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ETHNIC HOSTILITY AMONG ETHNIC MAJORITY AND MINORITY GROUPS IN THE NETHERLANDS

An Investigation into the Impact of Social Mobility Experiences, the Local Living Environment and Educational Attainment on Ethnic Hostility.

JOCHEM TOLSMA

ETHNIC HOSTILITY AMONG ETHNIC MAJORITY AND MINORITY GROUPS IN THE NETHERLANDS.

**An Investigation into the Impact of Social Mobility Experiences, the Local Living
Environment and Educational Attainment on Ethnic Hostility.**

Een wetenschappelijke proeve op het gebied van de Sociale Wetenschappen

Proefschrift

ter verkrijging van de graad van doctor
aan de Radboud Universiteit Nijmegen
op gezag van de rector magnificus prof. mr. S.C.J.J. Kortmann
volgens besluit van het College van Decanen
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Jochem Tolsma

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Introduction



1. INTRODUCTION

1.1 NEW QUESTIONS

Why do people have hostile attitudes towards members of ethnic outgroups? One of the classical answers is that ethnic hostility is an unintended effect from social categorisation (Brown, 2000; Tajfel, Billig, Bundy, & Flament, 1971; Tajfel & Turner, 1979). Everyone categorises social stimuli to make the world we live in comprehensible, drawing boundaries between the ethnic group one identifies with (i.e. the ethnic ingroup) and ethnic outgroups. Because people strive to achieve or maintain a positive social identity, the ethnic ingroup is positively evaluated (Brown, 2000; Tajfel et al., 1971; Tajfel & Turner, 1979). Ingroup favouritism, in turn, is often accompanied by outgroup derogation (Coenders, 2001; Sumner, 1959 [1906]). Social categorisation is a sufficient condition for ethnic hostility to arise, as explicated within Social Identity Theory (SIT) (Brown, 2000; Tajfel et al., 1971; Tajfel & Turner, 1979). The ubiquitous presence of competition between ethnic groups for scarce resources – whether economic or cultural, actual or perceived – further increases hostile stances directed to ethnic outgroups, according to Realistic Conflict Theory (Blumer, 1958; Bobo & Hutchings, 1996; Coser, 1956; Gijssberts, Hagendoorn, & Scheepers, 2004; Quillian, 1995; Sherif & Sherif, 1953).

Each and every one of us is cognitively predisposed to ethnic hostility and has more or less hostile attitudes towards specific ethnic outgroups – or is at least liable to develop ethnic hostility. It is however the ‘more or less’ that I am interested in, and the extent to which characteristics of individuals and forces within society turn less into more and vice versa. The core question this book will address is: what might be the sociological reasons for the fact that some people belonging to particular ethnic groups, situated in a specific time and place, hold more (or less) ethnic hostility than others?

Ethnic hostility may be defined as the set of unfavourable evaluative responses, either cognitive (thoughts), affective (feelings) or behavioural (action), to members of ethnic outgroups. Ethnic hostility may thus be regarded as a general term to encapsulate a multitude of related phenomena such as ethnic prejudice (attributions about groups or members of groups, by virtue of their membership in the group, that are disparaging and hostile, false, or at least without warrant, and rigidly held (Sniderman, Peri, De Figueiredo, & Piazza, 2000a)), perceptions of ethnic-group threat (individual perceptions of inter-group conflict of interest (Coenders, 2001)), ethnic stereotypes (the inflexible generalisation of traits of individuals to perceptions of the group as a whole (Stephan & Stephan, 2000)), ethnic social distance (the non-acceptance of members of outgroups as marriage partners, neighbours, friends, etc. (Bogardus, 1928; Hagendoorn, 1995)), feelings of distrust, and for ethnic migrants, a lack of identification with the host country.

Of course, the quest for sociological explanations for ethnic hostility is not new (Allport, 1979 [1954]; Blalock, 1967; Blumer, 1958; Bobo & Hutchings, 1996; Bogardus, 1928; Gijssberts et al., 2004; LeVine & Campbell, 1972; Olzak, 1992; Pettigrew, 1980; Quillian, 1995; Scheepers, Gijssberts, & Coenders, 2002; Sherif & Sherif, 1953), but notwithstanding the profound heritage of sociological research on this topic, there are still important unresolved issues regarding the nature and dynamics of ethnic hostility. To some extent this is due to the fact that many previous

scholars focused on static or current characteristics of individuals (and the groups they belong to) that would presumably affect ethnic hostility. I do not question the importance of current characteristics of individuals, but this book contends, following the main theoretical frameworks commonly used to explain ethnic hostility, that more 'dynamic' explanations should be taken into account as well, such as experiences of social mobility. Furthermore, in the chapters to come I will argue as to why it is likely that (changes in) conditions of the local living environment will have an impact on ethnic hostility as well, next to characteristics of individuals. So far, the impact of social mobility and of relatively small geographical units like municipalities and neighbourhoods on ethnic hostility has received little attention (for exceptions, see: Gijsberts & Dagevos, 2004; Lubbers, Coenders, & Scheepers, 2006). In the first section of this book I will therefore pursue shedding more light on the core question of this book by addressing the more specific sub-question: To what extent do experiences of social mobility and characteristics of the local living environment affect indicators of ethnic hostility, next to the more traditional static characteristics of individuals?

The phenomenon of ethnic hostility has traditionally been approached from a majority perspective – how to explain ethnic hostility among members of society's dominant ethnic group directed at members of ethnic minority groups. Only recently has a minority perspective come to the fore in the Netherlands, most notably by Gijsberts and colleagues (Gijsberts & Dagevos, 2004, 2005, 2007; Gijsberts & Vervoort, 2009). The mechanisms causing ethnic hostility among minority groups are however still less well understood than the mechanisms among dominant ethnic groups. This book applies a multi-ethnic group perspective on ethnic hostility whenever possible. For Part 1 this entails investigating the possible differential impact of the local living environment on ethnic hostility among natives directed to different ethnic outgroups, and on ethnic hostility among different ethnic ingroups directed to the ethnic outgroup. In Part 2 of this book it is my aim to scrutinise several important questions regarding the effect of educational attainment on ethnic hostility that arise from a multi-ethnic group perspective. These questions are explicated below.

For ethnic minority groups, the lack of hostility towards the host country and its ethnic majority is an indicator of the level of cultural integration. The integration of ethnic minorities into the host society also has a structural dimension besides a cultural one (Berry, 1997). The structural dimension of integration refers, among other things, to the extent to which members of ethnic minority groups are as equally represented as the native population at different educational levels (Van Tubergen, 2004). To what extent structural integration is associated with socio-cultural integration is subject of academic debate. Whereas empirical quantitative research has consistently shown that educational attainment is an important determinant of ethnic hostility among society's dominant ethnic group (Coenders & Scheepers, 2003) – higher education being associated with less ethnic hostility – the relationship between educational attainment and indicators of ethnic hostility and cultural integration is by no means clear for ethnic minority groups. This relationship is the subject of investigation in Part 2 of this book.

Scholars have argued that changing distributions of educational levels across social categories, hence the change in homogeneity of educational categories in terms of cognitive

skills, are related to changes in the strength of the negative effect of education on indicators of ethnic hostility among society's dominant ethnic groups (Jaspers, 2008). Analogously, since educational degrees are unequally distributed across ethnic groups within Dutch society (Statistics Netherlands, 2008), effects of education on ethnic hostility may differ across the major ethnic groups in the Netherlands. Unfortunately, an accurate and detailed description of the educational integration of minorities in the Netherlands has been missing. A study on differences in the effect of education on ethnic hostility across ethnic groups is therefore incomplete without first paying attention to differences in educational integration across ethnic groups. Part 2 of this book aims to come closer to answering the core question by addressing the following sub-questions: To what extent and why do trends in ethnic educational differentials exist?, and: To what extent and why does educational attainment affect ethnic hostility among ethnic minorities?

The considerations outlined above have led to the following book structure. In Part 1, *The Impact of Social Mobility and the Local Living Environment on Ethnic Hostility*, I pursue to identify novel determinants of ethnic hostility among native Dutch and the major ethnic minority groups in the Netherlands. I expect to find these in experiences of social mobility and in characteristics of local living environments. By applying a dynamic, a local context and a multi-ethnic group perspective, I will provide new empirical tests for theoretical frameworks commonly applied to explain ethnic hostility; Ethnic Competition Theory (Coenders, 2001; Scheepers et al., 2002), which integrates Social Identity Theory and Realistic Conflict Theory, and Contact Theory (Allport, 1979 [1954]; Pettigrew & Tropp, 2006).¹ Part 2, *Educational Attainment and Ethnic Hostility among Ethnic Minorities*, first zooms in on the educational integration of ethnic minority groups in the Netherlands and assesses the tenability of a rational action-based theory for school transition decisions, the Breen-Goldthorpe model (Breen & Goldthorpe, 1997; Goldthorpe, 2000), within a multi-ethnic setting. Part 2 ends with a study on the effects of educational attainment on indicators of ethnic hostility among the different major ethnic groups within the Netherlands. The multi-ethnic group perspective is very apparent in Part 2.

Part 1 deals with sub-questions belonging to the domain of sociology's overarching research question regarding the level of social cohesion within society. In Part 2, by first studying ethnicity-based educational differentials, I shift my attention to sociology's research tradition of social inequality, which deals with the haves and have-nots in society. I will also argue that these two research traditions are linked, since here I will posit that the effect of education on ethnic hostility is likely to depend on the distribution of educational attainments across ethnic groups.

1.2 THE SETTING OF THIS BOOK: THE NETHERLANDS

At the presentation of the Scientific Council for Government Policy's rapport 'Identification with the Netherlands' (WRR, 2007), 27 September 2007, Princess Máxima of the Netherlands spoke the words: "The Dutch identity does not exist" (RVD, 2007). This statement provoked many reactions, such as asserting that the Dutch do have a national identity (e.g. "Máxima: 'Nederlandse identiteit nog niet ontdekt,'" 2007; Zonneville, 2007), and that it is a mistaken and dangerous conclusion to equal questioning the Dutch identity with arguing that there is no Dutch identity (Ankersmit,

2007). Others complemented Máxima for pointing out that there is not one monolithic identity but, as the WRR itself argues in the report, it is all about the formation of identities in the plural (Karacaer, 2007). See Engelen (2008) for a scientific summary of the debate following the publication of 'Identification with the Netherlands'.

Not that long ago, many Dutch thought of *the* Dutch identity as one encompassing ethnic tolerance, and the Netherlands was known abroad for its multiculturalism (Entzinger, 2003). The typical 'Dutch tolerance' of the previous century was not restricted to ethnic minorities alone, it included for example tolerance towards euthanasia and homosexuality as well (Jaspers, 2008). Even more generally, the Netherlands has traditionally been a country whose residents expressed high levels of (political) trust (Pharr & Putnam, 2000). But whereas more and more people have come to terms with homosexuality and attitudes on euthanasia have become more accommodating (Jaspers, Lubbers, & De Graaf, 2007), ethnic hostility has not witnessed a consistent decline – instead, it has fluctuated heavily and far right voting has increased in the Netherlands, as it has in many other European societies during the last two decades (Lubbers, Gijssberts, & Scheepers, 2002; Norris, 2005).

Within the ideology of multiculturalism, cultural diversity was considered to be a goal in itself. In line with this ideology, minorities in the Netherlands were stimulated to retain their ethnic identity. In the 1970s, this was expected to facilitate the anticipated re-migration of guest workers of the 1960s and 1970s – which in the case of Turkish and Moroccan guest workers did not take place. The Netherlands granted Suriname independence in 1975, which caused migration rates to increase sharply. In the 1980s, migration from the Dutch Antilles increased as well (see Lucassen & Penninx, 1997 for an overview of the migration history of the Netherlands). But also after the Dutch government recognised in the 1980s that the Netherlands was faced with permanent immigration, it kept supporting the development and preservation of minorities' ethnic identities. It was assumed that strong group identification and cultural integration (or emancipation) within one's 'own' ethnic group would smooth inter-ethnic group relations and consequently lead to a minimal necessary integration within the Dutch society as a whole. In this time period, non-national migrants who lived in the Netherlands for a minimum period of five years received local voting rights, and with government subsidies minority groups founded schools, made ethnic television programs and built places of worship (see Blok, 2004 for an overview of the development of Dutch integration policies).

The Dutch integration policies of today can no longer be characterised as multicultural, instead they resemble more closely the ideology of assimilation in which minority members are expected to abandon their cultural identity and adopt the dominant group's way of life. Some scholars argue that the strong current emphasis on civic integration in the Netherlands is a sharp break with the past (Joppke, 2004). Three key catalysing events in the 2000-2002 period worth mentioning are: First, the influential newspaper contribution of Paul Scheffer 'The Multicultural Drama' in 2000 (Scheffer, 2000), in which he convincingly argued that multiculturalism policies have led to the socio-economic marginalisation of ethnic minorities. Second, the attacks on the World Trade Center in New York. This and other Muslim terrorist attacks fuelled fear of Muslim minorities and supposedly illustrated the clash of Western and Muslim civilizations (cf. Gonzalez,

Verkuyten, Weesie, & Poppe, 2008; Huntington, 1993; Sniderman & Hagendoorn, 2007; Strabac & Listhaug, 2008). Third, the rise of the political party LPF (List Pim Fortuyn). Its leader, the flamboyant politician Pim Fortuyn, fuelled discontent, openly challenged multiculturalism, wanted to put an end to Muslim immigration (“Fortuyn: grens dicht voor islamiet,” 2002) and was strongly in favour of assimilation policies. During the elections of May 2002, his political party caused a landslide in the Dutch political scene even though he was murdered by a Dutch environmentalist before the elections took place.

Others state that Dutch multicultural practices have been challenged as early as the beginning of the 1990s, by people like the leader of the liberal party (VVD) at that time, Frits Bolkestein (e.g. Bolkestein, 1991), but also that “multiculturalism was never accepted or practised as fully as suggested in more stereotypical depictions of Dutch integration politics” (Vink, 2007, p. 2). However, most experts will probably agree that especially in the last decade, tensions between native Dutch and minority groups became more visible and more explicitly a subject of debate. More or less simultaneously, integration policies toughened.

Ethnic tension certainly became manifest when in November 2004 Theo van Gogh, a publicist and cineaste, was murdered by Mohammed Bouyeri for his views about Islamic culture which he ventilated in his typical, blunt ‘van Gogh style’. Mohammed Bouyeri was a child of Moroccan immigrants. He had successfully completed intermediate general secondary education (HAVO) and was also otherwise seemingly well integrated into Dutch society (Buijs, Demant, & Hamdy, 2006). The case of Bouyeri thus exemplifies how educational integration and cultural integration do not always go hand in hand. His case is certainly not unique though: Mohammed Sidique Khan and Shedzad Tanweer, two of the British Muslims behind the 7 July 2005 London bombings, studied at Leeds Metropolitan University (“Profile: Mohammad Sidique Khan,” 2007; “Suicide bombers’ ‘ordinary’ lives,” 2005). Several scholars therefore speak of an integration paradox (Buijs et al., 2006; Gijsberts & Vervoort, 2009; Shaw, 2002; Werbner, 2001). The understanding that educational integration is not always related to less ethnic hostility among ethnic minorities illustrates the relevance of my study in Chapter 7 on the general effect of education on ethnic hostility among a representative sample of ethnic minorities.

Shortly after the assassination of van Gogh, mimicking the vocabulary of George W. Bush after 9/11, Gerrit Zalm, Deputy Prime Minister of the Netherlands at that time, declared war on terrorism (“Kabinet verklaart terreur de oorlog,” 2004). His choice of words was heavily criticised because the term ‘war’ in Dutch (*oorlog*) is almost solely used to refer to a war between countries and not to indicate a strong effort over a long period of time to get rid of something. What Zalm probably meant to get across is that he would support tougher immigration and integration policies. As a reaction to the assassination of van Gogh, several arson attacks on mosques and an Islamic elementary schools took place or were attempted. According to the national newspaper *de Volkskrant*, many people felt as being on the brink of falling into a canyon of chaos, hate and escalating violence (Wagendorp, 2004).

The attacks of members of minority groups directed to (members of) the host country are extreme examples of a faltering cultural integration process. Lacking cultural integration will often take on more subtle forms (e.g. ethnic prejudice, ethnic distance, lack of identification with the

host country). Also note that many migrants integrate within Dutch society successfully and that 'integration problems' have not been limited to Muslim minority groups alone. The problematic integration of many Antillean migrants arriving in the last two to three decades has also received much media attention lately ("CDA en PvdA willen harde aanpak jongeren; bovengemiddeld vaak werkloos en crimineel," 2008; Emmer, 2007; "Meer geld en aandacht voor jonge Antillianen," 2008). Antillean youth has been severely overrepresented in crime statistics (Blom, Oudhof, & Bijl, 2005). Economic self-sufficiency among Antilleans is low compared to native Dutch. This is partly due to the high prevalence of single-parent families among Antilleans (Statistics Netherlands, 2008). As a consequence of the lacking structural integration of many Antilleans in the Netherlands, migration from the Antilles to the Netherlands has been actively discouraged by the Dutch government since 1998 (Tweede Kamer, 2001).

Understanding the processes that give rise to ethnic hostility and a lacking integration of ethnic minorities, which threaten the social cohesion of the Dutch society, have become more important than ever for the Dutch. Explanations supported by empirical evidence are called for. My focus, as stated above, lies on explanations situated in experiences of social mobility, in characteristics of the local living environments and on understanding the effect of educational attainment on ethnic hostility. To derive hypotheses I will heavily rely on Ethnic Competition Theory (Coenders, 2001; Scheepers et al., 2002) and Contact Theory (Allport, 1979 [1954]; Pettigrew & Tropp, 2006), parsimonious, theoretical frameworks that provide explanations for ethnic hostility among both dominant ethnic groups and ethnic minority groups within every conceivable country. The long tradition of multiculturalism and the recent shift towards assimilation make the Netherlands an interesting case to test the hypotheses derived from these theories. The availability of unique data – both at the individual and at the contextual level – allows the incorporation of a dynamic perspective, a local-context perspective and a multi-group perspective.²

1.3 RESEARCH QUESTIONS AND OUTLINE OF THIS BOOK

1.3.1 Part 1: The Impact of Social Mobility and the Local Living Environment on Ethnic Hostility

Chapter 2, Social Mobility and Ethnic Hostility

Educational attainment and current social class are among the most important predictors of ethnic hostility, at least among society's dominant ethnic groups. From different theories, such as Ethnic Competition Theory (Coenders, 2001; Scheepers et al., 2002) and Socialization Theory, it is to be expected that not only these current or static characteristics will affect ethnic hostility but that parental education and parents' class position during one's childhood may cast a shadow of the past and affect current feelings of hostility. Previous empirical research has confirmed the relevance of the family of origin in relation to hostile attitudes towards ethnic minorities (Hello, 2003; Jaspers, Lubbers, & de Vries, 2008), although the relative importance of social origin versus social destination remains unclear.

Durkheim already hypothesised that the experience of social mobility by itself – irrespective of the specific origin and destination combination – could lead to personal instability,

alienation and a loss in social and personal control, in other words to a state of anomie (Durkheim, 1987 [1897]). Several scholars suggest that this 'negativity' or frustration as a result of social mobility may find a release in hostility towards ethnic outgroups (scapegoating) (e.g. Bettelheim & Janovitch, 1964). However, up to now no study has satisfactorily addressed the effect of social mobility on ethnic hostility. Recent contributions on the mobility-ethnic hostility relationship are simply lacking. In Chapter 2, *Social Mobility and Ethnic Hostility*, I investigate the impact of social mobility on three indicators of ethnic hostility: ethnic stereotypes, feelings of ethnic threat and opposition to ethnic intermarriage. The central research question of this chapter reads:

To what extent does intergenerational educational and class mobility affect ethnic hostility (i.e. stereotypes, feelings of ethnic threat and opposition to ethnic intermarriage)?

Standard statistical methods are inadequate for modelling mobility effects. In chapter 2, I will therefore make use of diagonal mobility models. With diagonal mobility models it is possible to assess the relative importance of social origin versus social destination and to simultaneously and parsimoniously represent both mobility effects, which depend on specific origin and destination combinations, and mobility effects that are independent of specific origin and destination combinations. This chapter thus takes on what I have called a dynamic approach; I will not only investigate the impact of present characteristics of individuals but also the impact of fathers' social position and of social mobility.

Chapter 3, The Local Living Environment and Ethnic Hostility

It has been recognised previously that next to individual characteristics, so-called contextual characteristics also affect levels of ethnic hostility. However, so far only the impact of a very limited set of contextual characteristics on ethnic hostility has been explored. Moreover, until very recently this 'context' had mostly been operationalised as the nation-state or other relatively large geographical units such as regions or districts (e.g. Evans & Need, 2002; Poppe & Hagendoorn, 2003; Quillian, 1995, 1996; Scheepers et al., 2002; Semyonov, Raijman, & Gorodzeisky, 2006; Wagner, Christ, Pettigrew, Stellmacher, & Wolf, 2006), and the impact of smaller geographical units like municipalities and neighbourhoods received relatively little attention (for exceptions, see: Gijsberts & Dagevos, 2004; Lubbers et al., 2006).

Empirical results from previous research regarding the impact of the size of the ethnic outgroup in the locale on ethnic hostility have been inconsistent (Gijsberts & Dagevos, 2004; Lubbers et al., 2006; Oliver & Mendelberg, 2000; Quillian, 1995; Semyonov et al., 2006; Taylor, 1998). This inconsistency could be due to the different geographical localities in the analyses, the use of different indicators of ethnic hostility and the limited contextual characteristics included in the explanatory models next to relative outgroup size. In Chapter 3, *The Local Living Environment and Ethnic Hostility*, it is my aim to address these lacunae and inconsistencies of previous research by investigating the impact of a wide array of characteristics of neighbourhoods and municipalities on different indicators of ethnic hostility.

To identify theoretically relevant characteristics of the local living environment, I

will rely on Ethnic Competition Theory and Contact Theory. According to Ethnic Competition Theory, perceptions of ethnic group competition induce feelings of group threat which in turn may ignite ethnic hostility (Coenders, 2001; Coser, 1956). I argue that characteristics of the local environment are likely to affect perceptions of ethnic competition and ethnic threat and hence ethnic hostility. Actual group competition may be over economic resources, power, cultural resources and collective identity (Blalock, 1967; Tajfel, 1982). The relative importance of the different types of competition is however unclear and deserves more scientific attention (Taylor, 1998).

The above considerations have led to the following research question:

To what extent do characteristics of Dutch neighbourhoods and municipalities related to economic, cultural or safety threats affect ethnic hostility (i.e. opposition to ethnic intermarriage, reluctance to grant residence permits to migrants and negative views on the multicultural society)?

Chapter 3 thus researches the relative importance of locality characteristics related to different types of ethnic competition (i.e. economic, cultural and physical) on indicators of ethnic hostility, thereby hoping to shed more light on the threat response. I will also investigate to what extent the impact of specific locality characteristics depends on the particular locality, on the inclusion or exclusion of other contextual characteristics in the explanatory model, and on the indicator of ethnic hostility under consideration. As part of the multi-ethnic group perspective of this book, I will investigate in detail whether the relative size of a specific ethnic group within the locality is predominantly correlated to opposition to marriages with this specific ethnic-minority group. This enables more stringent tests of the derived hypotheses and makes it possible to assess the generalisability of our explanatory models.

Chapter 4, The Local Living Environment and Indicators of Social Cohesion

Ethnic tolerance, the opposite of ethnic hostility, is one of the many possible indicators of the level of social cohesion *between* ethnic groups. Social cohesion may be regarded as the interconnectedness of (or ties between) individuals that is both the result of, and cause for, the quality of public and civic life, feelings of commitment and trust, norms of reciprocity, and participation in networks and civic organisations (see Chan, To, & Chan, 2006 for a more thorough discussion of the concept of social cohesion). Whatever deteriorates trust in general presumably also increases hostility towards ethnic outgroups (Sniderman, Peri, De Figueiredo, & Piazza, 2000b), and according to Putnam's constrict proposition (Putnam, 2007), the proximity of ethnic outgroups in the locality not only deteriorates trust in members of ethnic outgroups but also deteriorates trust in members of the ingroup, consequently endangering both social cohesion *between* and *within* ethnic groups.

Propositions regarding the level of social cohesion are commonly derived from the homophily principle; like seeks like (Lazarsfeld & Merton, 1954; McPherson, Smith-Lovin, & Cook, 2001). People prefer to interact with similar others, with others who share the same ethnic heritage, have the same social status and thus share experiences and tastes. Explanations for

ethnic hostility are commonly grounded in Ethnic Competition Theory or Contact Theory. Chapter 4 analyses to what extent these theoretical approaches lead to similar or contradictory propositions regarding the impact of the locality and to what extent explanations for ethnic hostility may be generalised to indicators of social cohesion that do not form part of ethnic hostility and vice versa.

Although localities have repeatedly been put forward as important contexts for social cohesion (cf. Putnam, 2007; Sampson, Morenoff, & Gannon-Rowley, 2002; Volker, Flap, & Lindenberg, 2007), the argument for whom localities matter is less well developed. Building on my results of Chapter 3, I will argue in Chapter 4 that the impact of the community on indicators of social cohesion very likely depends on characteristics of its residents such as ethnic background, income and educational degree.

The research question that I will address in Chapter 4 is:

To what extent, and for whom, do ethnic and economic heterogeneity, economic affluence, crime rates and residential mobility within Dutch neighbourhoods and municipalities affect indicators of social cohesion (i.e. contact frequency with one's neighbours, tolerance towards a neighbour from a different race, generalised social trust and volunteering)?

Chapter 4 builds on Chapter 3 in three important ways. First I will assess the impact of different locality characteristics. This time theoretically relevant characteristics from the Homophily Principle are identified. Second, in Chapter 3, I will assess to what extent different indicators of ethnic hostility are affected differently by the locality. In Chapter 4, I will investigate to what degree explanatory models and the theoretical frameworks for ethnic hostility could also be applied to explain other indicators of social cohesion not related to ethnic hostility. Third, both Chapters 3 and 4 will take into account a multi-ethnic group perspective but in different and complementary ways. Whereas Chapter 3 analyses the impact of locality characteristics on ethnic hostility among natives directed towards different ethnic outgroups, Chapter 4 investigates the impact of the locality on ethnic hostility and other social cohesion indicators among both the native Dutch population and among different ethnic-minority groups.

1.3.2 Part 2: Educational Attainment and Ethnic Hostility among Ethnic Minorities

Chapter 5, Trends in Ethnic Educational Inequality

Previous research has shown that the mean educational level of ethnic minorities has steadily increased, even faster than among the native Dutch (Gijssberts, 2004; Statistics Netherlands, 2005; Tesser, 1995). This does not necessarily mean that, in general, ethnic inequality of educational opportunities has been declining. A detailed description of trends in ethnic inequality of educational opportunities has been missing. Distributions of educational attainments have been linked to the effect of education on ethnic hostility and the effect of educational attainment on ethnic hostility among ethnic minorities is by no means clear. In Chapter 5, *Trends in Ethnic Educational Inequality*, I will commence on a detailed description of trends in educational differentials across the major ethnic groups in the Netherlands. After having investigated more in depth the reasons

for ethnicity-based educational inequality in Chapter 6, I will return in Chapter 7 to explaining ethnic hostility among ethnic minorities and the role played by educational attainment herein.

Educational inequality may take on different guises. According to Raftery and Hout (1993), at times of educational expansion, educational inequality will only decrease at educational levels where enrolment of the elite stratum has been saturated. Otherwise, the dominant groups in society will profit more from educational expansion than the less privileged, whereby inequality is (maximally) maintained. The educational levels in the Dutch educational system are qualitatively differentiated into vocational and general tracks. It is thus possible that once saturation has been reached at a given educational level, inequalities of attaining that level may be replaced by inequalities in enrolment in the more selective track. In this way, inequality is effectively maintained (Lucas, 2001). In Chapter 5, acknowledging the possible different forms of ethnic educational inequality, I will investigate to what degree ethnic educational inequality is maintained, both maximally (across levels) and effectively (across general and professionally-oriented tracks within the same level).

During one's school career many transition decisions have to be made. The literature on class-based educational differentials has recognised since long that the inequality across classes in final educational attainment is the end product of the differences in educational opportunities during the complete school career (De Graaf & Wolbers, 2003; Mare, 1980). Trends among ethnic groups in transition decisions have hardly received any attention so far (for an exception, see: Kalmijn & Kraaykamp, 2003). I will therefore investigate (trends in) ethnic differences in transition decisions after primary school and after higher general secondary school, next to studying trends in final educational attainment in Chapter 5.

The four largest ethnic minority groups in the Netherlands have a less favourable social background than the native Dutch (Statistics Netherlands, 2008). Parental social background is a strong determinant of children's educational achievement, both among the native Dutch and ethnic minority groups (Shavit & Blossfeld, 1993; Wolbers & Driessen, 1996). Up to now, however, it is unclear how much the differences in social background account for the differences in achieved educational level and educational transition decisions across ethnic groups.

The above considerations have led to the following research question of Chapter 5:

What are the birth cohort trends across ethnic groups in final educational attainment and in the transition decisions after primary school and higher general secondary school, and to what extent does parental social background explain these differences?

The results of Chapter 5 have triggered new questions on differences between ethnic groups in their school career, which has resulted in the study presented in Chapter 6.

Chapter 6, Explanations for Ethnic Educational Inequality

Differences observed at the ethnic-group level at branching points in the educational career are the result of differences in decisions made by individuals. In Chapter 6, *Explanations for Ethnic Educational Inequality*, I will investigate how and why ethnicity affects the decision for a specific

track in higher education. My point of departure is the Breen-Goldthorpe model, a formal micro-theoretical model developed to explain (trends in class-based) educational differentials (Breen & Goldthorpe, 1997; Goldthorpe, 2000). According to this model, students make rational decisions based on cost-benefit evaluations which are influenced by subjective beliefs about the likelihood of success in different educational tracks, expected direct and indirect costs associated with each transition choice, and subjective beliefs about the utility of educational outcomes. The tenability of the Breen-Goldthorpe model within a multi-ethnic context is so far unclear.

I will argue in Chapter 6 that male and female students, students from different social backgrounds and students with different ethnic origins may have different beliefs regarding their success probabilities, even after controlling for ability. Differences in success probabilities are thereby a likely candidate to account in part for existing ethnic educational differentials. Surprisingly, to what extent success probabilities explain the effect of ascribed characteristics such as ethnicity on schooling decisions have remained unclear, since success probabilities have seldom been included in explanatory models (for an exception, see: Stocké, 2007). The research question of Chapter 6 is therefore:

To what extent do subjective estimates of success probabilities explain the effect of social origin, sex and ethnicity on students' choices between different school tracks in Dutch higher education?

After having investigated the educational integration of ethnic minorities in Chapter 5 and the extent to which differences in subjective beliefs of future school success explain the observed ethnic educational inequality in Chapter 6, I will investigate the effect of educational attainment on indicators of ethnic hostility and cultural integration among minorities in Chapter 7.

Chapter 7, Educational Attainment and Ethnic Hostility

Educational attainment is an important, if not the most important, determinant of ethnic hostility among native ethnic groups (e.g. Hagendoorn & Nekuee, 1999). Surprisingly, the effect of education on ethnic hostility is by no means clear for ethnic-minority groups. Several authors even speak of an 'integration paradox' by which they refer to counterintuitive findings that especially well-educated ethnic minorities presumably feel rejected by the host country and perceive cultural differences and discrimination (Buijs et al., 2006; Gijsberts & Vervoort, 2009) These studies do not imply that education in general is positively related to ethnic hostility among ethnic minorities, but do raise questions regarding the assumed positive effect of education on cultural integration and inter-ethnic tolerance among ethnic minorities.

Due to educational expansion in the Netherlands in recent decades, educational categories have become more distinct in terms of their cognitive skills. Probably as a consequence of this, the educational effect on ethnic tolerance increased among native Dutch in the 1975-1998 time period (Jaspers, 2008). Following this line of argument, I will use the results of the first two chapters of Part 2, which study the educational integration of ethnic minorities, to derive hypotheses regarding the strength of the education effect on indicators of ethnic hostility and cultural integration among ethnic minorities. Chapter 7 also uses Ethnic Competition Theory and

Contact Theory to derive hypotheses regarding the mechanisms behind educational attainment and indicators of ethnic hostility and cultural integration. According to Ethnic Competition Theory and Contact Theory, members of society's dominant ethnic group perceive less ethnic threat, and have more positive and fewer negative contact experiences. This in turn would partly explain why higher educated natives are less hostile to ethnic minorities. But if, and to what extent, these causal mechanisms also hold for ethnic minority groups has to be empirically investigated.

I am unaware of any empirical study that makes use of highly representative datasets among different ethnic minority groups in which the mechanisms that provide insight into the link between educational attainment and indicators of ethnic hostility and cultural integration have been investigated. It is my aim to fill this lacuna with Chapter 7. The final research question this book addresses is:

To what extent and why is educational attainment linked to indicators of both ethnic hostility among and cultural integration of ethnic minorities (i.e. opposition to ethnically mixed relationships and identification with the country of origin)?

In sum, in Part 2 of this book I recognise that although educational attainment might be an important determinant for ethnic hostility among native populations, one of the reasons to expect education to affect ethnic hostility differently across ethnic groups in the Netherlands is that educational levels are distributed differently across ethnic groups. Since the exact extent of these differences and the trends herein are unclear, I will first direct my attention to the educational integration of ethnic minorities. Next, I will explore to what extent and why educational attainment affects indicators of ethnic hostility and cultural integration among ethnic minorities.

1.3.3 Questions, theories, perspectives, data and methods

The research questions of the empirical chapters, Chapter 2 to 7, have been summarised in Table 1.1 together with the perspective applied, the theories from which the hypotheses are deduced, and the datasets and statistical methods that will be used to test these hypotheses.

In the last chapter of this book, Chapter 8, I will assess to what extent I have been successful in answering the core question of this book; what might be the sociological reasons for the fact that some people, belonging to particular ethnic groups, situated in time and place, hold more (or less) ethnic hostility than others? I will reflect on the theoretical implications of my empirical findings, and will give my opinion on which direction future research should take.

Table 1.1 Outline of empirical chapters

Chapter	Research questions (brief) ^a	Theories / Propositions	Perspective	Data Sources ^b	Methods of analysis
2	To what extent does intergenerational educational and class mobility affect ethnic hostility?	<ul style="list-style-type: none"> • Ethnic Competition Theory • Socialisation Theory 	<ul style="list-style-type: none"> • Dynamic 	<ul style="list-style-type: none"> • SOCON 1995, 2000, 2005 • NKPS 2002 	<ul style="list-style-type: none"> • Diagonal mobility models
3	To what extent do characteristics of Dutch neighbourhoods and municipalities affect ethnic hostility?	<ul style="list-style-type: none"> • Ethnic Competition Theory • Contact Theory 	<ul style="list-style-type: none"> • Multi-ethnic • Local context 	<ul style="list-style-type: none"> • NKPS 2002 	<ul style="list-style-type: none"> • Multi-level regression models
4	To what extent, and for whom, do ethnic and economic heterogeneity, economic affluence, crime rates and residential mobility within Dutch neighbourhoods and municipalities affect social cohesion?	<ul style="list-style-type: none"> • Homophily Principle • Ethnic Competition Theory • Contact Theory 	<ul style="list-style-type: none"> • Multi-ethnic • Local context 	<ul style="list-style-type: none"> • CV 2004 	<ul style="list-style-type: none"> • Multi-level regression models
5	What are the birth cohort trends across ethnic groups in final educational attainment and in school transition decisions?, and to what extent does parental social background explain these differences?	<ul style="list-style-type: none"> • Modernisation Theory • Maximum Maintained Inequality proposition • Effectively Maintained Inequality proposition 	<ul style="list-style-type: none"> • Multi-ethnic • Dynamic 	<ul style="list-style-type: none"> • SPVA, 1988, 1991, 1994, 1998, 2002 • NKPS 2002 	<ul style="list-style-type: none"> • Log-linear models • Multinomial logistic regression
6	To what extent do subjective estimates of success probabilities explain the effect of social origin, sex and ethnicity on students' choices between different school tracks in Dutch higher education?	<ul style="list-style-type: none"> • Breen-Goldthorpe Model 	<ul style="list-style-type: none"> • Multi-ethnic 	<ul style="list-style-type: none"> • Participation in Higher Education 1995, 1997 	<ul style="list-style-type: none"> • Multi-level regression models • Conditional multinomial logistic regression
7	To what extent and why affects educational attainment ethnic hostility among ethnic minorities?	<ul style="list-style-type: none"> • Ethnic Competition Theory • Contact Theory • Cultivation Theory 	<ul style="list-style-type: none"> • Multi-ethnic 	<ul style="list-style-type: none"> • SIM 2006 	<ul style="list-style-type: none"> • Multiple-mediator models

^a Please refer to section 1.3 for the full research questions

^b SOCON: Social and Cultural Developments in the Netherlands; NKPS: Netherlands Kinship Panel Survey; CV: Cultural Changes; SPVA: Social Position and Use of Welfare Facilities by Immigrants Surveys; SIM: Survey Integration of Minorities

1.4 NOTES

1. In this book I rely strongly on the Netherlands Kinship Panel Survey (NKPS) (Dykstra et al., 2004) and the Social Position and Use of Welfare Facilities by Immigrants (SPVA) surveys (Groeneveld & Weyers-Martens, 2003), which are made available by the Dutch National Research Foundation (NWO) through The Binding Force of Family Relations [*De Bindende Kracht van Familierelaties*] (BKF) program. The Netherlands Kinship Panel Study is funded by grant 480-10-009 from the Major Investments Fund of the Dutch National Research Foundation, and by the Netherlands Interdisciplinary Demographic Institute (NIDI), Utrecht University, the University of Amsterdam and Tilburg University.
2. The label Ethnic Competition Theory is taken from Coenders (2001). The synthesis between Realistic Conflict Theory and Social Identity Theory is also referred to as Ethnic Group Conflict Theory (Coenders, Lubbers, & Scheepers, 2007).

Part 1

The Impact of Social Mobility and the Local Living Environment
on Ethnic Hostility



2. SOCIAL MOBILITY AND ETHNIC HOSTILITY†

2.1 INTRODUCTION

Empirical research has shown convincingly that educational achievement and social class are among the most important predictors of hostile attitudes towards ethnic outgroups, such as prejudices, ethnocentrism and opposition to ethnic intermarriage (Coenders, 2001; Kunovich, 2004; Scheepers et al., 2002). The sociological literature consistently finds that less educated persons hold less favourable attitudes towards ethnic outgroups than more educated persons and that manual workers and the self-employed hold less favourable attitudes towards ethnic outgroups than other social classes.

Besides one's current social position, one's social origin – parental educational attainment and social class of the father during the formative years – also explains attitudes towards ethnic outgroups, although presumably to a lesser extent than current social position. If social mobility has an impact on ethnic hostility, newcomers into a specific social position may differ in their level of hostile attitudes from members who hold the same social position but who have not experienced social mobility. The relative impact of social origin and destination positions on ethnic hostility remains unclear as the impact of social mobility may have been underestimated in previous studies because standard approaches are inadequate for modelling mobility effects.¹

Many theories in the Durkheimian tradition hypothesise that social mobility leads to instability, identity conflict, and subjective feelings of deprivation (Durkheim, 1987 [1897]). Social mobility – both upward and downward – is expected to cause alienation and abnormal strain. Without social and personal control, this may be manifested in dissatisfaction with life, antagonistic attitudes towards ethnic outgroups (Bettelheim & Janovitch, 1950), and, in extreme cases, in suicide (Durkheim, 1987 [1897]). Despite these longstanding theoretical predictions, we know of no empirical research that has shown that experiences of social mobility affect ethnic hostility through anomie or any other mechanism (Marshall & Firth, 1999).

Conceptually, we view individuals' attitudes towards outgroups as affected both by the social position of their parents and by their own social position in adulthood. In addition, the experience of social mobility itself may affect attitudes independent of the social origin and destination (Marshall & Firth, 1999). We stress that the two views are not in contrast with one another but rather complementary. Diagonal mobility models, which we apply in the present study, offer a parsimonious and elegant representation of origin, destination, and mobility effects and are well suited to model these potential mechanisms simultaneously (Hendrickx, De Graaf, Lammers, & Ultee, 1993; Sobel, 1981, 1985; Weakliem, 1992).

† A slightly different version of this chapter has been published in the *British Journal of Sociology* (Tolsma, De Graaf, & Quillian, 2009). An earlier version of this paper has been presented at the American Sociological Association (ASA) 2008 Annual Meeting in Boston, USA and at the 8th European Sociological Association (ESA) Conference 2007, Glasgow, United Kingdom.

In addition to the theoretical literature on causes of ethnic hostility, our research contributes to the theoretical literature on the consequences of social mobility. Several scholars have applied diagonal mobility models to assess the relationship between mobility on the one hand and voting behaviour, culture and material consumption behaviour, fertility, and lifestyles on the other hand (De Graaf, 1991; De Graaf, Nieuwebeerta, & Heath, 1995; Nieuwebeerta, De Graaf, & Ultee, 2000; Sobel, 1985; Stein, 2005; Weakliem, 1992). These studies showed that the level of acculturation depends on the specific origin and destination positions. Until now, consequences of intergenerational mobility on ethnic hostility have been neglected in the body of research on social mobility.

Both educational achievement and social class are important determinants of ethnic hostility. We, therefore, examine the effects of mobility in terms of both educational achievement and social class on attitudes towards outgroups. We employ three distinct measures of hostile attitudes towards outgroups: ethnic stereotypes, ethnic threat, and opposition to ethnic intermarriage. In sum, in this chapter we will address the following research question: *To what extent does intergenerational educational and class mobility affect ethnic hostility (i.e. ethnic stereotypes, ethnic threat and opposition to ethnic intermarriage)?*

For this purpose, we use two data sets from the Netherlands that are distinctive in their inclusion of measures of antagonistic attitudes, education, and class: *Social and Cultural Developments in the Netherlands* (SOCON) surveys, waves 1995, 2000, and 2005 and the *Netherlands Kinship and Panel Study* (NKPS) wave 2002.

2.2 EXPECTATIONS

2.2.1 Class origin and destination status

Class of origin and class of destination are distinguished for individuals in that they occur at different points in the life course. Individuals experience their class of origin – their parent's class – most strongly during childhood and adolescence when they reside with their parents. They experience their destination class as adults after the completion of formal schooling. Persons who climb or fall from the social ladder thus experience two different class positions. We expect that both origin and destination class status may have an impact on attitudes, but their relative importance depends to a large extent on the relative importance of early socialization into the attitudes typical of the origin class by parents and other members of the origin class versus later circumstances on the formation of attitudes towards ethnic outgroups in adulthood.

Since socialization takes place primarily early in life (Alwin & Krosnick, 1991) and many attitudes tend to be rather stable during the life course (Glenn, 1980), a 'socialization' perspective would expect a larger role for origin position than destination position. As hostile attitudes towards ethnic outgroups are in part transmitted during childhood (Dalhouse & Frideres, 1996), 'Once prejudices appropriate to one's class position are accepted, they may become traditions which are passed by childhood socialization from one generation to the next.' (Hodge & Treinman, 1966, p. 91). Re-socialization may also occur later in life, but most theory and research suggests

that socialization is a process that operates most strongly in childhood and adolescence, and thus class-based socialization influences should largely reflect origin class position. Under the view that socialization experiences are of primary importance in the formation of negative attitudes towards ethnic outgroups, we expect the '*Class Origin Hypothesis*' to hold: *The impact of the destination class on indicators of ethnic hostility is weaker than the impact of the origin class on indicators of ethnic hostility.*

Another approach suggests that attitudes towards outgroups are more closely related to individuals' perceptions of their material self-interest and related collective identities, especially their current class position. In line with this view, Ethnic Competition Theory states that members of ethnic groups compete with each other for scarce resources such as jobs, housing, and income (Blalock, 1967; Blumer, 1958; Bobo & Hutchings, 1996; Coenders, 2001; Coser, 1956; Olzak, 1992; Scheepers et al., 2002; Tajfel, 1982). Especially in conditions in which new competitors come from ethnically distinct groups, many individuals perceive this competition as reflecting collective competition between ethnic groups. Since workers and the self-employed can rely on fewer resources and are more directly in competition with ethnic outgroups than other social categories, these categories perceive competition most strongly. Perceived ethnic threat evoked by perceptions of ethnic competition enhances in turn negative sentiments against ethnic outgroups (Coenders & Scheepers, 1998; Quillian, 1995, 1996; Scheepers et al., 2002). According to Ethnic Competition Theory, members of a social class thus share similar attitudes towards ethnic outgroups because of their shared competitive economic environment and because of their perceived mutual interest to protect their social class from ethnic outgroups. This theory suggests the '*Class Destination Hypothesis*': *The impact of the destination class on indicators of ethnic hostility is stronger than the impact of the origin class on indicators of ethnic hostility.*

2.2.2 Educational origin and destination status

Past research has consistently found that level of education to be one of the strongest correlates of prejudice and attitudes towards outgroups, with higher education associated with less ethnic hostility. Many have theorised that this holds in part because schools are socializing agents and transmit the prevailing norms of society, which in most Western societies favour tolerance. Moreover, education develops cognitive competence, increases open mindedness, and reduces authoritarian attitudes, all of which tend to foster a more tolerant stance towards ethnic outgroups (Hello, Scheepers, & Slegers, 2006).

Studies have generally not examined the relative impact of parental level of education versus own educational achievement on attitudes towards ethnic outgroups. Applying the distinction we made earlier between socialization and instrumental theories of class position, socialization theory predicts that more educated parents are likely to transmit their tolerant attitudes to the child during both school and pre-school years. This suggests the '*Educational Origin Hypothesis*': *The impact of one's own educational achievement on indicators of ethnic hostility is weaker than the impact of father's educational achievement on indicators of ethnic hostility.*

While parental education is also likely to have an impact on attitudes, we expect a stronger impact of respondent's own education, consistent with past research. There are two

reasons for this. First, education itself has a socializing influence that increases acceptance of norms of tolerance, at least in societies in which tolerance is the dominant value orientation. Second, education is important because it has a strong impact on job and class position, and thus affects perceived ethnic competition experiences. In fact, Hello, Scheepers, and Slegers (2006) find education affects social distance attitudes towards ethnic outgroups largely because of its effect on perceived ethnic competition, suggesting this second mechanism is predominant. Because of the combined effect of these mechanisms, we suggest that the more likely hypothesis with regard to education is the '*Educational Destination Hypothesis*': *The impact of one's own educational achievement on indicators of ethnic hostility is stronger than the impact of father's educational achievement on indicators of ethnic hostility.*

Table 2.1 Prevalence of ethnic threat, stereotypes and opposition to ethnic intermarriage in the Netherlands

Ethnic Threat (<i>N</i> =2898) ^a	Agree (%)
Dutch people fired because of minorities	18
Minorities are a threat to our own culture	30
Stereotypes (<i>N</i> =2520) ^a	Agree (%)
Never know whether Moroccans aggressive	24
People from Surinam work slowly	25
Gypsies are never to be trusted	16
Turks are backward	7
Extra careful with Jews in business dealings	14
Intermarriage (<i>N</i> =7420) ^b	I would mind (%)
Intermarriage with Turc OK?	39
Intermarriage with Moroccan OK?	44
Intermarriage with Surinamese OK?	32

Source: ^a: SOCON 1995, 2000, 2005 (pooled); ^b: NKPS 2002

2.2.3 Tolerance and the national culture

Individuals are influenced by 'the social pressure resulting from the shared values of the other members of the group' (Blau, 1960, p. 191). We assume that this social pressure will not only originate from one's 'educational group' or one's 'social class' but also from the group formed by the people of a nation. The stronger the value climate of tolerance is in a country, the more individuals are thus stimulated to subscribe to these values. The Netherlands, like many other societies, officially condemn intolerance and discrimination. Although support for discrimination has been more widespread in times of high levels of immigration and during times of increasing unemployment, the Dutch majority did not support ethnic discrimination in the period from 1979 to 2002 (Coenders, Lubbers, Scheepers, & Verkuyten, 2008). Even after experiencing an ideological shift from multiculturalism towards assimilation (2001 to 2004), tolerance is the dominant attitude among older and younger generations in the Netherlands (Coenders et al., 2008). As can be seen from Table 2.1, the majority of the Dutch people do not agree that ethnic minorities form a threat, do not hold ethnic stereotypical attitudes, and do not oppose ethnic intermarriage. Intolerant attitudes are therefore difficult to express without facing social criticism; pressures of

social conformity favour more tolerant attitudes. We expect that general social pressures make it less difficult for individuals to adopt attitudes that are in congruence with the dominant norms of society. In the case of prejudice towards ethnic outgroups, these happen to be more tolerant. In summary, we expect the *'Tolerance dominance hypothesis'* to hold: *Someone who moves to a social destination category of which the immobile members are in general less hostile towards ethnic minorities than the immobile members of the origin category will be more likely to adopt the attitudes of the destination class than someone who is mobile into a social category of which the immobile members express more hostile attitudes than the social origin category.*

2.2.4 Losers of modernization

The importance of social mobility for attitudes towards ethnic outgroups is also found in the 'losers of modernization' thesis (Scheuch & Klingemann, 1967). Downward mobility may determine that people lose connections with society and that problems accumulate among those who experience downward mobility (Bernhardt, 2001; Durkheim, 1987 [1897]). Downward mobility is likely to fuel feelings of subjective deprivation and economic competition. Since intergenerational progress is an important expectation in society, lack of mobility may lead to frustration. Feelings of subjective deprivation, perceptions of competition, and frustration may find a release in hostile attitudes towards ethnic outgroups whom become scapegoats (Bettelheim & Janovitch, 1964). Consequently, the downward mobile may be especially likely to develop antipathy towards ethnic outgroups (Weller & Tabory, 1984). These theories suggest the *'frustration hypothesis'*: *Intergenerational downward mobility induces hostile attitudes towards ethnic out-groups above and beyond social origin and destination effects on attitudes.*

We test our hypotheses on two different datasets, for two types of mobility (educational and class) and on three different indicators of ethnic hostility. We assume that the same mechanisms apply and our results should therefore be consistent.

