphasized (Lin 2001). Probably, Granovetter's strength of weak ties hypothesis is the most famous example here (Granovetter 1973, 1974). Regarding

educational attainment, parental information on the functioning of the school system has been acknowledged as a particular pathway to how ethnic disparities may come about (see, e.g., Kristen 2008).

d) Lastly, obligations within relatively stable groups are supposed to promote co-operations and transactions among their members (Bourdieu 1986; Coleman 1990). Structural characteristics such as closure or density are important for the effectiveness of obligations. The better actors know each other, the higher is the probability that mutual trust evolves and the higher is their liability to invest into these relationships or to fulfill obligations (Coleman 1990; for a detailed discussion, see Stecher 2001: 60ff). Ethnic communities are often structured in ways that support fulfilling obligations (Portes 1995). Hence, ethnic networks are very susceptible to support cooperation based on group membership—this is better known as “ethnic solidarity”. In groups where ethnic solidarity is strong immigrants may get access to support (b) or information (c) easier, which may strengthen educational achievement (Portes 1995: 255; Zhou 2009).

Most of the arguments from education and integration as well as neighborhood research that have been presented in chapter 3 can be refined as one of these four mechanisms. The efficacy of all four mechanisms depends on network characteristics such as network closure, density, multiplexity, or the strength of ties.

What is more, the four social capital mechanisms can be integrated into a general model explaining ethnic educational inequalities. Although social capital can also affect competence development, for instance, through motivating role models, I will briefly sketch in which way differences in social capital between immigrants and natives can translate into differences in educational decisions, net of one’s competences. Thereby, that proportion of ethnic educational inequality is addressed that follows from secondary effects.

3.2 Towards a Comprehensive Model of Educational Decisions

Rational choice (RC) models are widespread explanations for differences in educational decisions between social classes as well as for differences between immigrants and natives (Erikson and Jonsson 1996; Breen and Goldthorpe 1997; Stocké 2010). Such models relate immigrant specific factors as well as other general factors to the evaluation of costs, benefits and probabilities of success. Several social capital arguments can directly be integrated into such RC models. Based on this approach, Kristen (2008), for instance, argues that information deficiencies following from ethnic segregation is a key reason of why parents of Turkish origin choose certain primary schools less often than German parents. Similar arguments can straight ahead be made for information, support and obligations from social networks.

However, several findings in various domains suggest RC approaches have clear limitations as well. In particular, the importance of values and normative orientations challenges such models. With regard to the social capital mechanisms, I differentiated two kinds of arguments: i) those related to evaluation of costs and benefits, ii) those related to the impact of normative reference groups. Whereas the former refer to a rather reflecting rational mode of decision-making, which is the prime domain of common RC models (Lin 1999, 2001, the latter suggest mechanisms of social learning (for an analogue differentiation of human behavior, see Kroneberg et al. 2010; Kroneberg 2011). Especially if values and orientations are strongly incorporated, and enforced by dense strong-tie networks, habitual behavior is expected. Recently, the so-called model of frame selection (MFS) has been developed to capture both behavioral patterns without giving up the appealing aim of a precise formal model (Esser 2000; Kroneberg 2005; Kroneberg 2011).

In terms of MFS, reference groups may constrain individuals’ definition of situations (frames), their perceptions as well as their dispositions to certain actions (scripts). The explanation of respective behavior challenges traditional RC models because strongly anchored norms that are enhanced by normative reference

groups or significant others can “disregard other non-normative incentives altogether” (Kroneberg et al. 2010: 6). Häuberer (2011) makes a similar point. She differentiates ‘bridging’ and ‘bonding’ mechanisms of social networks. She suggests that rather closed and dense bonding networks are more conducive for expressive action. On the other hand, bridging networks that are characterized by rather weak ties and less group solidarity let instrumental action become more likely (Häuberer 2011: 251ff).

Although a detailed full-blooded modeling is beyond the scope of this paper, the sketched approach based on the MFS seems promising to address the full range of pathways in which ethnic networks and social capital can affect educational decisions-making, especially to integrate effects of normative reference groups. Thereby such a MFS-based model might allow arriving at an integrated soundly founded explanation capturing the complex role that social networks can play in the development of ethnic educational inequality. Whether or not such a model, indeed, outperforms traditional RC models, however, has to be evaluated empirically in comparative studies.