2.3 DATA, MEASUREMENTS AND METHODS

2.3.1 Data description and measurement of dependent and independent variables

In this chapter we used the Dutch national *Social and Cultural Developments in the Netherlands* (SOCON) surveys, waves 1995, 2000, and 2005 and the *Netherlands Kinship and Panel Study* (NKPS) wave 2002.² Within the SOCON a random stratified sampling method is followed: 81 municipalities were randomly selected according to their level of urbanization, followed by a random selection of residents aged 18-70. The response rate of these surveys is approximately 50 per cent. The NKPS is a random sample of individuals within private households in the Netherlands, with a minimum age of 18 and a maximum age of 79. To collect data from the main respondents, Computer Aided Personal Interviewing (CAPI), supplemented with self-completion questionnaires, was used. The overall response rate was 44.7 per cent. Response rates tend to be rather low in the Netherlands, and the response rates of the SOCON and the NKPS are not exceptionally low. The samples of the SOCON are to a large extent representative for the Dutch population. The distribution by sex,

urbanization, and matrimonial status in the NKPS sample significantly differs from that in the comparison population. Results based on a weighted sample do not lead to different conclusions as those presented below. For further information with regard to the sampling procedure, response rates and the construction of the weight variable we refer to the respective codebooks (Dykstra et al., 2004; Eisinga et al., 2002; Eisinga, De Graaf, Levels, Need, & Scheepers, 2008; Eisinga, Felling, König, Peters, & Scheepers, 1999).

For the present study we selected respondents with Dutch-born parents. With regard to the educational mobility analyses, we only included respondents older than 25 at which age most people finished their educational career. For the class mobility analyses we excluded all students. The sample sizes used in this chapter depend on the type of intergenerational mobility (educational or class) and the dependent variable in question (see Tables 2.2 and 2.3).

Based on the SOCON data sets, we constructed an *ethnic stereotype* scale and an *ethnic threat scale* as dependent variables.³ The ethnic stereotype scale score was based on the mean score of the following items: 'With Moroccans you never know for certain whether they are going to be aggressive or not.', 'Most people from Surinam work quite slowly', 'Gypsies are never to be trusted.', 'Turks have so many children because they are slightly backward', and 'When you do business with Jews, you have to be extra careful.' With answer categories: (4) agree entirely, (3) agree, (2) don't agree/don't disagree, (1) disagree, and (0) disagree entirely. The Cronbach's alpha of the ethnic stereotype scale is 0.79. For the 1995, 2000, and 2005 waves this is 0.78, 0.83, and 0.76, respectively. If a respondent had one or two missing values on these ethnic stereotype items, we substituted these with the mean values based on the other stereotype items. Missing values were distributed more or less equally across these items (approximately 4 per cent). Results based on a sub-sample of respondents who had valid scores on all five items do not lead to substantially different results. The ethnic threat scale was a mean score of the items 'The day will come that Dutch people will be forced to give jobs to ethnic minorities' and 'The coming of ethnic minorities to the Netherlands is a threat to our own culture', both with answer categories: (4) agree entirely, (3) agree, (2) don't agree/don't disagree, (1) don't agree, and (0) don't agree at all. The inter-item Pearson correlation coefficient is 0.52. For the 1995, 2000, and 2005 waves this is 0.51, 0.62, and 0.48 respectively. Confirmatory factor analysis showed that the stereotype and ethnic threat dimension are empirically distinguishable.

Based on the NKPS data we constructed an *opposition to ethnic intermarriage* scale by adding the scores on three items on views related to ethnic intermarriage with specific ethnic groups. The question is: 'Would it bother you if one of your children decided to marry someone of [Turkish/Moroccan/Surinamese] descent?', with answer categories (4) 'bother me a lot', (3) 'bother me a little', (2) 'neutral', (1) 'not bother me', (0) 'not bother me at all'. The Cronbach's alpha of the opposition to ethnic intermarriage scale is 0.95.

Social destination is measured either as respondent's current social class or as respondent's highest achieved educational degree. Social origin is either father's social class when the respondent was 15 or father's highest achieved educational degree. The *social class* of respondent's current class position and *father's social class* when the respondent was 15 were measured using a condensed version of the original eleven-category EGP classification scheme

created by Erikson, Goldthorpe, and Portocarero (Goldthorpe, 2000).⁴ In the Netherlands, the majority of the employed male population works in the service class, i.e. as high- and low-grade professionals and managers (classes I and II of the EGP class scheme) (Ganzeboom & Luijkx, 2004). Güveli, Need and De Graaf, (2007b) argue that in post-industrial societies, within this service class two sub-classes may be distinguished: the socio-cultural specialists (e.g. social workers, teachers, lawyers) and the technocrats (e.g. engineers, accountants, and office managers). These subclasses are defined according to two criteria: controllability of the work performance and the socio-cultural character of the work tasks. It is relatively harder for employers to monitor socio-cultural specialists than technocrats in their work tasks. Furthermore, socio-cultural specialists have specific skills and knowledge involving social services and social-cultural issues. Extensive validation tests strongly supports this class distinction for the Netherlands (Güveli, 2006; Güveli & De Graaf, 2007; Güveli, Need, & De Graaf, 2007a). The final class background categories we used were: (1) technocrats, (2) socio-cultural specialists, (3) routine non-manual occupations; (4) small employers, (5) manual supervisors and skilled manual occupations, and (6) semi-unskilled manual occupations and farm labourers. We measured the *education* of the respondent and *father's education* in six categories: (1) university (WO), (2) college (HBO), (3) 0 and A levels (HAVO/VWO), (4) secondary vocational (MBO), (5) lower secondary education (MAVO) and (6) elementary school and lower vocational school (LBO).⁵

Although the impact of class and educational intergenerational social mobility on indicators of ethnic hostility is the main focus of this chapter, we also take into account other relevant variables which are likely to affect hostile attitudes and which possibly intervene with the impact of social origin and destination positions on these attitudes. *Sex* was coded as (0) male and (1) female. *Church attendance* was used as an indicator for religiosity and was measured in times per year. With regard to the class mobility analyses we controlled for respondent's educational attainment since both father's class position and respondent's educational attainment are causally prior to respondent's class destination. To take into account over time changes in ethnic hostility we included the variable *birth cohort*. Birth cohort was coded as survey year minus age at time of survey. Taking into account social position specific birth cohort did not alter our findings.

We are aware of other alternative explanations for negative attitudes, such as for example contact with ethnic minorities and neighbourhood contexts. However, only omitted variables that are related to both the specific negative attitude *and* social mobility possibly bias our estimation of mobility effects. We expect to find mobility effects due to socialization mechanisms or due to a change of competition environment following mobility. Testing whether mobility effects could be explained by for example more or less contact with ethnic minorities or due to a change in residential environment following mobility, although interesting, is beyond the scope of this chapter.

Descriptive statistics as well as the six mobility tables on which we base our conclusions are summarised in Appendices 2.1, 2.2, and 2.3.

2.3.2 Diagonal mobility models and formalization of hypotheses

We use diagonal mobility models (Hendrickx et al., 1993; Sobel, 1981) to assess the relative impact of social origin and destination position on ethnic stereotypes, ethnic threat and opposition to

ethnic intermarriage. Diagonal mobility models offer a parsimonious and theoretically interpretable method to model interactions between social origins and destinations (see also note 1). To stress the theoretical importance of diagonal mobility models for the social sciences, Cox used these models as an example how social science can bridge empirical and substantive concerns. According to Cox: 'These models aim to explain what is observed in terms of processes (mechanisms), usually via quantities that are not directly observed, and some theoretical notions as to how the system under study "works"' (Cox, 1990, p. 169). Interested scholars can find a short tutorial on the application of diagonal mobility models in Appendix 2.4 of which an electronic version is available at www.jtolsma.nl.

Diagonal mobility models model the relative impact of the origin and destination position on the dependent variable. The central idea behind diagonal mobility models is that the immobile represent the 'core' of each social position and express attitudes 'appropriate' to the class position in question. In our case, these core attitudes will be expressed by respondents who have the same social class position as their father or the same educational degree as their father. In a table showing respondent's social class by father's social class when the respondent was 15, the immobile respondents will fall on the main top-left to bottom-right diagonal. Members of these core positions establish their attitudes towards ethnic minorities without mobility experiences.

Formally, within diagonal mobility models, the attitudes of respondents in the ij cell of the mobility table are modelled as a function of the attitudes of the immobile respondents in social origin position i (cell ii) and of the immobile respondents of social destination position j (cell jj). The additive diagonal mobility baseline model without covariates for a dependent interval variable is given by:

$$Y_{ijk} = p\mu_{ii} + (1-p)\mu_{jj} + \varepsilon_{ijk} \quad (\text{Model 0})$$

And the baseline model with covariates is given by:

$$Y_{ijk} = p\mu_{ii} + (1-p)\mu_{jj} + \sum_b \beta_b x_{ijb} + \varepsilon_{ijk} \quad (\text{Model 1})$$

Where ε_{ijk} is a stochastic term with expectation 0, and μ_{ii} and μ_{jj} are the population means of the ii th and jj th cells of the mobility table. The parameter p indicates the salience of origin status relative to destination status to the dependent variable in question. Parameter p can thus be interpreted as the relative weight, or importance, of the origin category and $1 - p$ the relative weight, or importance, of the destination category for the explanation of the dependent variable, Y_{ijk} . If p is smaller than 0.5 the destination has a stronger relative impact on the dependent variable than the origin position. During the estimation procedure, we restricted the salience parameter to the $[0,1]$ interval in which it should theoretically lie. The covariates are expressed by different x_{ijb} variables and the corresponding covariate parameters by β_b , which should be interpreted just as in ordinary least square regression analysis. The interpretation of the parameters will be illustrated further by several examples in the result section.

In our *origin hypotheses* we stated that the influence of the origin position is likely to

be more important than the influence of the destination position. According to these hypotheses, the salience parameter p should be larger than 0.5. The *destination hypotheses*, which stated that the destination position will be more important than the social origin, implies that p is smaller than 0.5.

The *tolerance dominance hypothesis* states that adaptation to the attitudes of the destination position will be stronger when these norms are more tolerant than the origin position. To order social classes and educational degrees on the level of ethnic hostility, we use the mean level of hostile attitudes as expressed by the immobile respondents. To test the tolerance dominance hypothesis we constructed a dummy variable x_{ijt} which takes the value 1 if someone moved to a position of which the immobile members express lower levels of hostile attitudes than the immobile class members of the origin position and 0 otherwise. Henceforth, we refer to these respondents as respectively the tolerant-destination and intolerant-destination mobile. The tolerance model is given by:

$$Y_{ijk} = (p + tx_{ijt})\mu_{ii} + (1-(p+tx_{ijt}))\mu_{jj} + \sum_b \beta_b x_{ijb} + \varepsilon_{ijk} \quad (\text{Model 2})$$

and we find confirmation for our hypothesis if t is negative. In this case the impact of the origin is smaller for the tolerant-destination mobile (i.e. $p + t$) than for the intolerant-destination mobile (i.e. p).

Finally, we expected that downward mobility may have an additional effect independent of the origin and destination categories due to the frustration that accompanies downward mobility. The full model is given by:

$$Y_{ijk} = (p + tx_{ijt})\mu_{ii} + (1-(p+tx_{ijt}))\mu_{jj} + fx_{jff} + \sum_b \beta_b x_{ijb} + \varepsilon_{ijk} \quad (\text{Model 3})$$

Where the dummy variable x_{jff} takes the value 1 for the downward mobile and 0 otherwise. An f larger than 0 is corroborative evidence for the *frustration Hypotheses*.

In the result section below we discuss the parameter estimates of model 2 and 3. These models show the relative impact of origin and destination for the tolerant-destination and intolerant-destination mobile and whether there are additional mobility effects above origin and destination specific acculturation mechanisms.

Table 2.2 Parameter estimates from diagonal mobility models for intergenerational class mobility in the Netherlands (native Dutch only, students excluded)

	Stereotypes						Ethnic threat						Intermarriage					
	Model 2		Model 3		Model 2		Model 3		Model 2		Model 3		Model 2		Model 3			
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE		
Mobility Parameters																		
p: salience parameter (weight of origin)	0.46	0.22	0.26	0.28	0.76	0.19	1.00	0.29	0.81	0.23	1.00	0.23	0.81	0.23	1.00	0.23		
t: tolerance parameter	-0.46	0.31	-0.26	0.34	-0.76	0.27	-0.99	0.33	-0.74	0.30	-0.90	0.28	-0.74	0.30	-0.90	0.28		
f: frustration parameter	N.A.		-0.04	0.05	N.A.		0.08	0.07	N.A.		0.29	0.13	N.A.		0.29	0.13		
Attitudes of immobile (estimated means)																		
μ_{11} : technocrats	1.67	0.05	1.67	0.05	1.84	0.07	1.84	0.07	1.84	0.07	1.84	0.07	1.84	0.07	1.84	0.07		
μ_{22} : socio-cultural specialists	1.55	0.07	1.54	0.07	1.75	0.08	1.76	0.08	1.75	0.08	1.76	0.08	1.75	0.08	1.76	0.08		
μ_{33} : routine non-manual occupations	1.71	0.05	1.72	0.05	1.92	0.07	1.92	0.07	1.92	0.07	1.92	0.07	1.92	0.07	1.92	0.07		
μ_{44} : small employers	1.95	0.09	1.94	0.08	2.08	0.08	2.06	0.07	2.08	0.08	2.06	0.07	2.08	0.08	2.06	0.07		
μ_{55} : manual supervisors and skilled manual occupations	1.78	0.05	1.79	0.05	2.25	0.09	2.16	0.06	2.25	0.09	2.16	0.06	2.25	0.09	2.16	0.06		
μ_{66} : (semi-)unskilled manual occupations	1.89	0.05	1.89	0.05	2.19	0.06	2.27	0.08	2.19	0.06	2.27	0.08	2.19	0.06	2.27	0.08		
Covariates																		
β_{sex} : sex (male is ref. category)	-0.03	0.03	-0.03	0.03	0.05	0.04	0.03	0.04	0.05	0.04	0.03	0.04	0.05	0.04	0.03	0.04		
β_{cohort} : birth year (1960=0)*10	-0.09	0.01	-0.09	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01		
β_{church} : church attendance*10	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01		
Educational level respondent (elementary and lower vocational is ref. category)																		
β_{educ1} : University	-0.46	0.06	-0.46	0.06	-0.68	0.08	-0.68	0.08	-0.68	0.08	-0.68	0.08	-0.68	0.08	-0.68	0.08		
β_{educ2} : Professional college	-0.39	0.05	-0.39	0.05	-0.63	0.06	-0.63	0.06	-0.63	0.06	-0.63	0.06	-0.63	0.06	-0.63	0.06		
β_{educ3} : O and A levels	-0.32	0.06	-0.32	0.06	-0.53	0.07	-0.53	0.07	-0.53	0.07	-0.53	0.07	-0.53	0.07	-0.53	0.07		
β_{educ4} : Secondary vocational	-0.18	0.04	-0.18	0.04	-0.26	0.05	-0.26	0.05	-0.26	0.05	-0.26	0.05	-0.26	0.05	-0.26	0.05		
β_{educ5} : Lower general secondary	-0.14	0.05	-0.14	0.05	-0.15	0.06	-0.15	0.06	-0.15	0.06	-0.15	0.06	-0.15	0.06	-0.15	0.06		
R^2	0.15		0.15		0.16		0.16		0.16		0.16		0.16		0.16			
N	2518		2518		2517		2517		2517		2517		2517		2517			

Source: SOCON 1995, 2000, 2005; NKPS 2002

2.4 RESULTS

2.4.1 Intergenerational class mobility

Before we discuss class mobility effects we briefly describe the distribution of the investigated indicators of ethnic hostility across immobile respondents and the impact of the included covariates. Table 2.2 shows that in the Netherlands, social class has a non-linear relationship with ethnic hostile attitudes. The estimates of the diagonal cell parameters (μ_{11} , μ_{22} , μ_{33} , μ_{44} , μ_{55} , μ_{66}) refer to the mean values as expressed by the stable members of the specific social position. Thus, the immobile socio-cultural specialists have the lowest level of stereotypical attitudes (1.55) and feelings of ethnic threat (1.75), and have the least opposition to an ethnically mixed marriage (6.22) (Table 2.2, models 2). Of the respondents who have not experienced mobility, the small employers hold the most stereotypical views regarding ethnic outgroups (1.95, Table 2.2, model 2) and opposition to ethnic heterogamy is most prevalent among the self-employed as well (7.91, Table 2.2, models 2). Feelings of ethnic threat are however most prevalent among manual labourers. This may reflect the level of objective economic competition members these groups face from ethnic minorities. While the order of social classes on the level of ethnic hostility is usually similar across stereotypes, ethnic threat, and intermarriage, the exact ordering of social classes on the level of ethnic hostility depends on the specific indicator of ethnic hostility in question.

Men and women do not differ in the level of stereotypical attitudes and feelings of ethnic threat but women express more opposition to ethnic intermarriage than men. Younger birth cohorts express lower levels of stereotypes, ethnic threat, and ethnic exclusionism. People who more frequently attend church express higher levels of ethnic hostile attitudes than those who attend less frequently. The higher one's educational level the lower the level of hostile attitudes expressed (Table 2.2, models 2).

To test our hypotheses we now turn to the estimates of the mobility parameters. The relative influence of the class of origin compared to the class of destination is p for the intolerant-destination mobile and $p + t$ for the tolerant-destination mobile. Downward mobility was expected to increase feelings of subjective deprivation, frustration, and perceptions of economic competition. Effects of downward mobility which work independently of the acculturation mechanism are expressed by the frustration parameter f . First we notice that with respect to stereotypes and ethnic threat there are no such downward mobility effects (Table 2.2, models 3) and it suffices to look at the parameter estimates of models 2. With respect to opposition to ethnic intermarriage however, we do find a significant effect of downward mobility independent of origin and destination effects ($f=0.29$, $SE=0.13$, Table 2.2, model 3). This provides corroborative evidence for the downward mobility hypothesis. That we only found confirmation for the frustration hypothesis with respect to opposition to ethnic intermarriage may be related to the fact that ethnically mixed marriage is the most intimate form of inter-ethnic contact and the one indicator of ethnic hostility to which there is by far the highest level of expressed hostility (Table 2.1). It may be more acceptable to express frustrations openly regarding ethnic marriage given the high level of opposition to it.

Table 2.3 Parameter estimates from diagonal mobility models for intergenerational educational mobility in The Netherlands (native Dutch only, age>25)

	Stereotypes						Ethnic threat						Intermarriage			
	Model 2		Model 3		Model 2		Model 3		Model 2		Model 3		Model 2		Model 3	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
<i>Mobility Parameters</i>																
p: Salience parameter (weight of origin)	0.19	0.19	0.54	0.34	0.24	0.15	0.39	0.26	0.73	0.18	0.87	0.28				
t: Tolerance parameter	-0.19	0.24	-0.54	0.35	-0.24	0.18	-0.38	0.26	-0.66	0.24	-0.79	0.31				
f: Frustration parameter	N.A.		0.09	0.09	N.A.		0.07	0.11	N.A.		0.15	0.22				
<i>Attitudes of immobile (estimated means)</i>																
μ_{11} : University	1.15	0.05	1.16	0.05	1.11	0.06	1.11	0.06	1.11	0.06	5.33	0.15	5.31	0.15		
μ_{22} : Professional college	1.23	0.05	1.22	0.05	1.20	0.06	1.20	0.06	1.20	0.06	5.64	0.13	5.62	0.14		
μ_{33} : O and A levels	1.38	0.06	1.39	0.06	1.33	0.07	1.33	0.08	1.33	0.08	6.2	0.17	6.20	0.17		
μ_{44} : Secondary vocational	1.52	0.04	1.52	0.04	1.64	0.05	1.63	0.05	1.63	0.05	6.71	0.11	6.71	0.11		
μ_{55} : Lower general secondary	1.58	0.05	1.56	0.05	1.78	0.06	1.78	0.06	1.78	0.06	6.45	0.14	6.44	0.14		
μ_{66} : Elementary school and lower vocational school	1.75	0.04	1.76	0.04	2.03	0.05	2.03	0.05	2.03	0.05	7.07	0.11	7.06	0.11		
<i>Covariates</i>																
β_{sex} : Sex (male is ref. category)	-0.05	0.03	-0.05	0.03	0.03	0.04	0.02	0.04	0.13	0.08	0.13	0.08	0.13	0.08		
β_{cohort} : Birth year (1960 = 0)*10	-0.12	0.01	-0.12	0.01	-0.01	0.02	-0.01	0.02	-0.37	0.03	-0.37	0.03	-0.37	0.03		
β_{church} : Church attendance*10	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.13	0.02	0.13	0.02	0.13	0.02		
R ²	0.15		0.15		0.14		0.14		0.10		0.10		0.10			
N	2339		2339		2341		2341		5483		5483		5483			

Source: SOCON 1995, 2000, 2005; NKPS 2002

For all distinguished negative attitudes, we find that the destination class provides a stronger reference point for those whose father was a member of a less tolerant social class (i.e. the tolerant-destination mobile) than for those whose father was a member of a more tolerant social class (i.e. the intolerant-destination mobile). The tolerance parameters t are -0.46 ($SE=0.31$), -0.76 ($SE=0.27$), and -0.90 ($SE=0.28$), respectively for stereotypes, ethnic threat, and opposition to ethnic intermarriage (Table 2.2). This clearly supports the tolerance hypothesis in which we stated that acculturation to the attitudes of a new social position would be easier if the norms are more in line with the dominant (i.e. more tolerant) attitudes of society.

The relative impact of the origin and destination class thus depends on the tolerance direction of mobility. For the tolerant-destination mobile the impact of the origin is negligible since the p and t parameters add up to approximately zero: $0.46 - 0.46$; $0.76 - 0.76$; $1.00 - 0.90$, respectively for stereotypes, ethnic threat, and opposition to ethnic intermarriage (Table 2.2). But strikingly, the class origin has a substantial influence compared to the destination class for the mobile who moved to a less tolerant destination class. With respect to stereotypes the origin class is then equally important ($p=0.46$, Table 2.2, model 2) and the origin class even has a stronger impact among the intolerant-destination mobile with respect to ethnic threat ($p=0.76$, Table 2.2, model 2) and is the sole influence with respect to ethnic intermarriage ($p=1.00$, Table 2.2, model 3).

To illustrate the impact of mobility, consider a male born in 1960 who does not go to church and has only minimal schooling and whose father worked in a factory as an unskilled labourer (unskilled manual occupation). If this man starts his own small business (small employer) he would move up to a class where the core members are more opposed to ethnic intermarriage. We would predict that he would not acculturate to these attitudes since $p = 1.00$ and would predict his score on the intermarriage scale resembles the score of the core members of the origin category. If on the other hand, he were able to move up the social ladder even further, say to the class of socio-cultural specialists, his upward mobility would take him into a class where the core members are less opposed to ethnic intermarriage than the core members of his origin position. In the latter case we predict his score on the intermarriage scale closely resembles the score of core members of his new and more tolerant class (6.27).⁶

2.4.2 Intergenerational educational mobility

Immobile respondents within the highest educational position consistently express the lowest level of ethnic hostility: 1.15, 1.11, and 5.53 for respectively ethnic stereotypes, ethnic threat, and opposition to ethnic intermarriage, as shown in models 2 of Table 2.3. Immobile people with no or only elementary education express the highest levels of ethnic stereotypes (1.75), feel more threatened by ethnic minorities (2.03), and are in general more opposed to ethnically mixed marriages (7.07) (Table 2.3, models 2). Not surprisingly, the estimates of the covariates do not differ substantially from the estimates obtained from the class mobility models and are therefore not further discussed.

The estimates of the downward mobility parameters are in the predicted direction but they never reach significance (Table 2.3, models 3). We have to reject the downwards mobility hypothesis. Within Table 2.3, models 2, the estimates of the tolerance parameter are in the

predicted direction (negative) but only reach significance with respect to ethnic intermarriage ($t=-0.66$, $SE=0.24$).

From table 2.3 models 2, one's own educational achievements are more important compared to father's educational position for the explanation of stereotypical attitudes and feelings of ethnic threat. This holds for both intergenerational mobile respondents who obtained a higher degree – and in this case inherently a more tolerant position – than their father and for respondents who did not succeed in obtaining a degree as high as their father. This supports the educational destination hypotheses. The educational destination hypothesis is also supported among the tolerant-destination mobile with respect to opposition to ethnic intermarriage ($p + t = 0.73 - 0.66 < 0.5$, Table 2.3, model 3). Although the impact of the origin category on attitudes related to ethnic intermarriage is negligible for the mobile who reach a more tolerant educational position than their father, the impact of the origin category is even larger than the impact of the destination for the mobile who do not reach a more tolerant educational level ($p=0.73$, $SE=0.18$).

2.5 CONCLUSIONS

Intergenerational mobility has a notable impact on ethnic hostility. People adapt to the attitudes of the destination category, but the extent of this attitudinal adjustment depends on the specific origin and destination combination. We view social strata as having core or typical attitudes which are expressed by the members who have not experienced intergenerational social mobility. If someone is socially mobile and enters a new social position of which these core members are in general more tolerant towards ethnic minorities than the core members of the origin position, acculturation is easier and the impact of the origin is negligible. This holds for both types of intergenerational social mobility we investigated – intergenerational class and educational mobility – and for all three types of negative attitudes we consider: stereotypical attitudes, feelings of ethnic threat, and opposition to ethnic intermarriage. On the other hand, when the origin position is more tolerant than the destination position, the relative impact of the origin is substantial and sometimes exceeds the impact of the destination.

We interpreted origin effects as resulting from socialization processes taking place early in life. Destination effects could be both due to re-socialization later in life and due to shared experiences of ethnic threat (instrumental effects). With regard to educational mobility it is likely that the destination affects ethnic hostility due to both instrumental and socialization effects since schools are important socializing agents. This may explain why the destination is more influential with respect to educational mobility than with respect to class mobility.

In the Netherlands, mobility affects ethnic hostility by origin and destination dependent acculturation. Acculturation to tolerant attitudes is easier than acculturation to intolerant attitudes. This finding supports what we have called the tolerance dominance hypotheses: acculturation to the level of ethnic hostility of the achieved social position will be stronger when these attitudes are more in congruence with the dominant culture of tolerance within society.

Due to modernization processes and educational expansion upward mobility is more prevalent than downward mobility. Although upward mobility is often synonymous with mobility to a more tolerant stratum, this is not always the case. Hence, we cannot deduce from our data that as time goes there will necessarily be a reduction in ethnic hostility. Moreover, hostile attitudes may become more prevalent among all social classes because of shifts in macro-sociological conditions such as public events linked to ethnic conflict (e.g. hate crimes), large scale immigration fluxes, or economic recessions.

We expected that downward social mobility would foster ethnic hostility due to feelings of frustration and increased perceptions of ethnic competition. This mobility effect should be visible on top of the acculturation effects following mobility. We only found corroborative evidence for the frustration hypothesis with respect to class mobility and opposition to ethnic intermarriage. We tentatively conclude that it is not the frustration of being downwards mobile but more likely frustration of not reaching a social position higher than one's father that influences ethnic hostility. The frustration of not achieving intergenerational progress may also be felt by the immobile, whose upward social mobility has been blocked.

Our findings suggest that mobility effects may be generalised across different indicators of ethnic hostility and different forms of mobility. Even after taking into account respondent's education we find significant class mobility effects. This stresses the importance of class mobility effects. However, ideally one would want to analyze the consequences of educational and class mobility simultaneously. Unfortunately, our data does not permit this, since this would involve a four-dimensional table with many sparsely filled or empty cells. We hope that future research disentangles class mobility effects from educational mobility effects more clearly.

Previous empirical research found a modest influence of social origin on ethnic hostility. We note, however, that these studies mostly applied standard regression and that mobility effects are not adequately modelled with standard regression or similar approaches. Diagonal mobility models allow the relative importance of origins and destinations to be estimated. If they are not equally important this indicates a mobility effect. Past applications of diagonal mobility models identified various other effects of mobility (cf. De Graaf, 1991; De Graaf et al., 1995; Kelley & De Graaf, 1997; Monden, De Graaf, & Kraaykamp, 2003; Sobel, De Graaf, Heath, & Zou, 2004). We are the first to make a distinction between on the one hand upward and downward mobility and on the other hand mobility in the direction of dominant attitudes. We find that mobility to more tolerant destinations is associated with increased tolerance, but mobility to a less tolerant destination has hardly any influence on tolerance.

We hope that future research will further test our interpretation that acculturation is easier (or more likely) in the direction of 'dominant' attitudes. A necessary step in this analysis would be to theoretically define the 'dominant' attitudes in a society. At least three criteria are relevant: (1) the prevalence of the attitude in the society at large; (2) the extent to which state institutions actively promote the attitude in question; and (3) the extent to which expression of the opposite attitude is sanctioned by state institutions. Cross-societal comparative research provides a promising approach to better understand how variation in norms of tolerance conditions the effects of individual factors that predict ethnic hostility.

2.6 NOTES

1. Suppose that Y_i is our dependent variable of interest and that x_f is a measure of the social status of the father and x_c is the social status of the child. Mobility may be conceptualised as the difference between these two statuses: $x_f - x_c$. Since:

$$Y_i = \alpha_f x_f + \alpha_c x_c + \alpha_m (x_f - x_c) + \varepsilon_i$$

is equivalent to:

$$Y_i = \beta_f x_f + \beta_c x_c + \varepsilon_i$$

where $\beta_f = \alpha_f + \alpha_m$ and $\beta_c = \alpha_c - \alpha_m$.

- these models can not test for the presence of a social mobility effect since they incorporate this effect in the main effects of social origin and destination. Thus in the conventional standard regression approach there is nothing in between the additive model and the model in which every origin and destination combination cell is considered as unique. The advantage of diagonal mobility models is that they offer parsimonious and structured models of interactions. More importantly, diagonal mobility models are theoretically interpretable; the parameters refer to well conceptualised mobility mechanisms. See also Sobel (1981; 1985) and Sobel, Becker and Minick (1998).
2. The Netherlands Kinship Panel Study is funded by grant 480-10-009 from the Major Investments Fund of the Netherlands Organization for Scientific Research (NWO), and by the Netherlands Interdisciplinary Demographic Institute (NIDI), Utrecht University, the University of Amsterdam and Tilburg University.
 3. Our focus in this analysis is on openly expressed hostile attitudes towards ethnic minorities expressed on survey measures asking about opinions of ethnic outgroups. We recognise some research suggests the existence of implicit attitudes of which respondents may be incompletely aware, but we lack measures of these constructs in our data, and moreover we note that there remain many questions of interpretation of measures of implicit attitudes (Quillian, 2006). We believe that openly expressed attitudes remain highly important in affecting ethnic relations.
 4. People who became unemployed involuntarily and who want to work but remain unemployed for a long time are likely to feel frustrated. Note however that most unemployment in the Netherlands is frictional unemployment which may be voluntary. Unfortunately, within our data it is not possible to distinguish between frictionally unemployed and structurally unemployed. We therefore decided not to treat the unemployed as a separate social class position.
 5. We ordered the educational levels from high to low as followed: (1) university, (2) college (HBO), (3) O and A levels (HAVO/VWO), (4) secondary vocational (MBO), (5) lower secondary education (MAVO) and (6) elementary school and lower vocational school (LBO). We ordered the social classes as followed: (1) technocrats and socio-cultural specialists, (2) routine non-manual occupations; (3) small employers, (4) manual supervisors and skilled manual occupations, and (5) semi-unskilled manual occupations and farm labourers. Note that the technocrats and socio-cultural specialist are assumed to be of equal status. Movement out of the service class may be the most significant (downward) mobility experience. In

subsequent analysis, a dummy variables referring to mobility out of the service class did not lead to different results than the dummy variable capturing more general downward mobility experiences.

6. This is calculated as: $(1 - 0.9) * 6.81 + (1 - (1 - 0.9)) * 6.21 = 6.27$. Note that if his father would have belonged to the socio-cultural specialists and the respondent himself would have ended up in the lowest class, we would predict a different score on the intermarriage scale, namely: $1 * 6.21 + (1 - 1) * 6.81 + 0.29 = 6.50$.

3. THE LOCAL LIVING ENVIRONMENT AND ETHNIC HOSTILITY†

3.1 INTRODUCTION

In this chapter we set out to explain ethnic hostility and in particular as indicated by views of the ethnic majority group towards ethnic intermarriage. The Dutch society consists of approximately 10 percent non-western immigrants (Statistics Netherlands). Of all marriages in 2005, 5 per cent were between a native Dutch and a non-western immigrant (Statistics Netherlands). Marriage between an ethnic immigrant and a native of the host country can be considered as the final step of the integration process for immigrants (Gordon, 1964; Hooghiemstra, 2003), and mixed marriages are an indicator of cohesion within society. Opposition to ethnic heterogamy among native Dutch would indicate a stagnating integration process and undermines cohesion.

Opposition to ethnic intermarriage is one of the components of social distance (Bogardus, 1928) and closely related to the phenomena of prejudice (Allport, 1979 [1954]; Pettigrew & Meertens, 1995) and as such it will be highly associated with other indicators of ethnic hostility. In this chapter we will investigate to what extent structural characteristics of neighbourhoods and municipalities affect opposition to ethnic intermarriage next to individual characteristics. Moreover, we will investigate the relative impact of different types of ethnic competition (i.e. economic, cultural, and physical) on opposition to ethnic intermarriage.

Ethnic Competition Theory (ECT) is usually developed as a framework for predicting effects of individual-level as well as contextual-level structural characteristics on ethnic exclusionism. ECT poses that ethnic competition, either at the individual or group level, actual or perceived, enhances negative sentiments against ethnic outgroups by provoking threats to personal and group interests (Coenders, 2001; Coser, 1956). Ethnic *group* competition is the aggregation of individual competition experiences and may be over economic resources (Blalock, 1967), power (Blalock, 1967), cultural resources or collective identity (Tajfel, 1982). Persons in specific social strata will resemble each other in hostile attitudes, not necessarily because all individual members have the same personal ethnic competition experiences but also because their perceived ethnic competition is a result of competition experiences of other members in their social strata. A sudden rise of immigrants at the national level leads to ethnic hostility, not necessarily because personal ethnic competition experiences are suddenly more prevalent but because these immigrants are perceived as a potential competitive threat for members of the ethnic ingroup (Blumer, 1958; Bobo & Zubrinsky, 1996).

Studies focusing on structural sources for variations in ethnic hostility at the contextual level have mainly used size of the foreign population and economic conditions as indicators for ethnic-group competition. If prejudicial attitudes resulting from the presence of ethnic minorities are a threat response, the dynamics of this response should be made explicit (Taylor & Moghaddam,

† A slightly different version of this chapter has been published in the *European Sociological Review* (2008). An earlier version of this paper has been presented during the European Sociological Association (ESA) summer school on 'Immigration in Europe', Milan, Italy, 2006.

1987). Assessment of the importance of types of ethnic competition remains to be made (Taylor, 1998). In this chapter, we aim to investigate the relative impact of different types of ethnic competition (i.e. economic, cultural, and physical) on opposition to ethnic intermarriage.

As a result of ECT's group level focal point, most studies focusing on the impact of contextual characteristics on ethnic hostility have used the country as a unit of measurement. However, there are several reasons to expect that structural characteristics of smaller geographical units than the country, such as municipalities and neighbourhoods, affect ethnic hostility, and hence opposition to ethnic intermarriage. The second aim of our chapter is to investigate to what extent neighbourhood and municipality characteristics affect opposition to ethnic intermarriage next to individual characteristics.

Results of recent studies on the link between the competitive environment and ethnic hostility have been inconsistent (Gijsberts & Dagevos, 2004; Lubbers et al., 2006; Oliver & Mendelberg, 2000; Quillian, 1995; Semyonov et al., 2006; Taylor, 1998). Taylor (1998) has shown that resistance among whites towards blacks is higher when the proportion of blacks in neighbourhoods or schools is higher, but could not relate the percentage of Latinos to anti-Latino sentiments. Lubbers, Scheepers and Billiet (2000) showed that far right-wing voting in Belgium depends on the percentage of ethnic outgroups at the municipality level. But in a study on the German situation, Semyonov et al. (2006) could not support the theoretical expectation that the size of the ethnic outgroup in the locale increases exclusionary attitudes. Gijsberts and Dagevos (2004) showed that an influx of ethnic minorities at the neighbourhood level increases negative stereotypes, but did not influence attitudes related to the Dutch multicultural society. The effects of relative group sizes and other characteristics of the living environment on ethnic hostility may depend on the hostile attitude in question, the unit of measurement of the locale, and the specific outgroup.

If ethnic competition affects ethnic exclusionism, as ECT predicts, it should have an effect on views regarding ethnic heterogamy, since acceptance of a member of an ethnic outgroup as a close relative is the ultimate form of ethnic inclusion. However, for a sub-sample, we are able to compare our results regarding opposition to ethnic intermarriage with other indicators of ethnic hostility (i.e. reluctance to grant residence permits to migrants and negative views on the multicultural society). In this chapter we have three levels of measurement: the individual, the neighbourhood and the municipality. Moreover, to explore whether there are group-specific exclusionistic reactions we will investigate opposition to ethnic heterogamy in relation to Turks, Moroccans and the Surinamese, the main ethnic groups in the Netherlands. We contribute to the body of literature by including, for the first time, a wide array of indicators for *regional* variance in ethnic competition in the explanatory model, next to relative group size measures and relevant individual-level characteristics.

The above leads to the following research question: *To what extent do characteristics of Dutch neighbourhoods and municipalities related to economic, cultural or safety threats affect ethnic hostility (i.e. opposition to ethnic intermarriage, reluctance to grant residence permits to migrants and negative views on the multicultural society)?*

We will test several hypotheses derived from ECT and Contact Theory with a national

representative data set, the *Netherlands Kinship and Panel Study* (NKPS) wave 2002, supplemented with unique aggregate demographic statistics on the city *and* neighbourhood level.

3.2 EXPECTATIONS

Opposition to ethnic intermarriage is a type of ethnic exclusionism, just like opposition to integrated housing, denial of civil rights to ethnic minorities (Scheepers et al., 2002) and opposition to asylum seeker centres (Lubbers et al., 2006). The explanations proposed by ECT for ethnic exclusionism should therefore also hold for views regarding ethnic heterogamy.

Ethnic group competition takes place in economic and cultural units. In the Netherlands, municipalities and sometimes even neighbourhoods have their own local authority and run local elections. There is considerable variance in employment levels across cities and neighbourhoods. Also, the real estate market varies widely between and within cities, and competition for primary education and public services takes place within cities or neighbourhoods (Oliver & Mendelberg, 2000). Moreover, a regional group identity is developed due to, among other factors, local news media, soccer clubs, dialects and the social network; in general, between 10 and 20 per cent of the social network of a Dutch individual consists of people who live in the same neighbourhood (Flap, 1999). We therefore expect the living environment of neighbourhoods and municipalities to affect opposition to ethnic heterogamy: *Opposition to ethnic intermarriage varies at the municipality level and at the neighbourhood level (Regional variance hypothesis).*

To assess whether the variance at the locale is in part genuinely due to structural characteristics, we will control for possible composition effects by including relevant individual-level characteristics into our explanatory model. Based on previous research on attitudes towards ethnic outgroups, we expect older people, men, the lower educated, the lower strata together with the self-employed, and religious individuals, to express higher levels of opposition to ethnic intermarriage than young people, women, the higher educated, the higher social strata, and non-religious individuals (Coenders, Lubbers, & Scheepers, 2005; Kunovich, 2004).

We investigate opposition to ethnic intermarriage with specific ethnic minority groups: Surinamese, Turks and Moroccans. These groups form 7 per cent of the current Dutch population (Statistics Netherlands). Turks and Moroccans are predominantly Muslim. The Surinamese are Christian, Hindu or Muslim. Opposition to ethnic heterogamy may therefore overlap with opposition to religious heterogamy. Consequently, we expect that religiosity will be a stronger predictor for opposition to ethnic intermarriage than for other indicators of ethnic hostility. Given the regional variation in religiosity and denominations within the Netherlands, the regional variance in opposition to ethnic intermarriage will be, in part, a consequence of the religious composition of the locale.

Previous research has pointed to the relevance of the family of origin in relation to hostile attitudes towards ethnic minorities (Hello, 2003; Jaspers et al., 2008). To control rigorously for possible composition effects, we include parental educational level, occupational position of the father during childhood and mother's denomination in the explanatory model, and expect these effects to take the same direction as those of the respondent.

The actual ethnic competition within geographic units such as neighbourhoods and municipalities will be more severe the larger the percentage of ethnic outgroups. The visibility of ethnic minorities in the locale is likely to influence the perceptions of relative group sizes and hence perceived ethnic competition as well (Blalock, 1967; Oliver & Mendelberg, 2000; Taylor, 1998). Variation in actual ethnic competition and in perceived ethnic competition due to locale variation in relative group sizes, leads us to expect that: *Regional variation in opposition to ethnic intermarriage is partially a consequence of the relative group size at the locale (Relative group size hypothesis)*. However, for Coenders (2001) and Olzak (1992, p. 35) the mechanism underlying perceived threat and ethnic hostility is not only the absolute size of minorities in the population, but ethnic tensions will increase by changing levels of outgroup sizes as well. *Regional variation in opposition to ethnic intermarriage is partially a consequence of the changes in the relative group size at the locale (Change in relative group size hypothesis)*.

There is strong regional variation in the concentration of ethnic minorities in the Netherlands, with different patterns for each of the three minority groups (Statistics Netherlands). We can relate the presence of Surinamese, Turks and Moroccans in a municipality to the resistance to intermarriage with a member of the specific ethnic group. Hence we can test the propositions from ECT on the effect of relative outgroup sizes more rigorously, by investigating whether the relative group size of a specific ethnic group predominantly affects hostile attitudes directed to this specific ethnic minority group.

Ethnic hostility increases when the group economic situation worsens (Blalock, 1967; Quillian, 1995, 1996). The socio-economic status of the locale and changes herein are direct measures of the majority group's actual economic environment. We therefore pose: *Opposition to ethnic intermarriage is partially a consequence of (changes in) the socio-economic status of the locale (Economic environment hypothesis)*.

3.2.1 Cultural and physical competition

Due to the focus on relative group size and economic circumstances as the main contextual characteristics in empirical studies within the group-threat theory tradition, other forms of ethnic competition have been neglected in the literature (Taylor, 1998). To evaluate the underlying mechanism between actual competition at the contextual level and ethnic hostility, measures of economic *and* cultural competition are called for, next to measures of relative group size (Oliver & Mendelberg, 2000; Taylor, 1998).

Cultural competition takes place at the religious market (e.g. presence of places of worship) and within the educational system (e.g. presence of schools exclusively for Muslims (Taylor, 1998). The presence of mosques and Muslim schools in one's living environment highlights the cultural distinctiveness between native Dutch and ethnic outgroups and as a consequence, concerns over cultural identity will increase among native Dutch (Sniderman, Hagendoorn, & Prior, 2004). We use information on the geographical location of mosques and schools exclusively for Muslims as an indicator for (perceived) cultural competition at the contextual level and hypothesise that: *The more mosques and Muslim schools present at the locale, the more opposition to ethnic intermarriage at the locale (Cultural environment hypothesis)*.

Members of most ethnic minority groups in the Netherlands are overrepresented in crime statistics. Almost 40 per cent of the population of suspects of criminal offences committed in 2002 had an ethnic minority background, whereas the total of ethnic minorities (both EU and non-EU) forms only 20 per cent of the Dutch population (Blom et al., 2005). Moreover, crime is the most important theme in newspaper articles on Turks, Moroccans and the Surinamese in the Netherlands (Lubbers, Scheepers, & Wester, 1998). Publicity on criminal behaviour by ethnic-minority members, often stirred up after Muslim terrorism and honour-related violence, is likely to attribute crime as characteristic of ethnic outgroups. This may fuel a physical, or safety threat (Sniderman et al., 2004; Taylor, 1998). We assume that feelings of fear and physical threat depend on the level of crime in municipalities and neighbourhoods. These feelings in turn may lead to lack of trust in others, and in particular to suspicion towards members of ethnic outgroups. We, therefore, deduce the following hypothesis: *The higher the crime rates in a locale, the higher the opposition to ethnic intermarriage (Physical environment hypothesis).*

Opposition to ethnic intermarriage may also be heightened by a lack of social cohesion. Socially disintegrated individuals feel insecure and will search for new ways to derive a positive self-identity. To compensate for their loss in positive self-identity, such individuals have a stronger need for attachment to the ethnic ingroup and increase their ethnic ingroup favorable attitudes and negative views towards ethnic outgroups (Arendt, 1951; Lubbers, 2001). We assume that social cohesion will be lower within neighbourhoods and municipalities that are characterised by higher-moving mobility rates. Furthermore, a lack of social cohesion due to residential instability decreases informal social control within localities, hereby making the locality a preferred target area for criminals (Sampson, Raudenbush, & Earls, 1997). As a consequence, residents may feel unsafe within these localities. In sum, residential instability is expected to cause residents to feel unsecure and unsafe and hence to develop ethnic hostility: *Residents in neighbourhoods and municipalities characterised by high rates of mobility will express higher levels of opposition to ethnic intermarriage than residents in neighbourhoods and municipalities with lower rates of mobility (Cohesive environment hypothesis).*

Larger Dutch cities have had a longer history with relatively high percentages of non-Western ethnic minorities. Due to the longer visibility of ethnic minorities within large cities and to the accumulation of problems associated with large cities such as organised crime, housing shortages and ethnic minorities without legal residence permits, we expect that: *Respondents in larger cities express higher levels of opposition to ethnic intermarriage than respondents in smaller cities (Negative large city hypothesis).*¹

3.2.2 Contact Theory

In line with ECT, we stated that the ethnic minority percentage in neighbourhoods and municipalities is likely to be positively related to actual and perceived ethnic competition and hence to opposition to ethnic intermarriage. However, Contact Theory offers an alternative hypothesis to ECT. Intergroup contact reduces prejudice, even if Allport's optimal contact conditions (Allport, 1979 [1954]) are not met (Pettigrew & Tropp, 2006). Although the causal mechanism is not undisputed, the literature seems to suggest that the causality runs mainly from contact to prejudice reduction

(Pettigrew & Tropp, 2006). Wagner et al. (2006) show that, at least in the case of Germany, the percentage foreigners in the locale is negatively related to prejudice even after controlling for relevant individual level characteristics. They further established that the opportunity for contact and actual contact with foreigners in the neighbourhood increases with larger outgroup proportions in the living environment (Wagner et al., 2006).² Given these findings and in line with Contact Theory, we formulate a *Contact Hypothesis: The higher the percentage of ethnic minorities in the neighbourhood and municipality, the lower the opposition to ethnic intermarriage*. In line with this, we formulate a *Positive large city hypothesis: Respondents in larger cities express lower levels of opposition to ethnic intermarriages than respondents in smaller cities*.

However, higher levels of contact are in part a consequence of tolerant attitudes as well (Pettigrew & Tropp, 2006). People with more tolerant attitudes may embrace residential proximity to immigrants and choose to live in neighbourhoods and municipalities with higher percentages of ethnic minorities (Wagner et al., 2006). Likewise, one could also expect selective out-migration of people with intolerant attitudes from locales with high percentages of ethnic minorities i.e. 'white flight' (Massey, Gross, & Shibuya, 1994). We assume that respondents with low educational levels are more often relegated to neighbourhoods and municipalities with higher percentages of ethnic minorities due to economic constraints than respondents with high educational levels. Selective migration therefore implies a negative interaction between educational attainment and relative group size. If the effect of relative group size on opposition to ethnic intermarriage is positive for the lower educated (or for all educational levels) we would find support for the threat mechanism. If on the other hand the effect of relative group size on ethnic heterogamy is negative for all educational levels, this would be a corroboration of the contact theory.

In this chapter, we thus pose that two mechanisms may operate at the neighbourhood and the municipality level simultaneously: the threat mechanism and the contact mechanism. Furthermore, we pose that due to selective migration outgroup sizes may be positively related to opposition to ethnic intermarriage for the lower educated and negatively related to opposition to ethnic intermarriage for the higher educated.

3.3 DATA, MEASUREMENTS AND METHODS

3.3.1 Micro-level measurements

For information on individual-level characteristics, we used data from the main sample of the Netherlands Kinship and Panel Study (NKPS) wave 2002 (Dykstra et al.).³ This is a random sample of individuals within private households in the Netherlands, with a minimum age of 18 and a maximum age of 79. To collect data from the main respondents, Computer Aided Personal Interviewing (CAPI), supplemented with self-completion questionnaires, was used. The overall response rate was 44.7 per cent. Response rates tend to be rather low in the Netherlands, and this study is no exception. For the present study we selected respondents with both Dutch-born parents and who returned the self-completion questionnaire ($N=6538$). A sub-sample of these respondents ($N=903$) provided information on more indicators of ethnic hostility.

The opposition to ethnic intermarriage scale was constructed by adding the scores on three items on views related to ethnic intermarriage with specific ethnic groups ('Would it bother you if one of your children decided to marry someone of [Turkish/Moroccan/Surinamese] descent?', with answer categories (4) 'bother me a lot', (3) 'bother me a little', (2) 'neutral', (1) 'not bother me', (0) 'not bother me at all'). The three items constituted a Mokken scale (Mokken, 1971): the Loevinger's H for the entire scale was 0.92 and the lowest Loevinger's H per item pair was 0.89. Respondents are most opposed to an ethnic intermarriage with Moroccans, followed by an ethnic intermarriage with Turks. This finding is in line with previous research on the ethnic hierarchy in the Netherlands (Hagendoorn & Pepels, 2003). The constituted 'ethnic intermarriage scale' runs from 0-12, and higher scores indicate more opposition to ethnic heterogamy. It closely follows a normal distribution. Approximately 40 per cent of our respondents are bothered if one of their children decides to marry someone from either Turkish, Moroccan or Surinamese descent.

To assess the construct validity of the ethnic marriage scale, we tested the relationship to other prejudice-related concepts among the indicated sub-sample of respondents. Within this sub-sample, the three items on ethnic intermarriage referring to a specific ethnic group also formed a Mokken scale with other items measuring social distance (Bogardus, 1928). As expected, exclusionistic attitudes were most prevalent when it came to ethnic heterogamy. Furthermore, the ethnic intermarriage scale correlated significantly with more restrictive views on Dutch immigration policies (e.g. 'To what extent do you believe the Dutch government should be lenient in issuing residence permits to people from other countries who wish to live and work in the Netherlands for the following reason: someone whose life is at risk in his country of origin because of the political situation', Pearson correlation $r=0.23$), with negative views on the multicultural society (e.g. 'There are too many migrants in the Netherlands', Pearson correlation $r=0.50$) and with individually-experienced ethnic threat ('Do you feel at ease in the company of migrants?', Pearson correlation $r=0.44$). In sum, our dependent variable forms part of an ethnic social-distance scale and is related to views on immigration policies, the multicultural society in general, and individually-perceived ethnic threat. The propositions of group-threat theories such as ECT that relate to prejudice and exclusionism should therefore hold in relation to opposition to ethnic intermarriage.

Sex was coded as (1) male and (0) female. *Age* was measured in years. *Education* was measured in years: no complete primary=4; primary education=6; lower vocational education (LBO)=8; lower general education (MAVO)=10; medium vocational education (MBO)=10.5; medium general education (HAVO)=11; higher general education (VWO)=12; higher vocational education (HBO)=15; and university=16. For *parental education*, we used the highest education of either parent and it was also measured in years. We replaced missing values with mean values. The *employment categories* were measured using a condensed version of the original eleven-category EGP classification scheme created by Erikson, Goldthorpe and Portocarero (1979). We used current occupational status to derive the social class of the respondent, and added the categories: pensioner, student, disabled, in care of household, and unemployed. For *father's social class* we used the occupation of the father at the time the respondent was aged 15, and this was measured by the EGP scheme too. The *denomination* of the respondent was measured in

seven categories: no-religion, Roman Catholic, Dutch Reformed and Calvinists (synodal), other Calvinist denominations, other Christian denominations, other denominations, and missing. *Church attendance* was measured in times per year. Missing values on church attendance were set to the mean value. *Mother's denomination* was measured likewise. We chose mother's denomination instead of the father's since mothers have the strongest influence on religious socialisation (Bao, Whitbeck, Hoyt, & Conger, 1999).

3.3.2 Macro-level measurements

The NKPS survey data on individual-level characteristics were enriched with data on structural characteristics of neighbourhoods (NB, four-digit zip codes) and municipalities (MP). Information on socio-economic disadvantage of the locale and relative group sizes was taken from Dutch municipalities' administration data published by Statistics Netherlands. *Percentage of ethnic minorities* at the neighbourhood and municipality levels was calculated as non-Western minorities. Within the Dutch administration data, ethnic minorities are people with at least one parent born in the respective origin country. Non-Western minorities predominantly include immigrants from Turkey, Morocco and Suriname. We also constructed the variable change in percentage of ethnic minorities as a change score of the percentage of non-Western ethnic minorities at the locale between 2001 and 1999.⁴ At the municipality level, we had additional information on percentages of the specific Moroccan, Turkish and Surinamese ethnic groups (Statistics Netherlands).

For 2001, a summary measure of *socio-economically disadvantaged neighbourhood (SES dis. NB)* was computed based on the results of a principal component analysis (PCA) on 2945 neighbourhoods. The PCA included the scores of mean income of income recipients, percentage of income recipients with a low income, and percentage inhabitants living on public benefits. We labelled the first component as socio-economically disadvantaged neighbourhood. A similar procedure was followed for the raw changes in these three indicators. The extracted component of a PCA including these three change scores was labelled *change in socio-economically disadvantaged neighbourhood (Δ SES dis. NB)*. Likewise, we constructed the measurements *socio-economically disadvantaged municipality (SES dis. MP)* and *change in socio-economically disadvantaged municipality (Δ SES dis. MP)*.⁵

Locations of 39 Muslim schools in 2002 were provided by the Board of Islamic Education, ISBO (www.deisbo.nl). The best information we could find on the location of 454 *Mosques NB/MP* was a data file derived from Nico Landman, which has been updated with internet resources. We have to acknowledge that large differences exist in the visibility of these Mosques, for which we cannot control. We counted the presence of all types of mosques and Muslim schools within neighbourhoods and municipalities.

We used two indicators for crime rates at the locale. The Dutch Police Population Monitor (PPM, Politie monitor Bevolking) includes standardised questions on victimisation experiences. We aggregated the PPM data of the 1999, 2001 and 2003 waves (approximately 150,000 respondents). *Victims of burglary NB/MP* is a count of burglary victims within the spatial units of neighbourhoods and municipalities divided by the total PPM respondents who lived within these localities. Figures on *crime statistics NB/MP* have been obtained from the Dutch police registration systems (HKS,

HerkenningdienstSysteem).⁶ We aggregated data on crime statistics for the available years 2000 to 2004 (2,688,262 recorded offences with known location). For every neighbourhood and municipality we counted the total offences, with the exception of petty theft and traffic offences, since we do not consider these latter severe enough to cause physical threat or to be locale-specific. For our crime statistics variables, we divided these figures by the total inhabitants of the locale, as reported by Statistics Netherlands.

The only available indicator for social cohesion at the neighbourhood level was *relative inward-moving mobility* – the number of people entering a neighbourhood from another neighbourhood per 1000 inhabitants of the destination neighbourhood. For reasons of comparability, we used a similar measure at the municipality level (Statistics Netherlands).⁷ The variable *city size* measures the total inhabitants of each municipality in 2001.

For 186 respondents we were unable to match any municipality characteristic. These respondents were deleted from the sample. Missing values at either the neighbourhood or municipality level regarding (changes in) economic status, percentage of ethnic minorities or mobility were replaced with grand mean values.⁸

We ended up with a workable dataset of 6095 respondents from 2096 neighbourhoods and 437 municipalities, thus covering 55 per cent of Dutch neighbourhoods and 86 per cent of Dutch municipalities. We centred non-categorical variables on their grand mean values, except for number of mosques and Muslim schools at the locale and the variables measuring (changes in) the economic disadvantage at the locale, which were already standardised variables at the corresponding contextual levels. Descriptive statistics are summarised in Appendix 3.1.

3.4 RESULTS

The bivariate relationships between individual-level characteristics and opposition to ethnic heterogamy run mostly in the predicted direction (Appendix 3.1). The longer a person has been in the educational system and the higher the social class, the less opposition one finds to ethnic heterogamy. Pensioners and housewives are most opposed to ethnic intermarriage compared to other groups. People who belong to a specific denomination and attend church are more opposed to ethnic heterogamy than non-churchgoers and those not belonging to a specific denomination. Older people are more opposed to ethnic intermarriage than younger people, as are men compared to women. Parental characteristics are correlated to opposition to ethnic intermarriage in the same way as respondent characteristics, albeit less strongly.

Concerning the bivariate relations with the macro-level characteristics, we find that the larger the relative size of the ethnic outgroup in the locale the lower the opposition to ethnic intermarriage. This is in line with the contact hypothesis. Respondents who live in socio-economically disadvantaged neighbourhoods and municipalities are on average not more (or less) opposed to ethnic heterogamy. However, respondents living in neighbourhoods and municipalities which have experienced a deteriorating economic status are, as predicted, more opposed to ethnic heterogamy. Surprisingly, all other indicators for ethnic competition run in the opposite direction than predicted. For example, the higher the crime rates in the neighbourhood or municipality,

the lower the opposition to ethnic intermarriage. The bivariate correlations between contextual characteristics and opposition to ethnic heterogamy could be confounded by the composition of the locale and the interrelation between contextual characteristics. We therefore turn to the multivariate analyses next.

3.4.1 Opposition to ethnic intermarriage

We started with an empty hierarchical random intercept model to assess the variance components at the individual, neighbourhood and municipality levels. Of the total variance, a significant part, 3.5 per cent, is due to the variation between municipalities, but we do not find a significant variance component at the neighbourhood level (Table 3.1, model 0). We thus find only weak support for the regional variance hypothesis. This does not necessarily mean that contextual characteristics of the neighbourhood do not affect opposition to ethnic intermarriage, as we deduced from ECT. We will therefore continue our analysis as a three-level hierarchical model.⁹

To investigate to what extent parental characteristics are mediated by the characteristics of the respondents themselves, we continued our analysis by including parental characteristics in model 1 and respondents' characteristics in model 2 and 3. In agreement with our expectation, parental education, father's social class and mother's denomination affect opposition to ethnic intermarriage (Table 3.1, model 1). Respondents with higher educated parents are less opposed to ethnic intermarriages, respondents who grew up with a self-employed father and respondents with a Catholic or Calvinist mother are more opposed to ethnic intermarriage. Even after controlling for respondent's own educational achievement, employment status, age and sex, parental education and father's employment status still contribute significantly to the explanatory power of the model (Table 3.1, model 2). After controlling for respondent's religiosity in model 3, mother's denomination is no longer significant and is therefore excluded from subsequent models.

Older respondents are more opposed to ethnic intermarriage than younger respondents (model 3). Men and women do not express significantly different attitudes regarding ethnic intermarriage in our multivariate model. Higher educated individuals are less opposed to ethnic intermarriage; one year of education leads to a reduction of 0.13 in the opposition to ethnic intermarriage scale, which ranges from 0-12. Of all employment statuses, the unemployed and students are the least opposed to ethnic heterogamy. That the unemployed express high levels of tolerance is a consistent finding in the Dutch context (Coenders & Scheepers, 1998). The higher one's social class, the less opposed one is to ethnic heterogamy. Catholics and Calvinists are more opposed to ethnic intermarriage than individuals of other denominations and those who do not belong to any denomination at all. Church attendance also contributes to explaining opposition to ethnic intermarriage – frequent churchgoers are more opposed.

The individual-level characteristics included in model 3 reduce the estimated variance components at the municipality level by 64 per cent compared to the null model. This indicates that the variance at the locale is largely due to compositional effects. The respondent's denomination is responsible for almost half of the proportional reduction of the estimated variance component at the municipality level.

Table 3.1 Hierarchical linear intercept models estimating opposition to ethnic intermarriage (0-12), N_i=6095

	Model 0		Model 1		Model 2		Model 3	
	b	SE	b	SE	b	SE	b	SE
Constant	6.85*	0.05	6.39*	0.13	6.52*	0.19	6.44*	0.19
Parental characteristics								
Parental education (in years)			-0.14*	0.01	-0.05*	0.02	-0.04*	0.02
Father's social class (unskilled manual = ref.)								
Higher professional			-0.02	0.15	0.18	0.15	0.19	0.15
Lower professional			-0.20	0.14	0.04	0.14	0.07	0.14
Routine non-manual			-0.24~	0.15	-0.08	0.14	-0.05	0.14
Small self-employed			0.31*	0.12	0.32*	0.12	0.25*	0.12
Skilled manual			-0.06	0.13	0.11	0.13	0.13	0.13
Mother's denomination (no denomination = ref.)								
Missing			0.93*	0.17	0.61*	0.17	0.24	0.18
Roman Catholic			0.31*	0.11	0.30*	0.11	-0.16	0.13
Dutch Reformed/Calvinist			0.58*	0.12	0.46*	0.12	0.08	0.13
Other Calvinist			0.79*	0.20	0.77*	0.19	0.13	0.24
Other Christian denomination			0.47~	0.26	0.29	0.25	0.30	0.27
Other religion			-0.43	0.53	-0.57	0.52	-0.43	0.53
Respondent's characteristics								
Age*10					0.20*	0.04	0.19*	0.04
Female					0.06	0.08	0.04	0.08
Education (in years)					-0.13*	0.02	-0.13*	0.02

Continued on next page

Table 3.1 continued

Employment status (unskilled manual = ref.)									
Pensioner		0.27	0.20	0.19	0.20	0.19	0.20	0.20	0.20
Student		-0.71*	0.27	-0.68*	0.27	-0.68*	0.27	0.27	0.27
Disabled		-0.39~	0.22	-0.32	0.22	-0.32	0.22	0.22	0.22
Unemployed		-0.78*	0.28	-0.62*	0.28	-0.62*	0.28	0.28	0.28
In care of household		0.14	0.19	0.08	0.19	0.08	0.19	0.19	0.19
Higher professional		-0.59*	0.20	-0.53*	0.20	-0.53*	0.20	0.20	0.20
Lower professional		-0.51*	0.18	-0.41*	0.18	-0.41*	0.18	0.18	0.18
Routine non-manual		-0.42*	0.18	-0.37*	0.18	-0.37*	0.18	0.18	0.18
Small self-employed		-0.32	0.28	-0.27	0.28	-0.27	0.28	0.28	0.28
Skilled manual		-0.14	0.23	-0.14	0.23	-0.14	0.23	0.23	0.22
Religiosity									
Church attendance (*10)				0.06		0.06		0.06	0.02
Denomination (no denomination = ref.)									
Missing				0.58*		0.58*		0.58*	0.21
Roman Catholic				0.83*		0.83*		0.83*	0.11
Dutch Reformed/Calvinist				0.72*		0.72*		0.72*	0.14
Other Calvinist				0.75*		0.75*		0.75*	0.28
Other Christian denomination				-0.28		-0.28		-0.28	0.27
Other religion				-0.45		-0.45		-0.45	0.29
Variance components									
Municipality		0.31*	0.07	0.21*	0.06	0.16*	0.05	0.11*	0.04
Neighbourhood		0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Individual		8.99*	0.19	8.69*	0.16	8.25*	0.15	8.13*	0.15

* $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

Table 3.2 Hierarchical linear intercept models estimating opposition to ethnic intermarriage (0-12), context characteristics $M=6095^a$

	Model 4		Model 5		Model 6		Model 7		Model 8	
	b	SE	b	SE	b	SE	b	SE	b	SE
Neighbourhood characteristics										
Percentage of ethnic minorities	0.00	0.01			0.00	0.01				
Change in percentage of ethnic minorities	0.00	0.02			-0.01	0.02				
Socio-economic disadvantage	-0.02	0.04			-0.03	0.04				
Change in socio-economic disadvantage	0.14*	0.06			0.11~	0.06			0.07	0.05
Number of mosques and Muslim schools					-0.06	0.07				
Victims of burglary					-0.94	0.89				
Crime statistics					-0.12	0.17				
Relative inwards-moving mobility*10					-0.08*	0.02			-0.07*	0.02
Municipality characteristics										
Percentage of ethnic minorities*10			-0.15~	0.09			0.06	0.16		
Change in percentage of ethnic minorities			0.07	0.07			0.08	0.08	0.07	0.05
Socio-economic disadvantage			-0.07*	0.04			-0.07~	0.04	-0.06~	0.04
Change in socio-economic disadvantage			0.12*	0.04			0.09~	0.04	0.08*	0.04
Number of mosques and Muslim schools							0.00	0.02		
Victims of burglary							-0.52	2.25		
Crime statistics							-0.29	0.42		
Relative inwards-moving mobility*10							-0.07~	0.04	-0.03	0.04
City size*1000							0.00	0.00		
Variance components										
Municipality	0.08*	0.04	0.03	0.03	0.05~	0.03	0.01	0.02	0.03	0.03
Neighbourhood	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Individual	8.15*	0.15	8.17*	0.15	8.15*	0.15	8.19*	0.15	8.16*	0.15

* $p<0.05$, ~ $p<0.10$ (two sided test of significance)
^a controlled for individual-level characteristics

Next, we turn to the higher-order characteristics. In Table 3.2 we summarised the effects of municipality and neighbourhood characteristics. First, we added the classical structural indicators of ethnic threat and ethnic competition to the model: (changes in) relative group size and (changes in) economic situation. We did this separately for the neighbourhood level (model 4) and for the municipality level (model 5).

Although the main effects of percentage of ethnic outgroups and changes herein at the neighbourhood level are not related to opposition to ethnic intermarriage (Table 3.2, model 4), the cross-level interaction between educational level and outgroup size at the neighbourhood level is negative and significant (Appendix 3.2). For people who are lower educated than average, the percentage of ethnic minorities within their neighbourhood is positively related to opposition to ethnic intermarriage but for people who are higher educated than average, the relative outgroup size within the neighbourhood is negatively related to opposition to ethnic intermarriage. The proportion of ethnic outgroups in the municipality is negatively related to opposition to ethnic intermarriage (Table 3.2, model 5). The economic situation of the municipality explains partially the relationship between ethnic outgroup size and opposition to ethnic intermarriage; without the indicators for the economic situation of the municipality, the negative effect of percentage of outgroup size at the municipality is twice as large. The cross-level interaction between educational level and outgroup size at the municipality level is not significant and does not influence the main negative effect of outgroup size at the municipality level (Appendix 3.2). The effect of a change in the minority size at the municipality level is positive but not significant ($b=0.07$; $se=0.07$; Table 3.2, model 5).

Individuals in neighbourhoods with deteriorating economic conditions are more opposed to ethnic intermarriage (Table 3.2, model 4). At the municipality level we also observe that an economically deteriorating situation is related to a stronger opposition to ethnic heterogamy (Table 3.2, model 5). Surprisingly, at the municipality level the current economic situation is negatively related to opposition to the ethnic intermarriage scale – the parameter estimate is -0.07 . However, since the effect of a change in this situation is larger (0.12), we find partial support for the economic environment hypothesis; variation in ethnic hostility is partly the result of changes in the economic competition within the locale.

In models 6 and 7 we test if our other indicators of competition affect hostile views towards ethnic minorities.¹⁰ Crime statistics and the presence of mosques and Muslim schools do not influence people's opinion on ethnic heterogamy, neither at the neighbourhood level (Table 3.2, model 6) nor the municipality level (Table 3.2, model 7). We therefore have to refute the cultural and physical environment hypotheses.

Relative inward-moving mobility at the neighbourhood and municipality levels affect opposition to ethnic heterogamy, albeit in the opposite direction than predicted. We consequently have to refute the cohesive environment hypothesis. The larger the relative inward-moving mobility, the less opposed respondents are towards an ethnically-mixed marriage. Once we control for economic competition at the municipality level, municipality size does not affect respondents' views regarding ethnic intermarriage significantly. There are no other major problems to accumulate in big cities that affect opposition to ethnic intermarriage. We therefore refute both large-city hypotheses.

In model 8 we focus on the characteristics that turned out to be significant.¹¹ The effects of change in socio-economic disadvantage at the neighbourhood level reaches the boundary of significance in model 8 ($b=.07$; $se=0.05$). Relative inward-moving mobility at the neighbourhood level explains the effect of relative inward-moving mobility at the municipality level. Based on the contact theory perspective we expected that larger proportions of ethnic minorities would be related to less opposition to ethnic intermarriage. The effect of relative outgroup size at the municipality level is negative and, given a one-sided significance test, significant ($b=-.12$; $se=0.09$; $p=0.09$) Given a one-sided significance test - we deduced a directional hypothesis from ECT - the effect of an increase in the percentage of ethnic minorities is significant as well ($b=.07$; $se=0.05$; $p=0.10$).

3.4.2 Outgroup specific opposition to intermarriage

To investigate whether the explanatory model is ethnic outgroup-specific, we relate the presence of Moroccans, Surinamese and Turks in the municipality to the resistance to intermarriage with a member of one of these specific groups (Appendix 3.3). In general, our results replicate previous results; the overall relative outgroup size at the municipality level is negatively related to opposition to ethnic intermarriage with one of the ethnic groups mentioned above, and the change in the overall relative outgroup size is positively related to opposition to ethnic intermarriage (although these parameters only reach significance for opposition to intermarriage with Surinamese). The percentages of Moroccans, Turks and Surinamese in the municipality do not affect opposition to specific ethnic intermarriages significantly.

3.4.3 Ethnic hostility indicator specific relations

We repeated our analyses on the sub-sample for which we had a broader set of indicators of ethnic hostility. This sub-sample includes 771 respondents with valid answers, all living in one of the 14 medium-to-large Dutch cities with a longer history of non-EU ethnic-immigrant residents.¹² First we compare the results on ethnic intermarriage for this sub-sample (Table 3.3, model 1) with our previous results for the complete sample (Table 3.1 and Table 3.2). The individual-level characteristics have similar effects on the opposition to ethnic intermarriage scale within the two different samples. The only exception is religiosity. For respondents living in one of these 14 Dutch cities, denomination has a stronger effect on opposition to ethnic intermarriage than for Dutch individuals in general. Remarkably however, the effect of church attendance is now reversed; more frequent churchgoers in medium-to-large cities are less opposed to ethnic intermarriage. Persons living in these municipalities have lower church attendance rates than the average Dutch individual.

Regarding the neighbourhood and municipalities characteristics, we once again observe that, in agreement with the contact hypothesis, the higher the percentage of ethnic minorities in the municipality, the lower the opposition to ethnic intermarriage. An increase in the percentage of ethnic outgroups at the municipality level increases opposition to ethnic intermarriage significantly.¹³ Once again, the higher the inward-moving mobility, the less opposition respondents express to ethnic intermarriage. Other structural characteristics did not

significantly affect opposition to ethnic intermarriage once individual level-characteristics and mobility were controlled for.

The next question is whether the explanatory model for opposition to ethnic intermarriage on this sub-sample is similar to explanatory models for other indicators of ethnic hostility on this sub-sample. We compare the explanatory model for opposition to ethnic intermarriage with the explanatory models on whether there are too many immigrants in the Netherlands, and on the extent to which the Dutch government should be lenient in issuing residence permits to persons whose life is at risk in their country of origin. In order to compare the effect sizes of the independent variables, we standardised the respective dependent variables. The education effect is consistent across the three models. Church attendance reduces opposition to ethnic intermarriage, and more frequent churchgoers agree less often on there being too many migrants in the Netherlands. Catholics and Protestants are more opposed to ethnic heterogamy than the non-religious, but do not have different views on granting a residence permit to someone whose life is at risk and do not agree more or less often in there being too many migrants in the Netherlands. This is another indication that opposition to ethnic intermarriage overlaps with opposition to religious heterogamy.

None of the contextual characteristics influence views on granting a residence permit to someone whose life is at risk. In the models regarding opposition to ethnic intermarriage and the view on whether there are too many immigrants in the Netherlands, an increase of ethnic minorities at the municipality level leads to more hostile views. In these two models, higher mobility rates lead to less hostile views. The non-significance of the economic situation of the municipality is likely due to the smaller sample size. Notwithstanding some noteworthy differences, the model pertaining to attitudes towards the number of immigrants in the Netherlands and the model regarding ethnic intermarriage are almost identical (Table 3.3).

Table 3.3 Comparison of explanatory models for different indicators of ethnic hostility. $N_1=771^a$

	Ethnic intermarriage		Residence permit for someone whose life is at risk		There are too many migrants	
	b	SE	b	SE	b	SE
Constant	0.01	0.17	0.12	0.17	-0.20	0.17
Parental characteristics						
Parental education (in years)	-0.01	0.01	-0.02	0.01	-0.01	0.01
Father's social class (unskilled manual = ref.)						
Higher professional.	0.09	0.13	0.08	0.13	0.21	0.13
Lower professional	0.12	0.13	0.15	0.13	0.21	0.13
Routine non-manual	-0.05	0.13	0.17	0.13	0.11	0.13
Small self-employed	-0.06	0.13	0.25	0.13	-0.04	0.13
Skilled manual	0.13	0.12	0.14	0.13	0.11	0.12
Respondent's characteristics						
Age*10	0.07~	0.04	-0.08*	0.04	0.07~	0.04
Female	0.09	0.07	-0.21*	0.07	-0.04	0.07
Education (in years)	-0.05*	0.01	-0.07*	0.01	-0.05*	0.01
Employment status (unskilled manual = ref.)						
Pensioner	0.12	0.19	0.08	0.19	0.00	0.19
Student	-0.10	0.23	-0.22	0.24	-0.01	0.23
Disabled	0.06	0.20	-0.06	0.21	-0.03	0.20
Unemployed	-0.37~	0.21	-0.31	0.22	0.00	0.21
In care of household	-0.15	0.25	0.20	0.26	0.10	0.25
Higher professional	-0.15	0.17	-0.20	0.17	-0.34*	0.17
Lower professional	-0.04	0.16	-0.20	0.16	-0.19	0.16

Continued on next page

Table 3.3 continued

Routine non-manual	0.02	0.17	-0.04	0.17	-0.03	0.17
Small self-employed	-0.13	0.30	-0.08	0.31	-0.11	0.30
Skilled manual	-0.13	0.20	-0.20	0.21	-0.21	0.20
Religiosity						
Church attendance (*10)	-0.05*	0.02	0.03	0.03	-0.08*	0.02
Denomination (no denomination = ref.)						
Missing	0.24	0.19	0.64	0.20	0.00	0.19
Roman Catholic	0.37*	0.09	0.05	0.09	-0.14	0.09
Dutch Reformed/Calvinist	0.27*	0.12	-0.09	0.12	0.07	0.12
Other Calvinist	0.53*	0.25	-0.15	0.25	0.16	0.25
Other Christian denomination	0.05	0.21	-0.28	0.21	0.06	0.21
Other religion	0.00	0.22	0.11	0.23	0.08	0.22
Neighbourhood characteristics						
Socio-economic disadvantage						
Change in socio-economic disadvantage						
Relative inwards-moving mobility*10	-0.08*	0.02			-0.10*	0.02
Municipality characteristics						
Percentage of ethnic minorities	-0.01	0.01			-0.01*	0.01
Change in percentage of ethnic minorities	0.09~	0.05			0.14*	0.05
Socio-economic disadvantage						
Change in socio-economic disadvantage						
Relative inwards-moving mobility*10	0.04	0.03			0.07*	0.03

* $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a Standardised dependent variables. Higher scores indicate higher levels of hostile attitudes.

3.5 CONCLUSIONS

We observed a weak variation across municipalities in mean levels of opposition to ethnic heterogamy. Most of this variance was explained by compositional differences, for which we found that the individual-level characteristics are in line with Ethnic Competition Theory. The strongest municipality variance reduction was caused by the religious composition of the municipality though. Religiosity turned out to be a strong predictor for opposition to ethnic heterogamy. Moreover, parental education and father's social class contributed to the explanatory power of the model even after controlling for respondents' characteristics.

We did not observe a significant variation across neighbourhoods in opposition to ethnic intermarriage when we took into account that neighbourhoods are nested within municipalities. However, we showed that contextual characteristics of both municipalities and neighbourhoods affect attitudes towards ethnic heterogamy, where the municipality level plays a larger role. Within the Netherlands, individuals do not hold more, but less negative views on ethnic outgroups when the percentage of such groups in municipalities is higher. This finding holds for both the lower and higher educated; therefore in support of contact theory. Interestingly, at the neighbourhood level, for respondents with low educational levels – whom we assume to be relegated to neighbourhoods with higher percentages of ethnic minorities due to economic constraints –, the percentage of ethnic minorities is related to more opposition to ethnic intermarriage. This finding clearly supports the threat mechanism. On the other hand, for higher educated individuals, larger outgroups within the neighbourhood are related to less opposition to ethnic intermarriage. This is likely the result of white flight and selective in-migration of individuals who have the luxury to choose their neighbourhood.

A relative increase in the size of the ethnic outgroup at the municipality level increases opposition to ethnic heterogamy, especially in municipalities with relatively large outgroups. In these cities, the possibility of contact with ethnic minorities will hardly increase with larger outgroups. Consequently, the threat mechanism induced by an increase in outgroup size may be easier to observe.

Economic characteristics of the municipality account partially for the negative relation between group sizes and opposition to ethnic intermarriage. Studies that interpret the negative correlation between proximity of outgroups and prejudice as supportive for the contact hypothesis suffer a severe weakness if they do not control for the economic condition of the geographical unit.

A deteriorating socio-economic status at the neighbourhood and municipality levels increases opposition to ethnic intermarriage. We therefore find confirmation for our economic environment hypothesis. Moreover, the mechanism by which group competition leads to exclusionist attitudes and in turn to opposition to ethnic intermarriage is only confirmed for economic competition; cultural competition and physical competition at the neighbourhood and municipality levels do not induce ethnic hostility. If ethnic competition causes ethnic hostility, our findings show that economic competition is the most important, if not the sole, type of competition within the locale that causes an increase in opposition to ethnic heterogamy within the Netherlands. The perception of cultural and physical competition may be influenced by the

mass media, as a consequence the regional variation in perceived cultural and physical threat may be low within a nation. Future research should assess whether cultural or physical competition plays a larger role at the national level.

The higher the relative inward-moving mobility within neighbourhoods, the less hostile attitudes respondents express. This was contrary to our expectations. Mobility explains in part the effect of economic competition at the contextual level. If people have a choice, they will not move into a disadvantaged neighbourhood. A high inward-mobility rate is therefore a likely indicator for a popular locale and favourable competitive environment. City size is no longer negatively correlated to opposition to ethnic intermarriage once the economic situation of the municipality is controlled for.

In this chapter we showed that within the Netherlands, the competitive environment of neighbourhoods and municipalities play a modest role in the explanatory model of ethnic hostility compared to individual-level characteristics. We found confirmation for both the contact mechanism and the threat mechanism. Of the different forms of competition only the economic competitive environment of the locale influences opposition to ethnic intermarriage. The explanatory model for opposition to ethnic intermarriage is not outgroup specific.

3.6 NOTES

1. Gijssberts et al. (2004) posed the same hypothesis but were unable to test it due to their smaller sample size of individuals and municipalities.
2. It is not self-evident that the negative relationship between percentage of foreigners and prejudice would have remained significant once other relevant contextual characteristics were controlled for. And although we fully acknowledge the rigor of the study, surprisingly, the item measuring the frequency of contact in the neighbourhood is not included in the final multi-variate model explaining prejudice.
3. The Netherlands Kinship Panel Study is funded by grant 480-10-009 from the Major Investments Fund of the Netherlands Organization for Scientific Research (NWO), and by the Netherlands Interdisciplinary Demographic Institute (NIDI), Utrecht University, the University of Amsterdam and Tilburg University.
4. Change scores in percentage of ethnic minorities between the years 2001 and 1997, and 2001 and 1995 do not lead to different results.
5. A positive score indicates that the socio-economic situation within this specific locale improved less than average.
6. We would like to kindly thank L. Prins and his colleagues of the Dutch police force (*Korps Landelijke Politiediensten, Dienst Nationale Recherche Informatie, Onderzoek en Analyse*) for making these data available for us.
7. At the municipality level we also constructed the variables *relative outward-moving mobility* and *relative mobility*. These variables do not lead to different results.
8. Control dummies for mean value substitution do not reach significance during the analysis and do not influence the estimates of the other variables included in the model.

9. The models presented in this chapter are estimated in MLwiN version 2.00. If one wishes to estimate the within and between neighbourhood variance, one needs at least 2 respondents per neighbourhood (Snijders & Bosker, 1999). Our data contains 1378 neighbourhoods with 2 or more respondents; therefore the observed absence of variance at the neighbourhood level in the three-level model is not caused by the relatively small samples within each neighbourhood. In a two-level empty hierarchical random intercept model which only includes the neighbourhood level and the individual level, the variance component at the neighbourhood level is significant.
10. There was no problem with multicollinearity in estimating the models. We analysed this by the “expert” macro for MLwiN 2.0 developed by Stijn Ruiter (<http://stijnruiter.ruhosting.nl/>).
11. We also included the variable change in percentage of ethnic minorities at the municipality level since in model 5 the z-value of the estimated parameter was larger than 1. In a next step we added the cross-level interaction between outgroup size at the neighbourhood level and respondent’s educational level ($p=-0.02$, $se=0.01$).
12. These cities are: Amsterdam, Rotterdam, The Hague, Utrecht, Hoogezand-Sappermeer, Almere, Enschede, Tiel, Alphen aan den Rijn, Delft, Dordrecht, Bergen op Zoom and Eindhoven. The sub-sample contains 275 neighbourhoods.
13. An increase in relative outgroup sizes at the municipality level forms a stronger ethnic threat when the outgroup is already relatively large. We also confirmed this for our full sample ($N=6095$). An increase in the outgroup size once the relative outgroup size is already above the Dutch average increases opposition to ethnic intermarriage.

4. THE LOCAL LIVING ENVIRONMENT AND INDICATORS OF SOCIAL COHESION†

4.1 INTRODUCTION

Social cohesion is the social harmony that enhances the quality of public and civic life by feelings of commitment and trust and participation in networks and civic organisations. It develops from an interplay between personal characteristics and the community one lives in (Wilson, 1987). Social cohesion is a characteristic of a group, yet finds its origins in pro-social attitudes and behaviour of individuals. The ties that individuals have with other individuals, illustrated by associative life and feelings of trust and tolerance to others, are indicators at the individual level of the cohesiveness of a group or community. Although ethnic and economic heterogeneity, poverty, crime and residential mobility of the local environment are all claimed to be related to lower levels of social cohesion (Alesina & La Ferrara, 2000, 2002; Letki, 2008; Putnam, 2007), it is unclear which of these characteristics matters most and whether the impact of contextual characteristics is consistent for different aspects of social cohesion. A possible reason for this remaining controversy might be that scholars focused on different geographical regions and have neglected the fact that it is likely that the impact of the community on social cohesion depends on the characteristics of its residents. In this chapter, we assess to what extent, and for whom, characteristics of Dutch neighbourhoods and municipalities affect four different aspects associated to social cohesion: contact frequency with one's neighbours, tolerance to a neighbour from a different race, generalised social trust, and volunteering.¹

Much attention has been paid to the negative impact of (ethnic and economic) heterogeneity on social cohesion. Supposedly, individuals are less likely to connect to each other socially in heterogeneous communities than in homogeneous communities (Alesina & La Ferrara, 2002). This is explained by the homophily principle: people prefer to interact with others who share the same ethnic heritage, have the same social status and hence share experiences and tastes. Whereas some stress the importance of economic heterogeneity within communities (Uslaner & Brown, 2005), others argue that particularly ethnic heterogeneity within local communities erodes social cohesion (Putnam, 2007; Stolle, Soroka, & Johnston, 2008). Evidence for the negative effect of locality heterogeneity on social cohesion has been largely confined to the United States and is scarce in Europe. Hence, our first research question reads: *to what extent is social cohesion affected by ethnic and economic heterogeneity within neighbourhoods and municipalities in the Netherlands?*

Despite the strong, recent emphasis on ethnic heterogeneity, the general tenability of the heterogeneity hypothesis is by no means clear. Letki (2008) shows convincingly that in British neighbourhoods it is foremost economic deprivation and not ethnic heterogeneity that

† A slightly different version of this chapter is forthcoming in *Acta Politica* (Tolsma, Van der Meer, & Gesthuizen, forthcoming). An earlier version of this paper has been presented at the Dutch Ministry of Finance at the invitation of Deputy Prime Minister Wouter Bos (June 2008).

erodes social cohesion. Economically deprived localities, criminal localities, and localities with high residential mobility rates offer their inhabitants less opportunities for social interaction. Within these localities, circumstances make that contacts between people are not generally positive, making inhabitants more careful, fearful and less familiar with each other (Sampson et al., 2002; Small & Newman, 2001). This leads to our second research question: *to what extent is social cohesion affected by economic deprivation, crime rates, and residential mobility within neighbourhoods and municipalities in the Netherlands?* Ethnic and economic heterogeneity often go hand in hand with crime rates, and residential mobility. To assess the unique impact of different locality characteristics it is necessary to take them into account simultaneously.

From a theoretical perspective, locality characteristics are likely to have a different impact across social groups. In line with the homophily principle, living in close proximity to ethnic minorities might not be such a big deal for ethnic minorities themselves, while for natives, higher levels of ethnic heterogeneity might be much more threatening. Moreover, as we will argue below, for individuals with low income and educational levels, living in an ethnically heterogeneous, economically deprived, or otherwise disordered locality is often not based on free choice (i.e. preferences), but on economic necessity. The impact of neighbourhood and municipality characteristics might thus be stronger for the poor and lower educated than for the rich and higher educated. To our knowledge the differential effect of contextual characteristics across social groups has been neglected so far. Our final research question is: *to what extent does the relationship between locality characteristics and social cohesion vary across individuals with different income and educational levels and across ethnic groups?*

Empirically, we focus on the Netherlands, which has traditionally been a high trust, highly engaged country (Pharr & Putnam, 2000). Such an analysis is the more interesting, as the Netherlands differs profoundly from the United States in terms of heterogeneity: economic inequality is lower, and the Netherlands have witnessed a very different, much more recent migration history. In the Netherlands, data have been recorded in great detail both at the individual level (through survey data) and at the contextual levels (through statistics from the Dutch Statistical Office and official police data).

Yet, a systematic test of the impact of theoretically interesting – and tightly collected – locality characteristics on different aspects of social cohesion has been scarce in Europe (but see: Letki, 2008). Our focus on the Dutch case thus enables us to replicate previous, mainly American studies. However, the study presented in this chapter is more than a replication. First, previous studies on the impact of the local community on social cohesion predominantly focused on one aspect of social cohesion, most often on (general or particular) social trust (e.g. Alesina & La Ferrara, 2000; Putnam, 2007). In this chapter we employ four indicators of social cohesion: contact frequency with one's neighbours, tolerance to neighbours from a different race, generalised social trust, and volunteering. Second, the explanatory model of this chapter is broader in scope than previous research as well, as we take into account the following locality characteristics: (ethnic and economic) diversity, mean income levels, crime rates and residential mobility simultaneously. For example, this allows us to disentangle effects due to economic heterogeneity and poverty. Third, whereas most previous studies looked at the impact of a single relatively large geographical

unit such as states or countries, we investigate the impact of two smaller geographical units simultaneously: neighbourhoods and municipalities. Below, we use the label ‘localities’ to refer to both neighbourhoods and municipalities. Finally, we build on previous research by placing more emphasis – theoretically and empirically – on the possibility that the impact of the locality may vary across the residents they inhabit. We will investigate to what extent the living environment influences our indicators of social cohesion differently for individuals from different ethnic backgrounds, with different income levels, and with different levels of education.

Context effects are likely to be most pronounced at the neighbourhood level, being the most direct geographical environment in which we assume that people spend most of their social time. However, community life does not exclusively take place in neighbourhoods. Soccer clubs, churches, etc. may be situated outside one’s direct neighbourhood. Similarly, friends may very well live in different neighbourhoods but within the same city. Living in a homogenous and prosperous neighbourhood may not be enough to shield oneself from the influence of an otherwise heterogeneous and deprived municipality. We therefore expect similar contextual effects at the municipality level as at the neighbourhood level. Note that the only way to test whether observed municipality effects are in reality due to experiences within neighbourhoods is to employ a three-level design (i.e. individual, neighbourhood, and municipality), which is exactly what we will do.

At the individual level, participating in voluntary organisations and having dense social networks is beneficial for many reasons; among others it (supposedly) stimulates physical and mental health, and boosts one’s economic career (Ruiter & De Graaf, 2008; Wilson, 2000). At the aggregate level, social cohesion (e.g. associative life and trust) is desirable since it (supposedly) improves inter-ethnic relations, enhances the quality of public and civic life, promotes economic growth, and makes democracy work (Halpern, 2005; Knack & Keefer, 1997; Putnam, 1993). It is therefore not surprising that governments put much effort in developing policy measures that aim to improve locality characteristics and thereby enhancing social cohesion. For this, it is important to empirically assess *which* locality characteristics affect *which* aspects of social cohesion, and for *whom*.

4.2 EXPECTATIONS

4.2.1 Heterogeneity and conflict

The homophily principle (Blau, 1977; Lazarsfeld & Merton, 1954) has found impressive support in a wide array of sociological and psychological studies (McPherson et al., 2001). People like others that resemble themselves and have the tendency to associate with these similar others, while they have a ‘natural aversion to heterogeneity’ (Alesina & La Ferrara, 2002). Similarity and familiarity facilitate interpersonal relations (Kalmijn, 1998). Vice versa, when people living in the same community have less in common with each other, they are less likely to identify with each other (Lehning, 1998), and are therefore less likely to connect to each other socially (Alesina & La Ferrara, 2002). Lehning (1998, p. 238) claimed that ‘the greater the number and diversity of persons in a group, the more that universalistic norms require altruism, and yet – at the same time

– the weaker the force of altruism.’ According to Putnam (2007), heterogeneity of the environment does not only affect the relations between individuals of different social groups negatively, but may even deteriorate cohesion between members of the same social group.

The recent scientific debate especially emphasises the detrimental effect of *ethnic* heterogeneity on social cohesion. In ethnically diverse communities, inhabitants share less cultural characteristics. Cultural differences complicate the inter-ethnic dialogue, and language differences literally may cause people not to understand each other. This may lead to lower levels of trust (Alesina & La Ferrara, 2002; Stolle et al., 2008) and participation (Letki, 2008; Putnam, 2007).

The literature on ethnic exclusionism takes a different spin on why ethnic heterogeneity would affect social cohesion. According to Ethnic Competition Theory (ECT) (Blalock, 1967; Blumer, 1958; Bobo & Hutchings, 1996; Coenders, 2001; Quillian, 1995, 1996; Scheepers et al., 2002) larger ethnic outgroup size produces feelings of ethnic threat, be it economically or culturally, and thereby stimulates negative outgroup attitudes. In contrast, Contact Theory (Allport, 1979 [1954]; Pettigrew & Tropp, 2006) poses that the size of ethnic outgroups in a community stimulates contact whereby prejudicial attitudes are reduced. Both contact theory and ECT make an explicit distinction between attitudes towards the (ethnic) ingroup and outgroup, which are supposedly communicating vases (Sumner, 1959 [1906]). However, a positive ingroup bias is not necessarily accompanied with outgroup hate (Allport, 1979 [1954]; Brown, 2000). Sniderman and colleagues (2000b) posed that whatever deteriorates trust in general also increases hostility towards ethnic outgroups. And according to Putnam’s constrict proposition, the proximity of ethnic outgroups would deteriorate trust in both the ethnic outgroup *and* ingroup (Putnam, 2007).

Several cross-regional studies in the U.S. provide evidence for the claim that within ethnic heterogeneous communities, people are less likely to trust each other or perform joint activities (Alesina & La Ferrara, 2002; Putnam, 2007). Although in European countries the relative group size of non-EU citizens is related to higher levels of ethnic exclusionism (Scheepers et al., 2002; Semyonov et al., 2006), support for the ethnic heterogeneity approach on other aspects of social cohesion in Europe is scarce (Letki, 2008). European countries with a higher level of ethnic heterogeneity, or a higher share of immigrants, do not show less social cohesion (Gesthuizen, Van der Meer, & Scheepers, 2008; Hooghe, Reeskens, Stolle, & Trappers, 2009).

In a study of British neighbourhoods, Letki (2008) finds a negative effect of ethnic heterogeneity for neighbourhood attitudes, but no effect for structural aspects of social cohesion (sociability, associational involvement and informal help provision). In the Netherlands, at the municipality level, the proximity of ethnic minorities is negatively related to ethnic exclusionism, however, at the neighbourhood level the findings are mixed (see previous chapter). Ethnic heterogeneity may thus not have the same effects on different aspects of social cohesion and the impact of ethnic heterogeneity may depend on the geographical locality considered. Nevertheless, building on the general conclusions for the U.S., we formulate the following hypothesis: *The larger the ethnic heterogeneity in localities, the less social cohesion (Hypothesis 1).*

Dissimilarity in economic resources may also cause people to have problems cooperating, trusting, and predicting each others’ behaviour. The lifestyles of the rich and the poor differ profoundly; there are marked differences in for example economic and cultural consumption and

sporting activities. The rich and the poor have been socialised in different social classes and other contexts. Differences in economic resources thus result in less shared experiences and less shared norms. The larger the economic heterogeneity, the more cultural dissimilarity, the larger the barriers across social groups, and the less citizens will be able to identify with each other. The end result will be less social cohesion.

The claim that economic heterogeneity reduces social cohesion has found support in several cross-national studies (Gesthuizen et al., 2008; Rothstein & Uslaner, 2005; Uslaner & Brown, 2005; Van Oorschot & Arts, 2005), as well as in cross-regional studies in the United States (Alesina & La Ferrara, 2002; Putnam, 2007). Yet, the relationship between economic heterogeneity and social cohesion has been less regularly examined at the local level in European countries. We formulate the following hypothesis: *The larger the economic heterogeneity in localities, the less social cohesion (Hypothesis 2).*

4.2.2 Deprived communities

Next to the degree of heterogeneity, communities differ in the extent to which they offer their inhabitants the resources to meet and mingle. These resources encompass well-equipped alters, infrastructure, a safe and trustworthy environment, and residential stability. Without such resources it will be more difficult for social cohesion to arise (Volker et al., 2007). Moreover, such communities generate feelings of threat and alienation, which hampers social interactions (Letki, 2008). Social cohesion is least, there where its positive effects are needed the most, namely in disadvantaged communities (Letki, 2008; Sampson & Groves, 1989; Sampson et al., 2002; Small & Newman, 2001; Wilson, 1987). A lack of social cohesion may have negative consequences for the quality of the community, which in turn could result in dropping social cohesion rates. Localities may thus get trapped in a vicious circle. Vice versa, advantaged communities may 'accumulate' capital and benefit from a virtuous circle, due to a high level of individual level and collective resources. We distinguish three locality characteristics that may obstruct social cohesion: poverty, criminality, and residential mobility.

In economically deprived neighbourhoods people experience less instrumental help, have less positive role models (Wilson, 1987), and develop lower levels of self-efficacy (Boardman & Robert, 2000). Residents consequently experience less bonding (Brisson & Usher, 2005), have less trust (Li, Pickles, & Savage, 2005; Ross, Mirowsky, & Pribesh, 2001), and associate less (Browning, Feinberg, & Dietz, 2004; Halpern, 2005; Portes, 1998; Putnam, 2007). Crime, too, may be a hindrance for social cohesion (Rosenfeld, Messner, & Baumer, 2001), since people are less likely to trust others when they themselves or acquaintances have been the victim of crime. According to Oliver and Mendelberg (2000, p. 576), exposure to crime 'leads to [...] feelings of anxiety and fear, alienation from neighbours, lack of trust in others, and suspicion towards outgroups in general'. Finally, higher residential mobility rates are also likely to diminish social cohesion (Sampson & Groves, 1989). The time people spend in their community stimulates their possibilities to initiate social interaction and subsequently enhance the quality of social relations (Volker et al., 2007). Residential mobility destabilises social networks, both for those who leave the locality and for those who stay behind. Moreover, anticipating on others' residential mobility

may be a negative incentive for investing in social relationships. It is therefore more difficult to build up and maintain social ties when the composition of a community is unstable. All these symptoms of a 'bad' locality were significant determinants of social cohesion in Putnam's recent study (Putnam, 2007), but have not been tested simultaneously in the Netherlands. We expect that: *The more (a) poverty, (b) criminality, and (c) residential mobility in localities, the less social cohesion (Hypothesis 3).*

4.2.3 Who is affected?

Up to this point we have focused on the question *which* contextual characteristics matter. At least as interesting is the question *for whom* these contextual characteristics matter. Yet, although localities have repeatedly been put forward as important contexts for social cohesion (Putnam, 2007; Sampson et al., 2002; Volker et al., 2007), the argument for whom is less well developed. Nevertheless, differential effects of contextual characteristics are to be expected – primarily between the rich and the poor as well as between the relatively higher and lower educated.

Compared to individuals with higher incomes, individuals with low incomes will be relegated to localities less by choice than by economic necessity. For rich citizens that do not like their local environment (due to heterogeneity or bad neighbourhood quality), leaving the locality is more often a viable option (Massey et al., 1994). Those who are content with their local environment stay. This selective migration may obscure the contextual effects for the rich, but not (or at least less so) for the poor – who are more likely to lack the option to move. Moreover, especially the relatively higher educated express less ethnic hostility, higher feelings of trust and adhere more to a cosmopolitan worldview. Given these known relationships between educational level and social cohesion, we expect that the homophily principle might be less applicable to them. Instead, the higher educated may prefer to live in a diverse locality, at least more so than individuals with lower educational degrees.

The literature on ethnocentrism suggests that locality characteristics referring to the local (economic, cultural or physical) competitive environment may have a stronger impact on ethnic hostility for the poor and lower educated members of the dominant ethnic group than for the rich and higher educated members of the dominant ethnic group, since especially poor and lower educated native residents are in direct competition with ethnic minorities in ethnic heterogeneous and deprived localities (Coenders & Scheepers, 1998; Quillian, 1995; Scheepers et al., 2002, see also chapter 3).

Empirically, it has been shown that the poor are more likely to be influenced in pro-social behaviour than the rich (Van der Meer, Scheepers, & Te Grotenhuis, 2008). And as shown in chapter 3, the impact of the proportion of ethnic outgroups within one's neighbourhood increases ethnic exclusionism among the lower educated, but decreases ethnic exclusionism among the higher educated. Given these theoretical considerations and empirical findings we formulate the hypothesis: *Locality characteristics have a stronger detrimental effect on social cohesion for the poor and lower educated than for the rich and higher educated (Hypothesis 4).*²

Within a municipality people will choose the neighbourhood most to their liking within the limits of their economic resources. People are more confined to live in a specific municipality

than to live in a specific neighbourhood, due to working or family obligations for example. Differential effects of locality characteristics across the rich and the poor and the higher and lower educated should thus be most apparent on the neighbourhood level.

Ethnic heterogeneity may not be perceived in the same way by different ethnic groups. For native Dutch, increasing heterogeneity in localities is generally synonymous to increasing ethnic *outgroup* sizes. However, this is generally not the case for ethnic minority groups; for them, a larger *ingroup* size increases ethnic heterogeneity. We expect that: *Ethnic heterogeneity has a stronger negative effect on social cohesion for the native Dutch, than for non-natives (Hypothesis 5).*

4.3 DATA, MEASUREMENTS AND METHODS

Our hypotheses call for a multi-level design since we distinguish between three levels of analysis: individuals, neighbourhoods, and municipalities. This distinction is well captured by the survey data of 'Culturele Veranderingen 2004' (Cultural Changes 2004, CV04) of the Netherlands Institute for Social Research (www.scp.nl). The CV04 is a random sample of individuals within private households in the Netherlands, with a minimum age of 16. Within the CV04 a random stratified sampling method is followed: 430 neighbourhoods were randomly selected according to their level of urbanization, followed by a random selection of residents aged 16 and older. To collect data from the respondents, Computer Aided Personal Interviewing (CAPI), supplemented with self-completion questionnaires, was used. This data set has several additional advantages. Firstly, it contains a large amount of measures associated with social cohesion. Secondly, besides the national representative sample (response rate 59 per cent), it is supplemented with an additional sample of respondents living in 100 underprivileged neighbourhoods (response rate 40 per cent), thereby increasing variance in locality characteristics. Furthermore, this sampling procedure resulted in a large percentage of respondents of non-Dutch origin in our dataset (25 per cent).

We distinguish between the neighbourhood and the municipality as relevant geographical contexts for social cohesion. In the Netherlands, complete zip codes have four digits and two letters. Parts of streets have distinct zip codes. From here on, we use the word neighbourhood as synonym for the four-digit part of the zip code. On average, approximately 4000 persons share the same four digits of their zip code. Neighbourhoods are nested in larger geographical units, municipalities. We test our hypotheses on a dataset of 2949 individuals living in 503 neighbourhoods and 245 different municipalities.