4. Conclusion and Outlook

Aiming at a comprehensive review and systematization of the broad literature, this paper addressed two questions: i) in which ways can ethnic networks and communities affect the educational achievement of immigrants; ii) whether differences in the social embedding of immigrant groups can help to better understand how achievement gaps between immigrants and natives and especially between several immigrant groups come about.

Departing from assimilation theories the neighborhoods immigrants live in, the networks they are attached to and the sub-cultures and ethnic communities they come into contact with—in short: the social embedding—should play a decisive role for the incorporation of immigrants into a host country society. Which pattern of intergenerational incorporation emerges for a certain immigrant group largely depends on the social embedding of this group (see, e.g., Borjas 1999; Portes and Rumbaut 2001; Zhou 1997). In assimilation theories, however, the link from the social environment to educational achievement remained too broad and vague.

To specify this link, I brought together results from integration and education research as well as from the broad field of neighborhood effect studies. The review of the state of research in chapter 2 arrived at a conditional view: It crucially depends on further characteristics of immigrant groups whether ethnic networks have the potential to strengthen or to hinder the educational achievement of immigrants. Accordingly, a better specification of the conditions is needed under which the resources, orientations and values within ethnic communities are likely to have positive consequences and when they rather represent an obstacle to educational achievement.

The salience of the proposed mechanisms through which the social embedding of immigrants affects their educational achievement change over the life-course, depending mainly on the children’s age and developmental periods as well as on the actors involved and on the educational decisions at a particular stage in the educational career. To specify respective mechanisms more precisely thus is the next step that research should take (see, e.g., Crosnoe 2009; Helbig 2010; Zhou 2009). To bring this forward I argued that it is promising to apply to four mechanisms proposed in social capital theory: i) reference group effects, ii) information, iii) support and iv) obligations. Finally, I briefly sketched that an approach based on the model of frame selection (Esser 2001; Kroneberg 2005, 2011) seems promising to address the full range of pathways in which ethnic networks and social capital can affect educational decision-making,

especially to integrate effects of normative reference groups because strongly anchored norms that are enhanced by reference groups can directly influence individual decision-making. An MFS-based model might allow us to arrive at an integrated soundly founded explanation capturing the complex role that social networks can play in the development of ethnic educational inequality.

Several findings of neighborhood effects on educational achievement are likely to turn out as the result of social network or social capital mechanisms, and might thus be integrated into the sketched model. Yet, neighborhoods seemingly also matter before and beyond shaping social network and social capital, for instance, through environmental impact or institutional infrastructures. Additional neighborhood mechanisms should be scrutinized in future research. Therefore large-scale studies must provide detailed information on individual networks and social capital as well as manifold neighborhood characteristics. Up to now, most German data sets do not provide this (see, e.g., Helbig 2010: 676). Thus, it is often impossible to specifically test in which ways the social embedding matters.

I showed that many studies lack appropriate information on social capital and networks because of two methodological challenges: i) such measures are quite complex, i.e., time-consuming and expensive in survey studies (see, e.g., Häuberer 2011); ii) a good account of individual social capital can only be achieved longitudinally as causal reversal and endogeneity problems are particularly likely for social capital and network measures (Kalter 2010; Mouw 2006).

Some latest developments in the field might help to better address both challenges. The National Educational Panel Study in Germany (NEPS), for instance, puts a special focus on measuring social capital and ethnic networks. A comprehensive social capital instrument has been developed (for further details see, Kristen et al. 2011; Stocké et al. 2011) which is composed of five modules: i) a position generator that captures the network positioning of parental networks (Lin et al. 2001), ii) a resource generator to log what kind of support actually is available for respondents at certain educational stages (Van der Gaag and Snijders 2004, 2005), iii) a condensed version of the Burt generator to capture characteristics of strong ties (Burt 1984), iv) measurements of normative expectations towards educational achievement of several reference groups, v) global network characteristics, such as the educational composition of schools. Moreover, the NEPS social capital modules are supplemented with measures of ethnic network composition, such as the co-ethnic ratio in classes or of friendship networks.