4.3.1 Measures of indicators of social cohesion

The four indicators of social cohesion are measured at the individual level. Although we acknowledge that social cohesion is a characteristic of a group, these four indicators all refer to the way individuals are tied to fellow citizens. The frequency of *contact with one's neighbours* was measured by an ordinal scale. We recoded it into the number of days per year. *Tolerance to neighbours from a different race* was measured by the survey question whether it would bother the respondents if they would get neighbours from a different race. Answer categories were: 1: I would oppose; 2: It would be less comfortable; 3: Depends; 4: No objection at all. Higher

scores thus represent less opposition and hence more tolerance to a neighbour from a different race. Notably, ethnic minorities received the same questions as the native Dutch. *Voluntary work* is operationalised as doing voluntary work for at least one of eleven types of associations.³ *General social trust* is measured through the standard dichotomous question: Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Although all indicators of social cohesion, they are not strongly correlated; the strongest correlation was observed between tolerance to neighbours from a different race and general social trust (Pearson correlation 0.13, $p=0.00$). This underlines the importance of analyzing indicators of social cohesion separately.

4.3.2 Individual level determinants: background characteristics

While testing the effects of citizens' direct environment on social cohesion, we need to take other explanations into account. Previous studies showed, for instance, that citizens with more resources (income, education) are more likely to be happy with their direct environment, trust others, and participate socially. In sum, we control for the following factors at the individual level: age, sex, marital status, household composition, level of education, level of income, work status, health status, denomination, church attendance, and ethnic origin. To deal with missing values on these determinants, we assigned the respective average scores to interval level variables and included an extra category 'missing' to nominal level variables.

4.3.3 Context characteristics

Our measure of *ethnic heterogeneity* is based on the Herfindahl Index (i.e. 1 – Herfindahl Index). We hereby use the same measure for ethnic heterogeneity as other recent studies on the relationship between contextual characteristics and social cohesion (Alesina & La Ferrara, 2000, 2002; Anderson & Paskeviciute, 2006; Gesthuizen et al., 2008; Hooghe et al., 2009). The ethnic heterogeneity measure estimates the chance that two randomly chosen individuals in the population have a different ethnic background. We distinguish three main ethnic background categories: native Dutch, non-western immigrants, and western immigrants, which constituted 81 per cent, 10 per cent, and 9 per cent of the Dutch society in 2004, respectively.⁴ In the Netherlands, the most important non-western immigrant groups are Turks (21 per cent), Moroccans (19 per cent), Surinamese (20 per cent), and Antilleans (7 per cent). The most important western-immigrants are Germans.

We used the Gini-coefficient as our indicator for *economic heterogeneity* within neighbourhoods and municipalities. The value 0 corresponds to perfect equality (homogeneity) and 1 with perfect inequality (heterogeneity). To construct the Gini-coefficient, we used the mean nominal income of the complete zip code (i.e. parts of streets; on average 40 persons), as collected by Statistics Netherlands. On average the Gini-coefficient for neighbourhoods is based on 109 complete zip codes, the Gini-coefficient for municipalities on 907 complete zipcodes.⁵

To capture the economic status of the neighbourhood and municipality we used the *mean income*, as collected by Statistics Netherlands.

We used the Dutch Police Population Monitor waves 1999, 2001, and 2003 to obtain the

number of burglary victims per 1000 residents in the locale. The number of recorded offences in the time period 2000-2004 per 1000 residents has been derived from official crime statistics. The number of criminal suspects living in each locality (per 1000 residents) has been derived from official crime statistics as well. We calculated the standardised sum score of these three distinct crime measures to construct a single indicator of *crime*.⁶

Finally, the *residential mobility* of a locale is a sum score of all people who moved *within* a locale plus half the sum of movers *out of*, and *into* a locale in 2004, divided by the total inhabitants of the locale.

Note that due to our unique data, all neighbourhood characteristics are measured at the correct level, the four digit zip code. We thus did not use characteristics of larger localities as proxies for neighbourhood characteristics. Descriptive statistics for both individual level variables and contextual level variables may be found in Appendix 4.1. In order to facilitate interpretation of the cross-level effects, we centered the involved variables (accept for ethnicity) around their respective grand (sample) mean values. Correlations between the context variables are summarised in Appendix 4.2.

4.3.4 Modelling strategy

We employ multi-level analyses to take into account the nesting structure of our data (Snijders and Bosker, 1999). For the metric dependent variables, we estimate hierarchical linear random intercept regression models (with `lme4` in R, final results were verified with `xtmixed` in STATA 10); for the dichotomous dependent variables, multi-level logistic regression models (with `lme4` in R, final results were verified with `xtmelogit` in STATA 10). The estimated variance components are summarised in Appendix 4.3.⁷

It is impossible to estimate all contextual characteristics and proposed cross-level interactions simultaneously. With so many related contextual variables and cross-level interaction variables, we would experience problems of collinearity. It is also undesirable to include all contextual characteristics simultaneously, since the inclusion of irrelevant contextual variables will cause standard errors to be needlessly large. We deal with this problem in two ways. First, we will investigate the *bivariate* relationships between locality characteristics and social cohesion. Second, to come to our final *multivariate* explanatory models we will follow a stepwise procedure. We start with a base model that included all individual level characteristics but no locality characteristics. As a criterion for entry and removal of contextual characteristics we use the significance of the parameter estimates, respectively $p < 0.10$ and $p > 0.10$, two-tailed. The order of introduction is determined by the improvement of the model fit as indicated by the likelihood value.⁸

Table 4.1 Bivariate relationships between locality characteristics and indicators of social cohesion^a

	Contact neighbours (0 – 78)		Tolerance neighbours different race (0 – 4)		Generalised trust (0 – 1)		Voluntary work (0 – 1)	
	b	se	b	se	b	se	b	se
<i>Neighbourhood characteristics</i>								
Ethnic heterogeneity (0.04 – 0.60)	-13.31**	4.66	0.64**	0.15	-0.54~	0.32	-2.03**	0.31
Economic heterogeneity (0.06 – 0.30)	-23.04	20.02	0.73	0.57	5.53**	1.34	0.34	1.36
Mean income (1.31 – 4.46)	3.72*	1.86	-0.03	0.05	0.68**	0.13	0.58**	0.13
Crime (-0.43 – 1.53)	-5.28**	1.97	0.10~	0.06	-0.10	0.13	-0.51**	0.14
Residential mobility (30.00 – 248.60) ^b	-62.78**	17.23	2.28**	0.53	0.39	1.19	-7.47**	1.21
<i>Municipality characteristics</i>								
Ethnic Heterogeneity (0.04 – 0.59)	-14.02**	5.18	0.72**	0.19	-0.13	0.36	-2.33**	0.35
Economic heterogeneity (0.10 – 0.34)	-58.87*	24.31	0.97	0.82	1.57	1.63	-5.97**	1.77
Mean income (1.47 – 3.34)	-1.09	3.27	-0.17	0.10	0.12	0.22	0.19	0.23
Crime (-1.70 – 4.18)	-1.02*	0.51	0.05**	0.02	0.00	0.03	-0.21**	0.03
Residential mobility (48.00 – 170.50) ^b	-58.96*	26.98	3.36**	0.95	0.67	1.82	-10.99**	1.82

~*p* < 0.10; **p* < 0.05; ***p* < 0.01 (two sided test of significance)

^a Parameter estimates of hierarchical random intercept regression models in which only the contextual characteristic of interest is included.

Range of variables between brackets.

^b Parameter estimates have been multiplied by 1000.

4.4 RESULTS

4.4.1 Bivariate relationships between locality characteristics and indicators of social cohesion

The bivariate relationships between on the one hand neighbourhood and municipality characteristics and on the other hand our indicators of social cohesion are summarised in Table 1. The values in Table 1 refer to the parameter estimates of hierarchical random intercept regression models in which only the contextual characteristic of interest is included. At the neighbourhood level, ethnic heterogeneity is negatively and significantly related to contact frequency with one's neighbours ($b=-13.31$), generalised trust ($b=-0.54$), and volunteering ($b=-2.04$). In economically advantaged neighbourhoods, residents have more frequently contact with their neighbours ($b=3.72$), higher levels of generalised trust ($b=0.68$), and participate more in voluntary work ($b=0.58$). Crime and residential mobility in one's neighbourhood are negatively related to contact frequency with one's neighbours and voluntary work (Table 1). So far the bivariate relationships between neighbourhood characteristics and social cohesion are in agreement with our predictions.

On the other hand, economic inequality within the neighbourhood as operationalised by the Gini coefficient is not negatively related to any of our distinguished aspects of social cohesion. Moreover, ethnic heterogeneity, crime, and residential mobility are positively related to tolerance to neighbours from a different race. Although somewhat surprisingly from the constrict proposition (Putnam 2007), these latter findings are in line with the bivariate relationships as reported in Chapter 3 and with respect to ethnic diversity, they support the contact theory.

When we look at the relationships between characteristics at the municipality level and our indicators of social cohesion, we mainly find similar results. However, there are also some striking differences. Whereas economic heterogeneity at the neighbourhood level is not negatively related to any of our indicators of social cohesion, at the municipality level it is related to less contact with neighbours and lower levels of volunteering, in line with our predictions. And although mean income at the neighbourhood level is fairly consistently related to more social cohesion, mean municipality income is not related to any of our indicators of social cohesion.

4.4.2 The unique impact of locality characteristics on indicators of social cohesion

The results discussed so far referred to bivariate relationships between contextual characteristics and our indicators of social cohesion. The observed relationships may however be due to composition effects. In this case, individuals living in these localities are more (or less) likely to have pro-social attitudes or display social behaviour due to their *own* characteristics instead of characteristics of their local environment. Moreover, since locality characteristics are correlated we need to include (relevant) contextual characteristics simultaneously into our explanatory models. Finally, since we assumed that contextual characteristics may have a different impact across ethnic, income or education groups, we need to take into account possible cross-level interactions. Our multi-variate hierarchical random intercept regression models with cross-level interactions with which we test our hypotheses are summarised in Table 2. The presented main effects of locality characteristics indicate the general (or mean) effect within the population on social cohesion. The cross-level interactions show to what extent the impact of locality characteristics is conditional on individual-level characteristics.

Table 4.2 Relationships between locality characteristics and indicators of social cohesion^a

	Contact neighbours (0 – 78)		Tolerance neighbours different race (0 – 4)		Generalised trust (0 – 1)		Voluntary work (0 – 1)	
	b	se	b	se	b	se	b	se
<i>Individual characteristics</i>								
Intercept	17.52**	3.96	3.52**	0.10	-0.6*	0.27	-1.97**	0.28
Income (in 1000 euros; 0.04 – 10.00)	-0.33	0.62	0.03*	0.02	0.20**	0.05	0.05	0.04
Education (in years; 6 – 16.5)	-0.55*	0.22	0.03**	0.01	0.14**	0.02	0.09**	0.02
Ethnicity (Dutch=reference)								
Surinamese	-1.34	4.42	0.29*	0.11	-0.77*	0.32	-0.20	0.32
Antilleans	10.60	6.44	0.26	0.17	-1.01*	0.51	-0.20	0.49
Indonesian	-7.67*	3.68	0.31**	0.10	-0.63*	0.26	-0.02	0.26
Turks	12.93*	6.26	0.06	0.16	-0.68	0.44	-0.19	0.47
Moroccans	6.60	6.91	0.35*	0.17	-0.10	0.47	-0.39	0.54
Age*10 (16 – 99)	0.29**	0.05	0.00*	0.00	0.00	0.00	0.01*	0.00
Men (female=reference)	-1.19	1.24	-0.03	0.03	0.02	0.08	0.02	0.09
Unemployed (employed=reference)	2.53~	1.52	-0.11**	0.04	-0.09	0.10	0.03	0.11
Health (1 – 4)	2.27**	0.86	0.01	0.02	0.33**	0.06	0.24**	0.06
Denomination								
Catholic	1.24	1.84	-0.14**	0.05	-0.22~	0.12	0.07	0.13
Liberal Protestants	3.70	2.66	-0.10	0.07	0.02	0.18	0.33~	0.18
Orthodox Protestants	0.69	3.26	0.02	0.08	0.35	0.22	0.57*	0.23
Islam	-8.03	5.40	0.19	0.13	0.14	0.36	-0.32	0.41
Church attendance (0 – 53)	0.08~	0.05	0.00	0.00	0.00	0.00	0.02**	0.00

Continued on next page

Table 4.2 continued

Household composition (single no children=reference)													
Single parent	7.51**	2.68	0.00	0.07	-0.61**	0.18	0.62**	0.19					
Married no children	6.41**	1.86	-0.05	0.05	-0.32**	0.12	0.25~	0.13					
Married with children	9.93**	1.89	-0.05	0.05	-0.21~	0.13	0.60**	0.13					
Unmarried couple no children	4.70	3.02	-0.09	0.07	-0.01	0.21	-0.60**	0.23					
Unmarried couple with children	3.96	3.46	0.00	0.09	-0.20	0.23	0.08	0.24					
<i>Neighbourhood characteristics; main effects and cross-level interactions</i>													
Ethnic heterogeneity (0.04 – 0.60)	3.08	8.32	0.52**	0.15									
Ethnic heterogeneity*income	8.79*	3.77	-0.26**	0.09									
Economic heterogeneity (0.06 – 0.30)	-34.62	23.86			1.52	1.59							
Economic heterogeneity*income					-2.65*	1.12							
Economic heterogeneity*education	-9.53~	5.59			0.30~	0.18	0.24~	0.14					
Mean income (1.31 – 4.46)	7.21**	2.46											
Residential mobility (30.00 – 248.60) ^b													
<i>Municipality characteristics; main effects and cross-level interactions</i>													
Ethnic heterogeneity (0.04 – 0.59)	-14.63	9.90			0.28	0.36	-1.09**	0.39					
Ethnic heterogeneity*education	-4.67**	1.94			0.24*	0.09							
Mean income (1.47 – 3.34)			-0.29**	0.09	-0.67*	0.27							
Mean income*income					0.33~	0.19							
Residential mobility (48.00 – 170.50) ^b	61.53	39.66											
Residential mobility*education	19.97~	10.74											

~p < 0.10; *p < 0.05; **p < 0.01 (two sided test of significance)

^a Controls variables also included in the model but not show: dummy variables indicating imputation of missing values; other category for: ethnicity, household composition, and denominator. Range of variables between brackets.^b Parameter estimates have been multiplied by 1000.

Before we turn to the impact of locality characteristics, we briefly discuss the effects at the individual level for which we hypothesised that contextual characteristics may have different effects (i.e. which have been used in cross-level interactions), namely income, education and ethnicity. Compared to native Dutch, Antilleans and Turks have more and Indonesians have less contact with their neighbours. In general, ethnic minority groups express more tolerance to neighbours from a different race (although only the parameter estimates for Surinamese and Indonesians reach significance). Ethnic minority groups have lower levels of generalised trust than native Dutch but do not participate more or less in voluntary associations. The higher one's income, the lower the contact frequency with neighbours, the more tolerance to a neighbour from a different race, and the higher one's feelings of generalised trust. People with higher levels of education have less contact with their neighbours, express more tolerance to neighbours from a different race, have higher levels of trust and participate more in voluntary work. These main effects of ethnicity, income and education on our dimensions of social cohesion are firmly in line with previous research (Gesthuizen et al., 2008, see chapter 3). The parameter estimates of our other control variables at the individual level (age, sex, employment status, health, religiosity, and household composition) did not lead to surprising results.

In general, after controlling for individual level characteristics and by taking into account contextual characteristics simultaneously, we find far less support for our hypotheses stating that (ethnic or economic) heterogeneity, poverty, crime, or residential mobility negatively affect social cohesion. Compared to Table 1, much fewer (main) effects of locality characteristics reached significance.

Perhaps most strikingly, ethnic heterogeneity at the neighbourhood level is no longer negatively related to any of our indicators of social cohesion. Ethnic heterogeneity at the neighbourhood level is even significantly positively related to contact with neighbours for residents with income levels above average (as indicated by the significant cross-level interaction, $b=8.79$, $se=3.77$) and to tolerance to neighbours from a different race (the main effect is 0.52 ($se=0.15$)), especially for residents with income levels below average (the cross-level interaction is -0.26 ($se=0.09$)). Ethnic heterogeneity at the municipality level is also positively and not negatively related to generalised trust for residents with educational levels above average ($b=0.24$, $se=0.09$). The only effects of ethnic heterogeneity in line with our predictions are that ethnic heterogeneity within municipalities is negatively related to voluntary work ($b=-1.09$, $se=0.39$) and negatively related to contact with neighbours for the higher educated (as indicated by the cross-level interaction $b=-4.67$, $se=1.94$). All in all, we thus find little support for hypothesis 1.

Economic heterogeneity within neighbourhoods or municipalities does not consistently negatively affect social cohesion either, contrary to our second hypothesis. Economic heterogeneity of the neighbourhood only reduces contact with neighbours for the higher educated (as indicated by the significant cross-level interaction, $b=-9.53$, $se=5.59$) and reduces generalised feelings of trust for residents with income levels above average (as indicated by the significant cross-level interaction, $b=-2.65$, $se=1.12$).

Instead of economic heterogeneity it is economic affluence that influences social cohesion; the most consistent finding is that the economic affluence of neighbourhoods is

positively related to social cohesion. If the mean income level of a neighbourhood increases with 1000 euros, residents see their neighbours 7 times more a year ($b=7.21$, $se=2.46$). This effect is substantial even in comparison to significant individual level characteristics. In more affluent neighbourhoods, generalised feelings of trust are higher as well ($b=0.30$, $se=0.18$) and residents participate more in voluntary work ($b=0.24$, $se=0.14$). Thus, at the neighbourhood level, we find corroborative evidence for hypothesis 3a. On the other hand, in more affluent municipalities, residents have, in general, lower levels of tolerance to neighbours from a different race ($b=-0.29$, $se=0.09$). The mean income of the municipality is also negatively related to feelings of trust and especially so for residents with low income levels (the main effect is $b=-0.67$, $se=0.27$; the cross-level interaction is $b=0.33$, $se=0.19$).

Crime rates within localities and municipalities are not related to our indicators of social cohesion, once we control for composition effects and other relevant locality characteristics. Therefore, we reject hypothesis 3b. Residential mobility at the neighbourhood level reduces the likelihood to participate in voluntary work ($b=-2.75$, $se=1.47$). But, overall, there is little support for hypothesis 3c. Somewhat surprisingly, residential mobility at the municipality level is even positively related to contact with neighbours for the higher educated (as indicated by the cross-level interaction $b=19.97$, $se=10.74$).

Several general patterns thus emerge. Firstly, not all contextual characteristics are equally important. Economic deprivation within neighbourhoods is most clearly negatively related to social cohesion. Secondly, we find substantial differences in explanatory models between the dimensions of social cohesion. For the dependent variable tolerance to neighbours from a different race, the contextual characteristics are consistently related in the opposite direction as predicted by the heterogeneity and deprivation propositions. Thirdly, the effects of many contextual characteristics on social cohesion are conditional on residents' income or educational level. However, the assumed detrimental effect of locality heterogeneity and deprivation is not consistently stronger for the poor or lower educated than for the rich or higher educated. The effect of ethnic diversity does not depend on residents' ethnicity. We have to reject hypotheses 4 and 5.

4.4.3 On the lack of consistent negative effects of ethnic diversity

We failed to find support for hypothesis 1, according to which social cohesion would be less in ethnically more diverse localities. By contrast, many American studies did find such an effect. Do the Netherlands really differ from the United States in this respect, or are other issues at play? One important issue is that the interpretation of observed relationships between ethnic diversity (as measured by the complement of the Herfindahl Index) is not always clear. The Herfindahl Index (HI) is 'colorblind'. It is impossible to translate the value of the HI to the real ethnic composition of the locality. For example, a HI of 1 simply means there is one ethnic group present in the locality, although it does not tell which group this is. See also Voas *et al.* (2002) for a discussion of problems related to the HI.

The precise ethnic composition of a locality might matter at least as much as the more abstract idea of ethnic heterogeneity. However, the size of the native Dutch is strongly correlated to ethnic diversity (Pearson's correlation >0.90). Consequently, in the Netherlands,

it is impossible to pull effects of ethnic diversity and the size of the dominant ethnic group apart. Nevertheless, additional analyses (not shown) rule out two alternative explanations for the relationships between ethnic heterogeneity and social cohesion that we did observe: they are not due to the size of your own ethnic group (i.e. the percentage of Turks for Turks, the percentage of native Dutch for native Dutch) nor to the presence of one *specific* ethnic minority group. Note that the (interpretation) problems related to ethnic diversity affect most previous research. For example, for the US, it might not necessarily be diversity that negatively affects social cohesion, but percentages of whites, blacks or Latino's in the locality. Future research is thus warranted.

4.5 CONCLUSIONS

In this chapter we raised three research questions regarding locality effects on social cohesion. The first asked to what extent social cohesion is affected by ethnic and economic heterogeneity within neighbourhoods and municipalities in the Netherlands. The second asked to what extent social cohesion is affected by economic deprivation, crime rates, and residential mobility within neighbourhoods and municipalities in the Netherlands. We distinguished four indicators of social cohesion: contact frequency with one's neighbours, tolerance to a neighbour from a different race, generalised social trust, and volunteering.

The mean income of the neighbourhood turns out to be the most important contextual characteristic. More specifically, we found that in more prosperous neighbourhoods, residents have more contact with their neighbours, have higher levels of trust, and are more likely to do voluntary work. A second consistent finding is that crime rates do not affect social cohesion. Economic heterogeneity at the locality level does not have a consistent negative effect on social cohesion in the Netherlands. Similarly, residential mobility does not have a consistent negative effect on social cohesion either. And although Putnam (2007) reports that – in line with his constrict proposition – ethnic heterogeneity has a negative impact on all forms of social cohesion in the U.S., we come to a radically different conclusion. In the Netherlands, ethnic heterogeneity does not have a uniform negative effect on social cohesion: whereas it diminishes some forms of social cohesion – at the municipality level it is negatively related to the propensity to do voluntary work, it stimulates others; tolerance to neighbours from a different race is higher in ethnically heterogeneous neighbourhoods.

The answers to these research questions have important implications. First, given that locality characteristics affect different aspects of social cohesion differently, it is imperative that social cohesion is not reduced to one single indicator, let alone that different dimensions are simply aggregated. The overarching concept of social cohesion is not easily reduced to one or two indicators. Second, all in all we find little support for the homophily principle, at least when it comes to the expected impact of locality characteristics. At the locality level there is no consistent effect that ethnic or economic heterogeneity hinders social cohesion: living amongst dissimilar others does not consistently weaken one's pro-social attitudes or undermine one's social behaviour. Coffé and Geys (2006) came to similar conclusions for economic heterogeneity in Flemish municipalities.⁹ Possibly, even though citizens might prefer contacts with similar others, when they have less but still some

opportunities to do so, they do not participate less or have more negative attitudes.

The third question we set out to answer was to what extent the relationships between locality characteristics and social cohesion vary across individuals. Ethnic heterogeneity within localities does not have a differential impact on social cohesion across ethnic groups. Also contrary to our predications, detrimental effects of locality characteristics are not always weaker for the rich and higher educated than for the poor and lower educated. Sometimes they are even stronger (e.g. economic heterogeneity is negatively related to trust for the rich but positively for the poor). We conclude that it is important to take into account that the impact of locality characteristics is conditional on individual level characteristics. However, it remains unclear why this is so. Our results show that the conditional effects of locality characteristics across income and educational groups are not (only) the result of residential mobility.

Still, we cannot rule out – and it is indeed very likely – that locality characteristics trigger selective residential mobility: not only the attitudes of the remaining residents change as a result of specific locality characteristics, but residents may selectively move in or out of the locality as well. At the locality level, residential mobility is most strongly related to ethnic heterogeneity. If especially ethnic heterogeneity triggers (or has triggered) selective residential mobility, this may explain why especially our findings regarding tolerance to a neighbour from a different race are in the opposite direction as expected.

We coped with the issue of selective residential mobility in two ways. First, we assumed that especially the rich have the economic opportunity to selectively select their place of residence and that the higher educated may prefer to some extent to live in heterogeneous communities. Hence we expected that negative effects of localities should be stronger for the poor and lower educated than for the rich and higher educated. As said before, in general, we did not find corroborative evidence for this line of reasoning. Ethnic heterogeneity is not negatively related to tolerance in our sample, not for the poor and not for the rich. This contradicts our previous findings presented in chapter 3. Second, we assumed that between small geographical communities, such as neighbourhoods, (selective) residential mobility is more likely to occur than between larger geographical communities, such as municipalities or countries. However, we did not find a consistent negative relationship between ethnic heterogeneity at the municipality level and social cohesion either. Given the relatively low migration rates, selective mobility is likely to be negligible at the country level but even within European countries there is no evidence for a negative relationship between ethnic heterogeneity and levels of social cohesion (Gesthuizen et al., 2008). All in all we conclude that although the moderating role of residential sorting on the impact of locality characteristics on social cohesion should be further investigated, it is unlikely that selective residential mobility discredits our conclusions.

Our multi-level analysis showed that the relationships between contextual characteristics and dimensions of social cohesion are to a substantial degree explained by composition effects. Aggregated analyses (e.g. Coffé & Geys, 2006; Delhey & Newton, 2005) would not have been able to pull composition effects and true contextual effects apart, while simple O.L.S. regressions would underestimate the standard errors of the contextual effects.

This study is the first study on social cohesion that tests for locality effects on a random

sample of municipalities *and* neighbourhoods. Both localities turned out to affect social cohesion, as we expected. This implies that looking at ever smaller geographical units or communities like streets or personal networks is not the only way to proceed. Since the impact of specific locality characteristics on social cohesion are reversed across neighbourhoods and municipalities (e.g. the effect of mean income on feelings of trust) the inconsistency in previous research may indeed be due to the different (regional) units of analysis. Cross-national research is warranted in which the impact of the same regional locality (or localities) on social cohesion is investigated.

This chapter implies that (Dutch) policy makers who aim to stimulate social cohesion by changing the local living environment of people had best direct their efforts to improve the mean levels of income within neighbourhoods. They should also be aware that not all residents within localities and dimensions of social cohesion are affected similarly.

4.6 NOTES

1. In this chapter higher scores on the respective dependent variables indicate more social cohesion. Tolerance to neighbours from a difference race is the opposite as hostility to neighbours from a difference race. Higher scores thus indicate less ethnic hostility.
2. More specifically, we are more confident to find a detrimental effect of (ethnic and economic) heterogeneity, poverty, crime, and residential mobility within localities on social cohesion among the poor and lower educated than among the rich and higher educated.
3. These are: singing/music, sports, hobby, political, interest, and religious organizations, schools, neighbours/elderly/handicapped, action groups, and local community organizations.

4. The Herfindahl Index (HI) is given by: $HI = \sum_i p_i^2$, where p_i is the proportion of the respective distinguished ethnic group within the locale. The measure of ethnic heterogeneity is obtained by taking the complement of the HI: $1 - HI$.

5. This operationalization causes an underestimation of the income inequality within neighbourhoods and municipalities and our tests regarding the impact of income inequality should be considered conservative. The definition of the Gini-coefficient as the mean of

absolute differences between all pair of individuals is given by: $\frac{\sum_i \sum_j |y_i - y_j|}{2n^2\bar{y}}$, where y is the

observed income, n the total individuals, and \bar{y} the mean income. We calculated the Gini-coefficient by the SPSS-script provided on Raynald's SPSS Tools website (<http://www.spsstools.net>). As said before, instead of income data at the individual level we use information on the mean income level of the complete zip code to construct the Gini-coefficient. We weighted the complete zip codes by the number of residents.

6. We would like to thank L. Prins and his colleagues of the Dutch police force (Korps Landelijke Politiediensten, Dienst Nationale Recherche Informatie, Onderzoek en Analyse) for making these data available to us.

7. We applied hierarchical models to obtain correct standard errors of the contextual effects. Since our neighbourhoods are not randomly selected the intra class correlations are not that informative. However, from appendix 4.3 we learn that the variances at the higher levels are substantial. To a large extent this variance is due to composition effects.
8. Note that neither STATA nor R has a build in stepwise model selection procedure. We thank Rense Nieuwenhuis for the help during the estimation procedure in R. See <http://www.rensenieuwenhuis.nl> for the R script we used to come to our final models as presented in Table 4.2.
9. One plausible theoretical explanation that economic inequality is important at the country-level but apparently not at lower contextual levels is that the effect of economic inequality at the country-level are mainly driven by institutional fairness perceptions and not so much by the cultural dissimilarity that results from differences in economic resources. These perceptions of fairness may be forged mainly in national public spheres by political parties and the media and not in local environments such as neighbourhoods and municipalities.

Part 2

Educational Attainment and Ethnic Hostility among Ethnic Minorities



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5. TRENDS IN ETHNIC EDUCATIONAL INEQUALITY†

5.1 INTRODUCTION

With growing numbers of immigrants throughout Western Europe, research on the influence of ethnicity on achievement could foresee rising attention. Previous research on ethnic stratification patterns in the Dutch educational system has revealed that ethnic minorities perform worse on several indicators of school success than the native population and that inequality takes place at different stages in the educational career. It takes ethnic minorities longer to finish elementary school, and both performance levels as well as success rates are lower at different tracks and different levels of the educational system (Dagevos, Gijsberts, & van Praag, 2003; Gijsberts, 2004; Kalmijn & Kraaykamp, 2003; Oomens, Driessen, & Scheepers, 2003; Statistics Netherlands, 2005; Tesser & Iedema, 2001; Wolbers & Driessen, 1996).

Ethnic inequality of educational opportunities (IEO) is by no way limited to the Netherlands. Ethnic IEO has also been observed in, among other countries, Germany (e.g. Alba, Handl, & Müller, 1994), France (e.g. Vallet & Caille, 1996), Israel (e.g. Ayalon & Shavit, 2004), and the United States (e.g. Glick & White, 2003). However, whereas for example in Germany the ethnic inequalities in the school system remain after controlling for socio-demographic characteristic, in France ethnic differences generally disappear after taking the socio-demographic characteristics into account. Ethnic IEO takes different forms in different countries.

The focus of the study presented in this chapter is on *trends* in ethnic IEO. The Netherlands is an interesting case to study trends in ethnic IEO, for three reasons. First, qualitatively tracked educational systems, such as those of the Netherlands, offer the opportunity to describe and explain both qualitatively as well as quantitatively ethnic IEO. Raftery's Effectively Maintained Inequality (EMI) proposition (Raftery & Hout, 1993) states that whenever inequality cannot be maintained quantitatively between educational levels, the basis for differentiation shifts to the qualitative nature of educational tracks. This proposition has not been tested in the context of ethnicity based educational inequality. Second, in a comparison of thirteen countries, Shavit and Blossfeld (1993) found that the effects of social origin on educational opportunity were stable over time for each transition in eleven countries but not in the Netherlands and Sweden.¹ It is therefore interesting to see whether educational stratification based on social classes or gender has been replaced by ethnicity based stratification in the Netherlands. Third, with the present data on the Netherlands, it is possible to compare birth cohort trends within and between first and second generation migrants. Glick and White (2003) have shown that it is important to disentangle those trends, as they turned out to be different for generations in the USA.

It has been reported that the educational disadvantage of ethnic minorities is decreasing in the Netherlands (Gijsberts, 2004; Statistics Netherlands, 2005; Tesser, 1995), but we cast doubt

† Slightly different versions of this chapter have been published in the *European Sociological Review* (Tolsma, Coenders, & Lubbers, 2007b) and in *Mens en Maatschappij* (Tolsma, Coenders, & Lubbers, 2007a). The study on which this chapter is based has been presented at 'Marktdag Sociologie' in Bruxelles (June 2005).

on the validity of the conclusion of these studies. Or studies focused on percentage change statistics, which not necessarily correspond to net associations, or they aggregated educational levels whereby these studies neglected the tracking nature of the Dutch educational system (in vocational educational tracks and general educational tracks). Other Dutch studies report that programmes directed to increase the educational achievements of disadvantaged ethnic minority pupils hardly had effect (Driessen, 2000; Mulder, 1996).

In order to explain birth cohort trends in ethnic educational inequality, one first has to describe these trends. The final level of completed education is a summary measure of educational inequality. In this chapter we therefore first turn to the description of birth cohort trends in final educational attainment for Turks, Moroccans, Surinamese and the Antilleans, the four major ethnic minority groups in the Netherlands, next to that of the native Dutch. Together these ethnic minority groups form 7% of the current Dutch population (Statistics Netherlands). Our first research question reads: *(1) What are the birth cohort trends in ethnic differences in final educational attainment?*

A student's highest attained educational level is determined by the decisions that have to be made at different branching points during the educational career. Ethnicity may affect all these different decisions. Several studies focussed on the different dropout rates (or downward mobility rates) across ethnic groups (Kalmijn & Kraaykamp, 1996; Statistics Netherlands, 2005), but until now the trends in the decisions that have to be made at the different branching points during the school career once a previous level has been completed successfully have hardly received any attention, although this would link the scholarship of ethnic educational inequality to the current literature on class-based educational inequality. We will turn to the explanation of ethnic differentials in educational decisions at two different points in the school career: the decision after elementary school and the decision after higher general secondary education. We formulated the second research question as: *(2) What are the birth cohort trends across ethnic groups, both within and between generational statuses, in the decisions at successive school transitions?*

That social class is a strong determinant of educational achievement is a well established finding in social stratification research (Breen & Jonsson, 2005; De Graaf & Luijkx, 1995; Dronkers & Ultee, 1995; Rijken, 1999; Shavit & Blossfeld, 1993). This relationship between social class and educational achievement is also observed within ethnic minority groups (Wolbers & Driessen, 1996). Since most immigrant groups face the burden of a class background that is less favourable than that of the native host population, it could very well confound the associations between ethnicity and educational opportunities. In most Western societies including the Netherlands, men and women have roughly the same average of years of education completed (Rijken, 1999). However, differences between men and women with regard to their educational achievement are more pronounced for ethnic minority groups as compared to the native Dutch (Dagevos et al., 2003). The gender composition of the ethnic minority groups has become more equal over time. Until now, the trends in the effects of ethnicity on achieved educational level and educational transitions controlled for gender and social background have remained unclear in the Netherlands. The debate over the persistent existence of an 'ethnic penalty' has not been settled yet. Our final research question is: *(3) To what extent do parental background and the gender composition of ethnic groups explain (trends in) ethnic inequality in school careers?*

We claim to contribute to the scientific literature in several ways. A detailed description of the trends in final educational attainment and educational transitions both across and within ethnic generations in which educational levels and (vocational and general) tracks are not aggregated and net associations are being modelled is missing in the Netherlands, and internationally scarce. We aim to fill this lacuna in the scientific literature on ethnic educational inequality and will describe in detail how different birth cohorts of the multi-ethnic Dutch society have been divided by their final level of education. This description will also tell us whether the distinction between general and vocational educational plays a role in ethnic educational inequality. Furthermore, we aim to explain educational transition decisions for different birth cohorts at different branching points in the educational career. In doing so, we link the scholarship of ethnic educational inequality to the current literature on class-based educational inequality. Moreover, we aim to contribute in the discussion on Maximum Maintained Inequality and Effectively Maintained Inequality, and test their propositions in a multi-ethnic context.

5.2 THE DUTCH EDUCATIONAL SYSTEM

The many decision points and the possibility to reach a level of education by different routes are characteristic features of the Dutch educational system. Until 1999, Dutch students could choose between four different educational tracks after they completed primary school (see Figure 5.1). A decision had to be made whether to start a vocational education (LBO) or to continue general education at a low, medium or high level (respectively MAVO, HAVO, VWO). One may also start a vocational track at a later point in the educational career; after having finished a general education. Tertiary education consists both of higher vocational education (HBO) and university. The vocational track is regarded as the less selective track compared to the general track. Full-time education is obligatory for students aged between 4 and 16. Students aged between 16 and 18 are only partially obliged to follow an education. We would like to point out that only the second generation immigrants have been subject to the complete Dutch educational system.

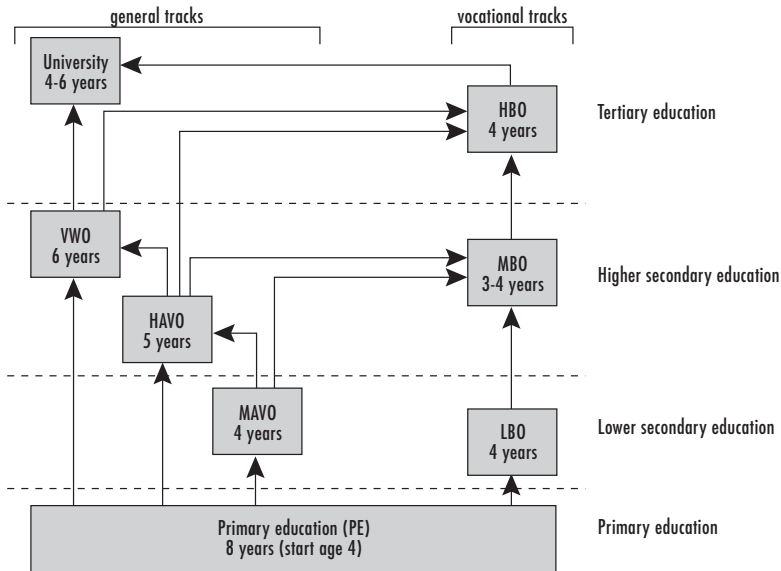


Figure 5.1 The Dutch educational system (until 1999)

5.3 EXPECTATIONS

5.3.1 Modernization thesis

The proposition of modernization theory states that the economies and concomitant occupational structures of modern, industrialised countries will come to dictate selection processes based on achieved characteristics of individuals. Selection processes present in the educational system or on the labour market that are based on ascribed characteristics such as social origin, gender, and ethnicity will turn out to be economically inefficient (Blau & Duncan, 1967). This trend from ascription to achievement, which was driven by the economy, was also accompanied by a change in the value patterns of western societies (Parsons, 1951). Ascribed characteristics not only *could not*, but also *should not* play any more an important role in selection processes. However, comparative empirical research on educational inequality among social strata has shown convincingly that with respect to educational opportunities meritocratization is not a universal process among modernised countries (Breen & Jonsson, 2005; Shavit & Blossfeld, 1993). In the Netherlands, the importance of social class in educational attainment did decrease (De Graaf & Luijkx, 1995). Moreover, gender has also become a less decisive determinant for highest attained level of education for the native Dutch (Van der Lippe & Van Doorne-Huiskes, 1995). In agreement with the observation that the Netherlands is indeed becoming ever more a meritocratic society with regard to the ascribed characteristics social origin and gender, we deduce a *modernization hypothesis: Ethnic inequality in the educational system will decrease at all levels and for all tracks.*

5.3.2 Maximally Maintained Inequality (MMI)

Raftery and Hout (1993) pose that at times of educational expansion, educational inequality will only decrease at educational levels where enrolment of the elite stratum has been saturated. At levels where enrolment is not universal, the elite social stratum will profit more from educational expansion than the less privileged, and increase their attendance rates faster. This has been known as the Maximally Maintained Inequality proposition.

The Netherlands have experienced a period of educational expansion the last decades. Although now almost everyone continues their school career after primary education, even in 1999, 'only' 42% of the native Dutch pupils who completed primary school enrolled in the highest levels of secondary education (ROA, 2002; Statistics Netherlands, 2005). According to the MMI proposition, it is (and was) therefore still possible to maintain inequality quantitatively within secondary education. In contrast, since approximately 90 per cent of the native Dutch students who successfully finish the highest general levels of secondary education enroll in tertiary education, the tertiary level can be regarded as saturated for those who finish higher secondary education. We therefore deduce that: *Ethnic inequality will be maintained within secondary education. And: Between students who successfully completed higher general secondary education in the Netherlands, ethnic inequality will decrease.* Note that the first *MMI hypothesis* contradicts the modernization hypothesis.

5.3.3 Effectively Maintained Inequality (EMI)

The educational levels in the Dutch educational system (Figure 5.1) are qualitatively differentiated in vocational and general tracks. After primary education and after the higher general levels of secondary education, students may choose to continue education either at a vocational or a general track. The MMI proposition ignores the fact that educational systems may be tracked. In Lucas' hypotheses of EMI (Lucas, 2001) it is argued that once saturation has been reached at a given educational level, inequalities of attaining that level may be replaced by inequalities in enrolment in the more selective track. The more selective tracks in the Netherlands are the general tracks. As stated above, we only regard the tertiary level as saturated. This leads to the following *EMI hypothesis*: *At the tertiary educational level, ethnic inequality will have decreased for the less selective vocational track and have increased for the more selective general track.*

5.3.4 Parental background and gender

The influence of social origin on educational achievement has diminished in the Netherlands over time. However, social origin is still a strong predictor for educational outcomes, even for native Dutch. Ethnic minorities in the Netherlands have in general a lower social background than the native population. We therefore pose in a '*social origin hypothesis*' that: *Ethnic IEO will decrease when we control for parental education and for father's job status.* We will assess whether or not ethnicity based inequality disappears after we control for these social origin characteristics, as in France (Vallet & Caille, 1996), or partially remain, as in Germany (Alba et al., 1994).

Gender differentials in educational opportunities are still present in the Dutch society (Need & De Jong, 2000), even though, as stated above, gender is becoming a less decisive determinant for highest attained level of education for the native Dutch (Van der Lippe & Van

Doorne-Huiskes, 1995). Although gender differentials in education are more pronounced for ethnic minority groups than for native Dutch, there are also indications that the emancipation process in the Dutch educational system for some ethnic minority groups is taking place at a different (i.e. faster) pace than for the native Dutch (Gijsberts, 2004). We formulate the following 'gender hypotheses': (a) *Gender based IEO within ethnic groups is decreasing.* And (b): *The gender emancipation process in the educational system is taking place at a faster rate for ethnic minority groups than for the native Dutch.*

5.3.5 Generational status

Successive birth cohorts of first generation immigrants may differ in their educational attainment due to changing selective migration and due to processes in the educational system in the country of origin. In the 1960s and 1970s, the Netherlands was in need for lowly educated manual workers and recruited male guest workers from countries such as Morocco and Turkey. These people were relatively low educated compared to native Dutch but also compared to Moroccans and Turks in the origin country. In the 1970s, the Turks and Moroccans reunited with their (lowly educated) family members. In the 1980s, a new type of migration could be observed; young (first and second generation) migrants chose to marry a partner from their respective origin country. These partners originated from the same rural agricultural areas and villages as the initial migrants, and are therefore probably relatively low educated as well. As a consequence, throughout the years, predominantly relatively low educated Turks and Moroccans migrated to the Netherlands. However, the adult literacy rates for men and women in Turkey and Morocco have risen sharply the last decades (UNESCO, various years). But they are still relatively low compared to the literacy rates of the other ethnic groups under consideration in this study. Since primary education is saturated in the Netherlands, we pose that: *The educational inequality at the lowest educational levels (i.e. no education and primary education) will have diminished between first generation Turks and Moroccans and Moroccans and Turks of second generational status.* On the other hand, due to the continues (self)selection of relatively low educated Turks and Moroccans, we also expect that: *For Moroccans and Turks, ethnic educational inequality at educational levels higher than primary education will be maintained between generational statuses and native Dutch.*

Up to the 1960s, migration from Surinam to the Dutch mother country was low, but those who migrated were mostly students and the highly educated. During the transitional period towards independence, more Surinamese migrated to the Netherlands among of which were more lower educated Surinamese. The economic crises in Surinam at the end of the 80s caused especially the migration of the relatively lower educated to increase. It is difficult to predict the educational achievements of the first generation Surinamese in the Netherlands, for relatively low educated Surinamese chose to migrate to the Netherlands at later periods, but at the same time, these relatively low educated Surinamese became better educated due to the general educational expansion in Surinam (UNESCO, various years).

From 1954 and onwards, inhabitants of the islands belonging to the Netherlands Antilles are free to migrate to the mother country. Initially, only students arrived of whom many re-migrated after obtaining a degree. After the 50s, migration from the Antilles is mainly driven by

the worsening economic conditions on the islands. Due to the strong trend towards (self)selective migration favouring the lower educated we expect that: *The educational achievements of first generation Antillean immigrants of subsequent birth cohorts will have decreased compared to Antilleans of second generational status.*

5.4 DATA AND MEASUREMENTS

We used data from the social position, and use of welfare facilities by immigrants surveys (SPVA), waves 1988, 1991, 1994, 1998 and 2002 (Groeneveld & Weyers-Martens, 2003; Martens, 1995, 1999; Martens, Roelandt, & Veenman, 1992). The SPVA is a household survey of Turkish, Moroccan, Surinamese and Antilleans ethnic minorities and a native Dutch reference group and was conducted in 13 municipalities in the Netherlands – among which Amsterdam, Rotterdam and The Hague – in which the majority of the Dutch ethnic minority members live. The SPVA contains to a high extent a representative selection of members of the respective ethnic minority groups with regard to age, gender, marital status and nationality. The SPVA Dutch control group is not a perfect representative selection of native Dutch residents with regard to final educational attainment. Data of the Dutch Labour Force Survey (LFS 1991, 1994, 1998 and 2002) were used to reduce this non-representivity.²

With regard to the description of the final education levels across ethnic groups, we followed the usual procedure to restrict the sample to respondents who were aged 25 or above at the time of the survey. We thereby did not favour young drop-outs and students who followed a short educational track. In the school transition analyses we only selected respondents who successfully finished their previous educational track. In the school transition analyses we included generational status as an explanatory variable. Since second generation immigrants only became a part of the Dutch society from the 1960s and onwards, we only selected those respondents who were born after 1959.

Final educational attainment was measured in 8 categories (0) no education, or not completed elementary school '<PE', (1) elementary school 'PE', (2) lower vocational 'LBO', (3) lower general secondary 'MAVO', (4) intermediate vocational secondary 'MBO', (5) intermediate and higher general secondary 'HAVO/VWO', (6) higher vocational tertiary 'HBO' and (7) university 'WO'. We also constructed *school transition* variables based on the data of the SPVA surveys from 1988, 1991, 1994 and 1998.³ A person was classified as belonging to an *ethnic minority group* when the respondent himself or either of his parents was born in the origin country. The ethnic minorities who were born in the origin country and immigrated to the Netherlands after the age of 5 were classified as belonging to the first *generation*, those born in the Netherlands or age at immigration younger than 6 to the second generation. Second generation immigrations became a substantive part of the Dutch society from 1960 and onwards. The native Dutch of the SPVA Dutch control group are defined as persons of whom both parents are born in the Netherlands and who themselves were born in the Netherlands. Survey year minus age at time of survey leads to year of birth. We defined five *birth cohorts*: cohort 1: 1917-1936; cohort 2: 1937-1946; cohort 3: 1947-1956; cohort 4: 1957-1966; cohort 5: 1967-1980. We use two indicators for social origin; *parental*

education and father's job status when the respondent was 15. Parental education is the highest educational level attained by either parent. When we did not have information on both parents we used the educational level of the parent we had information on. Missing values were substituted with mean scores per ethnic group per survey year. We categorised parental educational levels as (0) primary education (i.e. '<PE' and 'PE'), (1) lower secondary education (i.e. LBO and MAVO), (2) higher secondary education (HAVO, VWO and MBO), (3) higher professional education (HBO), and (4) University (WO). The prestige of father's job when the respondent was 15 was measured by the occupational prestige scale developed by Ultee and Sixma (1983), which ranges from 13 to 87. Respondents of whom the father never had a job received the lowest prestige score on father's job status. If only information was present on father's first job, instead of the job when the respondent was 15, we used this instead. Missing values were substituted with mean scores per ethnic group per survey year. The inclusion or exclusion of respondents with imputed values during the analyses does not substantively affect our conclusions. Descriptive statistics are summarised in Appendix 5.1.

5.5 ANALYSES AND RESULTS

5.5.1 Final educational attainment

As the Netherlands have experienced significant educational expansion the last decades, and since the ethnic groups that are being analysed in this study have a different age composition, the description of trends in ethnic IEO calls for a cohort design. The cell frequencies of the three-way ethnicity by cohort by final educational attainment table (see Appendix 5.2) are a function of the main effects of Ethnic group (E), final educational attainment (S, for Schooling), and birth Cohort (C). Loglinear models are ideal to estimate and describe associations between nominal variables free of the marginal distributions and changes in these distributions over time.

First we assess whether it is necessary to include specific 'Ethnicity by Schooling' associations to estimate the observed frequencies in our table. In order to do this we start with a baseline model (Model 1). This baseline model is the saturated model *without* the parameters of interest. The baseline model therefore does not contain the second order interactions of 'Ethnicity by Schooling' (ES) and the 3rd order parameters modelling birth cohort trends in the 'Ethnicity by Schooling' interaction (i.e. 'Ethnicity by Schooling by Cohort' (ESC)). The less parsimonious model 2 includes all (non-redundant) 'Ethnicity by Schooling' interaction parameters. These parameters have the same properties as odds ratios and therefore show whether certain ethnic minority groups are positively or negatively associated to specific educational levels.

Next we test whether 'Ethnicity by Schooling' associations changed over the specified birth cohorts in a linear fashion. In order to do this we add in model 3 three-way interaction parameters; 'ESC(1)'. The only difference between the saturated model and model 3 is that in the latter there is only one linear 'Ethnicity by Schooling by Cohort' trend parameter for each 'Ethnicity by Schooling' association, hence ESC(1). In contrast, the saturated model includes parameters for every specified cohort and each 'Ethnic group by Schooling' association. The 3rd

order parameters of the saturated model (i.e. the ESC parameters) tell us whether an ‘Ethnicity by Schooling’ association that belongs to a specific birth cohort deviates from the mean (over birth cohorts) ‘Ethnicity by Schooling’ association.⁴

We use the BIC statistic as the criterion for model selection. The BIC statistic may be considered as a likelihood ratio (L) corrected for sample size and the number of degree of freedom (df) used. Parsimonious models are preferred above less parsimonious models. The restricted model with the lowest BIC value describes the data best given the degree of freedom it uses. Saturated models have a BIC value of zero. We have summarised the BIC values in Table 5.1.

The addition of parameters that represent the associations between ethnicity and final educational attainment (model 2), and the addition of a linear trend in these associations (model 3) are in both cases improvements to the baseline model 1 (see Table 5.1). Model 3 is the preferred model, according to the BIC statistic. We therefore reach the conclusion that at specific educational levels, ethnic specific over- and under-representation exist and that trends in final educational attainment levels differ across ethnic groups. The associations between ethnicity and educational achievement have, in general, been altered in a linear fashion.