Altogether, this offers a promising opportunity to empirically differentiate mechanisms as proposed in this review. Respective analyses are carried out in the project that this review has been conducted for. Along with the panel design of NEPS surveys this will allow for methodologically more appropriate empirical tests of the complex role that social networks play in the development of ethnic educational inequalities.

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APPENDIX

Social Embedding, Assimilation and Incorporation Processes

The focus of this working paper is on the role of ethnic networks and communities for the educational achievement of immigrants. Respective processes are necessarily related to more general issues of intergenerational mobility and to the incorporation of immigrant groups in the long run. This supplement therefore provides a brief reconsideration of the debate in assimilation theory that forms the background of this study and puts the whole project into context. It aims at elaborating that assimilation theories from all camps again and again stressed the crucial role that the social embedding plays for the incorporation of immigrants.

At the core of the assimilation debate is the issue which pattern of intergenerational incorporation of immigrant groups into a host society is most likely to emerge—more precisely: Which conditions are likely to bring about which pattern of incorporation (Zhou 1997: 975), and which concepts are suited best to describe and analyze the underlying processes? Three main types of intergenerational incorporation are usually differentiated: i) assimilation, ii) downward assimilation ('marginalization'), and iii) selective acculturation (see e.g., Kalter 2008: 15). *Assimilation* as a descriptive concept captures an incorporation pattern which "can be defined as the decline, and at its endpoint the disappearance, of an ethnic/racial distinction and the cultural and social differences that express it" (Alba and Nee 1997: 863). Ethnic groups may become part of the host country society in a certain respect as they are no longer distinguishable from its majority group. Assimilation processes, however, make only slow progress and mainly take place from one immigrant generation to another (Alba and Nee 2003). In contrast, *downward assimilation* describes a situation in which ethnic disparities, especially those in education and in the labor market persist over time, and are transferred from one immigrant generation to another. Incorporation patterns are usually labeled as *selective acculturation* if immigrants manage to be economically successful while maintaining their cultural habits, orientations and ties to their home country or to their ethnic community. To specify the conditions under which each of these incorporation types emerges, i.e., to elaborate a fully developed theory of intergenerational incorporation remains an open task (Kalter 2008; Kristen et al. 2011).

What is important for my point here is the fact that in the course of the assimilation debate proponents in all camps stressed the *crucial role that the social embedding of immigrants plays in the incorporation process*. Ethnic communities have been found to be highly relevant for the incorporation outcome that is most likely to emerge for a certain immigrant group in a particular receiving context. Since I seek to clarify the pathways in which ethnic networks matter for the structural integration of immigrants, I will summarize the main arguments *on the role of social embedding* that have been brought up in the course of the assimilation debate. Yet, I do not aim to provide an overview of the assimilation debate as a whole.

The assimilation debate largely is an US-American one, at least when it comes to the empirical examples and to the majority of scholars involved. In light of the long US migration history this comes as no surprise. Fully established in the 1960s but stretching back to the 1920s the "assimilationist perspective" dominated academic and public debates in the US for decades (Borjas 1999: 127). Traditional assimilation theory (Park 1950; Gordon 1964) assumed a more or less inevitable adjustment of immigrant groups to the mainstream of the receiving society from one immigrant generation to another. However, Gordon (1964) also argues that many aspects of the host society can be influenced by the minority groups as well (Gordon

1964: 72). From the very beginning classical assimilation theory is much more complex and differentiated than its critics often conceded (Esser 2004: 41; Kalter 2008: 14). Yet—and this largely is at stake in this debate—ethnic groups cannot change the “cultural patterns themselves”. Cultural codes and core regulations of the host country society remain untouched by the blending of ethnic minority groups and the receiving society, classical assimilation theory assumes (Gordon 1964: 73). Quite contrary, ethnic groups would almost automatically acculturate to the cultural codes and habits of the host country from one generation to another because this is the most efficient way to economic success. Economic progress is assumed to increase inter-ethnic contact which, ultimately, would result in immigrants’ identification with the majority group. This narrowed and condensed picture is widely known as ‘straight-line assimilation’. From the very beginning this approach has been criticized because it would incorrectly depict what happens to many ethnic groups in the US (Glazer and Moynihan 1970). Already Price (1969) points to the fact that some ethnic groups show patterns of ‘uneven assimilation’ meaning that such groups would assimilate to the majority group in certain respects such as language use, but at the same time other aspects would remain widely unaffected, e.g., social relations.