The estimates of the relevant parameters are presented in Table 5.2.⁵ Positive ‘Ethnicity by Schooling’ associations, or ES parameters, refer to an overrepresentation for an ethnic minority group at this educational level, compared to the association of native Dutch with this level. Significant ESC(1) parameters with opposite signs as the significant ES parameters indicate that the association has more closely come to resemble the Dutch association. We italicised these parameters. Parameters that reflect a (significant) persistent inequality are in bold face. Note, that the ES association parameters are robust to model specification (model 2 versus model 3 and the saturated model, Appendix 5.3).

Table 5.1 Goodness-of-fit statistics for loglinear models that test the associations between ethnicity and educational attainment^{abc}

	LL	df	P	BIC
M1. Baseline (= E S C EC SC)	17417	140	0.0	15963
M2. Baseline + ES	572	112	0.0	-591
M3. M2 + ESC(1)	214	84	0.0	-658

^a N=32322, Dutch weighted

^b E, main effect of Ethnicity; S, main effect of completed level of education/schooling; C, main effect of cohort; ES, association between Ethnicity and Schooling; ESC(1), linear trend over cohorts of ES.

^c The preferred model is in bold face.

Source: SPVA, 1988, 1991, 1994, 1998, and 2002

Table 5.2 Parameters estimates of Model 3 representing the association between ethnicity and final educational attainment (ES) and linear changes therein (ESC(1)) (baseline parameters not shown)^{ab}

	Primary			Lower secondary			Higher secondary			Tertiary		
	<PE	PE	Vocational	General		Vocational	General		Vocational	University		
				LBO	MAVO		HAVO/VWO	HBO		WO		
Turks	ES	4.8**	1.9**	-1.3**	0.3**	-1.9**	0.2*	-2.0**	-1.9**	-1.9**	-1.9**	
	ESC(1)	-1.2**	-0.5**	<i>0.9**</i>	0.6**	<i>0.4*</i>	<i>-0.1</i>	<i>0.0</i>	<i>-0.1</i>	<i>-0.1</i>	<i>-0.1</i>	
Moroccan	ES	5.7**	1.3**	-1.5**	-0.1	-2.6**	<i>0.2*</i>	-1.8**	-1.8**	-1.2**	-1.2**	
	ESC(1)	-1.4**	0.0	<i>1.1**</i>	<i>0.1</i>	<i>1.5**</i>	<i>-0.9**</i>	<i>-0.2</i>	<i>-0.2</i>	<i>-0.2</i>	<i>-0.2</i>	
Surinamese	ES	2.9**	0.5**	-0.7**	0.7**	-1.3**	-0.2*	-0.8**	-0.8**	-1.1**	-1.1**	
	ESC(1)	-0.3	0.2*	<i>0.9**</i>	<i>0.2</i>	<i>0.1</i>	<i>0.3</i>	-1.0**	-1.0**	-0.5**	-0.5**	
Antilleans	ES	2.5**	0.3**	-0.3**	0.3**	-1.3**	<i>0.2*</i>	-0.8**	-0.8**	-0.8**	-0.8**	
	ESC(1)	<i>0.6</i>	<i>0.1</i>	<i>0.3**</i>	-0.1	<i>0.1**</i>	<i>-0.4*</i>	-0.4**	-0.4**	-0.2**	-0.2**	
Dutch	ES	-	-	-	-	-	-	-	-	-	-	
(ref)	ESC(1)	-	-	-	-	-	-	-	-	-	-	

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a $N = 32322$, Dutch weighted

^b Italics: trend towards equality; Bold face: persistent inequality; Normal font: equality

Source: SPVA, 1988, 1991, 1994, 1998, and 2002

All three theories predict that at the primary levels inequality should decrease across ethnic groups in the Netherlands. We see that the over-representation for Turks and Moroccans at the 'no-education level' and the over-representation for Turks at the primary elementary level indeed decreased (Table 5.2). For example, the ESC(1) parameters for Turks for the educational levels '<PE' and 'PE' are -1.2 and -0.5 and significant. For Surinamese and Antilleans we do not see a trend towards equality. At these low educational levels, trends are likely dominated by first generation over second generation immigrants, since especially within these educational categories first generation migrants outnumber second generation migrants (Appendix 1). We tentatively conclude that self-selective migration of the lowly-educated offsets the positive effects of educational expansion in Suriname and the Antilles.

At the tertiary educational levels, educational inequality between native Dutch and Turks and Moroccans remained stable and increased between native Dutch and Surinamese and Antilleans. More difficult to interpret are the parameters for the secondary educational levels. Secondary general education seems for native Dutch not the culmination of the educational career. The over-representation of some ethnic minorities groups at these secondary levels is not the result of native Dutch not reaching these levels, but more likely of ethnic minorities not enrolling in or succeeding at the tertiary level. However, we see two interesting phenomena. First of all, for both the lower secondary level and the higher secondary level, we see that there is a clear distinction between parameters of the vocational track and the general track. This stresses the importance to distinguish between qualitative and quantitative inequality when describing ethnic educational inequality. Secondly, we see that at the lower secondary level the less selective vocational track (LBO) is gaining in importance compared to the lower general track (MAVO); the ESC(1) parameter for LBO is larger than this parameter for MAVO for all ethnic minority groups.

From our results we conclude that there are two reasons not to collapse educational categories when assessing educational inequality across ethnic groups. First, trends at the primary level will probably dominate trends at higher levels, since ethnic minority groups are strongly over-represented at these lower categories. Secondly, trends are different for vocational and general tracks at the secondary level. Contrary to previous studies in the Netherlands, our results do not confirm the general statement that ethnic inequality with regard to final educational attainment has decreased.

5.5.2 School transitions

We analysed two school career transition points to shed light on the process of the formation of ethnic IEO, and to more rigorously test the EMI and MMI propositions. The first branching point we analysed takes place after completion of elementary school. At this point, pupils may choose between four different educational tracks. For simplicity reasons, we assumed this to be a decision whether or not to continue the school career at a higher general level (HAVO/VWO), at a relatively lower general level (MAVO), or at a relatively lower vocational level (LBO). Leaving the school system is officially only an option for those who have not been subjected to the Dutch obligatory educational system, which has been operational since 1969. However, since we observed a persistent overrepresentation for the ethnic minority groups at the elementary level,

we also assessed whether this is in part due to ethnic minorities who more often than native Dutch leave the educational system after elementary school. The second transition we analysed takes place after finishing higher secondary education (HAVO/VWO). At this stage, pupils may leave the educational system or continue their education at the tertiary level, either at the vocational HBO, or at the university.⁶

Both of these school decision nodes consist of several odds. We estimated the odds simultaneously for each branching point in multinomial logistic regression models. The regression weights regarding the first and second transition are presented as logits in Table 5.3 and Table 5.4, respectively. In the analyses, we made a distinction between first generation immigrants and second generation immigrants and constructed the variable 'Ethnic group by Generation'. Model A (Table 5.2 and 5.3) also includes the trend parameters (i.e. 'Year of birth'*'Ethnic group by Generation'). We added the variables 'Gender', 'Parental education' and 'Father's job status' in model B to assess the ethnic penalty net of these background variables. In model C we accounted for the possibility that changes in educational differentials might be different between men and women and that emancipation processes took place at a different pace for ethnic groups. Results of Model C are summarised in Appendix 5.4 and Appendix 5.5, respectively for transition 1 and 2.

Transition 1

Leaving the educational system is only a viable option for first generation Turks and Moroccans as the 'Ethnic group by Generation' parameters of -4.21 and -3.77 in column 1, Model A show (Table 5.3). The chance to leave the educational system for those who followed their education in the Netherlands is low, approximately 2% (as estimated by the parameters of our models). We further observe that the Dutch trend parameter is -1.02. This means that continuing at the lower vocational track has become a less relevant choice compared to the choice to leave the educational system for later generation pupils of Dutch descent. Since the trend parameters for the ethnic minority groups are either positive or non-significant, we conclude that for this specific odd, ethnic educational differentials have diminished. This finding is in line with all three theoretical frameworks; the modernization thesis, MMI proposition and the EMI proposition.

Of the older cohorts, only second generation Turks less often opt to continue at the general level (MAVO) versus to the vocational level (LBO), compared to the native Dutch (-0.63). The general track at lower secondary education (MAVO) is gaining in importance compared to the vocational level (LBO) for most ethnic groups. However, in comparison with the native Dutch, this process is less pronounced for second generation Moroccans and Antilleans (their cohort trend interaction parameters are -0.27 and -0.36, respectively). At lower secondary education, inequality is therefore maintained qualitatively for specific ethnic groups. This clearly refutes the modernization thesis.

Next, we test the MMI hypotheses, which states that inequality is effectively maintained if saturation is not reached. We therefore inspect the relative chance to continue at the higher secondary general levels (HAVO/VWO) compared to the chance to continue at the lower secondary general level (MAVO, see column 3, Model A, Table 5.3). In sum, all immigrants either experienced a negative trend compared to the native Dutch, or second generation minorities experienced

no trend relative to the native Dutch and ethnic differentials in the transition odds remained stable. This is a clear corroboration of the MMI proposition. For example, the trend interaction parameter for Turks is -0.42 whereas the main effect term, which refers to the trend for native Dutch, is non-significant. The only exception is the first generation Surinamese, but they will need approximately 5 decades to overcome their disadvantaged position (i.e. $1.39/0.29=4.8$).

Generational status affects the relative chances of the transition after primary education, but not in a clear consistently manner. For example, whereas in 1960 the odds to continue at the MAVO relative to the LBO for first and second generation Turks were 1.48 and 0.42, these same odds in 1980 were 1.16 and 1.86, respectively.⁷ Differences between generational statuses for this odd remained more or less stable for Moroccans and Antilleans, and favour the second generation immigrants. In general, the chance to continue at the higher secondary general levels (HAVO/VWO) relative to the lower secondary general level (MAVO) decreases faster for immigrants of second generation compared to immigrants of first generational status.

In model B we controlled for gender, parental education and father's job status. These variables contribute considerably to the model fit (see the Likelihood Ratio values (-2LL) in Table 5.3). Moreover, these background characteristics explain in part the effects of ethnicity and generational status as we predicted. For example the parameter for first generation Turks referring to the transition odd higher secondary general levels (HAVO + VWO) versus lower secondary general level (MAVO) diminished from -0.97 in Model A to -0.33 in Model B. We also see that specific trends in transition odds are for a large part explained by parental background characteristics. This is especially true for the native Dutch. However, more importantly, our conclusions regarding ethnic educational inequality are not influenced by the introduction of these background variables.

Next, we tested whether there are gender differences within ethnic groups and whether birth cohort trends are different for males and females across ethnic groups (model C, Appendix 5.4). Our results indicate that only among ethnic minority groups, gender differences exist in the choices after primary education. Predominantly male ethnic minority students opt for the lower vocational track (LBO) compared to the lower general track (MAVO) and more often opt for higher general education (HAVO + VWO) versus lower general education (MAVO). We only detected gender differences in birth cohort trends for second generation Turks and first generation Moroccans and Antilleans. Within these ethnic groups, lower general education (MAVO) gains in importance relative to lower vocational education (LBO) faster for men than for women.

Table 5.3 Multi-nominal logistic regression models of educational choice after primary education, birth cohorts 1960-1985^a

	Model A						Model B ^b					
	LBO/stop		MAVO/LBO		(HAVO + VWO) / MAVO		LBO/stop		MAVO/LBO		(HAVO + VWO) / MAVO	
	β	p	β	p	β	p	β	p	β	p	β	p
Constant (Dutch=ref.cat.; N=2841)	2.97**	0.00	-0.23**	0.00	0.03	0.73	2.57**	0.00	1.28**	0.00	1.49**	0.00
Turks (1 st generation; N=3672)	-4.21**	0.00	0.62**	0.00	-0.97**	0.00	-4.30**	0.00	1.27**	0.00	-0.33*	0.03
Turks (2 nd generation; N=1043)	-1.54**	0.00	-0.63*	0.02	-0.31	0.34	-1.36**	0.00	-0.16	0.58	0.21	0.53
Moroccans (1 st generation; N=2199)	-3.77**	0.00	-0.02	0.91	0.35*	0.03	-4.05**	0.00	0.69**	0.00	0.93**	0.00
Moroccans (2 nd generation; N=706)	-1.60**	0.00	0.57~	0.08	-1.13**	0.00	-1.42*	0.01	1.00**	0.00	-0.46	0.26
Surinamese (1 st generation; N=2382)	-2.10**	0.00	0.49**	0.00	-1.39**	0.00	-2.15**	0.00	0.78**	0.00	-1.21**	0.00
Surinamese (2 nd generation; N=1161)	-0.59	0.17	0.33~	0.09	-0.21	0.29	-0.57	0.18	0.44*	0.03	-0.28	0.18
Antilleans (1 st generation; N=1637)	-1.51**	0.00	-0.12	0.37	-0.29*	0.04	-1.58**	0.00	-0.02	0.89	-0.21	0.17
Antilleans (2 nd generation; N=578)	-0.84	0.16	0.67*	0.01	0.71**	0.00	-0.98~	0.09	0.62*	0.02	0.43~	0.06
Cohort (Birth year 1960=0) ^c	-1.02**	0.00	0.41**	0.00	0.12	0.12	-1.22**	0.00	0.29**	0.00	-0.01	0.87
Cohort*Turks (1 st generation)	1.82**	0.00	-0.53**	0.00	-0.11	0.42	1.88**	0.00	-0.53**	0.00	0.01	0.92
Cohort*Turks (2 nd generation)	0.70**	0.01	0.33~	0.05	-0.42*	0.03	0.67*	0.01	0.43*	0.02	-0.33~	0.08
Cohort*Moroccans (1 st generation)	1.67**	0.00	-0.27*	0.04	-1.08**	0.00	1.82**	0.00	-0.24~	0.08	-0.89**	0.00
Cohort*Moroccans (2 nd generation)	0.76**	0.01	-0.32~	0.10	-0.04	0.84	0.75*	0.02	-0.17	0.39	0.02	0.95
Cohort*Surinamese (1 st generation)	1.54**	0.00	-0.52**	0.00	0.29*	0.03	1.65**	0.00	-0.52**	0.00	0.31*	0.02
Cohort*Surinamese (2 nd generation)	0.44	0.11	-0.12	0.39	-0.28*	0.04	0.53~	0.06	-0.04	0.80	-0.14	0.32
Cohort*Antilleans (1 st generation)	0.86**	0.00	-0.21	0.11	-0.09	0.49	0.97**	0.00	-0.08	0.54	-0.01	0.96
Cohort*Antilleans (2 nd generation)	0.79*	0.05	-0.36~	0.07	-0.53**	0.00	0.96*	0.01	-0.25	0.19	-0.35*	0.04

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Table 5.3 continued

Male (Female=ref. cat.)					
Parental education (University=ref. cat.)					
Primary	0.86**	0.00	-0.43**	0.00	0.16~ 0.05
Lower secondary	-0.17	0.77	-1.74**	0.00	-1.95** 0.00
Higher secondary	0.28	0.63	-1.42**	0.00	-1.56** 0.00
Tertiary vocational	0.21	0.73	-1.18**	0.00	-1.45** 0.00
Father's job status (status 32=0) ^b	-0.36	0.56	-0.47	0.14	-0.79** 0.00
Cox and Snell	0.19				0.09* 0.02
-2LL	28361	df=51			
Δ-2LL	3317				
	26280	df=90			
	2081				

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a $N=16219$, Dutch weighted

^b control variables in model: survey year; mean substitution parental education; coding difference in father's job status; mean substitution of father's job status; unemployed father.

^c cohort parameter * 10

Source: SPVA, 1988, 1991, 1994, and 1998.

Table 5.4 Multi-nominal logistic regression models of educational choice after higher secondary education, birth cohorts 1960-1980^a

	Model A						Model B ^b					
	HBO/stopping			University/HBO			HBO/stopping			University/HBO		
	β	p		β	p		β	p		β	p	
Constant (Dutch= ref. cat.; N=816)	1.28**	0.00		-0.32*	0.02		0.90*	0.03		0.27	0.41	
Turks (1 st generation; N=380)	-2.83**	0.00		0.39	0.29		-2.89**	0.00		0.76~	0.06	
Turks (2 nd generation; N=85)	-1.10	0.14		-0.13	0.87		-1.31~	0.09		0.18	0.82	
Moroccans (1 st generation; N=185)	-2.71**	0.00		0.67	0.13		-2.88**	0.00		1.12*	0.02	
Moroccans (2 nd generation; N=54)	-3.13*	0.02		1.75	0.18		-3.26*	0.03		2.23	0.10	
Surinamese (1 st generation; N=343)	-1.45**	0.00		0.56*	0.04		-1.44**	0.00		0.85**	0.00	
Surinamese (2 nd generation; N=218)	-0.51	0.27		0.66~	0.07		-0.61	0.21		0.85*	0.02	
Antilleans (1 st generation; N=324)	-0.68*	0.04		0.10	0.72		-0.61~	0.07		0.16	0.57	
Antilleans (2 nd generation; N=192)	-1.30*	0.01		0.95*	0.02		-1.46**	0.00		0.87*	0.03	
Cohort (Birth year 1960=0) ^c	-0.21	0.35		0.50**	0.00		-0.40	0.10		0.56**	0.00	
Cohort*Turks (1 st generation)	0.09	0.81		-0.30	0.46		0.19	0.62		-0.16	0.68	
Cohort*Turks (2 nd generation)	0.35	0.54		-0.55	0.34		0.58	0.33		-0.41	0.49	
Cohort*Moroccans (1 st generation)	0.88*	0.04		-0.94*	0.04		1.03*	0.02		-0.79	0.10	
Cohort*Moroccans (2 nd generation)	1.72~	0.06		-1.17	0.16		1.96*	0.04		-1.12	0.19	
Cohort*Surinamese (1 st generation)	0.35	0.35		-0.48	0.13		0.38	0.32		-0.57~	0.08	
Cohort*Surinamese (2 nd generation)	-0.03	0.94		-0.63~	0.05		0.07	0.88		-0.70*	0.04	
Cohort*Antilleans (1 st generation)	0.60	0.10		-0.72*	0.01		0.54	0.15		-0.69*	0.02	
Cohort*Antilleans (2 nd generation)	0.66	0.18		-0.50	0.19		0.68	0.17		-0.44	0.26	

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Table 5.4 continued

Male (Female= ref. cat.)			0.21~	0.07	0.47**	0.00
Parental education (University = ref. cat.)						
Primary			-0.29	0.30	-1.01**	0.00
Lower secondary			-0.30	0.26	-0.78**	0.00
Higher secondary			-0.03	0.91	-0.79**	0.00
Tertiary vocational			0.50~	0.08	-0.48*	0.01
Father's job status (status 32=0)			-0.06	0.28	0.12*	0.01
Cox & Snell	0.18		0.24			
-2LL	4276	Df=34	4090	Df=58		
Δ -2LL	523		186			

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a $N=2589$, Dutch weighted

^b Control variables in model: survey year; mean substitution parental education; coding difference in father's job status; mean substitution of father's job status; unemployed father.

^c Cohort parameter * 10

Source: SPVA, 1988, 1991, 1994, and 1998.

Transition 2

Results of the multinomial logistic regression concerning the transition after higher secondary education are summarised in Table 5.4. Pupils of Dutch descent opt more often than immigrants to continue their educational career after higher general secondary education. Only the odds higher vocational (HBO) versus stopping the educational career is shown, however, the redundant odds 'university versus stopping' may be calculated by adding the parameters of column 1 and column 2. We did not observe significant trends among the ethnic groups in the odds to continue the educational career after higher secondary education at the tertiary level (significance calculated by binary logistic regression). After higher secondary education, ethnic inequality is quantitatively maintained.

The choice for university versus higher vocational education (HBO) was for ethnic minorities of older birth cohorts more popular than for native Dutch. Although only the parameters for the Surinamese and second generation Antilleans (0.56, 0.66, and 0.95 respectively) reach significance, all other ethnic group by generation parameters are positive as well (with the exception of second generation Turks.) In recent years the choice for university gained in importance (see the main cohort trend parameter of 0.50 in column 2, Table 5.4). The ethnic group by generation cohort interaction effects are all negative, although only the interaction parameters of first generation Moroccans, second generation Surinamese, and first generation Antilleans (-0.94, -0.63, and -0.72 respectively) reached significance. The non-significance of the trend parameters is possibly due to the relatively small sample sizes per ethnic group. We tentatively conclude that even when, contrary to our expectations, inequality is maintained quantitatively between higher secondary education and tertiary education, that, within tertiary education, inequality is established qualitatively as well.

Once again, parental education and gender contribute to the model fit (see Model B, Table 5.4). The chance to stop after higher secondary education is lower for students with higher educated parents (see Model B). However, the odd to continue at the tertiary vocational level (HBO) versus to stop is higher for students with parents who reached the tertiary vocational level (HBO) compared to students with at least one university graduated parent, this parameter is 0.50 ($p=0.08$; Model B). This latter finding can be explained by the 'Avoidance of Downward Mobility Mechanism' (Goldthorpe, 2000). Parents and children strive for avoidance of downward social mobility (Goldthorpe, 2000). For students with parents of whom at least one possess an university degree, both continuing at the tertiary vocational level (HBO) and stopping after higher secondary education (HAVO/VWO) is regarded as downward mobility. On the other hand, for students with parents who maximally obtained a tertiary vocational level, to enrol in university entails an unnecessary risk in order to avoid downwards mobility, since one could fail to graduate from university. Father's job status only affects the odd 'university versus HBO'.

We observe that male students more often continue their educational career and when they continue it is more often at the university track compared to female students ($b=0.47$; $p=0.00$; Model B). This latter finding is in agreement with previous research of De Graaf and Wolbers (2003). Surprisingly, differences across ethnic groups are hardly affected by the inclusion of these background characteristics. Model C is estimated without the three-way interaction

‘sex*cohort*ethnic group by generation’ since our sample size is relatively small (Appendix 5.5). The differences between male and female students in the odds to continue at the tertiary vocational level versus to stop one’s educational career are diminishing, as indicated by the significant interaction of ‘Male*Cohort’ ($b=-0.48$; $p=0.00$; Appendix 5.5). We do not observe significant differences across ethnic groups in the effect of sex on school transition decisions (Appendix 5.5).

5.6 CONCLUSIONS

In a detailed description of final educational attainment levels, we showed that ethnic minorities have improved their situation at the lowest educational levels. Also, the under-representation that these groups faced within vocational tracks of secondary education has decreased over the investigated cohorts. However, inequality regarding final educational attainment between the Dutch and ethnic minority groups is maintained at the tertiary level.

The detailed description of patterns of association between attained educational level and ethnicity also showed that (cohort trends in) ethnic inequality takes different forms across vocational and general educational tracks of the same level. It is therefore important to take the qualitatively differentiated structure of educational systems into account when assessing (ethnic) educational differentials. Surprisingly, the distinction between less restrictive vocational tracks and more restrictive general tracks does not play a major role during explicit track choices after elementary school. For the native Dutch, the general track has gained in importance at the lower secondary level. However, this is also true for two out of four ethnic minority groups who followed their education in the Netherlands. We therefore expect that the differences between vocational and general educational tracks will be more evident in drop-out rates than in transition rates.

After elementary school, inequality is maintained between lower secondary education and higher secondary education. Our analyses make clear that the selection processes for secondary education are decisive for ethnic inequality in final education. It might be that migrants themselves as well as teachers underestimate migrants’ chances in the educational career. However, at the transition point after higher secondary education, we also see that inequality is maintained. Native Dutch keep continuing their school after higher secondary education more often than the ethnic minority groups. On top of this, the university track becomes more exclusively the domain of native Dutch compared to the vocational track (HBO). Both transitions therefore establish ethnic educational inequality.

In this study, we made a link between the scholarships on class based educational differentials and the field of ethnic educational inequality. Unfortunately, even in a country where the effects of social class and gender on educational inequality indicators have decreased, a general birth cohort trend towards ethnic educational equality could not be observed. Social origin indicators partly explained the ethnic educational differentials, as we predicted. Better measurements of social position and the inclusion of (language) ability measures may even further reduce the observed ethnic differentials, but for now, our results indicate that ethnic educational inequality is maintained even after controlling for background characteristics. At the primary

level, gender differentials are only present among ethnic minority groups. We could not detect a convincing emancipation process among ethnic minority groups.

Generational status affects the decisions made at school transition nodes, albeit not in a consistent way for successive birth cohorts. Later birth cohorts of second generational status are sometimes even disadvantaged compared to their first generation counterparts. Third generation ethnic migrants (or native Dutch with a migrant heritage) are now starting to attend school. Whether the third generation is going to perform better or worse than their second and first generation counterparts remains to be seen. Unfortunately, it is not to be expected that inequality among second generation immigrants and native Dutch will disappear at the secondary and tertiary educational levels for successive birth cohorts.

Clearly, we have to refute the modernization proposition; ethnic educational inequality did not decrease at all levels and all tracks. Within secondary education, inequality is maintained quantitatively as the MMI proposition predicted. Even under a condition of saturation, the trends in ethnic IEO did not diminish between higher secondary education and tertiary education. In line with the EMI proposition, inequality is established qualitatively within tertiary education. Our results should temper the optimism of those who expect ethnic differences to dissolve for later generations or in due time.

5.7 NOTES

1. In a recent review of the research in social stratification, Breen and Jonssen (2005) mention that in other countries the association between social origin and educational attainment declined as well (e.g. Germany, France, Italy).
2. All (Dutch) primary respondents and other household members older than 25 were weighted to the frequency distribution of respondents of the LFS with the same birth cohort and final educational level. Alters younger than 25 received the same weighting factor as the primary respondent of the household. Primary respondents of the SPVA younger than 25 were not weighted (i.e. received a weight '1'), since these age categories are not part of the sample population of the LFS.
3. The SPVA wave of 2002 was excluded from the analysis regarding birth cohort trends in school transition choices due to missing information on the school career.
4. The interpretation of the parameters in a loglinear model depends on the definition of the design matrix. The above example refers to a simple contrast definition.
5. That all our restricted models deviate significantly from the full model is due to our large sample size. The ES association parameters are robust to model specification (model 2 versus model 3 and the saturated model, Appendix 5.3). In the design matrix the vector ESC(1) has length one. In a design with 5 cohorts specified this vector is (-0.63; -0.32; 0; 0.32; 0.63). The mean ethnicity-schooling association parameter for educational level '<PE' for Turks who belong to the oldest birth cohort should therefore be corrected with: $-0.63 * ESC(1) = -0.63 * -1.2 = 0.8$. The estimated 'Ethnicity by Schooling' association parameter for Turks who belong to the oldest birth cohort is: $4.8 + 0.8 = 5.6$.

6. Following Need and De Jong (2000), students who finished the HAVO and continued their school career at the VWO are considered as following the 'university track'. Their decision is regarded as similar to the decision to enrol in the university after completion of the VWO.
7. For first generation Turks born in 1980, this odd is calculated using the formula:
 $e^{-0.23+0.62+2*(0.41-0.53)}$.

6. EXPLANATIONS FOR ETHNIC EDUCATIONAL INEQUALITY†

6.1 INTRODUCTION

In industrial societies, the association between social origin and educational attainment has been extensively studied. This association is substantial, but has declined in the Netherlands, as, for example, in France and in Sweden (Breen, 2005). Social origin influences not only the choices students make on the level of schooling they will attend, it also affects their field of study choice. In the Netherlands, pupils' chosen field of study tends to resemble that of their father and is guided by the parents' occupational domain (Van de Werfhorst, De Graaf, & Kraaykamp, 2001). Next to effects of social origin, research shows that two other 'ascribed' characteristics, sex and ethnicity, also affect inequality of educational opportunities.

In most western countries, and the Netherlands is no exception, sex has become less decisive in determining the level of education that individuals attain (Van der Lippe & Van Doorne-Huiskes, 1995). Sex differentials have even reversed in Dutch society today: women are now more likely than men to enrol in higher education (Statistics Netherlands, 2007). However, sex differences are still pronounced in field of study choices, with women less likely than men to choose science subjects (De Jong, Van Leeuwen, Roeleveld, & Webbing, 1998; Portegijs, Hermans, & Lalta, 2006).

Ethnic origin, net of the effect of social origin, influences educational outcomes in most western countries (Alba et al., 1994; Ayalon & Shavit, 2004; Glick & White, 2003; see also Chapter 5). There are signs that ethnic inequality is diminishing in Dutch *vocational* education. However, ethnic inequality at higher levels of *general* education has remained stable or increased (see Chapter 5). When studying educational differentials based on social origin, sex and ethnicity, it is thus important to take into account not only differentials in levels of schooling attained (e.g. professional college versus university), but also differences in fields of study (e.g. science versus non-science).

To explain educational decisions, a rational action model has been maturing over the years (Boudon, 1974; Breen & Goldthorpe, 1997; Davies, Heinesen, & Holm, 2002; Goldthorpe, 1996, 2000; Need & De Jong, 2000; Stocké, 2007; Van de Werfhorst & Andersen, 2005). Breen and Goldthorpe (1997) argue that students make instrumentally rational decisions influenced by several factors: (1) their subjective beliefs about the likelihood of success in different educational tracks (success probabilities), (2) the expected costs of remaining in school (study costs) and (3) their subjective beliefs about the utility of educational outcomes (educational returns).

In Breen and Goldthorpe's explanation, both primary and secondary effects are assumed to be at work. Primary effects operate through the association between children's social origin and their average level of demonstrated ability. Secondary effects are the factors that influence the actual educational choices that pupils make, controlled for ability. In this study we test several

† A slightly different version of this chapter is forthcoming in the *European Sociological Review* (Tolsma, Need, & De Jong, forthcoming). The study on which this chapter is based has been presented at the RC28 Spring Meeting in Nijmegen, the Netherlands (June 2006).

hypotheses derived from Breen and Goldthorpe's model, in order to explain *how* social position, sex and ethnicity affect educational transitions.

Recently, Stocké (2007) assessed the validity of the Breen-Goldthorpe model in a similar manner. He showed for Germany that higher class parents are more likely to believe that their offspring will be able to successfully complete a certain degree than lower class parents. To a large extent, this difference in expected success probabilities between higher and lower class parents can be explained by differences in their children's ability. Surprisingly, differences between lower class children and higher class children in schooling level decisions could not be explained by the different expected success probabilities.

Within the rational action framework ability is often used as a sufficient indicator for differences in success probabilities; that is, differences in ability should explain how ascribed characteristics affect school choices just as well as students' subjective probabilities of future academic success. Subjective probabilities are however likely to be also influenced by factors other than ability. Social strata may differ in their subjective success probabilities because they are more or less familiar with the educational system or because they vary in the importance they attach to effort relative to ability in determining school success (Breen, 1999). In this study we investigate the extent to which success probabilities, estimated subjectively by the students themselves, differ according to the ascribed characteristics of social origin, sex and ethnic background, and the extent to which ability is responsible for these differences. Furthermore, we test the extent to which students' beliefs about their own chances of success in school explain the effect of social origin, sex and ethnic background on school decisions after higher secondary education.

This research is innovative in three respects. First, the Breen and Goldthorpe model has been applied almost solely to the explanation of class differentials. Few scholars have attempted to test its predictions for sex-based inequality in educational opportunities (for exceptions, see Jonsson, 1999; Need & De Jong, 2000). We examine the extent to which the Breen and Goldthorpe model also applies to ethnic differentials in educational decisions. Second, Stocké (2007) examined the effect of parental expectations of their children's future school success. We study entry into higher education and argue that at this transition point it is preferable to look at the expectations of the students themselves. Therefore, we assess the influence of students' beliefs about their own probabilities of success. Third, the literature on field choice is growing fast (see Gerber & Cheung, 2008 for an overview). However, we are not aware of any study in which success probabilities are incorporated in the explanatory model to predict field choice. We analyse the school transition after higher secondary education, when students decide on the level at which they want to continue their educational career *and* their preferred field of study. This leads to the following research questions:

1. *To what extent are social origin, sex and ethnicity related to students' expected probabilities of success for tracks in higher education that differ in level and field of study?*
2. *To what extent does ability explain the relation between social origin, sex and ethnicity and these success probabilities?*
3. *To what extent do students' expected success probabilities explain the effect of social origin, sex and ethnic background on choices of level and field of study in higher education, next to ability?*

To answer our research questions, we use the Dutch data set *Participation in Higher Education* waves 1995 and 1997. The richness of this data set is unique. It includes measures of educational aspirations, information on students' economic resources, a wide array of ability measures and, most importantly, detailed information on students' beliefs about their chances of success – that is, their subjective success probabilities – for different tracks in higher education. We analyse the school transition after higher secondary education. At this point, various educational options are offered, differing in both level of schooling and field of study.

6.2 EXPECTATIONS

In this study we focus on the role of success probabilities in school decisions. However, to assess its influence properly, we need to control for two other mechanisms relevant to the cost-benefit evaluation on which school decisions are based: the utility of educational outcomes and (in)direct costs of studying. We first discuss our expectations regarding the likely returns to schooling and the impact of differences in students' economic resources.

An important assumption of Breen and Goldthorpe (1997) is that of 'relative risk aversion': everyone's main aspiration is to avoid downwards mobility. Consequently, educational aspirations differ between social classes. Students whose parents have higher social positions are expected to remain in the educational system longer than students with the same ability level but from lower social strata, since students with parents of lower social origins will have satisfied their social aspiration (avoidance of downwards mobility) earlier in their educational career.

Most empirical tests of the relative risk aversion mechanism seem to support it: social aspirations (i.e. the avoidance of downwards mobility) have a pivotal role in explaining how social class affects school decisions. Unfortunately, our data set lacks the theoretical constructs to operationalise parental social class. However, several studies have shown that relative risk aversion also holds when social origin is operationalised as highest parental educational attainment (Davies et al., 2002; Need & De Jong, 2000); students make decisions (together with their parents) so as to minimize the risk of ending up with an educational level lower than that of their parents. Need and De Jong (2000) and Need *et al.* (2001) show not only that students differ in their educational aspirations in relation to their social origins, but also that men and women students have different ambitions. Differences in educational aspirations between men and women explain (in part) sex differentials in educational decisions (Need & De Jong, 2000). Given these considerations we formulate the following hypothesis: *Educational aspirations explain (in part) the effect of social origin, sex and ethnicity on level choice in higher education (Hypothesis 1).*

We assume that in general, the social returns differ more between the two levels of higher education than across fields within these levels. Choices for study subjects may be driven by concerns for acquiring specific types of knowledge as well (Van de Werfhorst, Sullivan, & Cheung, 2003). Based on the relative risk aversion mechanism, we expect that differences across social origins in field choice are less pronounced than differences with respect to level choice.

Students' perceptions of the costs of education differ according to the level of schooling, field of study, and the availability of economic resources. Although parental income is closely

related to the available economic resources of the parents, parental contributions to cover their child's study costs is probably an even better indicator of the availability of economic resources to the student and consequently of the direct costs students incur related to higher education. We also take into account students' ambition to finish school as soon as possible. We assume this aspiration is related to the importance of foregone income, the indirect cost of studying. This leads to our second hypothesis: *Differences in parental contribution to study costs and students' ambition to finish school as soon as possible explain (in part) the effect of social origin, sex and ethnicity on track choice in higher education (Hypothesis 2).*

Next to the expected utility of educational outcomes and the (in)direct costs related to studying, the perceived likelihood of future success in the school career is assumed to influence school transition decisions. Breen and Goldthorpe (1997) argue that the average expectation of educational success is lower among students of the lower social strata, because average ability levels differ according to social origin. Hence, in similar circumstances, students from less favourable social backgrounds will choose less demanding educational tracks. In the Netherlands, these primary effects are responsible for approximately 58 per cent of social origin-based inequality in the transition to higher levels of Dutch secondary education after primary school (Kloosterman, Ruiter, De Graaf, & Kraaykamp, 2009). Although ability is assumed to affect school choices through its influence on subjective success probabilities, the subjective success probabilities themselves seldom appear in explanatory models for school decisions (for an exception, see Stocké, 2007).

In this study, we examine the extent to which ascribed characteristics are related to differences in success probabilities and the degree to which previously demonstrated ability accounts for these differentials. Furthermore, we test whether success probabilities explain the effect of ascribed characteristics on educational choices. We hypothesise that: *Better able students estimate their chances of success in higher education higher than students with lower abilities (Hypothesis 3).*

Breen (1999) argues that following a Bayesian model of learning it is likely that beliefs of expected future school success of children from higher social origins are more heavily influenced by effort relative to ability than beliefs of lower social origins. This implies that the impact of ability on success probabilities is weaker for higher social origins. We assume that ethnic minorities have in general less knowledge of the Dutch schooling system compared to native Dutch. As a consequence they may be less aware that there is more than ability that makes for a successful schooling career and hence base their beliefs of future success more on ability than native Dutch. We see no theoretical argument why men and women would differ in the relationship between ability and success probabilities. Thus we expect that: *The impact of ability on success probabilities is weaker for higher social origins than for lower social origins (Hypothesis 4a); The impact of ability on success probabilities is weaker for native Dutch than for ethnic minorities (Hypothesis 4b).*

The probability of success will influence school track decisions and since we expect differences in success probabilities across ascribed characteristics, partly because of differences in ability, we formulate the following hypotheses: *Success probabilities explain (in part) the effect of social origin, sex and ethnicity on students' choices between different levels of schooling and fields of study in higher education (Hypothesis 5); Ability explains (in part) the effect of success*

probabilities on students' choices between different levels of schooling and fields of study in higher education (Hypothesis 6).

Finally, according to the relative risk aversion mechanism it is to be expected that probability of success has a differential impact on school transition decisions across social origins. In order to avoid downwards mobility, students from higher social origins are more likely to opt for the more demanding levels even if their expected success probabilities are relatively low (Breen & Yaish, 2006). Thus: *The impact of success probabilities on track choice within higher education is weaker for higher social origins than for lower social origins (Hypothesis 7).*

We do not have *a priori* expectations regarding differences in the impact of success probabilities on track choice across ethnic groups or among men and women but will investigate this possibility in an exploratory fashion.

6.3 DATA, MEASUREMENTS AND METHODS

To answer our research questions we use the data set *Participation in Higher Education* wave 1995 and 1997. This data set was collected by the SCO-Kohnstamm Institute and the Foundation for Economic Research (SEO). In 1995 and 1997, first-year students in Dutch higher education received a questionnaire concerning their motivations, schooling expectations and labour-market prospects. Students were selected to obtain a representative sample of pupils in institutes of higher learning (professional college or university), fields of study and the university or professional college attended.

In the Netherlands, after completing university-preparatory secondary school ('VWO'), students can choose between two levels of higher education: professionally oriented college ('HBO') and university. Both these levels offer a wide array of academic disciplines. We expect that individual differences in success probabilities will be most pronounced between science and non-science fields. We therefore grouped the educational tracks in higher education into four categories: professional college–science, professional college–non-science, university–science, university–non-science. The choice between these four educational options is our main dependent variable. An advantage of this categorization is that students with different ascribed characteristics are sufficiently present in each track to test our hypotheses and that both categories contain fields with high and low economic payoffs. If students expect more social returns from specific fields, the application of rational choice theory to these choices is more or less similar as in other studies predicting level of education. It is beyond the scope of the study presented in this chapter to explicitly incorporate the hierarchy between fields within the same educational level (cf. Ayalon & Yogev, 2005; Van de Werfhorst et al., 2001).

Our data set includes no information on students who did not continue their educational career after completion of university-preparatory secondary school. However, these students form a small minority, approximately 10 per cent in 1996 (Statistics Netherlands, 2007).

Students' success probabilities are treated as a dependent variable prior to the analysis regarding decisions on the further educational career. The students were asked to rate their likelihood of success, in percentages, for different courses of study in higher education irrespective

of their current track choice and if applicable, after a year in vocational college to meet the enrolment requirements for university tracks. *Success probability professional college–science* is the student’s mean success probability for majors in electrical engineering, computer science and laboratory technician (chemistry) at the professional college level. Similarly, *success probability university–science* is the mean score for majors in electrical engineering, computer science and chemistry at the university level. *Success probability professional college–non-science* is the mean score for majors in communication studies and elementary school teaching. *Success probability university–non-science* is the mean success probability score for majors in law, communication studies and history. Since students had only minimal experience with higher education at the time of the interview, we assume that their beliefs have not changed substantially compared to before the track choice.

Highest parental education is measured in five categories: (1) primary school, lower vocational education (‘LBO’) and lower general education (‘MAVO’); (2) intermediate vocational education (‘MBO’); (3) higher general education and pre-university education (‘HAVO’ and ‘VWO’); (4) professional college (‘HBO’); and (5) university. *Sex* was coded as (0) man and (1) woman. Turks, Moroccans, Surinamese and Antilleans are the main ethnic minority groups in the Netherlands and formed 6 per cent of the Dutch population in 1997 (Statistics Netherlands). *Ethnic background* is therefore measured in four categories: (1) Dutch; (2) Turks and Moroccans; (3) Surinamese and Antilleans; (4) other ethnic background. The last category contains predominantly western ethnic minorities. The country of birth of the mother was decisive for the categorization. If the mother was born in the Netherlands and the father in a foreign country, then the father’s country of birth was decisive.

After primary school, pupils in the Netherlands receive a teacher’s recommendation for an appropriate track of secondary school. This recommendation is generally strongly influenced by the pupil’s score on a nationally standardised scholastic achievement examination developed by CITO (www.cito.nl). Most pupils take this exam in their last year of primary school. We use this *recommendation after primary school*, which is retrospectively asked to students, as an indicator for early demonstrated ability. It consists of six categories: (1) below lower general education; (2) lower general education; (3) between lower and higher general education; (4) higher general education; (5) between higher general education and pre-university education; and (6) pre-university education. We also computed a *mean grade score* of students’ grades in secondary school as an indicator for later demonstrated ability. Students’ grades for Dutch are excluded since we expect this grade to be correlated with ethnic background – net of ability. Students in secondary school have some freedom to choose the subjects they want to take exams in. Science subjects are generally considered to be more difficult than non-science subjects. We therefore counted the *number of science subjects* in which students took exams in secondary school.¹ Our explanatory model for success probabilities also takes into account students’ *exam results* in higher education as an indicator of recent demonstrated ability. Answer categories are (1) no examinations yet administered; (2) did not participate in examinations; (3) passed examinations; and (4) failed examinations.

Parental income is the log of the sum of father’s income plus mother’s income per month after taxes according to the child, subtracted by the log of mean parental income. The

questionnaire provided income categories to facilitate students' estimations. We used the middle value of each category. The net family income was set at a minimum of 400 euros. *Parents' contribution to study costs* is measured in euros. Study costs are lower for students who live with their parents, so we include a dummy variable *living at home* (1) and not living at home (0). To capture to some extent the importance of foregone income, understood as indirect cost of studying, we asked students to what extent they agreed with the following statement: 'I am devoting all of my time to finish school as soon as possible.' Answer categories range from (0) completely disagree to (10) completely agree. We label this variable *finish school ASAP*, where higher scores indicate a stronger motivation to finish school as soon as possible.

To measure *higher education aspirations* we asked students to what extent they agreed with the statement 'I have had a lot of doubts about whether to continue my educational career.' Answer categories range from (10) completely disagree to (0) completely agree. Higher scores on this variable indicate stronger aspirations for higher education. *University aspirations* is measured as agreement with the statement, 'I have long had doubts about whether to go to a professional college or a university.' Answer categories range from (10) completely disagree to (0) completely agree. We reversed the scoring for students currently enrolled in a professional college so that higher scores indicate stronger aspirations for a university degree.

For categorical variables we included a category for respondents with missing values. For interval variables, we replaced missing values with mean values and constructed dummy variables to indicate if missing values were imputed. Interval variables are centred around the mean value to facilitate interpretation. Respondents with missing values on all four success probabilities were excluded from the analyses.

The success probabilities for the four educational options were nested in individual students. We applied hierarchical linear random intercept models to control for a possible correlation between the success probabilities of individual students. Dummy variables were used to relate the success probability score to the relevant educational option.

To test whether success probabilities and the other theoretical constructs of the Breen-Goldthorpe model explain social origin, sex and ethnicity differentials in the choice between the four mutually exclusive options in higher education, we used a multinomial conditional logit model. Success probabilities differ across the educational options and across students; the other explanatory variables vary across individuals only.

For the analyses regarding success probabilities, we selected students who had completed higher general secondary education ('HAVO') or university-preparatory secondary education ('VWO') and enrolled in further education for the first time ($N=6,790$). To explain the track decision in higher education, we selected students who had completed university-preparatory secondary school ('VWO') and enrolled in higher education for the first time ($N=4,615$). The choice for professional college is a less standard choice for this group of students, although with 17 per cent of VWO graduates opting for a professional college in our sample not a rare one. Students who finished higher general secondary education ('HAVO') have only the two professional college options available to them, and are therefore excluded from the analyses regarding the transition to higher education. Table 6.1 summarises the descriptive statistics.

Table 6.1 Descriptives and bivariate relations between ascribed characteristics and ability, aspirations and study costs^a

	Descriptives				Bivariate relationships							
	N	%	Mean	SD	Mean grade score secondary school		University aspirations		Parental contribution to study costs			
					Mean	F	Mean	F	Mean	F		
N=4699												
Men	2492	53			6.9	8.1**	5.8	4.7*	279	8.5**		
Women	2207	47			6.7		4.8		283			
Native Dutch	4147	88			6.8	7.6**	5.3	7.7**	283	4.5**		
Surinamese/Antilleans	82	2			6.5		5.0		216			
Turks/Moroccans	47	1			6.6		5.4		179			
Other	423	9			6.8		6.2		288			
Social background												
Parental education												
Primary, lower vocational and lower general	1041	22			6.69	24.7**	4.2	111.6**	214	34.8**		
Intermediate vocational	497	11			6.76		4.4		256			
Higher general and pre-university	602	13			6.83		5.2		267			
Professional college	1231	26			6.84		5.4		297			
University	1281	27			6.97		7.4		370			
Parental income			2377	1033								
Ability												
Mean grade score secondary school			6.9	0.9								
Number of science subjects secondary school			3.1	1.4								
Recommendation after primary school												
Below lower general	74	2										
Lower general	136	3										
Lower general to higher	295	6										
General	330	7										
Higher general	1542	33										

Continued on next page

Table 6.1 continued

Pre-university	2303	49	
Missing	19	0	
Educational aspirations			
Higher education aspiration		9.3	2
University aspiration		7.4	3.3
Proxies for study costs			
Parental contribution to study costs		24.0	29.7
Living at home	40		
Study tempo		5.4	2.7
Exam results higher education			
No examinations	375	8	
Did not participate in examinations	70	2	
Passed examinations	3695	79	
Failed examinations	536	11	
Success probabilities			
Professional college–science		49.2	29.7
Professional college–non-science		76.4	20.3
University–science		40.5	28.4
University–non-science		66.7	22.1
Educational choice			
Professional college–science	189	4	
Professional college–non-science	586	13	
University–science	1348	29	
University–non-science	2492	53	

* $p < 0.05$, $p <^{**} 0.01$ (two sided test of significance)

^a Descriptive statistics are shown for the sample to explain the track choice in higher education after university-preparatory secondary education.

6.4 RESULTS

6.4.1 Descriptives

According to the Breen-Goldthorpe model, three mechanisms explain the effect of social origin on school decisions: (1) primary effects, which is to say, ability is related to social background and ability influences school decisions since it determines the subjective likelihood of success in the various educational tracks; (2) relative risk aversion, which states that children from more advantaged backgrounds have higher educational aspirations since the main aim of all social classes is to avoid downwards mobility; and (3) availability of economic resources, by which children from more advantaged backgrounds have more resources to cushion the costs of studying. Table 6.1 confirms that among students currently enrolled in higher education, those from more advantaged backgrounds earned higher grade point averages in secondary school, they had stronger aspirations to study at the university level and had parents who contributed more to cover their study costs.

The mechanisms of the Breen-Golthorpe model for explaining school decisions are assumed to be universal; they should explain not only the effect of social background on educational decisions but also the effects of sex and ethnicity on these decisions. That said, ability, educational aspirations and study costs can explain the effect of sex and ethnicity on school decisions only if they vary between men and women and across ethnic groups. Table 6.1 shows that women currently in higher education have a lower grade point average in secondary education than men and their ambition to study at the university level is lower than that of their male counterparts. On the other hand, women in higher education receive higher parental contributions to pay for their study costs than men, although this difference is not very substantial. Compared to the other ethnic groups, Surinamese and Antilleans have the lowest grade point average, followed by Turks and Moroccans. The native Dutch, together with the 'other ethnic groups' category (mostly western ethnic minorities), have the highest grade point average. The Surinamese and Antillean students have the lowest university aspirations. On the other hand, Turks and Moroccans have slightly higher aspirations than the native Dutch. The western immigrants have by far the highest aspirations, possibly because this group includes students whose motive for coming to the Netherlands was education-related. Differences in parental contribution to study costs across ethnic groups are substantial. We thus conclude that the three mechanisms of the Breen and Goldthorpe model should – in principle – be able to explain the effect of sex and ethnic background on school decisions.