The clearest criticism of assimilation concepts have been formulated two decades later in light of the (missing) incorporation of new immigrant groups in the US, especially the “second generation decline” (Zhou 1997). Focusing the second generation of Latin-American and Asian immigrants, proponents of segmented assimilation theory argue that the US society as well as nowadays immigration flows would have changed in such a way that they became too heterogeneous to assume assimilation towards one particular mainstream to occur all over the place. Incorporation patterns and processes would rather be much more complex and would also be reversible from one immigrant generation to another (Portes and Rumbaut 2001: 45). A *reversed* incorporation pattern is a constellation in which immigrant’s children fall behind the level of structural integration their parents achieved. This would come about because immigrants do not adapt to a vague “mainstream culture” but to the particular segment of the US-American society that they are confronted with in their everyday-life; *the immediate social context thus shapes assimilation processes*. Since, in fact, many immigrants, especially from Latin-America, with poor socio-economic resources and low human capital initially strand in disadvantaged inner-city neighborhoods in the US, the second generation who grows up in such areas characterized by serious social problems, higher delinquency and crime, worse schools etc. is at risk to adopt rather counterproductive attitudes and behaviors of the peers around them and to generally have worse starting conditions. Thereby structural assimilation is stifled and the next immigrant generation ends up less integrated than they might have in more conducive social environments. This is how segmented assimilation proponents describe the major pathway to *downward assimilation*, a pattern where the next generation does not climb the social ladder but where they stuck in lower educational tracks and in lower rungs of the labor market –ethnic disparities perpetuate from one immigrant generation to another (see, e.g., Segeritz et al. 2010: 116).

Again, the aspect that segmented assimilation theory marks and which I want to highlight here is that *assimilation processes directly refer to the social environment* that immigrants come into contact with, and that contemporary societies are much more dispersed than it was the case at earlier waves of mass migration. The notion of segmented assimilation thus underlines that the incorporation of immigrants crucially depends on the particular segment of the receiving society that immigrants happen to be embedded in.

Stressing the importance of the social context, downward assimilation, of course, is not the only possible outcome. If immigrants are embedded in ethnic communities *and* if these communities offer resources and

orientations that are helpful to make progress in the receiving society, this can also foster upward mobility of the next generation³ (Portes and Rumbaut 2001: 63). If ethnic communities are supportive *selective acculturation* becomes more likely, i.e., immigrants make progress economically while maintaining orientations of as well as ties to their home country or to their ethnic community.

Segmented assimilation theory does not only point to new incorporation patterns but also seeks to identify the conditions that determine which pattern evolves (Esser 2008: 104; Zhou 1997: 975). To this end, Portes and Rumbaut (2001: 46) identify several key factors:

- i) *modes of incorporation* capture legal regulations and policies how immigrants are treated upon their arrival;
- ii) *Differences in the acculturation* between immigrant parents and their children are addressed because they affect the extent to which immigrant's children have to take over parental roles (for details, see section 3.1 below);
- iii) *Cultural and economic barriers* that the second generation faces;
- iv) *Family and ethnic group resources* that immigrants can draw upon in their quest for economic and social advancement.

The last mentioned factor, ethnic resources, again underlines the importance of social resources within immigrant groups. Social capital and other community based resources are seen as a major reason for differences in incorporation patterns between immigrant groups (see e.g., Zhou 1997, Portes and Rumbaut 2001: 62f).

To sum up, among new immigrant groups in the US downward assimilation and selective acculturation occur more often than it has been the case for earlier immigrant groups while patterns of mainstream assimilation diminish, proponents of segmented assimilation theory suppose. More heterogeneous societies that bring along pronounced differences between the social environments that immigrants come into contact with are seen as a key reason for this development. This challenges assimilation theory—their proponents were requested to refine their concepts (Alba 2006, 2008; Alba and Nee 1997, 2003).

Alba and Nee (1997) point to the fact that ethnic enclaves, discrimination by the “white protestant mainstream”, and excluding legal regulations are not a new phenomenon that only hits nowadays immigrants in the US. Alba and Nee (1997) as well as Perlmann and Waldinger (1997) show that European as well as Jewish immigrants, who today are regarded as members of the US middleclass, in the first half of the 20th century faced severe discrimination and almost insurmountable ethnic boundaries, just as it is described by segmented assimilation scholars for nowadays immigrants⁴. Contemporary patterns of downward assimilation and selective acculturation of Latin-American immigrants in the US might thus turn out to be transition states that occur under special circumstances but which will diminish in subsequent generations (Alba and Nee 1997; Esser 2004).

³ Yet, we should not use assimilation and mobility conceptually interchangeably: Assimilation is multi-dimensional as it addresses structural, societal as well as cultural and identificational adaptations, social mobility, in contrast, primarily addresses the socio-structural positioning of individuals or groups within a certain society (Alba 2008: 40).

⁴ Besides putting straight that traditional immigrant groups once faced strong exclusions as well, Alba and Nee (1997) make once again clear that assimilation is an analytical concept which has no normative claims; it is silent about the question which pattern of incorporation is most desirable.

A decline of segregation and segmentation can also be expected from the perspective of immigrants: Ethnic communities and niche economies come in handy upon arrival, i.e., for first generation immigrants. However, they are less attractive for subsequent immigrant generations because they offer far fewer chances for upward mobility – at least in the long run (Esser 2004: 43). Furthermore, social exclusion and discriminating behavior by majority group members should also decrease as interethnic contact rises and especially as immigrant groups gain economic success. Altogether, assimilation is therefore still the predominant outcome of *intergenerational* incorporation, proponents of neo assimilation theory conclude (Alba and Nee 2003; Alba 2008). Yet, how assimilation is assumed to proceed differs fundamentally from the version in traditional assimilation theory.

Assimilation (in its revised form) is not a one-way process where immigrant groups are the only ones that undergo perceptible changes. Quite contrary, assimilation is a “two-way change scenario”: To arrive at a situation in which ethnicity no longer matters the majority group and certain aspects of the receiving society usually change as well (Alba and Nee 1997). Here we are at the core of neo assimilation theory: It highlights processes of *ethnic boundary blurring* and *shifting* as main assimilation pathways (Alba and Nee 2003; Alba 2008). This also is the fundamental difference between traditional and neo assimilation theory: Assimilation is no longer seen as a process where *crossing* ethnic boundaries is the only way for immigrants to become members of the majority group which essentially meant that minorities have to adapt to majority group attitudes and behaviors (Alba 2008: 39). Traditional assimilation approaches therefore focused on acculturation processes. In this regard, the ‘cultural core’ of a society was presumed to be stable (see above). Stressing boundary blurring and showing its empirical magnitude, however, neo assimilation theory points out that this picture is flawed. In the course of mass migration and immigrants’ incorporation socio-cultural codes of the majority group change as well.

This needs some conceptual clarification: Boundaries are ideas of social distinctions that individuals have and that affect the way they interact with and think about others in everyday life; such distinctions are “typically embedded in a variety of social and cultural differences between groups that give a boundary concrete significance.” (Alba 2006: 347). To cross *ethnic* boundaries, which traditional approaches saw as the main assimilation mechanism, thus requires putting (old) ways of acting and thinking away, to leave established customs and beliefs behind and to take over attitudes and practices of the majority group—otherwise it would be hardly possible to be accepted as a new member of the majority group. Often boundary crossing not just means adopting new beliefs and behaviors but also hiding or even denying original ones (Alba 2006: 348). Boundary shifting, in contrast, means *moving ethnic boundaries* “over parts of the population so that they now appear on its other side” (Alba 2008: 39). This implies changes of the majority group or the ‘mainstream culture’ as well. With this conceptual shift neo assimilation theory primarily focuses on boundary (un)making processes, especially on the causes of maintaining or changing ethnic boundaries. This adds to a new stream of research that seeks to explain when and why certain ethnic boundaries are kept up and under which conditions they are abandoned. The most elaborated theory that addresses group variations in ethnic boundary making and boundary blurring is Wimmer’s multilevel approach⁵ (Wimmer 2008, 2013). However, these highly relevant and promising developments are beyond the scope of this paper.