Table 6.2 Hierarchical random intercept models explaining subjective success probabilities^a

	Model 0		Model 1		Model 2		Model 3		Model 4	
	b	p	b	p	b	p	b	p	b	p
Intercept	53.33**	0.00	84.36**	0.00	76.81**	0.00	72.58**	0.00	72.67**	0.00
(=Professional college–non–science)										
Professional college–science			-27.09**	0.00	-12.78**	0.00	-12.78**	0.00	-12.78**	0.00
University–science			-35.96**	0.00	-22.38**	0.00	-22.36**	0.00	-22.36**	0.00
University–non–science			-13.08**	0.00	-11.05**	0.00	-11.03**	0.00	-11.03**	0.00
Women (men=reference)			-8.60**	0.00	6.39**	0.00	11.12**	0.00	11.10**	0.00
Professional college–science*women					-28.66**	0.00	-28.70**	0.00	-28.70**	0.00
University–science*women					-27.23**	0.00	-27.33**	0.00	-27.33**	0.00
University–non–science*women					-4.09**	0.00	-4.14**	0.00	-4.14**	0.00
Ethnic group (other=reference)										
Dutch			-1.52*	0.05	-1.51~	0.06	-1.33~	0.05	-1.40*	0.04
Surinamese/Antilleans			-2.11	0.21	-2.13	0.20	0.42	0.77	0.76	0.63
Turks/Moroccans			1.16	0.55	1.13	0.56	3.81*	0.02	3.24~	0.07
Parental education (university=reference)										
Primary, lower vocational and lower general			-10.18**	0.00	-10.18**	0.00	-4.55**	0.00	-4.43**	0.00
Intermediate vocational			-8.94**	0.00	-8.93**	0.00	-3.80**	0.00	-3.88**	0.00
Higher general and pre-university			-6.18**	0.00	-6.19**	0.00	-1.90**	0.00	-1.93**	0.00
Professional college			-5.23**	0.00	-5.23**	0.00	-2.11**	0.00	-2.12**	0.00
LN (parental income) (centred)			1.97**	0.00	1.97**	0.00	1.48**	0.00	1.57**	0.00
Ability										
Recommendation after primary school										
(pre-university=reference)										
Below lower general							-2.51*	0.02	-2.59*	0.02
Lower general							-3.19**	0.00	-3.16**	0.00

Continued on next page

Table 6.2 continued

Lower general to higher general	-4.40**	0.00	-4.40**	0.00
Higher general	-3.41**	0.00	-3.43**	0.00
Higher general to pre-university	-2.66**	0.00	-2.69**	0.00
Mean grade score secondary education (centred)	4.46**	0.00	4.43**	0.00
Mean grade score secondary education squared	0.59*	0.02	0.65**	0.01
Number of exact subjects secondary education (centred)	3.32**	0.00	3.31**	0.00
Number of exact subjects secondary education squared	0.15~	0.10	0.15	0.11
Exam results higher education (failed exams=reference)				
No exams	-0.15	0.87	-0.16	0.86
Did not participate in exams	2.71	0.11	2.67	0.11
Passed exams	2.82**	0.00	2.82**	0.00
Mean grade score secondary education*Parental education (university=reference)				
Mean grade score secondary education*Primary, lower vocational and lower general			1.56	0.01
Mean grade score secondary education*Intermediate vocational			0.32	0.69
Mean grade score secondary education*Higher general and pre-university			0.70	0.40
Mean grade score secondary education*Professional college			0.90	0.14
Mean grade score secondary education*LN(parental income)			0.93	0.03
Mean grade score secondary education*Ethnic group (other=reference)				
Mean grade score secondary education*Dutch			-0.71	0.33
Mean grade score secondary education*Surinamese/Antilleans			0.49	0.77
Mean grade score secondary education*Turks/Moroccans			-2.08	0.30
Variance components				
Observations (level 1) N=27160	696.85	0.00	447.21	0.00
Individuals (level 2) N=6790	172.15	0.00	121.79	0.00
			390.63	0.00
			135.36	0.00
			135.24	0.00

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a Control variables also in the model: dummies for missing success probability, parental education, parental income and ability; previous track in secondary education.

6.4.2 Success probabilities

Table 6.2 shows the results of a hierarchical random intercept model with the four subjective success probabilities (one per educational option, level 1) nested in the individual students (level 2). With Table 6.2 we test whether differences in ability cause analogous differentiation in students' subjective probability of educational success (hypothesis 1). The subjective probability of success differs across educational levels and fields of study. On average, men perceive their chances of success at the professional college level in non-science fields as approximately 84 per cent, as shown by the constant in model 1 (Table 6.2). Science fields within professional colleges are considered to be more difficult than non-science fields at the university level; success probabilities are 57.27 per cent ($84.36 + -27.09$) versus 71.27 per cent ($84.36 + -13.08$), respectively.

On average women estimate their chances 8.60 per cent lower than men (Table 6.2, model 1). This stems from the fact that women estimate their chances within science fields approximately 21 per cent lower than men ($6.39 + -27.23$; Table 6.2, model 2). On the other hand, women estimate their chances within non-science fields somewhat (but significantly) higher than men: 6 per cent higher for the professional college–non-science track (as shown by the main effect of 'women') and 2 per cent higher for the university–non-science track (i.e. $6.39 + -4.09$; Table 6.2, model 2).

Native Dutch students estimate their chances 1.52 per cent lower than western ethnic minorities. The success probabilities of Surinamese/Antileans and Turks/Moroccans do not significantly deviate from the success probabilities of western ethnic minorities. Students from more advantaged backgrounds estimate their success probabilities higher on average; students whose parents have maximally attained a degree from a professional college estimate their chances 5.23 per cent lower than students with at least one parent with a university degree. Students with richer parents estimate their likelihood of success higher than poorer students (Table 6.2, model 1 and 2).

Model 3 adds ability to model 2. Ability is an important determinant of the subjective likelihood of success in higher education; the explained variance of model 3 increased by 7.6 per cent compared to model 2.² Students whose teacher's recommendation after primary school was below higher general secondary education estimate their chances lower than students whose primary school teacher recommended a higher secondary school level. Both the main effects and the squared effects of mean grade point average and number of science subjects are significant (at $\alpha=0.10$, two-tailed). The effect of the mean grade point average in secondary school on the success probabilities increases the higher the grade point average is. The same holds for the number of science subjects taken in secondary school. Students who failed their first exams estimate their success probabilities approximately 3 per cent lower than students who passed their first exams (Table 6.2, model 3).

After controlling for these ability measures, the main effect of being a women increases from 6.39 to 11.12, implying that women's underestimation of their success probability in science subjects diminished by some 5 per cent in comparison with men and their overestimation of their success probability in non-science fields increased by 5 per cent (model 3). On average, the differences between men and women almost halved; from -8.60 (model 1) to -3.39 (not shown).

These results support hypothesis 1. Whereas differences in success probabilities across parental education and parental income categories diminished significantly and substantially (25 to 40 per cent) after taking into account ability differences, differences between native Dutch and Turks/Moroccans became (significantly) more pronounced after controlling for ability; Turks/Moroccans estimate their success probabilities approximately 5 per cent higher than native Dutch (3.81 - - 1.33; Table 6.2, model 3). This said, even if we take into account ability differences, effects of ethnicity and of social origin on success probabilities are relatively small compared to sex effects.

Contrary to our expectation (hypotheses 4), the effect of ability on the success probabilities is not lower for students from higher social origins or for native Dutch. The expectations of success of students whose parents have higher income levels are even more closely related to the mean grade points in secondary school ($b=0.93$; $p=0.03$; Table 6.2, model 4). We obtain similar conclusions if we interact 'recommendation after primary school' or 'number of exact subjects in secondary school' with social origin and ethnic group (results not shown). We conclude that ability – at least as operationalised in this study – is an important, albeit not a perfect, indicator for the success probabilities of the students.

6.4.3 Educational transition decisions

Next, we discuss the results of the conditional multinomial logit model which refers to the track choice in higher education (Table 6.3 and 6.4). Table 6.3 summarises the results for the contrast university–non-science versus professional college–non-science. Table 6.4 summarises the results for the contrast university–non-science versus university–science. The odds to continue the educational career at the university–non-science track versus at the professional college–non-science track is lower for women than for men: the logit is -0.28 ($p=0.00$) (Table 6.3, model 1). If ethnic minorities continue on to higher education, they are more likely than the native Dutch to do so at the university level (only the odds with respect to non-science fields are shown, Table 6.3). These findings are in agreement with the findings presented in Chapter 5, in which the same time period is studied using different data.

Compared to students whose parents are university graduates, students from less advantaged social origins are less likely to opt for a university–non-science study than for a professional college–non-science study. Note that parental education has a non-linear effect on these odds, as the Breen and Goldthorpe model predicts (cf. Davies et al., 2002); the relative chance to continue at the university versus the professional college level is the same for students whose parents completed the professional college level and for students whose parents attained an intermediate or higher general education.

In model 2a, 2b and 2c we control in a stepwise procedure for the three mechanisms specified in the Breen and Goldthorpe model, successively, for factors related to study costs, for educational aspirations and for ability. Students who receive more money from their parents, students who live at home and students who are less eager to finish school as soon as possible are more likely to study at the university level. For example, the odds of studying a non-science field at a university versus at a professional college increases by 8 per cent for every 100 euros extra a student receives from his or her parents ($b=0.08$ ($EXP(0.08)=1.08$); $p=0.00$, model 2a, Table 6.3).

Table 6.3 Multinomial conditional logistic regression explaining track choice in higher education. Contrast shown: university–non-science versus professional college–non-science^a

	Model 1		Model 2a		Model 2b		Model 2c		Model 3		Model 4	
	b	p	b	p	b	p	b	p	b	p	b	p
Constant	2.99**	0.00	3.03**	0.00	3.53**	0.00	3.65**	0.00	3.89**	0.00	9.24**	0.01
Women (men=reference)	-0.28**	0.00	-0.27**	0.01	-0.08	0.46	-0.02	0.85	0.01	0.94	0.08	0.51
Ethnic group (other=reference)												
Native Dutch	-0.39*	0.03	-0.42*	0.02	-0.40*	0.05	-0.43*	0.04	-0.33	0.12	-0.38~	0.07
Surinamese/Antilleans	-0.28	0.48	-0.19	0.64	-0.26	0.56	-0.29	0.53	-0.25	0.58	-0.35	0.44
Turks/Moroccans	0.07	0.88	0.17	0.71	-0.92~	0.06	-0.85~	0.09	-0.99~	0.05	-0.96~	0.06
Parental education (university=reference)												
Primary, lower vocational and lower general	-1.12**	0.00	-0.84**	0.00	-0.45**	0.01	-0.43*	0.02	-0.42*	0.02	-0.39*	0.03
Intermediate vocational	-1.00**	0.00	-0.77**	0.00	-0.56**	0.01	-0.54**	0.01	-0.60**	0.00	-0.54*	0.01
Higher general and pre-university	-0.91**	0.00	-0.75**	0.00	-0.50**	0.01	-0.51**	0.01	-0.48*	0.02	-0.49*	0.02
Professional college	-0.96**	0.00	-0.78**	0.00	-0.51**	0.00	-0.49**	0.00	-0.50**	0.00	-0.49**	0.01
LN (parental income)	0.51**	0.00	0.41**	0.00	0.39**	0.00	0.37**	0.00	0.37**	0.00	0.36**	0.00
Study costs												
Parental contribution to study costs			0.08**	0.00	0.06**	0.01	0.06**	0.01	0.07**	0.00	0.06**	0.01
Living at home (not living at home=reference)			0.59**	0.00	0.48**	0.00	0.46**	0.00	-0.48**	0.00	-0.46**	0.00
Study tempo			-0.07**	0.00	-0.11**	0.00	-0.12**	0.00	-0.12**	0.00	-0.13**	0.00
Educational aspirations												
Higher education aspirations			0.00	0.98	0.00	0.98	0.01	0.81	0.01	0.79	0.01	0.72
University aspirations			0.32**	0.00	0.32**	0.00	0.32**	0.00	0.32**	0.00	0.31**	0.00
Ability												
Mean grade score secondary education							0.39**	0.00			0.28**	0.00
Mean grade score secondary education squared							-0.12	0.19			-0.13	0.18
Number of science subjects secondary education							0.04	0.34			0.11*	0.02
Number of science subjects secondary education squared							0.02	0.47			0.04	0.23
Success probabilities									0.05**	0.00	0.03**	0.00

** p<0.01; * p<0.05; ~ p<0.10 (two sided test of significance)

^a Control variables also in the model: dummies for missing parental education, parental income, study costs, aspirations and ability; recommendation after primary school.

These proxies for the cost of studying explain part of the effect of social origin (approximately 25 per cent), but do not explain why sex and ethnic group affect the decision between university–non-science and professional college–non-science.

As expected, students with higher university aspirations are more likely to study at the university ($b=0.32$; $p=0.00$, model 2b, Table 6.3). More importantly, differences in university aspirations fully explain why women are less likely than men to opt for a university–non-science study. Compared to model 1, controlling for study costs and educational aspirations reduces the effect of parental education by approximately 50 per cent.

Model 2c includes the ability variables. The number of exact subjects in secondary school and the teacher's recommendation after primary school do not affect the choice between university and professional college. Although students with a higher grade point average in secondary education are more likely to continue on to the university, surprisingly, ability differences do not explain the effects of parental education and ethnicity on the choice between a non-science field of study at the university level versus at the professional college level.

Model 3 includes the success probabilities, which vary across educational options and students. If the difference in the subjective likelihood of success between the two options increases by 1 per cent, the odds of choosing the option with the highest subjective likelihood of success increases by 5 per cent ($b=0.05$; $p=0.00$, model 3, Table 6.3). After including our measures of demonstrated ability as well, the effect of success probabilities falls to 0.03 (model 4, Table 6.3). This confirms hypothesis 6. But although success probabilities influence school decisions – even after controlling for previously demonstrated ability – success probabilities do not explain the effect of social origin and ethnicity on level choice in higher education. This is contrary to our expectation as formulated in hypothesis 5.

Factors related to study costs, educational aspirations and success probabilities all contribute to the explanation of the decision of what level of higher education to attend. The items related to study costs and educational aspirations explain *how* parental education affects the choice between a non-science study at the university level and at the professional college level. Moreover, educational aspirations are the most important explanation for the effect of sex on the decision between levels in higher education. So far our findings are in line with the predictions of the Breen and Goldthorpe model. On the other hand, aspiration differences suppress differences across ethnic groups. Surprisingly, neither demonstrated ability nor (gradients in) success probabilities explain the effect of ascribed characteristics on the decision between a non-science field at the university or professional college level.

Table 6.4 Multinomial conditional logistic regression explaining track choice in higher education. Contrast shown: university–non-science versus university–science^a

	Model 1		Model 2a		Model 2b		Model 2c		Model 3		Model 4	
	b	p	b	p	b	p	b	p	b	p	b	p
Constant	-0.09	0.53	0.29	0.37	0.34	0.30	0.90*	0.02	-0.11	0.63	-9.28**	0.00
Women (men=reference)	1.63**	0.00	1.62**	0.00	1.60**	0.00	1.18**	0.00	0.85**	0.00	0.79**	0.00
Ethnic group (other=reference)												
Native Dutch	-0.07	0.61	-0.08	0.54	-0.07	0.56	0.10	0.53	0.02	0.91	0.11	0.49
Surinamese/Antilleans	-0.08	0.80	-0.06	0.83	-0.04	0.89	0.36	0.28	0.41	0.23	0.48	0.18
Turks/Moroccans	0.53	0.18	0.57	0.16	0.64	0.11	0.83~	0.07	0.81~	0.08	0.81~	0.10
Parental education (university=reference)												
Primary, lower vocational and lower general	0.26*	0.02	0.33**	0.00	0.29**	0.01	-0.06	0.67	0.15	0.29	-0.05	0.72
Intermediate vocational	0.16	0.24	0.23	0.11	0.17	0.22	-0.15	0.38	0.04	0.82	-0.14	0.44
Higher general and pre-university	0.18	0.14	0.21	0.09	0.16	0.21	-0.17	0.24	0.08	0.60	-0.10	0.51
Professional college	-0.12	0.22	-0.08	0.41	-0.12	0.23	-0.26*	0.03	-0.21~	0.07	-0.27*	0.03
LN (parental income)	0.42**	0.00	0.43**	0.00	0.45**	0.00	0.36**	0.00	0.28~	0.00	0.25*	0.02
Study costs												
Parental contribution to study costs			-0.02	0.13	-0.02	0.16	0.02	0.19	0.00	0.88	0.02	0.23
Living at home (not living at home=reference)			0.43**	0.00	0.44**	0.00	0.50**	0.00	-0.29**	0.00	-0.35**	0.00
Study tempo			-0.02	0.20	-0.01	0.39	0.02	0.32	-0.01	0.60	0.01	0.57
Educational aspirations												
Higher education aspirations			-0.05*	0.03	-0.05*	0.03	-0.03	0.16	-0.05~	0.05	-0.03	0.22
University aspirations			-0.07**	0.00	-0.07**	0.00	0.00	0.80	-0.05**	0.00	-0.01	0.74
Ability												
Mean grade score secondary education							-0.56**	0.00			-0.41**	0.00
Mean grade score secondary education squared							-0.06	0.31			-0.01	0.85
Number of science subjects secondary education							-1.77**	0.00			-1.24**	0.00
Number of science subjects secondary education squared							0.47**	0.00			0.39**	0.00
Success probabilities									0.05**	0.00	0.03*	0.00

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a Control variables also in the model: dummies for missing parental education, parental income, study costs, aspirations and ability; recommendation after primary school

Next, we investigate the odds of choosing a non-science field of study versus a science field at the university level (Table 6.4). Compared to men, women are more likely to opt for a non-science field than for a science field ($b=1.63$, $p=0.00$; model 1, Table 6.4). The popularity of science and non-science fields does not significantly differ across ethnic groups or parental education categories. On the other hand, students whose parents earn more are more likely to choose a non-science field. This is possibly because next to social returns, economic returns to education influence school decisions as well (Becker, 1964), and students possibly estimate their life-long earnings after a non-science study to be higher than those after a science study. Unfortunately, our data set lacks information on economic aspirations and expected economic returns after different options in higher education.

Model 2a controls for factors related to study costs. Here we see that students who continue to live at home are typically science students ($b=-0.43$, $p=0.00$; model 2a, Table 6.4). Students with stronger higher education and university aspirations have a greater tendency to choose science fields (model 2b) as well, but this effect is explained by demonstrated ability (model 2c). The higher the students' grade point average, the more likely they are to opt for a science field compared to a non-science field ($b=-0.56$, $p=0.00$; model 2c, Table 6.4). Unsurprisingly, the more exact disciplines students' took in secondary school, the more likely they are to opt for an exact field of study at the university.

Ability explains the effect of sex and parental income on the odds of choosing a non-science versus a science field at the university level; the effect of sex diminished from 1.60 (model 2b) to 1.18 (model 2c), the effect of parental income fell from 0.45 (model 2b) to 0.36 (model 2c). Turkish and Moroccan students are significantly more likely to opt for a non-science field than a science field compared to western immigrants (and the native Dutch) once we take into account ability differences. Students whose parents studied at the professional college level are less likely to opt for a non-science field than students whose parents studied at the university level, after controlling for ability ($b=-0.26$, $p=0.03$; model 2c, Table 6.4). Possibly, because students with university-educated parents aim to avoid downwards mobility, they are less eager to risk enrolling in a difficult – science – field. Students whose parents were educated at the professional college level could avoid downwards mobility even after failing at the university by enrolling in a professional college.

We already saw that gradients in success probabilities across educational options influence students' educational decisions (Table 6.3). Naturally, within our conditional logit model specification, this choice-specific coefficient is similar in Table 6.4 and Table 6.3. Differences between men and women in gradients across options which differ by level were much smaller than differences in gradients across options which differ by field (see above). This is probably why success probabilities do not explain the effect of sex on the choice of level of schooling (Table 6.3) but do explain the effect of sex on field choice; the effect of sex fell from 1.60 (Table 6.4, model 2b) to 0.85 (model 3). The effect of parental income on field choice almost halved after taking into account success probabilities. We thus find strong evidence in support of hypothesis 5: success probabilities explain the effect of social origin and sex on educational choices which differ by field.

Table 6.5 The impact of success probabilities on the log-odds for specific tracks in higher education^a

	Model 1		Model 2		Model 3		Model 4	
	b	p	b	p	b	p	b	p
Impact of success probability on specific track choices ^b								
University-science	0.37**	0.00	0.38**	0.00	0.39**	0.00	0.39**	0.00
University-non-science	0.33**	0.00	0.33**	0.00	0.34**	0.00	0.37**	0.00
Professional college-science	0.48**	0.00	0.50**	0.00	0.51**	0.00	0.49**	0.00
Professional college-non-science	0.18**	0.00	0.18**	0.00	0.18**	0.00	0.21**	0.00
Track choice*parental education (not-university=reference)								
University-science*university			-0.04	0.33	-0.06	0.21		
University-non-science*university			-0.02	0.58	-0.04	0.38		
Professional college-science*university			-0.09	0.44	-0.11	0.36		
Professional college-non-science*university			-0.02	0.80	-0.03	0.73		
Track choice*LN(parental income)								
University-science*LN (parental income)					0.04	0.31		
University-non-science*LN (parental income)					0.05	0.27		
Professional college-science*LN (parental income)					0.05	0.54		
Professional college-non-science*LN (parental income)					0.02	0.68		
Track choice*sex (men=reference)								
University-science*women							-0.07~	0.10
University-non-science*women							-0.11**	0.01
Professional college-science*women							0.02	0.82
Professional college-non-science*women							-0.09	0.15

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a All individual characteristics as shown in Table 3, model 4 are included but not shown for reasons of parsimony, since the parameter estimates of individual characteristics are track choice dependent. All estimates have been multiplied by 10, to facilitate interpretation.

^b The impact of the expectation of success for a specific track on the odds to enrol in this specific track deviates significantly (at the $\alpha < 0.10$ two-sided significance level) between all tracks.

Model 4 includes both the ability measures and the success probabilities in the explanatory model. Compared to model 3, the effects of sex and parental income are not substantially different, indicating that ability explains the effect of sex and parental income on field of study choice due to the fact that ability differences cause to a large extent analogous differences in success probabilities. Ability explains the effect of success probabilities (only) in part. This is in agreement with hypothesis 6. Success probabilities explain the effect of sex and parental income on field choice better than our ability measures.

So far we assumed that the impact of expectations of success on the decision to choose or not choose a specific track within higher education is invariant across tracks. We next investigate to what extent the impact of success probabilities on the odds to choose a specific track varies across the distinguished tracks (Table 6.5). Success probabilities are more important for the decision whether or not to study science fields than for the decision whether or not to study non-science fields. In other words: expectations of success for science fields have more influence on track choice decisions than expectations of success for non-science fields. The difference is most pronounced within the professional college level: the impact of expectations of success on the log-odd for professional college–science is 0.05 and for professional college–non-science 0.02 (Table 6.5, model 1). The individual-specific coefficients as reported in Table 6.3 and Table 6.4 do not change substantially if we allow the impact of expectations of success to vary across tracks (not shown).

Contrary to our expectations (hypothesis 7), the impact of success probabilities does not vary (significantly) across social origins (Table 6.5, model 2 and 3). On the other hand, women are in general less influenced by their expectation of success than men; if we assume an invariant effect of success probabilities across tracks, the interaction with ‘women’ is significant ($b=-0.10$, $p=0.00$; not shown). Since in model 4 (Table 6.5) only the interaction for expectations of success for university–non-science reached significance ($b=-0.11$, $p=0.01$), we tentatively conclude that, especially for women, expectations of success are more important for decisions regarding science fields than non-science fields.³

6.5 CONCLUSIONS

Men and women students, students from different social origins and students with different ethnic backgrounds estimate their probabilities of success for various tracks in higher education differently. Women estimate their chances of success lower for science fields but higher for non-science fields compared to men. Turks and Moroccans rate their success probabilities higher than the native Dutch, Surinamese, Antilleans and western ethnic minorities. Students with more privileged social origins rate their success probabilities higher as well.

Although previously demonstrated ability is an important determinant of subjective success probabilities and ability explains to a large extent (approximately 50 per cent) differences across students of different sex and parental education categories, surprisingly, and contrary to our expectations, ability does not *fully* explain differences across ascribed characteristics. Ability even suppresses differences across ethnic groups. Naturally, our operationalization of the

theoretical construct 'previously demonstrated academic ability' is not ideal since they are based on self-reports. Our imperfect measurement of ability may have led us to underestimate ability's explanatory power for differences in success probabilities across ascribed characteristics. On the other hand, we used three different indicators of ability to explain success probabilities instead of just one. Our results indicate that ability is not a perfect indicator for success probabilities and other factors may influence students' estimations of future success as well. In relation to this, we hypothesised that especially students from higher social origins and native Dutch ground their success probabilities on effort next to ability and hence that the relationship between ability and expectations of success would be weaker among these groups. We did however not find corroborative evidence for this hypothesis, possibly because ability as operationalised in this study is already a reflection of both ability and effort.

We examined the school decision taken after university-preparatory secondary education for a specific track of higher education. We distinguished four tracks, which differ in level (university versus professional college) and field of study (science versus non-science). We found supportive evidence for the relative risk aversion mechanism: students with higher educated parents have stronger university aspirations than students with lesser educated parents, and these differences in aspirations explain some 50 per cent of the effect of parental education on the choice between the two levels of higher education. Moreover, differences in educational aspirations fully explain why women are less likely than men to opt for schooling at a university rather than at a professional college, at least in 1995 and 1997. Nowadays, women are more likely than men to opt for university schooling (Statistics Netherlands, 2007). Future research should examine whether this is due to a change in educational aspirations.

Parents' contributions to cover study costs, whether the student lives at home, and students' eagerness to finish school as soon as possible – both factors which we assume are related to the perceived direct and indirect costs of studying for the student – explain about 25 per cent of the effect of parental education and income on schooling level choice. However, these factors do not explain the effect of sex and ethnic origin on the decision between university–non-science and professional college–non-science. This is possibly because differences in perceived study costs between men and women students and across ethnic groups are small (after controlling for parental income). With respect to the chosen field of study, only living at home contributes to the explanatory model; however, it does not explain the effect of ascribed characteristics on field choice. Science fields are considered to be more difficult than non-science fields. Students who choose a difficult field may have more need to budget their time and therefore decide to remain living at home. Alternatively, science and non-science students may simply have different residence preferences.

The further students come in their educational career, the weaker the association is between social origin and ability, due to the selection processes encountered previously in the educational career. But even among students who successfully completed a higher track of secondary education, those from more advantaged backgrounds have significantly better demonstrated ability. Since we find a significant relationship – although admittedly not a very strong relationship, ability and hence success probabilities should explain the effect of social origin on track choice

in higher education according to the Breen-Goldthorpe model. Although, students with a higher grade point average at the secondary school level are more likely to opt for the more prestigious university level, we did not observe the primary effects mechanism when we examined the choice for a specific level in higher education. Neither ability nor success probabilities explain the effect of social origin on the level choice, after controlling for educational aspirations. On the other hand, ability and perceived success probabilities explain the effect of sex and social origin on field choice. This is probably because perceived success probabilities vary more across fields than across levels in higher education and because our results indicate that educational aspirations do not play a key role when academic level is held constant. We therefore posit that most students judge the social returns similarly for educational tracks that differ in field but not in level, at least more similarly than the social returns for tracks which differ in level but not in field. This implies that enrolling in a difficult field of study at the university level constitutes an unnecessary risk of downwards mobility, especially for students whose parents have a university degree.

Related to the latter point, we argued that the selection on success probabilities is likely to be stronger among lower origin students than among higher social origins students since students of higher social origins are more concerned with status demotion and hence accept greater risks in order to avoid downwards mobility. Our results did however not support this claim; we did not find a significant differential impact of success probabilities across social origins. However, we tentatively conclude that women are less influenced by their expectations of success than men. Perhaps the track choices of women are more than men driven by concerns for acquiring specific types of knowledge.

Success probabilities contribute to the explanation of school decisions, as predicted. But as said before, similar to differences in ability, differences in success probabilities do not explain the effect of ascribed characteristics on level choice. This contradicts the Breen and Goldthorpe model, but is in agreement with the earlier findings of Stocké (2007) who analyzed school decisions at the start of secondary education when the relationship between social origin and ability is still relatively strong. This strengthens our interpretation that our (null) findings are not due to the relatively weak relationship between social origin and ability at the entry point of higher education. On the other hand, Stocké's findings cannot be dismissed, because he relates to the effects of success probabilities as estimated by parents rather than by the students themselves.

This said, success probabilities as estimated by students explain the effect of sex and social origin on field choice and it does so even better than ability. After controlling for differences in success probabilities, ability does not further explain the effects of sex and social origin on field choice. We thus conclude that ability explains the effect of sex and social origin on field choice due to its influence on students' perceptions of their own chances of success. This supports the underlying 'primary effects' mechanism of the Breen and Goldthorpe model. At the same time, ability is not a sufficient indicator for the success probabilities of the students; success probabilities are better able to explain the influence of ascribed characteristics on field choices than ability measures. The appropriateness of ability as an indicator for success probabilities may depend on the transition decision and whether one considers the success probabilities as estimated

by the parents or the students. Future research should establish empirically whose perception of the likelihood of future educational success is more important for different transition decisions during the educational career.

This study showed that cost-benefit evaluations influence not only schooling level choices, but field of study choices as well. The results are mixed with respect to the applicability of the Breen and Goldthorpe model for explaining the effect of sex and ethnic origin on school decisions. The relative risk aversion mechanism offers the strongest explanation for the effect of social origin on level choice. Differences between men and women in their level choice in higher education are completely explained by differences in aspirations. This highlights the importance of the relative risk aversion mechanism. Subjective success probabilities explain differentials in field choice across social origins and between the sexes. Ethnicity's effect on school decisions cannot be explained by differences in the perceived costs of studying, aspirations or success probabilities. On the contrary, these theoretical constructs suppress ethnic differences. This last puzzling finding warrants further scientific attention.

6.6 NOTES

1. These exact subjects are mathematics, computer science, economics, biology, physics and chemistry.
2. $(1 - ((390.63 + 135.36) / (447.21 + 121.79))) * 100 = 7.6$
3. Expectations of success do not influence transition decisions differently across ethnic groups (not shown).

7. EDUCATIONAL ATTAINMENT AND ETHNIC HOSTILITY†

7.1 INTRODUCTION

Non-western ethnic minorities in the Netherlands – as in most other western countries – have more often a disadvantaged position than the native population. They are in general lower educated, more often active in the lower echelons of the labour market, and unemployment rates are higher among non-western ethnic minority groups as well (Statistics Netherlands, 2008). The structural non-integration at the ethnic group level is persistent over time (Gijsberts, 2004; see also Chapter 5). Besides a structural dimension, integration also has a cultural dimension (Berry, 1997). Ethnic intermarriage is the final step in the cultural integration process. Opposition to ethnically mixed relationships measures the preference for the own group and preferred ethnic distance towards other groups and is as such an attitudinal indicator of cultural integration. To what extent minorities identify themselves with their host country as opposed to their country of origin is also an important attitudinal indicator of the level of cultural integration. In this chapter we will investigate to what extent indicators of structural integration, such as educational attainment and involvement with the host country, are related to cultural integration, as expressed through views regarding ethnically mixed relationships and identification with the host country. We will investigate the cultural integration among both first and second generation migrants of the four major non-western ethnic groups in the Netherlands; the traditional guest workers groups of Turks and Moroccans, who are predominantly Muslim, and ethnic groups from the former Dutch colonies, Surinamese and Antilleans.

Studies on ethnic hostility among Muslim minorities in western European countries hint that especially among seemingly high educated and also otherwise structurally well integrated Muslim minority members, Muslim fundamentalism is prevalent (Buijs et al., 2006; Werbner, 2001). In the Netherlands, higher educated minority members more often than lower educated migrants perceive that they or their group are being discriminated against and more often feel rejected by the host country (Gijsberts & Vervoort, 2009; Jaspers & Lubbers, 2005; Kessler, Mickelson, & Williams, 1999). Among Moroccans and Turks in Rotterdam, in particular the higher educated perceive larger cultural distance (Entzinger 2008) and compared to lower educated counterparts, higher educated Moroccans were found to be more prone to vote for the AEL, a political party which rejects the Dutch integration policies (Jaspers & Lubbers, 2005). These findings may be regarded as somewhat contra-intuitive since it is often expected that cultural integration and structural integration go hand in hand (e.g. Alba & Nee, 2003; Gordon, 1964; Portes & Rumbaut, 1990) and since previous research consistently showed a negative effect of education on ethnic hostility, nationalism and far right-wing voting behaviour among native or dominant ethnic groups (Gijsberts et al., 2004; Lubbers, 2001; Quillian, 1996). Several authors therefore speak of an “integration paradox” (Buijs et al., 2006; Gijsberts & Vervoort, 2009).

† A slightly different version of this chapter is currently under review, co-authors are Mérove Gijsberts and Marcel Lubbers.

Interestingly, most previous empirical studies among ethnic minorities reveal in particular a positive relation between education and perceived group discrimination or between the educational attainment of minorities and perceived ethnic hostility among natives, they do not refer to the relation between education and ethnic hostility among minorities towards the host country or natives. For an exception, see the study on stereotypes among ethnic minorities towards the indigenous population from Gijsberts and Dagevos (2007). As a result of this focus on meta-views and perceptions of discrimination, the effect of education on ethnic hostility among minority groups is not clear. Similarly, the effect of education on ethnic identification is also ambiguous. Previous studies on this topic revealed inconsistent findings. For example, where Nesdale (2002) has shown that migrants in Australia identify more to their ethnic group with higher educational levels, in France, the odds that higher educated migrants identify to France compared to their own ethnic group are higher than among lower educated migrants (Abu-Rayya, 2007). Previous studies thus raise questions regarding the assumed positive effect of education on (attitudinal indicators of) cultural integration.

In this chapter we will investigate the link between educational attainment and involvement with the host country on opposition to ethnically mixed relationships (among both the majority group and ethnic minorities) and identification with the country of origin versus the host country (for minority groups only). More specifically, we will focus on the *direct* and *indirect* effects of education on these two attitudinal indicators of cultural integration. The research question of this chapter reads: *To what extent and why is educational attainment linked to indicators of both ethnic hostility among and cultural integration of ethnic minorities (i.e. opposition to ethnically mixed relationships and identification with the country of origin)?*

We will use data from the Survey Integration of Minorities 2006 (SIM 2006), a unique large scale and representative data set among the major ethnic minority groups in the Netherlands and a Dutch control group. We derive hypotheses from theories that turned out to be dominant in explaining such attitudes among natives; Ethnic Competition Theory (Coenders et al., 2005; Scheepers et al., 2002) and Contact Theory (Allport, 1979 [1954]; Pettigrew & Tropp, 2006). Media usage and Cultivation Theory (Gerbner, 1969) have previously been offered as a possible explanation for the integration paradox (Gijsberts & Vervoort, 2009) and we will therefore theorise on media effects as well.

Our study is innovative in several aspects. First, attitudes of ethnic minorities to the majority received relatively little attention, and we know no studies that focussed explicitly on (the differences in) educational attainment effects between natives and various ethnic groups of different generational statuses. In this chapter we will apply multiple mediator models to investigate to what extent education affects opposition to ethnically mixed relationships and ethnic identification directly and indirectly (through mediator variables) (Preacher & Hayes, 2008). Second, although both opposition to ethnically mixed relationships and ethnic identification may be regarded as indicators of cultural integration, to the best of our knowledge, they have never been investigated simultaneously before. In this chapter we study to what extent effects of indicators of structural integration on opposition to ethnically mixed relationships and ethnic identification are comparable. Third, to assess the universality of our hypotheses we will test them

among four ethnic minority groups in the Netherlands of both first and second generation and among native Dutch. The Netherlands is an interesting site of study for the cultural integration of migrants since it is a move away from the classic immigration countries (e.g. United States, Canada, Australia) where most previous studies have been concentrated.

The integration of ethnic minorities in the Netherlands has been a policy issue since the late seventies (Blok, 2004). In accordance with the assumption within the ideology of multiculturalism that strong ethnic group identifications will improve intergroup relations, the first so-called guest workers of the 1960s and 1970s were encouraged to maintain their ethnic group identity. However, multicultural integration policies have been increasingly questioned and the Netherlands went through a shift from the ideology of multiculturalism to one of assimilation (2000-2004) (Coenders et al., 2008; Joppke, 2004). Within the assimilation ideology, ethnic minorities are expected to abandon their cultural identity and adopt the dominant group's way of life. From a policy point of view it is thus relevant to investigate the mechanisms behind (cultural) integration and if these are similar across culturally different ethnic minority groups with different migration histories and between migrants of first and second generational status.

7.2 EXPECTATIONS

7.2.1 Different threats for different educational categories

Ethnic Competition Theory (ECT) (Coenders et al., 2005; Scheepers et al., 2002) is a synthesis of Realistic Conflict Theory (Blalock, 1967; Coser, 1956; LeVine & Campbell, 1972; Sherif & Sherif, 1953) and Social Identity Theory (Brown, 2000; Tajfel & Turner, 1986). ECT poses that ethnic groups compete for scarce resources such as jobs, housing, power and cultural values (Blalock, 1967; Bobo & Hutchings, 1996; Coenders et al., 2005; Coser, 1956; Quillian, 1995). This competition is experienced in a zero-sum type relationship (Bobo & Hutchings, 1996); e.g. 'they' take 'our' jobs. Both perceptions of group threat and perceptions of threats to one's self-interest reinforce the need to maintain or achieve a positive social identity, according to ECT. As a result of this need for a positive social identity, boundaries between the ethnic ingroup and outgroup become more rigid and the salience of the ingroup identity increases (Tajfel, 1982; Tajfel & Turner, 1986). Where the ethnic ingroup is in general positively evaluated, members of ethnic outgroups are depersonalised and stereotyped (Brown, 2000; Tajfel et al., 1971; Tajfel & Turner, 1979). Moreover, the positive bias towards the ingroup is often accompanied with hostility towards outgroups and ethnic exclusionism (Coenders, 2001; Sumner, 1959 [1906]).

ECT has met extensive cross-national corroborative evidence (Coenders et al., 2005; Scheepers et al., 2002; Semyonov et al., 2006). Although, the threat mechanism is almost solely used to explain and predict the attitudes of native (or dominant) ethnic groups, Poppe and Hagendoorn (2003) formulated and tested hypotheses on how ethnic competition and perceived threat would affect the level of national identification and ethnic hostility of minority populations. They showed that for Russian minorities in former Soviet Republics the same mechanisms were at work.

As argued by ECT, individuals who hold similar social positions as the majority of outgroup members, who are consequently more directly in competition with members of outgroups for scarce resources, will experience more ethnic group threat and hence express more ethnic social distance and identify stronger to their ethnic ingroup. Moreover, individuals with fewer resources are also presumably more susceptible to perceive ethnic outgroups as a threat. In the Netherlands, the lowest educated – also among ethnic minority groups – face higher unemployment levels and have the lowest levels of resources. At the same time, higher educated ethnic minorities are more likely to be (or to have been) in circumstances with relatively more natives, either due to their place of residence (i.e. whiter neighbourhoods) or for example due to the ethnic composition of their work place. Note that in contrast, lower educated natives and not the higher educated natives are more likely to be in circumstances with relatively more members of ethnic outgroups.

Given the consistent finding from previous research that education is negatively related to ethnic hostility and that lower educated have less resources than higher educated, we expect that: *Educational attainment will be negatively related to opposition to ethnically mixed relationships for all ethnic groups in the Netherlands, and that educational attainment will also be negatively related to identification with the country of origin among minority groups (Hypothesis 1).*

However, due to the relatively common prevalence of perceptions of threat among higher educated minorities compared to higher educated natives, we expect that: *The negative effect of education on opposition to ethnically mixed relationships will be smaller for ethnic minority groups than for native Dutch (Hypothesis 2).*

Although perceptions of threat among higher educated minorities are more common than among higher educated natives, we still expect that perceptions of group threat are less common among higher educated minorities than among lower educated minorities; there is a similar gradient in perceptions of threat across educational categories across ethnic minority groups and the native population but the gradient is less steep among ethnic minority groups. Thus: *Perceptions of threat should interpret the (negative) effect of education on opposition to ethnically mixed relationships and identification with the country of origin among minority groups, according to ECT (Hypothesis 3).*

7.2.2 Homogenization of educational categories

Education affects ethnic hostility not only because perceived threat is related to educational levels. Education asserts its negative influence on ethnic hostility – at least among dominant or native ethnic groups – also because the cognitive skills developed at school protect the formation of ill informed, derogative stereotypes. Due to the increased educational opportunities for all social classes following educational expansion in western societies (Breen & Jonsson, 2005), the people ending up in the lowest categories of the educational system became a more homogenous group with fewer educational skills (cf. Gesthuizen, De Graaf, & Kraaykamp, 2005; Gesthuizen & Kraaykamp, 2002). The less severe selection moments during the educational career introduced more heterogeneity among higher educated but the homogenization of the lowest categories is likely to have a stronger impact than the lost exclusivity of the highest educational categories, since individuals with a completed higher education still remain a fairly

selective group. As a consequence of the homogenization process, among native populations, members of educational categories have thus become more distinct with respect to their skills. Likely as a consequence of this, the educational effect on ethnic hostility increased among native Dutch in the time period 1975-1998 (Jaspers, 2008), as well as over birth cohorts in the US (Quillian, 1996).

Although we do not have longitudinal data to our availability, ethnicity-based educational inequality present in the Netherlands implies that homogenization of educational categories reached different stages across ethnic groups. Ethnic minorities – especially of first generational status – are overrepresented at the bottom of the educational hierarchy (see Chapter 5). For first generation migrants this is in part due to selective migration and to less favourable circumstances to start or continue one's educational career in the country of origin. Second generation migrants in the Netherlands are less likely to continue their educational career after successfully having completed general secondary education (i.e. HAVO or VWO) (see Chapter 5). Second generation Turks, Moroccans, Surinamese and Antilleans who do enrol in higher education obtained, in general, lower grade point averages in secondary education than their native Dutch counterparts (see Chapter 6). Given these considerations, we assume that minorities – both of first and second generational statuses – with relatively low educational degrees (below higher education) constitute a more heterogeneous group than their native Dutch counterparts with respect to their cognitive skills. Given the link between homogenization at the bottom of the educational hierarchy and the strength of the (negative) effect of education on ethnic hostility, we come to the same hypothesis as above, namely, that the negative effect of education on ethnic hostility (i.e. opposition to ethnically mixed relationships) is smaller for ethnic minority groups than for native Dutch.

Note that Ethnic Competition Theory and considerations around the homogenization process of educational categories give two reasons why (differential) distributions of educational degrees across ethnic groups asserts an influence on the effect of education on ethnic hostility. First, because ethnic minorities have more often lower educational attainments than native populations, natives who are lower educated themselves are more directly in competition with ethnic outgroups than higher educated natives, perceive more ethnic threat, and are consequently expected to express more ethnic hostility. If ethnic minorities were predominantly higher educated, the negative effect of education on ethnic hostility among natives would be weaker. Similarly, since especially higher educated minorities have similar position as members of the native population, we expect the negative effect of education on ethnic hostility among ethnic minority groups to be weaker. According to this threat-mechanism, ethnic threat should interpret the (negative) effect of education on indicators of ethnic hostility. Secondly, the differential distribution of educational degrees across ethnic groups is reflected in differences in homogeneity of cognitive skills of educational categories across ethnic groups. Lower educated minorities constitute presumably a less homogenous category with respect to cognitive skills than lower educated natives. Consequently, the negative effect of education on ethnic hostility is expected to be weaker across ethnic minority groups.

7.2.3 Media usage, perceptions of group discrimination and involvement with the host country

One of the explanations of an integration paradox is located in differences between educational categories in media usage (Gijsberts & Vervoort, 2009). Better educated migrants have better language proficiency and hence are more likely to take notice of the news supply from the host country (Peeters & D'Haenens, 2005). Media coverage studies have often reported that ethnic minorities in the media are associated with problems and criminality (Lubbers, Scheepers, & Vergeer, 2000) or were otherwise portrayed stereotypically (Shadid, 2006). Minorities themselves report that they do not recognise themselves in the host country media (Bonfadelli, Bucher, & Piga, 2007). For many Moroccans adolescents in the Netherlands, the media are a symbol of the Islam phobia of the host country (Buijs et al., 2006, p. 238).

Gerbner's cultivation hypothesis describes that people's reality is affected by media messages, and more so when one consumes those messages more (Gerbner, 1969). It is thus to be expected that native Dutch who consume more (Dutch) media hold more hostile attitudes towards minorities. Compared to migrants using ethnic media, migrants who use national media more often think that the majority holds negative views on minorities, and perceive higher levels of group discrimination (Gijsberts & Vervoort, 2009). Assuming a positive relationship between the negative meta-views on the one hand, and ethnic hostility and identification with the Netherlands on the other hand, we expect that: *Ethnic minorities who make use of Dutch media are more likely to be opposed to ethnically mixed relationships, just as native Dutch, and similarly, ethnic minorities who make use of Dutch media are more likely to identify with their country of origin (Hypothesis 4a).*

In order to be able to consume Dutch media, one should have at least some grip of the Dutch language. To assess the net effect of media, we will therefore investigate the impact of proficiency in Dutch as well. Due to language constraints, lower educated ethnic minorities are less exposed to negative images on them from the Dutch media. As a consequence, lower educated ethnic minorities will have less hostile attitudes to the group producing these images. Following this line of reasoning, we expect that: *A negative relation between education and hostility among minority groups may be suppressed by media usage and perceptions of group discrimination (Hypothesis 5a).*

However, media effects on ethnic hostility among members of dominant ethnic groups in survey research have turned out to be rather weak and often disappear after controlling for educational attainment. This implies that media preferences are strongly affected by structural characteristics and that opposes our formulated expectation from Cultivation theory. Instead of being a feeding source of ethnic hostility, the use of Dutch media by minority groups may indicate an expression of 'national preferences' and an involvement with the host country (Abu-Rayya, 2007; Peeters & D'Haenens, 2005). Involvement with the host country has been shown to be related to identification with the host country for migrants in France (Abu-Rayya, 2007). We therefore pose the more likely hypotheses that: *Dutch media usage is negatively related to both opposition to ethnically mixed relationships and to identification with the country of origin among ethnic minorities (but not for native Dutch) (Hypothesis 4b); The presumed negative relation between education and these two attitudinal indicators of cultural integration among minority groups is interpreted by Dutch media usage (Hypothesis 5b).*

Similarly, we expect that: *The use of media from the country of origin is positively related to opposition to ethnically mixed relationships and to identification with the country of origin among ethnic minorities (Hypothesis 6).*

7.2.4 Contact experiences

Contact opportunities for ethnic minorities are positively related to actual contact experiences (Gijssberts & Dagevos, 2007; Martinovic, Tubergen, & Maas, 2008). Given that higher educated migrants are surrounded more by native Dutch than lower educated migrants, higher educated migrants have a greater opportunity to associate with native Dutch than lower educated migrants. Positive contact with members of ethnic outgroups leads to the recognition of heterogeneity within the outgroup, causes negative stereotypes to diminish and ultimately that the in- and outgroup are decategorised (Brown, 2000). As a consequence, members of outgroups are perceived as less threatening and prejudice is reduced (Stephan & Stephan, 2000). Negative contact experiences on the other hand may give rise to negative affections to outgroup members – probably by enforcing negative stereotypes, attenuating group boundaries, and increasing feelings of ethnic threat (Jaspers, 2008). Among native populations, contact with ethnic outgroups is positively related to ethnic tolerance (Pettigrew & Tropp, 2006), even if the optimal meeting conditions as formulated by (Allport, 1979 [1954]) are not met. In the US, interracial contact experiences do not seem to affect attitudes of blacks towards whites (Sigelman & Welch, 1993). Prior research on the effect of contact among minority populations in Europe is scarce but for the Netherlands, Gijssberts and Dagevos (2007) found that ethnic minorities who maintain more contact with native Dutch hold fewer negative stereotypes.

We assume that contact in leisure time is in general positive and will provide counterexamples to the possible derogative stereotypes one may have, both for ethnic minority groups and native Dutch. Hence, we expect that: *Contact in leisure time is negatively related to opposition to ethnically mixed relationships (for all ethnic groups) and to identification with the country of origin (for minority groups) (Hypothesis 7).*

Since higher educated migrants will have more contact opportunities than lower educated migrants, we expect that: *A negative impact of education on ethnic hostility among ethnic migrants is in part interpreted by contact experiences in leisure time (Hypothesis 8).*

Since lower educated natives have more inter-ethnic contact opportunities than higher educated natives, one could expect that contact experiences in leisure time suppress the negative effect of education on ethnic hostility among natives. However, for natives it has been demonstrated that especially the higher educated have more positive inter-ethnic contact experiences – due to their less hostile attitudes directed to ethnic outgroups. For natives, the more likely hypothesis is therefore that contact in leisure explains in part the negative impact of educational attainment on ethnic hostility as well.

We regard personal experiences of being discriminated against as a type of negative contact. Following the argument above, we thus expect that: *Personal experiences of discrimination are positively related to opposition to ethnically mixed relationships and to identification with the country of origin among ethnic minorities (Hypothesis 9).*

Higher educated minorities have more opportunities to come into contact with natives but these natives are likely to be higher educated as well. Higher educated natives express less ethnic hostility and may consequently be expected to be less prone to discriminate. If, as a result of this, higher educated minorities are less likely to experience discrimination, this would lead to the expectation that: *The educational effect among ethnic migrants is in part interpreted by negative contact experiences (Hypothesis 10)*. The explanatory model is summarised in Figure 7.1 and the hypotheses in Table 7.1.