⁵ Wimmer (2008, 2013) focuses boundary making mechanisms and proposes a multilevel process theory of boundary making. In this paper, I can neither discuss the various possible types of ethnic boundaries nor the mechanisms that might keep them alive or dissolve them.

What is important here is that discrimination based on ethnic boundaries is no longer assumed as exogenous factors. In neo assimilation theory, the identity of the majority group becomes variable as well because boundary blurring involves melding of minority and majority groups, especially of their norms, beliefs and customs. Focusing boundary making mechanisms, discriminatory behavior by the majority group, thus, no longer is an exogenous explanatory variables. It rather constitutes a crucial aspect of assimilation theory itself. This is an important conceptual advantage compared with segmented assimilation theory that regards discrimination or excluding regulations by the majority group (modes of incorporation) as exogenous determinants of the incorporation process and, therefore, is challenged if ethnic boundaries change over time (Alba 2008: 45).

Ethnic boundary blurring and shifting are particularly likely if an economy grows, neo assimilation theory assumes. More specifically, non-zero sum mobility plays a critical role in the incorporation process because under prospering economic conditions immigrants can climb the social ladder without crowding out majority group members. Consequently, inter-ethnic conflicts are less likely (Alba 2008: 46).

As already noted, a sharply diverging picture of immigrants' prospects in nowadays US economy also is a main starting point for criticism from segmented assimilation scholars. They call into doubt that the US economy today still is structured in a way that allows immigrants to enter at the bottom and start climbing the occupational ladder step by step (for a critical discussion, see, e.g., Perlmann and Waldinger 1997: 910f). Deindustrialization and global industrial restructuring rather yielded an "hourglass economy" which mainly offers low paid menial jobs at the lower end, often carried out by immigrants, and professional jobs requiring high qualifications, often even college degrees, at the upper end of the occupational ladder. The formerly developed mid third of the occupational hierarchy, however, shrank hugely (Portes und Zhou 1993: 76). This fundamental structural change of the economy leaves immigrants less likely making economic progress step by step. They usually still enter the labor market in the lowest rungs but due to a shrinking economy in general and fewer mid-level jobs in particular, they are trapped at the bottom—which undermines conditions for assimilation. This is another reason why segmented assimilation proponents came to conclude that assimilation is no longer the main outcome of intergenerational incorporation of immigrants, and why assimilation theory would be outdated and inappropriate to analyze contemporary incorporation processes (Gans 1992; Portes and Rumbaut 2001; Portes and Zhou 1993; Zhou 1997).

Alba (2008), in contrast, argues that demographic changes are likely to retrieve conditions under which ethnic minorities can make economic progress without displacing majority group members. Ethnic minorities, moreover, might become essential parts of the labor force to keep the pace of the economy (Alba 2008: 47f). As the baby boom generation will leave the labor force and retire within the next decade hundreds of thousands of positions will have to be replaced. This will open many opportunities for upward mobility which, through the pathways described above, are likely to change inter-ethnic contact and ethnic boundaries in a way that structural assimilation evolves (Alba 2008: 52).

For the intergenerational incorporation of immigrants in general and for their structural integration in particular, assimilation theories assign a crucial role to the immediate social context. Scholars in all camps stress various aspects of the social environment, especially the neighborhoods immigrants live in, the networks they are attached to and the sub-cultures and ethnic communities they come into contact with. However, on this general level assimilation theories do not specify the nature of the relationship—the link from the social environment to educational achievement often is only sketched in rough terms. In light of its importance it seems overdue to systematically analyze the pathways in which the social environment of immigrants matters.