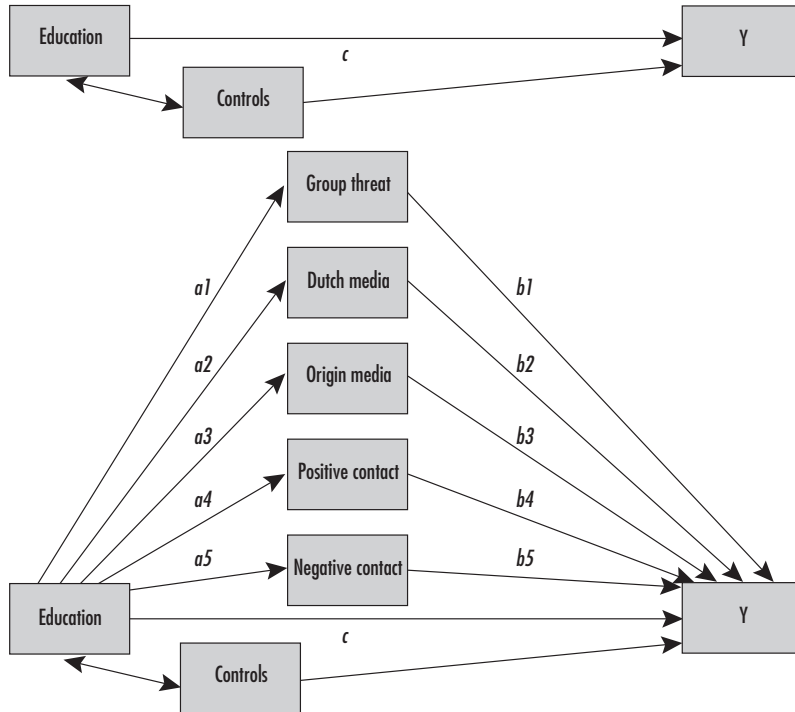


Figure 7.1 Multiple mediator model of the impact of education on opposition to ethnically mixed relationships and identification with the origin country (Y) (paths from controls to mediators not shown)

Table 7.1 Summary of hypotheses

Hypothesis	Corresponding path of Figure 7.1	Corresponding ethnic group(s)
1	Educational attainment is negatively related to indicators of ethnic hostility	c = - native Dutch / ethnic minorities
2	Educational attainment is stronger negatively related to opposition to ethnically mixed relationships for native Dutch than for ethnic minorities	a1*b1 = - b2 = + ethnic minorities
3	Perceptions of group threat interpret the negative effect of education	a2*b2 = + native Dutch / ethnic minorities
4a	Dutch media consumption is positively related to indicators of ethnic hostility	b2 = - ethnic minorities
5a	Dutch media consumption suppresses the negative effect of education	a2*b2 = - ethnic minorities
4b	Dutch media consumption is negatively related to indicators of ethnic hostility	b3 = + ethnic minorities
5b	Dutch media consumption interprets the negative effect of education	b4 = - ethnic minorities
6	Origin country media consumption is positively related to indicators of ethnic hostility	a4*b4 = - native Dutch / ethnic minorities
7	Positive contact is negatively related to indicators of ethnic hostility	b5 = + ethnic minorities
8	Positive contact interprets the negative effect of education	a5*b5 = - ethnic minorities
9	Negative contact is positively related to indicators of ethnic hostility	
10	Negative contact interprets the negative effect of education	

7.3 DATA, MEASUREMENTS AND METHODS

In this study we use data from the Survey Integration of Minorities 2006 (SIM 2006). These data were collected among minority groups in the Netherlands by the Netherlands Institute for Social Research (SCP) in 2006. A two-stage sample was drawn from the population registers of all communities in the Netherlands (for more information, see Dagevos, Gijssberts, Kappelhof, & Vervoort, 2007). The survey covers random samples from the four largest ethnic minority groups – Turkish, Moroccan, Surinamese and Antilleans – and a native Dutch comparison group. First generation migrants are born in the respective country of origin, second generation migrants are born in the Netherlands and have at least one parent born outside the Netherlands. For each ethnic group around 1000 participants aged fifteen years and older were interviewed face-to-face (computer-assisted personal interviewing). Only those participants who were expected not to be fluent in Dutch (those who were foreign born and arrived in the Netherlands after the age of 15) were interviewed in their native languages by bilingual interviewers. Response rates varied between 46% among the Surinamese and 60% among the Turkish (55% among the native Dutch). These response rates are higher than comparable research among ethnic minority groups in the Netherlands, such as the Social Position, and Use of Welfare Facilities by Immigrants Surveys (see Chapter 5).

The dependent variable *opposition to ethnically mixed relationships* was measured with the following survey item: 'Would it bother you if one of your children chooses a (native Dutch / non-native Dutch) as his/her partner?', with answer categories (4) Yes, it would bother me a lot, (3) Yes, it would bother me, (2) Neutral, (1) No, it would not bother me, and (0) No, it would not bother me at all. The *ethnic identification* question, which we use as our second dependent variable, reads: "Do you feel more (ethnicity of origin country) or Dutch?", with answer categories: (4) I feel completely (ethnicity of origin country), (3) I feel more (ethnicity of origin country) than Dutch, (2) I feel just as much (ethnicity of origin country) as Dutch, (1) I feel more Dutch than (ethnicity of origin country), and (0) I feel completely Dutch.¹ Higher values thus correspond to lower levels of attitudinal cultural integration. The dependent variables correlated positively and significantly with each other ($r=0.42$).

Our main independent variable is *educational attainment* and was measured in years: 4, no education; 6, primary education only; 8, lower vocational education; 10, lower general education; 10.5, medium vocational education; 11.5, medium general education or higher general education; 15, higher vocational education; and 16, university. Students currently in school were treated as if successfully having completed their current level.

Our dataset offers information on perceptions of ethnic group discrimination, which we assume will be closely related to perceptions of group threat and thus to be positively related to opposition to ethnically mixed relationships and ethnic identification. The variable we label *group threat* is measured by the item 'Some people say that non-natives are being discriminated against by native Dutch. How often does this happen?', (1) never, (2) almost never, (3) once in a while, (4) often, (5) very often. *Dutch media usage* and *origin country media usage* are the means score of 'How many times a week do you read Dutch/origin country newspapers?', and 'How many times a week do you watch Dutch/origin country TV channels?', with answer categories: (1) never, (2)

less than once a week, (3) once or twice a week, (4) three or four times a week, (5) five or six times a week, and (6) every day. *Positive contact* is operationalised by the survey item 'In your leisure time, do you often, sometimes or never associate with native Dutch/non-native Dutch'. We recoded it to (0) never, (1) sometimes, and (2) often contact with outgroup members in leisure time. *Negative contact* is operationalised as 'Have you yourself ever been discriminated against by native Dutch? How often did this happen?', (0) never, (1) almost never, (2) once in a while, (3) often, (4) very often.

We will briefly discuss control variables that may affect ethnic views and possibly influence the effect of education as well; age, sex, social class, language proficiency and religiosity. Sex was coded as (1) male and (0) female. Age is measured in years. Since education is an important determinant of social class we will control for respondents' labour market position. We categorised respondents who were currently employed for 12 hours a week or more and not following education in the following social classes: technocrats, socio-cultural specialists, routine non-manual occupations, small employers, manual supervisors and skilled manual occupations, semi-unskilled manual occupations and farm labourers, based on Güveli's adaptation (Güveli, 2006) of the original class schemata of Erikson, Goldthorpe, and Portocarero (Erikson et al., 1979). We included an additional category indicating if someone was currently following education. Other respondents who did not work 12 hours a week or more were categorised as 'non- or un-employed'.² The variable *proficiency in Dutch* is the mean score on the following items: 'Do you experience problems with the Dutch language while conversing in Dutch?', 'Do you experience problems with the Dutch language while reading newspapers, letters, or flyers?', 'Do you experience problems while writing in Dutch?', with answer categories: (1) yes often, (2) yes sometimes, and (3) no, never. The Cronbach's alpha of this scale was 0.91. Finally, opposition to ethnic intermarriage is likely to overlap with opposition to religious heterogamy and ethnic identification is likely to coincide with religious identification. We therefore decided to control for *church/mosque attendance* (measured in times per year) as well.

Missing values on interval level variables were replaced with the mean value for each respective ethnic group. For categorical variables we included the category 'missing' if necessary. Most missing values were observed with respect to perceived group threat (3 per cent).³ Note that generational status, group threat, negative contact and proficiency in Dutch are not available for native Dutch. Descriptive statistics for our total sample as well as the bivariate relationships between ethnicity and our indicators of cultural integration are summarised in Table 7.2.

To test our hypothesis, we apply multiple mediator models. These models were estimated in SPSS using a macro developed by Preacher and Hayes (2008) (see also: <http://www.comm.ohio-state.edu/ahayes/SPSS%20programs/indirect.htm>). The models were estimated separately across ethnic groups and generational status, since preliminary analyses showed that many mediation effects were moderated by both ethnicity and generational status.

Table 7.2 Descriptive statistics and bivariate relationships

	Univariate relationships			Bivariate relationships				
	N	%	Mean	SD	Mean ethnic intermarriage	SD	Mean ethnic identification	SD
<i>Dependent variables</i>								
Ethnic intermarriage (0-4)	4907		1.25	1.33				
Ethnic identification (0-4)	3893		2.28	1.24				
<i>Ethnicity by generation</i>								
First generation Turks	791	16.12			2.12	1.36	3.03	1.05
Second generation Turks	261	5.32			1.54	1.37	2.18	1.01
First generation Moroccans	777	15.83			1.96	1.41	2.68	1.07
Second generation Moroccans	177	3.61			1.38	1.28	2.16	0.95
First generation Surinamese	707	14.41			0.52	0.89	1.81	1.12
Second generation Surinamese	273	5.56			0.44	0.80	1.30	1.07
First generation Antilleans	734	14.96			0.40	0.74	2.25	1.21
Second generation Antilleans	173	3.53			0.25	0.57	0.90	1.08
Native Dutch	1014	20.66			1.43	1.20		
<i>Education and mediator variables</i>								
Education (4-16)			9.63	3.40				
Perceived group threat (1-5) ^a			2.93	0.99				
Dutch media (1-6)			4.65	1.37				
Origin media(1-6) ^a			2.42	1.41				
Positive contact (0-2)			0.98	0.77				
Negative contact (0-4) ^a			2.06	1.07				

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Table 7.2 continued

<i>Control variables</i>				
Age (15-95)			39.52	16.01
Male	2291	46.70		
Female	2616	53.30		
Language (1-3) ^a			2.55	0.67
Church / mosque attendance (0-20)			2.01	4.10
Labour market position				
Un/non-employed	1800	36.68		
Technician	314	6.40		
Socio-cultural specialists	332	6.80		
Routine non-manual	520	10.60		
Small self-employed	108	2.20		
Manual supervisors / skilled manual labourers	279	5.70		
Unskilled manual labourers	705	14.40		
Student	785	16.00		

^a Non-Dutch only

7.4 RESULTS

7.4.1 Bivariate relationships

In Table 7.2 we see that Turks and Moroccans are more opposed to mixed relationships than native Dutch and Surinamese and Antilleans less. Second generation migrants are less opposed to mixed relationships than first generation migrants. More or less the same ethnic and generational differences are found with respect to identification with the country of origin. Turks identify most with their country of origin, followed by Moroccans, Antilleans and Surinamese. Once again, second generation migrants identify less with the country of origin than the first generation.

7.4.2 Multiple mediator models

In Table 7.3 and Table 7.4, we summarised the estimates of the multiple mediator models. The estimate of the total effect of education (after controlling for age, sex, social class, language proficiency, and religiosity) is shown on the first row (corresponding to arrow 'c', Figure 7.1). Below the total effect of education, we see the parameter estimates of the *direct* effect of education and the mediator variables on the dependent variable (arrow 'c' and arrows 'b'). In the bottom rows we see the bootstrapping results for the total indirect effect of education and the partial indirect effect of education through the proposed mediators (paths 'a*b') and the 90 per cent bias corrected confidence interval of the respective boot strap point estimate. In Appendices 7.1 and 7.2 we summarised the direct effect of education on the mediator variables (arrows 'a') and the direct effects of the control variables.

Opposition to ethnically mixed relationships

For native Dutch, we see the expected significant negative relationship between (the total effect of) education and opposition to ethnically mixed relationships ($b=-0.06$, $se=0.01$), as well as for first generation Turks ($b=-0.06$, $se=0.02$), first generation Moroccans ($b=-0.10$, $se=0.02$) and first generation Antilleans ($b=-0.02$, $se=0.01$, Table 7.3). For first generation Antilleans the negative impact of education on opposition to ethnically mixed relationships is weaker than for native Dutch (significance tests not shown), in accordance with our expectation of weaker relationships between education and ethnic hostility among minorities (hypothesis 2). For first generation Surinamese and all immigrants of second generational status, education is not significantly related to opposition to mixed relationships at all. This may be considered as an integration paradox.

Perceived group threat only increases ethnic hostility among first generation Antilleans. Among ethnic minorities, perceived group threat is thus not a determinant of personal feelings of ethnic hostility, this is contrary to what we expected on the basis of ECT. Since perceptions of group threat do not influence ethnic hostility, they did not interpret the education effect (contrary to hypothesis 3). Perhaps, perceptions of group discrimination – our measure of group threat – are not a good indicator of perceptions of ethnic threat.

Dutch media usage and positive contact experiences are both (fairly) consistently negatively related to opposition to mixed relationships among minorities of first generational status, as well as positive contact for minorities of second generational status (Table 7.3). Note

however that Dutch media usage does not affect opposition to mixed relationships for Antilleans (of both first and second generation), for second generation Moroccans and only reaches the boundary of significance for second generation Surinamese. But all in all we find more corroborative evidence that, at least for first generation ethnic minority members, Dutch media usage is an indicator of involvement with the host country and as such is negatively related to ethnic hostility than that the Dutch media is an important source of negative feelings towards natives. Somewhat surprisingly, Dutch media usage is also negatively related to opposition to mixed relationships among native Dutch $b=-0.08$ ($se=0.04$; Table 7.3).

Negative contact experiences are, as predicted (hypothesis 10), positively related to opposition to mixed relationships for first generation Turks ($b=0.10$, $se=0.05$), first generation Surinamese ($b=0.12$, $se=0.04$), second generation Moroccans ($b=0.19$, $se=0.10$), and second generation Antilleans ($b=0.09$, $se=0.05$). The parameter estimates are positive for other ethnic categories as well (with the exception of second generation Turks) and even reach the boundary of significance for second generation Antilleans ($b=0.08$, $se=0.05$; Table 7.3).

The total effect of education is significantly interpreted through the proposed mediators for native Dutch and for all ethnic groups of first generational status; the 90 per cent biased corrected confidence interval lies below zero for all ethnic groups (Table 7.3). Among minorities of second generation, we observed a significant interpretation of the education effect for Surinamese and Antilleans but not for second generation Turks and Moroccans. Contact with outgroup members in leisure time most consistently significantly interprets the effect of education, but not for second generation Turks and Moroccans. This is not because positive contact does not reduce ethnic hostility among these latter groups, but because higher educated Turks and Moroccans do not have (significantly) more positive contact with natives in leisure time than lower educated Turks and Moroccans (Appendix 7.1).

Dutch media usage explains in part the effect of education on opposition to ethnically mixed relationships among ethnic minorities. There is one exception: for second generation Moroccans, Dutch media usage does not interpret the education effect. Origin country media usage was consistently positively related to more opposition to ethnically mixed relationships, however, we do not observe an indirect effect of education through origin country media consumption. Higher educated ethnic minority members do not use less media from their country of origin than lower educated ethnic minorities (Appendix 7.1). We tentatively conclude that involvement with the country of origin is less easily altered by policy measures directed at the structural integration (e.g. educational programs) than involvement with the host country.

We find far less significant mediation effects for second generation minorities than for their first generation counterparts. The variation across generations is due to differences in the direct effects of educational attainment on the mediator variables (Appendix 7.1). The positive effect of educational attainment on Dutch media usage, and contact in leisure time, and the negative effect of education on personal experienced discrimination, is weaker for second generation Turks and Moroccans than for their first generation counterparts (Appendix 7.1).

Table 7.3 Parameter estimates of multiple mediator models predicting opposition to ethnically mixed relationships (direct effects of education and mediator variables and indirect effects education through mediator variables).

	1st gen. Turks		1st gen. Moroccans		1st gen. Surinamese		1st gen. Antilleans		native Dutch	
	b	se	b	se	b	se	b	se	b	se
Education (total)	-0.06**	0.02	-0.10**	0.02	-0.01	0.01	-0.02*	0.01	-0.06**	0.01
<i>Direct effects</i>										
Education (direct)	-0.02	0.02	-0.05**	0.02	0.00	0.01	-0.01	0.01	-0.05**	0.01
Group threat	0.05	0.05	0.03	0.05	-0.01	0.04	0.08*	0.03		
Dutch media	-0.14**	0.04	-0.23**	0.04	-0.10**	0.03	0.01	0.03	-0.08*	0.04
Origin media	0.08*	0.04	0.15**	0.04	0.11**	0.04	0.01	0.02		
Positive contact	-0.56*	0.07	-0.26**	0.07	-0.16**	0.05	-0.10*	0.04	-0.43**	0.06
Negative contact	0.10*	0.05	0.04	0.05	0.12**	0.04	0.01	0.03		
<i>Indirect effects^a</i>										
Total indirect effect	b	90% CI	b	90% CI	b	90% CI	b	90% CI	b	90% CI
Group threat	-0.35	-0.45 -0.26	-0.35	-0.40 -0.29	-0.12	-0.15 -0.09	-0.03	-0.04 -0.02	-0.09	-0.15 -0.03
Dutch media	0.03	-0.01 0.09	0.01	-0.01 0.05	0.00	-0.04 0.02	0.01	0.00 0.04		
Origin media	-0.16	-0.26 -0.08	-0.27	-0.39 -0.18	-0.09	-0.16 -0.03	0.00	-0.01 0.02	-0.03	-0.07 -0.01
Positive contact	0.01	-0.01 0.05	0.01	-0.04 0.06	0.02	0.00 0.06	0.00	-0.02 0.01		
Negative contact	-0.26	-0.39 -0.16	-0.11	-0.20 -0.05	-0.07	-0.13 -0.04	-0.04	-0.08 -0.02	-0.05	-0.11 0.00
	0.03	0.01 0.08	0.02	-0.01 0.06	0.03	0.00 0.07	0.00	-0.01 0.00		

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Table 7.3 continued

	2nd gen. Turks		2nd gen. Moroccans		2nd gen. Surinamese		2nd gen. Antilleans	
	b	se	b	se	b	se	b	se
Education (total)	-0.02	0.04	-0.04	0.05	0.02	0.02	-0.01	0.02
<i>Direct effects</i>								
Education (direct)	0.01	0.04	-0.03	0.05	0.03	0.02	0	0.02
Group threat	0.07	0.11	-0.25~	0.13	0.04	0.06	-0.07	0.05
Dutch media	-0.19*	0.08	0.03	0.10	-0.08	0.05	0.02	0.04
Origin media	0.18*	0.07	0.13	0.09	0.05	0.07	-0.05	0.08
Positive contact	-0.35**	0.12	-0.35*	0.14	-0.18*	0.09	-0.11	0.08
Negative contact	-0.07	0.10	0.19~	0.10	0.08	0.05	0.09*	0.05
<i>Indirect effects^a</i>								
Total indirect effect	b	90% CI	b	90% CI	b	90% CI	b	90% CI
	-0.25	-0.43 -0.04	-0.12	-0.33 0.09	-0.11	-0.24 -0.09	-0.11	-0.24 -0.04
Group discrimination	0.01	-0.04 0.07	-0.04	-0.24 0.08	0.00	-0.02 0.04	-0.01	-0.08 0.02
Dutch media	-0.15	-0.37 -0.03	0.01	-0.07 0.07	-0.04	-0.14 0.00	0.00	-0.06 0.01
Origin media	-0.08	-0.24 0.04	-0.04	-0.21 0.05	-0.01	-0.08 0.01	0.00	-0.04 0.01
Positive contact	-0.03	-0.15 0.10	-0.05	-0.25 0.10	-0.06	-0.16 -0.01	-0.05	-0.14 0.00
Negative contact	0.00	-0.04 0.08	0.00	-0.20 0.12	-0.01	-0.06 0.02	-0.05	-0.18 -0.01

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a parameter estimates of indirect effects have been multiplied by 10 to facilitate interpretation

This may be part of the explanation for the integration paradox among second generation Turks and Moroccans: higher educated Turks and Moroccans do not make more use of Dutch media, do not have more contact with natives in leisure time and do not experience less personal discrimination. Moreover, for second generation Moroccans, Dutch media usage does not lead to less opposition to ethnically mixed relationships, as we already saw above. We tentatively conclude that especially for second generation Moroccans, who are low in the ethnic hierarchy within the Netherlands (Hagendoorn, 1995), Dutch media usage is not an indicator of involvement with the host country, or at least to a lesser extent, but rather a source for ethnic hostility (Buijs et al., 2006, p. 238).

Ethnic Identification

We see a consistent picture with respect to ethnic identification (Table 7.4) but effects are more pronounced with respect to ethnic identification than for opposition to ethnically mixed marriages and especially so for second generation migrants. Consequently, we find fewer differences in the explanatory mechanism between generations. In agreement with hypothesis 1 we find a significant total negative effect of education (after controlling for sex, age, social class, language proficiency, and religiosity) on identification with the country of origin for (first and second generation) Turks ($b=-0.03$, $se=0.02$; $b=-0.06$, $se=0.03$, respectively), first generation Moroccans ($b=-0.04$, $se=0.02$), second generation Surinamese ($b=-0.04$, $se=0.03$), and first generation Antilleans ($b=-0.03$, $se=0.02$). As with opposition to ethnically mixed relationships, for first generation Surinamese, education is not related to ethnic identification. The absence of an (total) education effect among second generation Antilleans may be due to a floor effect; in general second generation Antilleans identify themselves almost solely to the Netherlands (Table 7.2). The absence of a negative education effect among first generation Surinamese and second generation Moroccans may be considered as supporting the idea of an integration paradox.

Perceived group threat is not – at least not consistently – related to stronger identifications with the country of origin; only for first generation Turks and Surinamese do we observe a significant positive effect ($b=0.20$, $se=0.04$; $b=0.09$, $se=0.05$; respectively (Table 7.4)). For these groups, group threat even significantly suppresses the negative impact of education (Table 7.4). The higher first generation Turks and Surinamese are educated, the stronger the perception of perceived group threat (Appendix 7.1), and the stronger this perception, the stronger the identification with the country of origin. This is contrary to our expectation as formulated in hypothesis 3 in which we formulated the expectation that group threat would interpret and not suppress the negative education effect. Dutch media consumption is related to less identification with the country of origin for Turks ($b=-0.14$, $se=0.03$; $b=-0.13$, $se=0.06$; for respectively first and second generation) and Moroccans ($b=-0.13$, $se=0.03$; $b=-0.19$, $se=0.07$; for respectively first and second generation) and for first generation Antilleans (-0.10 , $se=0.04$). The use of media from the origin country is consistently related to stronger identifications with the country of origin. This effect was substantially weaker with respect to opposition to ethnically mixed relationships. Involvement with the host country may thus strengthen ethnic group identifications but not necessarily ethnic hostility. Contact in leisure time with native Dutch is also consistently related to less identification with the country of origin for all ethnic groups. These findings thus once

again give support to the idea that involvement with the host country, as expressed by Dutch media usage and contact with natives in leisure time is positively related to cultural integration.

Negative contact – as measured with personal experiences of discrimination - strengthens identification with the country of origin but not for Turks and second generation Moroccans. Given our findings, we conclude that negative contact has a less consistent impact on (attitudinal indicators of) cultural integration than positive contact.

Our mediators significantly interpret the education effect for all ethnic categories with a significant total effect of education. Although consumption of media from the country of origin was strongly positively related to identification with the country of origin, it may come as no surprise that origin country media usage does not interpret the education effect; educational attainment was not related to this mediator as we already observed above (see Appendix 7.1). Once again, we find that the negative effect of education is (fairly consistently) interpreted by Dutch media usage and contact with natives in leisure time.

Table 7.4 Parameter estimates of multiple mediator models predicting identification with the origin country (direct effects of education and mediator variables and indirect effects education through mediator variables).

	1st gen. Turks		1st gen. Moroccans		1st gen. Surinamese		1st gen. Antilleans	
	b	se	b	se	b	se	b	se
Education (total)	-0.03*	0.02	-0.04**	0.01	0.02	0.02	-0.03~	0.02
Direct effects								
Education (direct)	0	0.01	0	0.01	0.02	0.02	0	0.02
Group threat	0.20**	0.04	0.03	0.04	0.09	0.05	0.02	0.05
Dutch media	-0.14**	0.03	-0.13**	0.03	-0.05	0.04	-0.10*	0.04
Origin media	0.13***	0.03	0.17**	0.03	0.19**	0.05	0.20**	0.04
Positive contact	-0.26***	0.05	-0.28**	0.05	-0.19**	0.06	-0.28**	0.06
Negative contact	-0.02	0.04	0.05	0.04	0.17**	0.05	0.13**	0.04
<i>Indirect effects^a</i>								
Total indirect effect	b	90% CI	b	90% CI	b	90% CI	b	90% CI
	-0.18	-0.25 -0.11	-0.25	-0.29 -0.18	-0.02	-0.07 0.02	-0.21	-0.26 -0.15
Group discrimination	0.09	0.04 0.16	0.01	0.00 0.03	0.03	0.01 0.09	0.00	-0.01 0.03
Dutch media	-0.16	-0.24 -0.10	-0.16	-0.24 -0.09	-0.04	-0.11 0.02	-0.04	-0.09 -0.01
Origin media	0.01	-0.02 0.06	0.01	-0.04 0.06	0.04	0.00 0.09	-0.04	-0.10 0.01
Positive contact	-0.12	-0.20 -0.07	-0.12	-0.19 -0.07	-0.09	-0.16 -0.04	-0.12	-0.20 -0.07
Negative contact	-0.01	-0.04 0.01	0.02	0.00 0.06	0.04	0.00 0.09	-0.01	-0.05 0.02

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Table 7.4 continued

	2nd gen. Turks		2nd gen. Moroccans		2nd gen. Surinamese		2nd gen. Antilleans	
	b	se	b	se	b	se	b	se
Education (total)	-0.06*	0.03	0.03	0.04	-0.04~	0.03	-0.01	0.03
Direct effects								
Education (direct)	-0.04	0.03	0.05	0.03	-0.03	0.03	0.02	0.03
Group threat	0.07	0.08	-0.01	0.09	0.03	0.08	0.03	0.09
Dutch media	-0.13*	0.06	-0.19**	0.07	-0.03	0.07	0.02	0.07
Origin media	0.22**	0.05	0.24**	0.06	0.22*	0.09	0.63**	0.14
Positive contact	-0.19*	0.08	-0.40**	0.10	-0.16	0.11	-0.37**	0.14
Negative contact	-0.07	0.07	0.18**	0.07	0.17*	0.07	0.30**	0.08
Indirect effects ^a								
Total indirect effect	b	90% CI	b	90% CI	b	90% CI	b	90% CI
	-0.21	-0.32 -0.03	-0.13	-0.38 0.13	-0.13	-0.28 -0.07	-0.29	-0.58 -0.09
Group discrimination	0.00	-0.03 0.06	0.00	-0.07 0.04	0.00	-0.02 0.04	0.00	-0.03 0.07
Dutch media	-0.10	-0.23 -0.03	0.00	-0.15 0.12	-0.02	-0.11 0.03	0.00	-0.08 0.03
Origin media	-0.09	-0.26 0.05	-0.07	-0.23 0.13	-0.04	-0.13 -0.01	0.05	-0.06 0.22
Positive contact	-0.02	-0.09 0.05	-0.06	-0.26 0.12	-0.05	-0.17 0	-0.17	-0.33 -0.04
Negative contact	0.00	-0.03 0.07	0.00	-0.17 0.09	-0.01	-0.11 0.04	-0.17	-0.40 -0.03

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a parameter estimates of indirect effects have been multiplied by 10 to facilitate interpretation

7.5 CONCLUSIONS

In this chapter our aim was to identify the effect of educational attainment on two indicators of cultural integration; opposition to ethnically mixed relationships and identification with the country of origin. Educational attainment has consistently been shown to be negatively related to ethnic hostility, nationalism and far right-wing voting behaviour among native populations. However, for ethnic minorities, several authors reported an integration paradox: higher educated minorities supposedly perceive more discrimination, supposedly express more, not less ethnic hostility and supposedly identify more, not less to their country of origin. In the present study, we tested more thoroughly what the differences are between the largest Dutch ethnic minority groups and generations in the interpretation of the effect of education on attitudes of cultural integration.

Let us first recapture the differential effects of education among ethnic groups. Compared to native Dutch, educational achievement was substantially weaker negatively related to opposition to ethnically mixed relationships for all ethnic groups, except for first generation Turks and Moroccans. For second generations migrants, the effect of education on opposition to ethnically mixed relationships was even absent. Note however that for none of the distinguished ethnic categories or generations, we observed a positive relationship between educational attainment and opposition to ethnically mixed relationships or identification with the country of origin – which based on the integration paradox only might have been expected.

Our second aim was to explain the effects of education. Within Ethnic Competition Theory, educational attainment has a pivotal role in explaining ethnic hostility among dominant ethnic groups since the higher educated experience less ethnic group threat. In line with ECT, for native Dutch, we observed a significant negative direct effect of education on opposition to ethnically mixed relationships. For ethnic minority groups, most of the total effect of education on opposition to ethnically mixed relationships and identification to the country of origin could be interpreted by measures of involvement in the host country, through media usage and contact experiences. However, this is not to be expected if the educational effect should predominantly be explained by perceptions of group threat as ECT argues. Perceptions of group discrimination – which we assumed to be closely related to perceptions of ethnic group threat for ethnic minorities – did not affect opposition to ethnically mixed relationships and could consequently not be the reason for the smaller or absent direct education effect among ethnic minorities. Perceptions of group threat even suppressed the education effect on ethnic identification for first generation Turks and Surinamese, since higher educated Turks and Surinamese experience more threat, not less. We tentatively conclude that the group threat mechanism, or more generally, ECT, is less applicable to minority groups than to native populations; threats are not predominantly concentrated among lower educated minorities and perceptions of threats do not consistently lead to more ethnic hostility and to less cultural integration.

We found extensive corroborative evidence for contact theory among both ethnic minority groups and the native Dutch. Contact in leisure time is negatively related to opposition to ethnically mixed relationships and to identification to the country of origin among all ethnic groups. Negative contact, indicated by the personal experiences of being discriminated against,

is positively related to opposition to ethnically mixed marriages and to identification with the country of origin for most distinguished ethnic categories as well. However, as with all cross-sectional research on contact theory, we must be cautious to interpret these relationships in a causal manner.

Although higher educated migrants have more contact opportunities with native Dutch than lower educated migrants, second generation Turks and Moroccans do not experience more positive contact experiences and (together with second generation Surinamese) do not experience less negative contact experiences the higher they are educated. Hostility among the native population may be part of the reason for this. Although not expected, this is in line with previous research which demonstrated that not only low educated minorities face discrimination at the labourmarket but high educated minorities as well (Bertrand & Mullainathan, 2004; Gras, Bovenkerk, Gorter, Kruiswijk, & Ramsোধ, 1996). We tentatively conclude that, in the Netherlands, ethnic hostility among native Dutch hampers the integration of especially second generation migrants and especially of second generation Turks and Moroccans. The extent of which should be subject of future research.

Previous scholars suggested that the negative effect of education on cultural integration could be suppressed by national media usage, since the higher educated presumably consume more Dutch media and Dutch media usage leads to negative meta-views (e.g. 'They think we are all criminals.'). This in turn would increase ethnic hostility and identification with the country of origin. We found only meager corroborative evidence for this causal mechanism. Higher educated minorities generally consume more Dutch media usage than lower counterparts (second generation Turks and Moroccans are exceptions to this general relationship). But for all ethnic groups, except for second generation Moroccans, Dutch media usage interpreted and not suppressed the negative effect of education on origin country identification. Dutch media usage is thus foremost an indicator of involvement with the host country and to a lesser extent a feeding source for ethnic hostility, and this possibly only for second generation Moroccans.

Second generation migrants are less opposed to ethnically mixed relationships and identify more with the Netherlands than their first generation counterparts. However, educational attainment does not have the expected negative impact on ethnic hostility among ethnic minorities of second generational status. For second generation Turks and Moroccans this is somewhat worrisome since these groups are still relatively opposed to ethnically mixed relationships, this in contrast to second generation Surinamese and Antilleans who are fairly tolerant.

In this chapter we proposed to investigate the effect of education on opposition to ethnically mixed relationships and for ethnic identification. Opposition to mixed relationships is closely related to ethnic distance and ethnic hostility. We therefore applied theories with considerably merits in explaining both a wide array of indicators of ethnic hostility and in explaining the salience of national identities; Ethnic Competition Theory and Contact Theory. We conclude that for ethnic minority groups Ethnic Competition Theory turned out to be more appropriate to explain group identifications than ethnic hostility. But all in all, the threat mechanism could not be convincingly corroborated by our analyses. Within the contact theory research tradition, to focus on the tenability of the mechanism among minority population and to

investigate the impact of negative contact is still a relative novelty. Albeit with a cross-sectional dataset, we found strong support for contact theory; both positive as negative contact were related to opposition to ethnically mixed relationships and identification with the country of origin among ethnic minorities as predicted.

We conclude that the term integration paradox should be used with care. We did not find a general positive relationship between education and a lack of cultural integration, rather a weak or absent negative effect. Moreover, the effect of educational attainment is different for different attitudinal indicators of cultural integration. At the same time, the impact of policies that are intended to stimulate socio-cultural integration by offering educational programs will be meager, as the effects of education are – especially among second generation minorities – weak.

7.6 NOTES

1. It is possible that someone who identifies more with the ethnicity of origin than with the Netherlands identifies stronger with the Netherlands than someone who exclusively identifies with the Netherlands. A dichotomous variable with the categories: (1) feel completely ethnicity of origin country versus (0) do not feel completely ethnicity of origin country does not suffer from this ambiguity. We did not observe differences in signs among the direct effects of education and the mediator variables on both these variables within respectively OLS and logistic regression models. Moreover, with a few exceptions, relationships significant in the OLS model were significant in the logistic regression model and vice versa.
2. According to ECT, social class is thus likely to interpret the presumed negative effect of education on ethnic hostility and identification with the country of origin as well. However, to test this formally, we need to select respondents who are currently employed. Since this would result in a loss of approximately 50 per cent of our respondents, we decided against it.
3. We controlled for missing values in our analyses but since the inclusion or exclusion of these control variables did not substantially alter the parameter estimates of interest, they are not shown.

8. Conclusion



8. CONCLUSION

8.1 INTRODUCTION

In the last chapter of this book I will assess to what extent I have been successful in answering the core question of the book; what might be the sociological reasons for the fact that some people belonging to particular ethnic groups, situated in time and place, hold more (or less) ethnic hostility than others? I will reflect on the theoretical implications of my empirical findings, and will give my opinion on which direction future research should take. But first let me briefly sketch the structure of this book again and recapitulate the different focuses of its two parts.

Part 1 attempted to shed more sociological light on the question of why some people express more ethnic hostility than others, by examining the impact of social mobility experiences and of characteristics of the local living environment on ethnic hostility. Previous research mainly identified current or static characteristics of individuals that are related to ethnic hostility. I argued in Chapter 2, the first chapter of Part 1, that more dynamic explanations for ethnic hostility should be taken into account as well. I therefore applied a 'dynamic perspective' and investigated the impact of social mobility on ethnic hostility. The second chapter of Part 1, Chapter 3, assessed the importance of various characteristics of municipalities and neighbourhoods with respect to ethnic hostility. Up to now, such a 'local context perspective' had received relatively little attention. The third and last chapter of Part 1, Chapter 4, investigated the importance of various locality characteristics on indicators of social cohesion. Chapter 4 built on Chapter 3 in two important ways. In Chapter 3, I assessed, among other things, to what extent different indicators of ethnic hostility are affected differently by the locality. In Chapter 4, I investigated to what extent explanatory models and the theoretical frameworks for ethnic hostility could also be applied to explain other indicators of social cohesion not related to ethnic hostility. Secondly, both Chapters 3 and 4 took into account a multi-ethnic group perspective but in different and complementary ways. Chapter 3 investigated the impact of locality characteristics on ethnic hostility among natives directed towards different ethnic outgroups, Chapter 4 the impact of the locality on ethnic hostility and other social cohesion indicators among both the native Dutch population and among different ethnic minority groups.

In the first part of this book I not only endeavoured to identify novel determinants of ethnic hostility, but by looking at ethnic hostility from three different perspectives – i.e. a dynamic, local context, and multi-ethnic group perspective – I was able to provide new empirical tests for frameworks commonly used to explain ethnic hostility, such as Ethnic Competition Theory (cf. Coenders, 2001; Coenders & Scheepers, 1998; Scheepers et al., 2002) and Contact Theory (Allport, 1979 [1954]; Pettigrew & Tropp, 2006).

In the second part of this book, my aim was to contribute to the understanding of ethnic hostility by focusing on the role played by educational attainment in the formation of ethnic hostility among ethnic minorities. From previous research I already knew that educational attainment is an important determinant of ethnic hostility among dominant or native populations. I expected however that effects of education might differ across ethnic groups. This expectation was founded on previous research that describes differential distributions of educational levels across

ethnic groups (Statistics Netherlands, 2005) and research that relates distributions of educational levels to the strength of the educational effect among dominant ethnic groups (Jaspers, 2008). An accurate and detailed description of the educational integration of the four major ethnic minority groups had been lacking so far though. The description of trends in educational integration was therefore the topic of the first chapter of Part 2. This subject was viewed from a dynamic and a multi-ethnic group perspective: I not only investigated ethnic educational differentials at one point in time, but focused on birth cohort trends in ethnic educational inequality as well. Moreover, I compared ethnic educational differentials across the major ethnic groups in the Netherlands. The next chapter of Part 2, Chapter 6, built on the previous one and here my aim was to explain ethnic educational inequality. My theoretical point of departure in this chapter was the Breen-Goldthorpe model (Breen & Goldthorpe, 1997; Goldthorpe, 1996, 2000). This model had been used mainly to explain trends in class-based educational differentials and their stability. The model is formulated in such a way that it should – at least in principle – be able to explain all kinds of educational differentials. Chapter 6 thus investigated the tenability of the Breen-Goldthorpe model in a multi-ethnic context.

Besides the presumed differential distribution of educational levels across ethnic groups, a second reason to expect differential effects of education on ethnic hostility across ethnic groups came from previous, mostly qualitative research which claimed that higher educated and also otherwise seemingly well-integrated ethnic minorities express more, not less ethnic hostility (Buijs et al., 2006; Werbner, 2001). Since the relationship between educational attainment and ethnic hostility among ethnic minority groups had not been investigated before in a rigorous quantitative manner, I made this my subject of the last chapter of Part 2.

Although Chapters 5 and 6 did not contribute directly to the answer of the core question of this book, they do give a more complete picture of the integration of ethnic minorities in the Netherlands. Part 2 investigates the educational integration of ethnic minorities (the first two chapters) and the cultural integration of ethnic minorities as expressed by a lack of opposition to ethnically mixed relationships and a lack of identification with the country of origin. A more complete picture of the integration of minorities is offered than by looking at the cultural dimension only. Moreover, the first two chapters of Part 1 served as a foundation for one of the arguments explicated in the last chapter of Part 2, Chapter 7, where I related ethnic educational inequality to the strength of the educational effect across ethnic groups.

I will now proceed to discuss my conclusions for each chapter in a consecutive order, briefly recapitulating the research question and my expectations. Then I will summarise my main results before moving to chapter-specific conclusions. For each part there will be a final concluding remark. Findings of both Parts 1 and 2 have profound implications for Ethnic Competition Theory and Contact Theory, and give rise to new directions for future research. These implications and new questions deserved a separate section. The present chapter ends with a summary of the main messages of this book.

8.2 QUESTIONS, RESULTS AND CONCLUSIONS OF PART 1

8.2.1 Social Mobility and Ethnic Hostility

Research questions of Chapter 2

In Chapter 2, I argued that individuals' attitudes towards ethnic outgroups are affected both by the social position of their parents and by their own social position in adulthood. Previous empirical research has confirmed the relevance of the family of origin in relation to prejudicial attitudes (Jaspers et al., 2008), yet the relative importance of social origin versus social destination had so far remained unclear. Chapter 2 sets out to answer the following question:

To what extent does intergenerational educational and class mobility affect indicators of ethnic hostility (i.e. stereotypes, ethnic threat and opposition to ethnic intermarriage)?

The relative importance of social origin versus social destination depends largely on the relative importance of early socialisation into the attitudes typical of the social-origin position by parents and other members of the origin position versus latter circumstances on the formation of attitudes towards ethnic outgroups in adulthood, such as perceptions of competitive ethnic threat. Since socialisation tends to take place early in life (Alwin & Krosnick, 1991) and many attitudes tend to be rather stable during the life course (Glenn, 1980), a 'socialisation perspective' would expect a larger role for origin positions than destination positions. On the other hand, following Ethnic Competition Theory, ethnic hostility may be related more closely to current perceptions of material self- and group-interests. If we follow Ethnic Competition Theory, we should expect a larger role for destination positions than for origin positions. Since downward social mobility is likely to increase feelings of frustration and perceptions of ethnic competition (Bettelheim & Janovitch, 1964; Scheuch & Klingemann, 1967), I expected that downward social mobility would increase ethnic hostility independently of the specific origin-destination combination (Marshall & Firth, 1999).

Results of Chapter 2

The results presented in Chapter 2 indicate that intergenerational mobility has, as expected, a substantial impact on ethnic hostility. I found that people adapt to the attitudes of the destination category, but the extent of this attitudinal adjustment depends on the specific origin and destination combination. If someone is socially mobile and enters a new social position whose members are generally less hostile towards ethnic minorities than the members of the social-origin position, people are more likely to acculturate to the characteristic attitudes of their new social position, and the relative impact of the social origin compared to the impact of the social destination on indicators of ethnic hostility is negligible.¹ On the other hand, when the social destination is more hostile towards ethnic minorities than the origin position, the relative impact of the origin position is substantial. I showed that the influence of the social origin under specific conditions even exceeds the influence of the social destination. This means that the importance of the social origin position with respect to ethnic hostility has been underestimated in previous

research and that ideally, to explain ethnic hostility, one should look beyond the current or static characteristics of individuals and take on a more dynamic perspective.

Conclusions of Chapter 2

The main conclusion of Chapter 2 is that acculturation to less hostile attitudes is more likely to occur than acculturation to hostile attitudes, at least in the Netherlands. This finding supports what I have called in Chapter 2 the tolerance dominance hypothesis: acculturation to the level of ethnic hostility as expressed by the achieved social position will be stronger when these are more in congruence with the dominant culture of tolerance within society. In their present form, neither Socialization Theory nor Ethnic Competition Theory can completely explain that under specific conditions the social origin position has a stronger impact on ethnic hostility and in other circumstances the destination is more important. Future research is thus warranted. I urge researchers to investigate to what extent the same 'tolerance dominance' mechanism is observed for other attitudes (e.g. tolerance of homosexuals or a postmaterialist value orientation) or other forms of mobility (intra-generational mobility or marriage heterogamy).

Cross-societal comparative research provides a promising approach to better understand how variation in norms of tolerance conditions the effects of individual factors that predict ethnic hostility. To illustrate this point: among European Union member states, ethnic hostility (i.e. resistance to multicultural society, avoidance of social contacts with immigrants) is highest in Greece (Coenders et al., 2005; Coenders et al., 2007). Let us assume that the dominant norm in Greece is not one of being tolerant towards members of ethnic outgroups. Let us further assume that social positions (educational categories, social classes) still differ in terms of ethnic hostility in Greece. Following social mobility, will acculturation to less ethnic hostile attitudes be more likely than acculturation to more ethnic hostile attitudes in Greece? Following my own proposition, I would expect otherwise, since there is no dominant culture of tolerance.

Finally, I would like to pose an alternative explanation for the finding that acculturation to less hostile attitudes is more likely than to more hostile attitudes following social mobility. From this alternative explanation it is possible to deduce a contradictory hypothesis regarding the effect of social mobility to a more tolerant position on ethnic hostility in countries where there is no dominant culture of tolerance. This would add to the importance of investigating possible cross-national variation in consequences of social mobility. The alternative explanation finds its foundation in the fact that many attitudes tend to be rather stable during the life course (Glenn, 1980). Processes resulting in tolerance and hostility may to some extent be irreversible. Given the results of Chapter 2, I now posit that attitudes of ethnic tolerance may be more fixed than hostile attitudes towards ethnic outgroups; attitude change is more likely when one is hostile towards ethnic outgroups than when one is tolerant. This could also explain why an ethnically hostile social destination would have less impact than a tolerant social destination position for one's current ethnic attitudes. Once in a position of tolerance, you are no longer in the position to (easily) develop ethnic hostility. This would imply that for socially mobile individuals, acculturation to less hostile attitudes is more likely regardless of dominant societal norms. The possibility of irreversibility or asymmetry in the formation of attitudes towards ethnic groups is

something that, to the best of my knowledge, sociological theories on ethnic hostility have not yet taken into account.

But why should less hostile (i.e. more tolerant) attitudes be more stable than more hostile attitudes? One should realise that ethnic hostility is not only influenced by perceptions of threat but also, for example, by cognitive skills or individuals' level of open-mindedness (Hello, 2003). Cognitively more able and open-minded persons are less likely to be hostile towards ethnic outgroups. Cognitive skills (and probably also open-mindedness) are something that, once developed, cannot be lost or unlearned. Güveli and colleagues argue that social positions not only differ in their characteristic level of hostility due to differing levels of ethnic threat, but also because specific social positions require or develop skills, causing a person to be less hostile to outgroups (Güveli et al., 2007a, 2007b; Lubbers & Güveli, 2007). This implies that hostile individuals may become more tolerant through two mechanisms following social mobility: through the development of skills that cause someone to become less hostile towards ethnic outgroups and by moving to economic environments where ethnic competition is less salient. The attitudes of tolerant individuals are only influenced by the different competitive environment following social mobility.

8.1.2 The Local Living Environment and Indicators of Ethnic Hostility

Research questions of Chapter 3

In Chapter 3, I also looked beyond current characteristics of individuals that may affect ethnic hostility, but this time by investigating the impact of the local living environment on ethnic hostility. As argued by Ethnic Competition Theory, ethnic competition over scarce resources, either at the individual or the group level, actual or perceived, enhances negative sentiments against ethnic outgroups by provoking threats to personal and group interests (Blalock, 1967; Blumer, 1958; Bobo & Hutchings, 1996; Coenders & Scheepers, 1998; Scheepers et al., 2002). Up to now, the importance of types of ethnic competition had remained unclear. And whereas previous research on contextual determinants of ethnic hostility mainly studied the impact of characteristics of relatively large geographical units (Kunovich, 2004; Quillian, 1996; Semyonov et al., 2006; Wagner et al., 2006), I argued that effects of characteristics of municipalities and neighbourhoods could also be expected. My aim for Chapter 3 was therefore to find an answer to the question:

To what extent do characteristics of Dutch neighbourhoods and municipalities related to (perceptions of) economic, cultural or safety threats affect ethnic hostility (i.e. opposition to ethnic intermarriage)?

Following the rationale of Ethnic Competition Theory, I expected that within neighbourhoods and municipalities that could be characterised by relatively large ethnic outgroups (or sudden increases herein), low or deteriorating socio-economic status, the presence of mosques, high crime rates or high residential mobility rates, ethnic hostility would be more common. With respect to the size of ethnic outgroups within the direct living environment, Contact Theory would lead to the expectation that the higher the percentage of ethnic minorities in the neighbourhood

and municipality, the less ethnic hostility (i.e. the lower the opposition to ethnic intermarriage). I also expected that due to residential sorting, the impact of contextual characteristics might differ between the higher and the lower educated. Individuals with lower educational levels are likely to be relegated more often to neighbourhoods with higher percentages of ethnic minorities due to economic constraints and less due to preferences than individuals with higher educational levels (Massey et al., 1994; Wagner et al., 2006). I therefore expected a smaller positive effect of relative outgroup size on ethnic hostility for the higher educated than for the lower educated.²

Results of Chapter 3

In Chapter 3, I showed that there exists a significant and substantial variation in ethnic hostility across neighbourhoods and municipalities; however, to a large extent these differences are due to compositional differences. This said, even after controlling for individual level characteristics I found significant relationships between characteristics of neighbourhoods and municipalities and ethnic hostility.

Within the Netherlands, native Dutch do not hold more, but less hostile views on ethnic outgroups when the size of such groups in municipalities is larger. This relationship is not conditional on the educational level of the inhabitants and is thus in agreement with the predictions derived from Contact Theory. At the neighbourhood level the mechanisms are somewhat more complicated. For the higher educated, outgroup size is related to less ethnic hostility, and this finding thus also supports Contact Theory. It is likely, however, that it is also partly the result of selective in- and out-migration, since for the lower educated, who have less opportunity to move out of bad neighbourhoods, larger ethnic outgroup sizes within the neighbourhood are related to more ethnic hostility, as Ethnic Competition Theory predicts.

A deteriorating socio-economic status at the neighbourhood and municipality levels increases ethnic hostility, as Ethnic Competition Theory would predict. But other measures which I assumed to be related to (perceptions of) ethnic competitive threat, such as the presence of Mosques, crime rates, and residential mobility at the neighbourhood and municipality levels, do not consistently affect ethnic hostility.

Chapter 3 applies a multi-ethnic group perspective. I investigated opposition to ethnic intermarriage among native Dutch towards Turks, Moroccans and Surinamese. Native Dutch were most opposed to ethnic intermarriage with Moroccans, followed by ethnic intermarriage with Turks (cf. Hagendoorn & Pepels, 2003). However, the explanatory models for opposition to ethnic intermarriage with each respective outgroup did not differ.

Conclusion of Chapter 3

The local living environment constituted by municipalities and neighbourhoods influences ethnic hostility. However, the relationships between relevant neighbourhood and municipality characteristics, such as relative outgroup size and socio-economic situation, and ethnic hostility are weak compared to the impact on ethnic hostility of individual-level characteristics such as educational attainment.

I conclude that the threat mechanism evoked by the proximity of ethnic outgroups, positive contact experiences due to increased contact opportunities when one lives in close proximity to members of ethnic outgroups, and selective residential migration all take place at the same time within neighbourhoods and municipalities characterised by a sizeable ethnic outgroup.

Ethnic Competition Theory argues that ethnic competition and perceptions thereof cause ethnic hostility to increase. Our findings show that at the locality level, only characteristics associated to (perceptions of) economic competition are positively related to ethnic hostility. I assumed that perceptions of cultural competition would be influenced by the presence of Mosques and safety threats by crime rates and residential mobility. If this is correct, my findings would imply that only variation in economic competitive threat and not cultural or safety threats within a nation influence ethnic hostility. A necessary next step is to assess to what extent cultural threats at the national level (the presence of places of worships for different ethnic groups) and safety threats (national crime rates) can explain cross-national variation in ethnic hostility next to economic threats (socio-economic status). On the other hand, my assumption that perceptions of cultural competition would be influenced by the presence of Mosques within the locale living environment and safety threats by crime rates and residential mobility within the locale might not be correct. Perhaps perceptions of cultural and safety threats are more influenced by the mass media, which takes its cues from levels of threat at the national level, than by characteristics of the local living environment? Future research is warranted.

8.1.3 The Local Living Environment and Indicators of Social Cohesion

Research questions of Chapter 4

Chapter 4 investigated the impact of characteristics of neighbourhoods and municipalities on four indicators of social cohesion: contact frequency with one's neighbours, tolerance of a neighbour from a different race, generalised social trust and volunteering. The choice for these dependent variables enabled me to assess to what extent the impact of neighbourhoods and municipalities was similar for an indicator of both ethnic hostility and social cohesion between ethnic groups (i.e. tolerance/opposition to a neighbour from a different race), and for indicators of social cohesion that referred to associative life and generalised trust.

Although ethnic and economic heterogeneity, poverty, crime and residential mobility of the local environment are all allegedly related to lower levels of different dimensions of social cohesion (cf. Alesina & La Ferrara, 2000, 2002; Letki, 2008; Putnam, 2007), it remained unclear which of these characteristics matters most and whether the impact of contextual characteristics is consistent for different indicators of social cohesion. Building on my results of Chapter 3, I also argued in Chapter 4 that it is very likely that the impact of the community on indicators of social cohesion depends on the characteristics of its residents, such as ethnic background, income and educational degree. So far, these so-called cross-level interactions have received relatively little attention. The research question of Chapter 4 was:

To what extent, and for whom, do ethnic and economic heterogeneity, economic affluence, crime rates and residential mobility within Dutch neighbourhoods and municipalities affect indicators of social cohesion (i.e. contact frequency with one's neighbours, tolerance of a neighbour from a different race, generalised social trust and volunteering)?

I derived a hypothesis regarding the impact of locality characteristics on indicators of social cohesion mainly from the homophily principle (Blau, 1977; Lazarsfeld & Merton, 1954; McPherson et al., 2001). But I also assessed to what extent Ethnic Competition Theory and Contact Theory would lead to different expectations. The homophily principle simply states that people like others who resemble themselves, and that people have the tendency to associate with these similar others while having a 'natural aversion to heterogeneity' (Alesina & La Ferrara, 2002; Lehning, 1998). I expected that in ethnically and economically diverse communities inhabitants would share fewer characteristics and have more divergent lifestyles than inhabitants of homogenous neighbourhoods and municipalities, hence these individuals would have fewer (positive) ties with others. Next to degree of heterogeneity, I argued that neighbourhoods and municipalities differ in the extent to which they offer their inhabitants the resources to meet and mingle under favourable circumstances. I identified three of these locality characteristics which may obstruct indicators of social cohesion: poverty, criminality and residential mobility.

I expected the homophily principle to be less applicable to the higher educated and the rich, and that instead they would prefer living in a diverse locality, at least more so than individuals with lower incomes and lower educational degrees. This could be true especially within the Netherlands, with its history of strong endorsement by the elite of the ideology of multiculturalism (see introduction of this book). Hence I expected heterogeneity, poverty, crime and residential mobility to have a less severe detrimental effect on indicators of social cohesion for the higher educated and the rich than for the lower educated and the poor. Finally, following the homophily principle, I expected that increasing heterogeneity would have a less negative impact on indicators of social cohesion for ethnic minorities living in these localities than for the native Dutch.

Results of Chapter 4

Of the investigated locality characteristics, economic affluence at the neighbourhood level is most consistently positively related to different indicators of social cohesion. Within economically deprived neighbourhoods, neighbours have less contact with each other, volunteer less and have lower levels of trust. This relationship holds even if we control for composition effects, that is, for the characteristics of the individuals living in these neighbourhoods, and after taking into account other relevant characteristics of the living environment.

Ethnic and economic heterogeneity within neighbourhoods and municipalities does not have a consistent negative impact on different indicators of social cohesion for the residents living in these localities. After taking into account composition effects and other relevant locality characteristics, crime rates are not related to the four distinguished indicators of social cohesion in Chapter 4 either. Residential mobility within municipalities induces specific indicators of social

cohesion (e.g. it fosters contact with neighbours) but deteriorates others (e.g. residents are less likely to volunteer when mobility rates are higher).

Putnam (2007) reports that, in the United States, ethnic heterogeneity has a negative impact on all forms of social cohesion. I come to a radically different conclusion for the Netherlands; the impact of ethnic diversity depends on the specific indicator of social cohesion under investigation. Social cohesion cannot be reduced to one single indicator, let alone simply aggregating different indicators. Contrary to previous findings in the US, for the Netherlands I did not find a consistent negative effect of ethnic heterogeneity on indicators of social cohesion., neither among the native Dutch nor among ethnic minority groups.

Just as Chapter 3, Chapter 4 applies a multi-ethnic group perspective. This time I investigated to what extent ethnic groups differ in ethnic hostility towards one another and in other indicators of social cohesion. I also explored to what extent ethnic diversity within the locality affected indicators of social cohesion differently across ethnic groups. I tentatively conclude that, in general, non-Western ethnic minority groups have more contact with their neighbours than native Dutch, less opposition to neighbours from a different race, lower levels of generalised trust, and volunteer less. Ethnic diversity within the locality did not affect indicators of social cohesion differently for native Dutch than for ethnic minority groups.

Conclusion of Chapter 4

The local living environment not only affects ethnic hostility, as already shown in Chapter 3, but other indicators of social cohesion too. It is however not ethnic or economic diversity which is consistently related negatively to indicators of social cohesion, as could be expected on the basis of the homophily principle, but economic deprivation within neighbourhoods. Within economically deprived neighbourhoods, neighbours have less contact with each other, volunteer less and have lower levels of trust.

Different indicators of social cohesion are affected differently by both individual-level characteristics and contextual characteristics. This is in contrast with the results of Chapter 3, where I found that explanatory models for different indicators of ethnic hostility are more or less similar. We should go back to the drawing board to design a theoretical framework that explains the differential impact of locality characteristics on different indicators of social cohesion. Admittedly, in Chapter 4 I 'only' investigated a limited selection of indicators of social cohesion, but note that this is an improvement over many previous works in which only one indicator is being investigated or different indicators are simply aggregated. This said, other indicators of social cohesion should be investigated as well in order to discover – or more ideally, to test theoretically deduced – patterns in explanatory models for indicators of social cohesion. Since social cohesion refers to ties between individuals, a step forward would be to theorise on how the local living environment affects (ego-centered) networks. As long as the diversity within one's living environment remains below a certain threshold, this diversity may not be reflected in the diversity of one's own network and therefore not lead to a reduction in indicators of social cohesion that refer to associate life with members of the ethnic ingroup. Unfortunately, with the data used in Chapter 4, I was unable to investigate these 'who-with-whom'-like questions.

In relation to the latter point, scholars interested in the impact of locality on indicators of social cohesion have mostly operationalised ethnic heterogeneity by taking the complement of the Herfindahl Index. However, the precise ethnic composition of a locality might matter at least as much as the more abstract idea of ethnic heterogeneity. I did investigate this in Chapter 4 and concluded that neither the sizes of *specific outgroups* or the size of the ethnic *ingroup* affect indicators of social cohesion. If there are effects on indicators of social cohesion due to the presence of different ethnic groups, they are either the result of the group size of the dominant ethnic group – in our case the native Dutch – or really due to ethnic diversity.³ Unfortunately, within the Netherlands it is empirically impossible to pull these two effects apart. I therefore urge scholars to investigate this point further in more ethnically diverse societies.

In Chapter 4, I argued that selective residential mobility could bias the estimates of the influence of locality characteristics. Unfortunately, I did not have longitudinal data – let alone experimental data – available to me. The best I could do was to assume that individuals with higher educational degrees or higher income levels are more likely to live in specific neighbourhoods and municipalities because they prefer to do so (at least more so than the poor and lower educated), and face fewer economic constraints with respect to their locality choice than the poor and relatively lower educated. Following this rationale, I was more confident of finding detrimental effects of bad locality characteristics on indicators of social cohesion among the poor and the lower educated. The results of my analyses could not corroborate this expectation though, so I found no (indirect) evidence for residential mobility. I also assumed that residential sorting would be less pronounced across municipalities than across neighbourhoods, but in municipalities I did not find negative effects of economic or ethnic heterogeneity either. It is thus unlikely that selective residential mobility will discredit my main conclusions.

8.1.4 Concluding remarks on Part 1

In Part 1, I moved away from traditional explanations for ethnic hostility that find their origins in current or static characteristics of individuals, and showed that experiences of intergenerational educational and class mobility affect ethnic hostility. The impact of a person's current social position depends on her social origin and on society's culture of tolerance. Following social mobility, people are more likely to adopt to less hostile attitudes than more hostile ones. A more dynamic perspective on ethnic hostility thus proved fruitful. In order to predict or explain someone's level of ethnic hostility, we should take into account experiences from the past.

Next to individual-level characteristics, characteristics of relatively small geographical units affect ethnic hostility as well; especially those related to the socio-economic status of the locale affect ethnic hostility and other indicators of social cohesion as predicted. Local context matters, and a local context perspective contributes to the understanding of ethnic hostility – but is one's local living environment important for the explanation of ethnic hostility? It is safe to conclude that individual-level characteristics like educational attainment are more important in the explanatory model than characteristics of neighbourhoods, at least for society's dominant ethnic group. The relative importance of the local living environment remains unclear, however, and is most likely underestimated. Scholars should be cautious when attaching conclusions regarding the impact of

local living environments (on ethnic hostility) based on estimated variance components in multi-level models for two reasons. First, the relevant local context is not only theoretically hard to identify but also methodologically difficult to operationalise, and second, the reliability of the measured contextual characteristics is very likely to be lower than that of individual-level characteristics.

Although my results indicate that the native Dutch are more hostile towards specific ethnic minority groups (cf. Hagendoorn, 1995; Hagendoorn & Pepels, 2003), I did not find any discrepancy in the proposed explanatory models for hostility among native Dutch directed at different ethnic groups. The application of the multi-ethnic group perspective also revealed that ethnic hostility and other indicators of social cohesion are differently distributed across ethnic groups. But once again I could not explain why this was the case. The multi-ethnic group perspective did not offer more answers but did raise more questions, and as such was also valuable in terms of increasing our (future) understanding of ethnic hostility.

The theoretical implications of the findings of Part 1 with respect to Ethnic Competition Theory and Contact Theory are discussed in section 8.3.

8.2 QUESTIONS, RESULTS AND CONCLUSIONS OF PART 2

8.2.1 Trends in Ethnic Educational Inequality

Research questions of Chapter 5

Educational attainment is an important determinant for economic self-sufficiency, social class and life-long earnings. The educational integration of ethnic minority groups is therefore a good indicator of the level of structural integration of these ethnic groups. This book's core focus lies on the explanation of ethnic hostility. Ethnic hostility among ethnic minorities, which I regarded as an important aspect of their cultural integration, was the subject of Chapter 7. But by first addressing my attention to the trends in, and explanations for, the educational integration of minorities, I offered a more complete picture of the integration of ethnic minorities in the Netherlands. Moreover, the results of both Chapters 5 and 6 served as a foundation for the argumentation laid out in Chapter 7.

Although previous research on ethnic stratification patterns in the Dutch educational system reveals that the educational distribution of minority groups do not resemble that of the native Dutch, up to now the precise extent of ethnic inequality in educational opportunities and how these have changed over successive birth cohorts had remained unclear. The question I set out to answer in Chapter 5 was:

What are the birth cohort trends across ethnic groups in final educational attainment and school transition decisions, and to what extent does social background explain these differences?

According to the modernisation proposition, in modern societies the economies and concomitant occupational structures dictate selection processes based on achieved characteristics of individuals (Blau & Duncan, 1967). In Western modern societies, selection criteria not based on achieved

characteristics are morally sanctioned; ascribed characteristics not only *cannot*, but also *should not* play an important role in selection processes (Parsons, 1951). As the Netherlands is becoming an ever-more meritocratic society with regard to the ascribed characteristics of social origin and gender, I also expected the ethnic inequality of educational opportunities to have decreased at all levels and for all tracks. On the other hand, comparative empirical research on educational inequality among social strata has shown that with respect to educational opportunities, meritocratisation is not a universal process among modernised countries (Breen & Jonsson, 2005). As argued by Raftery and Hout, and summarised in their Maximally Maintained Inequality (MMI) proposition, at times of educational expansion educational inequality will only decrease at educational levels where enrolment of the elite stratum has been saturated (1993). Based on the MMI proposition I expected inequality to be maintained between ethnic groups within secondary education, yet a reduction in ethnic inequality in the odds of enrolling in tertiary education between students of different ethnic origins who successfully completed higher general secondary education in the Netherlands. Once saturation has been reached at a given educational level, inequalities of attaining that level may be replaced by inequalities in enrolment in the more selective track, according to Lucas (2001). The more selective tracks in the Netherlands are the general tracks (as opposed to vocational tracks). This would imply that at the tertiary educational level, ethnic inequality will have decreased for the less selective vocational track and increased for the more selective general track.

Results of Chapter 5

Ethnic educational inequality did not decrease at all levels and all tracks. Ethnic differences in final educational attainment are maintained; the underrepresentation of ethnic minority members with a degree in tertiary education remained more or less stable. Within secondary education, inequality is maintained quantitatively as well. Moreover, pupils of Dutch descent opt more often than immigrants to continue their educational career after higher general secondary education, and even under a condition approaching saturation pupils of ethnic minority groups do not seem able to close the gap in enrolment rates.

Based on my results, it seems that inequality is also established qualitatively within tertiary education: in recent years the choice for university gained in importance, apparently more so for native Dutch than for ethnic minority groups. However, due to a lack of statistical power I have to make the last conclusion with some caution. I urge others (and myself) to replicate this finding when suitable data becomes available.

The unfavourable social background of many students with an ethnic minority heritage partly explained the ethnic educational differentials, as predicted, but an ethnic penalty still remained after controlling for social position. Moreover, the social background composition of ethnic minority groups was not the reason for an absence of a general trend towards ethnic educational equality.

Conclusion of Chapter 5

Ethnicity is an ascriptive trait that still shapes schooling outcomes decisively. Even in a country

were class-based and sex-based educational differentials have been diminishing, educational inequality is not generally declining between non-Western minority groups and the native Dutch. Clearly, we have to refute the hypotheses derived from the modernisation proposition; ethnic educational inequality did not decrease at all levels and all tracks. But is modernisation theory wrong?⁴ Is a selection process based on ethnicity economically inefficient within educational institutions? Not if it is harder to judge the achievements and potential of minorities and there are sufficient other perfect (or suitable) candidates without an ethnic minority background for the same position to choose from. And are selection criteria based on ethnicity (morally) sanctioned, not only *de jure* but also *de facto*? These are questions that need to be addressed in the future.

In Chapter 5, I also showed that trends in ethnic educational inequality differ profoundly between ethnic groups. This illustrates the importance of a multi-ethnic group perspective. Based on my results it is not to be expected that inequality among second generation ethnic minorities and native Dutch will disappear at the secondary and tertiary educational levels for successive birth cohorts. Third generation ethnic minorities are now starting to attend school. Whether the third generation is going to perform better or worse than their second and first generation counterparts remains to be seen. My results should temper the optimism of those who expect ethnic differences to dissolve for later generations or in due time.

Even under a condition of saturation, the ethnic inequality in transition rates from secondary education to tertiary education did not diminish. This is a puzzling finding and needs further research attention. The detailed description of patterns of association between attained educational level and ethnicity also showed that ethnic inequality and cohort trends in it take different forms across vocational and general educational tracks of the same level. In line with the Effectively Maintained Inequality proposition, inequality is established qualitatively within tertiary education.

Chapter 5 raised the question of how decisions of individual students contribute to the ethnic inequality observed. This question led to the study described in Chapter 6.

8.2.2 Explanations for Ethnic Educational Inequality

Research questions of Chapter 6

Chapter 6 investigated how ethnicity affects the decision for a specific track in higher education. Building on the results of Chapter 5, I took the qualitatively differentiated structure of the Dutch educational system in general university tracks and vocational tracks of professional colleges into account. I also took into account that tracks, at both university and professional college, differ in study fields.

My point of departure was the Breen-Goldthorpe model. According to this model, students' transition decisions are based on the expected direct and indirect costs associated with each transition choice, on their subjective beliefs about the utility of educational outcomes, and on subjective beliefs about the likelihood of success in the different available track options. The beliefs of expected future academic success are likely to be influenced by factors other than ability, such as knowledge of the schooling system and preferred study effort. If students with the same demonstrated ability but with different ethnic backgrounds have different expectations of future

school success, this may account to some extent for existing ethnic educational differentials. The research question I set out to answer in Chapter 6 was:

To what extent do subjective estimates of success probabilities explain the effect of social origin, sex and ethnicity on students' choices between different school tracks in Dutch higher education?

Parents of ethnic minority pupils are less likely to have experienced the Dutch school system than parents of native Dutch pupils. Chapter 5 shows that pupils with a non-Western ethnic heritage remain underrepresented in tertiary education. They will have fewer ethnic role models from which information regarding tertiary education could be derived. I therefore assumed that ethnic minority students tend to have less knowledge of the Dutch schooling system than the native Dutch, and that as a consequence they may be less aware that there is more than ability which makes for a successful academic career. Hence I expected their beliefs of future success to be more heavily influenced by ability than the success probabilities of native Dutch students. Since I expected differences in success probabilities across social groups, ethnic groups, and male and female students, even after controlling for previous demonstrated ability, I expected these probabilities to explain (in part) the effect of social origin, sex and ethnicity on students' choices between different levels of schooling and fields of study in higher education.

Results of Chapter 6

Previously demonstrated academic ability is an important – albeit not perfect – determinant of the subjective likelihood of future academic success. Pupils from more advantaged social backgrounds have higher expectations of success, and this is largely due to their better demonstrated ability. Women have lower expectations of success for science fields than men, but higher expectations for non-science fields, even after taking ability differences into account. I also showed that Turks and Moroccans expect to have more success in higher education than native Dutch counterparts with similar ability levels, but that, contrary to my expectations, this is not because higher grades increase expectations faster for these ethnic groups.⁵ Still, differences in success probabilities were relatively small across ethnic groups compared to differences across social origin or sex. Future research should try to clarify the mechanisms of why ethnic groups and male and female students differ in their expectations of future school success.

Success probabilities explain to a large degree the effect of sex and parental income on choice of study field, as expected. However, success probabilities could not explain differences across ethnic groups in choice of study field. Also contrary to my expectations, success probabilities do not explain the effect of ascribed characteristics on the choice between general and vocational tracks. The latter finding clearly contradicts the Breen-Goldthorpe model.

Conclusion of Chapter 6

The Breen-Goldthorpe model is a very promising theoretical framework for the explanation of school transition decisions. The assumption within this model that ability is a sufficient indicator for students' success probabilities needs to be relaxed though, since in the first place ascribed

characteristics influence success probabilities next to previous demonstrated ability (although for reasons as yet unknown), and secondly since success probabilities explain the impact of ascribed characteristics on school transition decisions better than demonstrated ability. Future research should try to shed more light into why ascribed characteristics like social origin, sex and ethnicity affect expectations of success in the educational system.

Subjective success probabilities explain differentials in choice of study field across social origins and between the sexes. However, ethnicity's effect on school transition decisions cannot be explained by either differences in the perceived costs of studying, educational aspirations or success probabilities. Why the Breen-Goldthorpe model is less applicable to ethnic minority groups remains unclear. This puzzling finding warrants further academic attention.

The educational integration of ethnic minorities is lacking, as evidenced in Chapter 5. In Chapter 6 I showed that a theory with considerable merits for explaining school transition decisions of students from different social backgrounds or sexes is less applicable towards explaining the school transition decisions of ethnic minority students. Why would this be so? The findings of both Chapters 5 and 6 raise more doubts as to whether the effect of educational attainment on ethnic hostility is similar across ethnic groups. This was the subject of Chapter 7.

8.2.3 Educational Attainment and Ethnic Hostility

Research questions of Chapter 7

Educational attainment has consistently been shown to be an important determinant of ethnic hostility among the native population. The analyses presented in Part 1 of this book once again confirm this conclusion, although of course here I also showed that social mobility experiences and locality characteristics have a substantial impact on ethnic hostility. The results of Part 1 and the first two chapters of Part 2 begged the question of the extent of which and why educational attainment affects indicators of ethnic hostility and of the related phenomenon of cultural integration (i.e. opposition to ethnically mixed relationships, identification with the country of origin) among ethnic minority groups. The question regarding the link between educational integration and indicators of cultural integration can also be traced back to the findings of mostly qualitative studies regarding a presumed integration paradox among ethnic minority groups (Buijs et al., 2006; Werbner, 2001). Higher-educated minorities supposedly perceive more discrimination, not less; express more, not less ethnic hostility; and identify more, not less, with their country of origin. This is considered somewhat counterintuitive since, as said before, educational attainment has consistently been shown to be negatively related to ethnic hostility, nationalism and far right-wing voting behaviour among native populations. However, most previous quantitative empirical studies among ethnic minorities addressing the integration paradox focus on meta-views and perceptions of discrimination (e.g. Gijssberts & Vervoort, 2009; Jaspers & Lubbers, 2005). The effect of education on ethnic hostility among minority groups and on identification with the host country had remained unclear. The research question I set out to answer in Chapter 7 was therefore:

To what extent and why is educational integration linked to the cultural integration (i.e. opposition to ethnically mixed relationships and identification with the country of origin) of ethnic minorities?

To derive hypotheses I once again used Ethnic Competition Theory and Contact Theory. The starting point of Chapter 7 was that the causal mechanisms for cultural integration among ethnic minorities, as expressed through views regarding ethnically mixed relationships and identifications with the country of origin, should be similar to the causal mechanisms which lead to ethnic hostility among native populations. I expected that higher educated minorities would perceive less ethnic threat, would have more positive and fewer negative contact experiences, and would be more involved with their host country and less involved with their origin country. This in turn would explain why higher educated minorities are more culturally integrated (i.e. are less opposed to ethnically mixed relationships and identify less with their country of origin).

Results of Chapter 7

In Chapter 7 I found that, in general, educational achievement was substantially more weakly related to ethnic hostility (i.e. opposition to ethnically mixed relationships) for minority groups than for the native Dutch. I could not identify a negative effect of education on opposition to ethnically mixed relationships for second generation minorities. This finding, which is in line with the previously observed integration paradox, could be explained by the fact that second generation minorities (especially Turks and Moroccans) do not experience more positive and fewer negative contacts with the native Dutch the higher their educational level.

In contrast to what I expected on the basis of Ethnic Competition Theory, ethnic group threats did not explain the effect of education among ethnic minorities. On the other hand, I found extensive corroborative evidence for Contact Theory among both ethnic minority groups and the native Dutch. Contact in leisure time is negatively related to opposition to ethnically mixed relationships and to identification with country of origin among all ethnic groups. Also in line with Contact Theory, negative contact is positively related to opposition to ethnically mixed marriages and to identification with country of origin.

Higher educated minorities generally consume more Dutch media than their lower educated counterparts. Dutch media usage is negatively related to ethnic hostility and to identification with the country of origin. Only for second generation Moroccans did I find supportive evidence for the claim that Dutch media usage is a feeding source for ethnic hostility. The unique position of second generation Moroccans in this respect may be due to the fact that Moroccans are evaluated most negatively by the native Dutch in comparison to Turks and Surinamese/Antilleans (see results of Chapter 3).

Conclusion of Chapter 7

Second-generation migrants are less opposed to ethnically mixed relationships and identify more with the Netherlands than their first generation counterparts. However, educational attainment does not have the expected negative impact on ethnic hostility among ethnic minorities of second generational status. For second generation Turks and Moroccans this is somewhat worrisome, since these groups are still relatively opposed to ethnically mixed relationships. However, the term integration paradox should be used with care, since I did not find a general positive relationship between education and a lack of cultural integration, rather a weak or absent negative effect.

The results of Chapter 7 imply that even if, with increasing mean levels of education and when ethnic minorities start identifying with their host country, ethnic (marital) segregation will not necessarily diminish. Why identification with the country of origin is more often negatively related to educational attainments than other indicators of cultural integration (i.e. opposition to ethnically mixed relationships) deserves further scientific attention. Scholars should devote more attention to the identification of effects of ethnic identity on phenomena like ethnic hostility, physical and mental health, and labour market positions, which cannot be attributed to or explained by characteristics that are causally prior to ethnic identification.

The group-threat mechanism of Ethnic Competition Theory is, in its present form, less applicable to minority groups than to native populations. I will come back to this conclusion in section 8.3.

8.2.4 Concluding remarks on Part 2

In Part 2, I investigated the educational integration of ethnic minorities, the cultural integration of ethnic minorities and the link between these dimensions of integration. A worrisome conclusion is that the educational integration of ethnic minorities is lacking and that the unfavourable socio-economic background of many minority students could not account for this. Ethnicity is an ascriptive trait that decisively shapes schooling outcomes.

But why is ethnicity an ascriptive trait that decisively shapes schooling outcomes? I tried to explain ethnic educational differentials in educational opportunities with the Breen-Goldthorpe model. Although this model is a promising theoretical framework for the explanation of class-based – and to a somewhat lesser extent sex-based – educational inequality, it has considerably fewer merits within a multi-ethnic context; how ethnicity affects schooling outcomes remains unclear.

The Breen-Goldthorpe model focuses on explanations for student's academic demands. A way forward would be to expand this one-level demand model with a supply-side level and an institutional-context level. To what extent do teachers and school institutions offer or promote students with a minority background a suitable track of education? To what extent and why do formal institutional rules (e.g. rules governing enrolment) affect ethnic educational differentials? It is here that I expect to find answers for persisting ethnic educational inequality.

Part 2 linked the social research tradition of stratification to the tradition of social cohesion. This proved fruitful: given the persistent unequal distribution of educational degrees across ethnic groups, I expected differential effects of educational attainment on ethnic hostility among the major ethnic groups in the Netherlands.⁶ The results corroborated my expectation; in general, educational attainment has a weaker negative relationship with indicators of ethnic hostility among ethnic minority groups than among society's dominant ethnic group.

In Chapter 3, part of the first section of this book, I investigated ethnic hostility among the native Dutch population directed to different ethnic groups. My results were in agreement with previous research on the existence of an ethnic hierarchy within the Netherlands (Hagendoorn, 1995; Hagendoorn & Pepels, 2003). In Chapter 7, I took a complementary minority perspective. The level of cultural integration (i.e. a lack of opposition to ethnically mixed relationships and a

lack of identification with the country of origin) differed considerably across ethnic groups; Turks and Moroccans are more opposed to mixed relationships than native Dutch, and Surinamese and Antilleans less.

Adherents of the assimilation ideology should decide for themselves whether identity acculturation, without educational acculturation or acculturation on other domains, is sufficient. This said, based on the results of Chapter 7 I conclude that, in the Netherlands, ethnic hostility among the native population hampers the integration of ethnic minorities, especially second generation migrants, and even more specifically, second generation Turks and Moroccans. The precise extent should be subject of future research.

8.3 THEORETICAL IMPLICATIONS FOR ETHNIC COMPETITION THEORY AND CONTACT THEORY: NEW QUESTIONS

8.3.1 Theoretical implications for Ethnic Competition Theory and Contact Theory from Part 1

Theoretical implications from Chapter 2

Within the framework of Ethnic Competition Theory, actual competition between members of ethnic groups presumably induces perceptions of ethnic competition. These perceptions increase feelings of ethnic threat, which in turn reinforce ethnic hostility. Chapter 2 shows that acculturation to less hostile attitudes is more likely (or easier) than acculturation to more hostile attitudes regarding ethnic outgroups. I attributed this to the fact that ethnic tolerance (not ethnic hostility) is the dominant social norm within Dutch society. More generally, I posited that acculturation to dominant social norms is more likely to occur than acculturation to less accepted or deviant norms.

Building on these results, we may expect other effects of the dominant social norm regarding ethnic outgroups on the development of ethnic hostility among individual members of society. I would argue that individuals are more prone to perceive ethnic group competition when there are more individuals within society that express or seek to legitimise their negative thoughts, feelings or behaviour towards ethnic outgroups. Hence the prevalence of ethnic hostility within a society may condition the correlation between actual ethnic group competition and perceptions of it. Scholars have previously shown that, as a certain norm-violating behaviour becomes more common, it will negatively influence conformity to other norms and rules (Keizer, Lindenberg, & Steg, 2008). In line with these empirical findings and given the rationale given above, I expect that when there are more people violating the social norm of ethnic tolerance, ethnic hostility in all its different guises will spread more easily. The first hypothesis I posit which needs to be tested by future research is:

Actual competition between ethnic groups – induced by socio-economic, socio-cultural or socio-historical circumstances, whether at the individual or the contextual level – will have a stronger positive effect on perceptions of ethnic competitive threat and hence on ethnic hostility in countries where ethnic hostility is more prevalent.

This is of course not to say that there will always be a trend towards more ethnic hostility within society; there are other factors influencing such hostility (e.g. educational attainment, religiosity). Moreover, I just discussed results showing that acculturation to less hostile attitudes is easier than acculturation to more hostile attitudes, as long as the dominant social norm is one of social tolerance. Thus, in societies with a culture of tolerance there may very well be two counteracting self-strengthening mechanisms.

Theoretical implications from Chapters 3 and 4

There was an important inconsistency between the results of Chapters 3 and 4, which I have not mentioned before explicitly. In Chapter 3, I found that for native Dutch with an educational degree below average, the size of the outgroup in the neighbourhood was positively related to opposition to ethnic intermarriage, in line with Ethnic Competition Theory. For the relatively higher educated this relationship was reversed, as could be expected given selective residential mobility. In sharp contrast, in Chapter 4 I found that for native Dutch the size of the outgroup is negatively related to rejection of neighbours from a different race, as would be expected on the basis of Contact Theory, but this negative relationship was weaker (not stronger) for the relative rich.⁷

The two datasets used in Chapters 3 and 4 were collected after different sample selection procedures. The dataset used in Chapter 4, CV04, contained an oversampling of 'bad neighbourhoods', and compared to the dataset of Chapter 3, NKPS02, has far more respondents living in neighbourhoods with a substantial proportion of ethnic minorities. Hence, within the CV04, the *actual* relationship between outgroup size and ethnic hostility within neighbourhoods with relatively high proportions of ethnic minorities has more influence on the *estimated* effect of outgroup size on indicators of ethnic hostility than within the NKPS02. I now expect the following hypotheses to hold:

- 1a. *When outgroup sizes start to increase (beginning with zero per cent), outgroup sizes within neighbourhoods will decrease levels of ethnic hostility for the rich and higher educated. 1b. After a certain threshold, outgroup sizes will start to reinforce ethnic hostility for the rich and higher educated.*
- 2a. *When outgroup sizes start to increase (beginning with zero per cent), outgroup sizes within neighbourhoods will increase levels of ethnic hostility for the poor and lower educated. 2b. After a certain threshold, outgroup sizes will start to diminish ethnic hostility for the poor and low educated.*

Of course, these hypotheses have been induced from my results and not been theoretically deduced. This is because the relevant theories, Ethnic Competition Theory and Contact Theory, are simplifications of reality and do not take into account possible relevant conditional nonlinear relationships. A possible reason for this omission is that to theoretically deduce hypotheses – which I strongly adhere to – without formalised theoretical models is far more difficult with (conditional) nonlinear relationships. We thus need to formalise our theoretical frameworks. A nice example of a

formal sociological model is the Breen-Goldthorpe model, which I applied in Chapter 6.

At what outgroup size this 'certain threshold', or tipping point, occurs ideally follows from this formalised model. It is however more likely that it has to be determined by empirical investigation. For example, Gijssberts and Dagevos (2007) showed that the more ethnic minorities there are in one's neighbourhood the more contact native Dutch have with ethnic minorities, at least as long as the proportion of ethnic minorities remains below 50 per cent. After this tipping point contact decreases again. But note that these authors do not take into account a possible *conditional* curvilinear relationship. Moreover, their sample of respondents from 'concentration neighbourhoods' is relatively small. Consequently, their predicted relationship between the presence of ethnic minorities in a neighbourhood and contact of native Dutch with members of ethnic minority groups is likely to reflect more closely the actual relationship among the rich and higher educated than among the poor and lower educated.

Contact with members of ethnic outgroups and selective residential mobility may explain a negative relationship between outgroup sizes within neighbourhoods and ethnic hostility, perceptions of ethnic threat may explain a positive relationship. Consequently, if the above propositions meet corroborative empirical evidence, these explanatory mechanisms operate differently for the rich and higher educated than for the poor and lower educated (see Figure 8.1). I expect that residential mobility is sooner a viable option for the rich than for the poor. The poor need a stronger push factor. I would also argue that the higher educated and rich will have relatively more positive contact experiences when outgroup sizes are small within the locality, compared to the lower educated and poor. The reason being that they are not in direct competition with members of ethnic outgroups and are as a consequence more likely to meet (or select) members of ethnic outgroups under favourable circumstances (shops, sportclubs, etc.). In contrast, the low educated and poor will start to experience competitive threat and negative contact experiences immediately with rising outgroup sizes. Once outgroup sizes reach a specific threshold, the poor with negative views towards ethnic outgroups will start to leave their neighbourhoods as well. But the ones who remain may start to experience some positive contact experiences as well, which deteriorate their prior existing ethnic stereotypes. In contrast, with larger ethnic outgroup sizes, positive contact experiences will not become more likely for the rich and high educated, negative contact experiences will be harder to avoid, and as a consequence the threat mechanism may start to dominate the selective residential mobility and positive contact mechanism. A possible situation in agreement with this rationale is depicted in Figure 8.1.

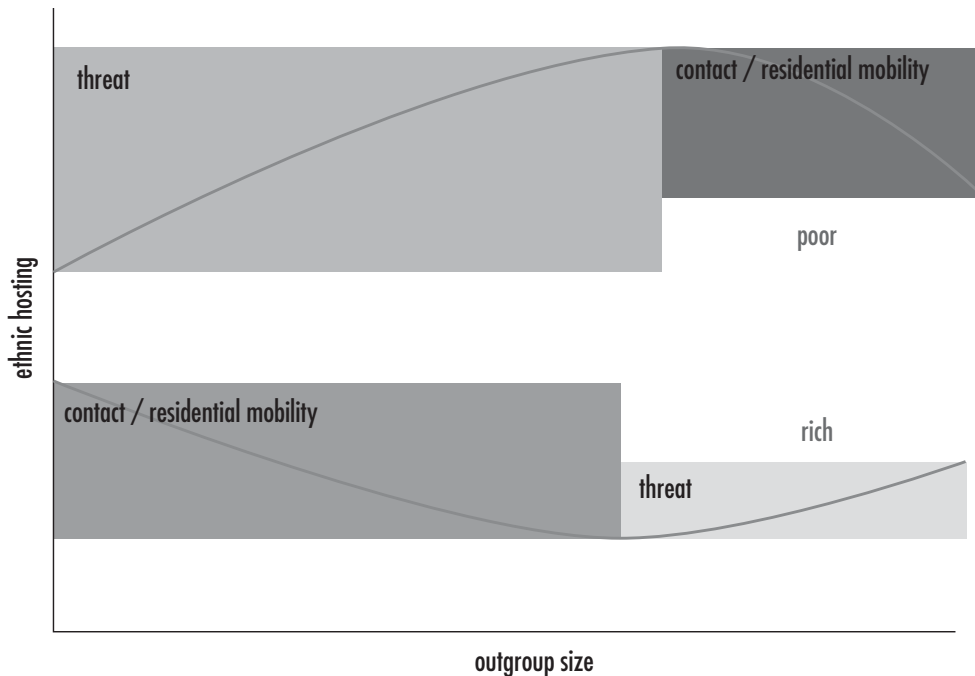


Figure 8.1. Conditional curvilinear effects of outgroup size on ethnic hostility

Hostility reduction as a result of positive contact experiences, ethnic hostility formation due to perceptions of threat, and selective residential mobility only constitute a part of my explanation for the relationship between outgroup sizes within the locality and level of ethnic hostility. Considered on their own, Contact Theory and Ethnic Competition Theory would lead to contradictory hypotheses regarding the impact of ethnic outgroup sizes within the locality. To deduce contradictory hypotheses from established theoretical frameworks is something to strive for, since they commonly pinpoint where something in our understanding and our theories has gone awry. Empirically testing contradictory hypotheses normally shows us which theory is wrong and which one is right (or more wrong/right than the other). However, neither Ethnic Competition Theory nor Contact Theory is wrong – ‘just’ underspecified. Perceptions of threat will lead to more ethnic hostility, all else being equal. And under *ceteris paribus* conditions, positive contact experiences will lead to a reduction in ethnic hostility. Of course the problem is that larger outgroup sizes within the locality both induce perceptions of threat and increase the likelihood of positive contact experiences. Statements like ‘the more A the more B the more C’ should be made more informative (cf. Ultee, 1974): *to what extent* do larger outgroup sizes lead to perceptions of ethnic threat and positive contact experiences?, and *to what extent* do perceptions of threat and positive contact experience increase or decrease ethnic hostility?

Moreover, I argue that Ethnic Competition Theory and Contact Theory cannot be considered on their own, since levels of threat cannot be held constant with changing levels of contact experiences and vice versa; perceived threat and contact experiences affect one

another. Ethnic Competition Theory and Contact Theory should be incorporated into one formal theoretical framework. Note that an integration of the propositions of Contact Theory and Ethnic Competition Theory is not new. Stephan and Stephan integrated contact experiences and threat in their Integrated Threat Theory (Stephan & Stephan, 2000); positive contact diminishes threat. And Robert Park already recognised and explicated within his assimilation theory that for actual competition between ethnic groups to exist there has to be (negative) contact between members of these groups (Park, 1950).⁸ It may be clear that residential mobility should also be taken into account within this new integrated and formalised theoretical framework.

Thus following Chapters 3 and 4, I would argue that future research should investigate *when* (depending on ethnic outgroup sizes within the locale), *for whom* (the rich and the poor, the higher educated and the lower educated), *to what extent* and *why* the threat mechanisms and contact mechanisms come to the fore – ideally, guided by hypotheses deduced from a formal theoretical model that incorporates Ethnic Competition Theory, Contact Theory and selective residential mobility.

8.3.2 Theoretical implications for Ethnic Competition Theory and Contact Theory from Part 2

In Chapter 7, I did not find corroborative evidence for the expectation derived from Ethnic Competition Theory that ethnic minorities who perceive group discrimination would be more opposed to ethnically mixed relationships and would more strongly identify with their country of origin. One could argue that perceptions of group discrimination are empirically and theoretically distinct from perceptions of ethnic-group threat measured by more traditional survey items such as ‘They take away our jobs’. I admit that future research should try to replicate my findings with these traditional operationalisations of perceptions of group threat. If these more classical measurements of group threat do lead to more ethnic hostility among ethnic minorities, the question becomes: why are perceptions of group discrimination not perceptions of ethnic group threat? And yet, I cannot see how discrimination could not lead to perceptions of ethnic group threat. I therefore want to propose a refinement of Ethnic Competition Theory instead.

Initially, the general proposition of Ethnic Competition Theory read: *‘The stronger the actual competition between ethnic groups – induced by socio-economic, socio-cultural or socio-historical circumstances, whether at the individual or the contextual level – the stronger the perceived ethnic threat, that in turn reinforces the mechanisms of social (contra-) identification, leading to stronger nationalistic and ethnic exclusionistic attitudes.’* (Coenders, 2001, pp. 42-43). The ethnic outgroup poses a threat to the social position of the ethnic ingroup as a whole, but the outgroup is a stronger threat for individuals who hold similar social positions as the majority of outgroup members, since these individuals are more directly in competition with members of outgroups for scarce resources, according to Ethnic Competition Theory. The *explanandum* has been generalised in subsequent publications, and Ethnic Competition Theory should in principle be able to explain all indicators of ethnic hostility and not only nationalistic and exclusionistic attitudes.⁹

Ethnic Competition Theory however implicitly equates the ingroup with society’s dominant ethnic group. The social positions that are most directly in competition with members of outgroups were considered to be members with few resources (the lower educated, the unemployed and

manual labourers). However, higher educated ethnic minorities in the Netherlands are generally more directly in competition with natives than their lower educated counterparts but they also have more resources. It is therefore crucial to distinguish the effect of 'a similar social position' from the effect of resources on ethnic hostility. Chapter 7 shows that, in general, higher educated minorities experience more ethnic group threat (cf. Gijssberts & Vervoort, 2009). I now posit that:

The positive effect of the actual competition between ethnic groups – induced by socio-economic, socio-cultural or socio-historical circumstances, whether at the individual or the contextual level – on perceived ethnic group threat will be stronger for individuals who hold similar social positions as the majority of outgroup members.

However, in Chapter 7, I did not find corroborative evidence that ethnic group threat is related to higher levels of ethnic hostility among minorities. It is likely that perceptions of ethnic (group) threat will be stronger related to ethnic hostility when they are experienced by individuals with few resources, since for them group interests will more directly further their self-interests and for them consequences of ethnic group competition will be more severe; a higher educated minority may end up in a job that does not match his/her ability due to group discrimination, but a low educated minority will end up unemployed. Thus:

The positive effect of perceived ethnic threat on ethnic hostility will be stronger for individuals with fewer resources.

8.4 RETROSPECT AND PROSPECT

This book shows that, next to static individual characteristics, taking into account social mobility experiences contributes to our understanding of the dynamics of ethnic hostility. Individuals acculturate to the attitudes typical of their social destination, yet acculturation is more likely to occur when these attitudes are in closer agreement with the tolerant societal norms.

The neighbourhood and municipality people live in affect the salience of hostile attitudes towards ethnic outgroups among its residents. Neighbourhood poverty or a deteriorating socio-economic status is fairly consistently related to more ethnic hostility and less social cohesion. An important null-finding was that neither outgroup sizes nor ethnic diversity are consistently related to more ethnic hostility and less social cohesion.

Educational attainment is an important determinant of ethnic hostility among native or dominant populations in a society, but it is more weakly negatively related to indicators of ethnic hostility among ethnic minorities. To some extent this could be attributed to the unequal distribution of educational attainments across ethnic groups, but the salience of ethnic hostility among society's dominant ethnic group is also likely to influence the cultural integration of ethnic minorities and their ethnic hostility directed to the host country.

This book ended with new questions and testable propositions. Hopefully these questions and propositions will inspire new research.

8.5 NOTES

1. Diagonal Mobility Models (Hendrickx et al., 1993; Sobel, 1981, 1985) were applied in Chapter 2. Within these models, stable respondents, respondents who did not experience social mobility, are assumed to constitute the core of the respective social position and to express the characteristic attitudes of this social position. These core members function as a reference for the socially mobile. When speaking of a (more) tolerant social position, I refer to mean levels of ethnic hostility as expressed by these core members.
2. In my expectation I implicitly assumed that the threat mechanism dominates over the contact mechanism. If however the contact mechanism dominates, selective residential mobility would imply a stronger negative effect of relative outgroup size for the higher educated than for the lower educated.
3. The estimated effect of the group size of the native Dutch on ethnic hostility is of course exactly the opposite as the estimated effect of the group size of non-natives.
4. According to Inglehart (1997), Modernisation Theory's central claim is that economic, cultural and political change go together in coherent patterns. It is however not always clear what the defining characteristics of modernisation theory are (Roxborough, 1988), Here I am only concerned with the proposition (not the theory) that industrialisation is accompanied by a trend from ascription to achievement.
5. Turks and Moroccans enrolled in higher education are a more selective group than native Dutch students. However, this cannot explain that Turks and Moroccans currently enrolled in higher education do not have higher expectations of success than native Dutch students. Granted, Turks and Moroccans probably need higher expectations of success in higher secondary education than native Dutch students before they decide to enrol in higher education. But if there were no effect of ethnicity on success probabilities, this would imply that their ability levels would be higher than native Dutch students as well, which they are not. Thus ethnicity affects success probabilities, although for reasons so far unknown.
6. In Chapter 2, I also linked social stratification research to research with a focus on social cohesion. Here I related social mobility experiences to indicators of ethnic hostility.
7. It is not likely that this paradox can be attributed to the different indicators of ethnic hostility, opposition to ethnic intermarriage and opposition to a neighbour from a different race are closely related; both are expressions of the preferred social distance people want to keep between themselves and members of ethnic outgroups. It cannot be attributed either to the fact that I estimated a cross-level interaction with education and outgroup size in Chapter 3, and in Chapter 4 I reported a cross-level interaction with income. This interaction improved the model fit more than the cross-level interaction with education, but both went in the same direction and both were significant.
8. Only recently have negative contact experiences been receiving more attention (Jaspers, 2008).
9. In its original form, competition at the contextual level referred to the competition at the national level between a nation's dominant ethnic group and ethnic outgroups. In Part 1, Chapters 3 and 4, I investigated to what extent characteristics of neighbourhoods and municipalities affect ethnic hostility. The results were promising. The contextual level that Ethnic Competition Theory refers to may thus be understood as any geographical unit.

APPENDIX

APPENDIX 2.1 DESCRIPTIVE STATISTICS SOCON DATA SET

	Min.	Max.	Mean	SD	%	Mean or correlation ^a	
						Stereotypes	Ethnic threat
Dependent variables ^b							
Stereotype scale	0.00	4.00	1.54	0.75			
Ethnic threat scale	0.00	4.00	1.62	0.93			
Mobility variables ^c							
Occupational destination							
Technocrats					22.79	1.37	1.34
Socio-cultural specialists					16.66	1.18	1.18
Routine non-manual occ.					27.69	1.45	1.57
Small employers					4.98	1.71	1.64
Manual sup. and skilled manual occ.					10.07	1.60	1.80
Semi-unskilled man. occ. and farm lab.					17.81	1.63	1.86
Occupational origin							
Technocrats					21.33	1.35	1.41
Socio-cultural specialists					8.08	1.35	1.29
Routine non-manual occ.					10.88	1.34	1.36
Small employers					20.38	1.54	1.54
Manual sup. and skilled manual occ.					21.41	1.45	1.65
Semi-unskilled man. occ. and farm lab.					17.92	1.56	1.72
Educational destination							
University						1.15	1.09
College						1.24	1.20
O and A levels						1.35	1.28
Secondary vocational						1.50	1.59
Lower secondary education						1.56	1.64
Lower vocational or elementary school						1.67	1.89
Educational origin							
University						1.32	1.31
College						1.32	1.35
O and A levels						1.37	1.31
Secondary vocational						1.38	1.38
Lower secondary education						1.34	1.23
Lower vocational or elementary school						1.51	1.64
Non-mobility independent variables ^d							
Sex							
Male					50.00	1.48	1.49
Female					50.00	1.40	1.56
Church attendance	0.00	52.00	8.77	17.78		0.04	0.05
Age	18.00	70.00	45.60	13.30		0.20	0.08
Survey year							
1995					28.82	1.37	1.38
2000					31.07	1.33	1.41
2005					40.11	1.58	1.72

^a All ANOVA F-tests and Pearson's correlations are significant at the $\alpha < 0.10$ significance level

^b Descriptives calculated for respondents who are included in either the occupational or educational mobility analyses and with a valid score on the respective dependent variable.

^c Descriptives calculated for respondents who are included in the respective mobility analyses (occupational or educational) and with at least a valid score on one of the dependent variables

^d Descriptives calculated for respondents who are included in one or more mobility analyses.

APPENDIX 2.2 DESCRIPTIVE STATISTICS NKPS DATA SET

	Min.	Max.	Mean	SD	%	Mean or correlation ^a Ethnic Inter-marriage scale
Dependent variables ^a						
Ethnic Inter-marriage scale	0	12	6.67	3.04		
Mobility variables ^b						
Occupational destination						
Technocrats				26.48		6.04
Socio-cultural specialists				19.12		5.57
Routine non-manual occ.				27.50		6.52
Small employers				4.44		7.27
Manual sup. and skilled manual occ.				7.94		6.89
Semi-unskilled man. occ. and farm lab.				14.51		6.94
Occupational origin						
Technocrats				23.74		6.08
Socio-cultural specialists				9.87		5.78
Routine non-manual occ.				12.76		6.16
Small employers				17.26		6.83
Manual sup. and skilled manual occ.				20.99		6.44
Semi-unskilled man. occ. and farm lab.				15.39		6.54
Educational destination						
University				10.69		5.53
College				25.97		6.05
O and A levels				7.50		6.36
Secondary vocational				22.62		6.85
Lower secondary education				11.36		7.06
Lower vocational or elementary school				21.87		7.77
Educational origin						
University				4.92		5.48
College				10.69		5.83
O and A levels				5.96		6.42
Secondary vocational				11.64		6.58
Lower secondary education				11.11		6.37
Lower vocational or elementary school				55.68		7.07
Non-mobility independent variables ^c						
Sex						
Male					42.05	6.57
Female					57.95	6.74
Church attendance	0	70	9.484981			0.14
Age	18	79	47.43752			0.22

^a All ANOVA F-tests and Pearson's correlations are significant at the $\alpha < 0.10$ significance level

^b Descriptives calculated for respondents who are included in either the occupational or educational mobility analyses and with a valid score on dependent variable.

^c Descriptives calculated for respondents who are included in the respective mobility analyses (occupational or educational) and with a valid score on the dependent variables

^d Descriptives calculated for respondents who are included in one or both mobility analyses.

APPENDIX 2.3 MOBILITY TABLES

Mobility type: Occupational Mobility; Dependent variable: Stereotypes; Data source: SOCON

Father's class		Respondent's class						
		1	2	3	4	5	6	7
	mean	1.42	1.15	1.45	1.86	1.35	1.75	1.41
1. Technocrats	SD	0.69	0.72	0.76	0.64	0.62	0.76	0.74
	N	179	122	139	16	39	50	545
	mean	1.25	1.31	1.60	1.56	1.49	1.38	1.39
2. Socio-cultural specialists	SD	0.67	0.66	0.60	0.93	0.69	0.84	0.68
	N	51	69	54	9	7	17	207
	mean	1.44	1.21	1.48	1.56	1.75	1.51	1.43
3. Routine non-manual occupations	SD	0.70	0.71	0.74	0.45	0.72	0.71	0.72
	N	75	55	89	8	9	37	273
	mean	1.50	1.32	1.58	1.93	1.76	1.92	1.65
4. Small employers	SD	0.67	0.63	0.70	0.76	0.76	0.70	0.73
	N	98	62	148	55	44	102	509
	mean	1.41	1.11	1.59	1.84	1.78	1.64	1.55
5. Manual supervisors and skilled manual occupations	SD	0.70	0.74	0.76	0.90	0.78	0.72	0.77
	N	102	69	153	25	82	106	537
	mean	1.51	1.39	1.51	2.01	1.83	1.95	1.68
6. (Semi-)unskilled manual occupations	SD	0.70	0.54	0.70	0.63	0.74	0.80	0.75
	N	75	48	116	10	71	127	447
	mean	1.43	1.23	1.53	1.86	1.72	1.79	1.54
7. Total	SD	0.69	0.69	0.73	0.76	0.75	0.76	0.75
	N	580	425	699	123	252	439	2518

Mobility type: Occupational Mobility; Dependent variable: Ethnic threat; Data source: SOCON

Father's class		Respondent's class						
		1	2	3	4	5	6	7
	mean	1.37	1.20	1.62	1.71	1.39	2.00	1.46
1. Technocrats	SD	0.76	0.85	0.98	0.97	0.73	1.01	0.90
	N	178	123	141	17	38	47	544
	mean	1.16	1.20	1.71	1.56	1.75	1.09	1.35
2. Socio-cultural specialists	SD	0.75	0.76	0.84	1.08	0.93	0.61	0.82
	N	53	69	52	8	8	16	206
	mean	1.35	1.13	1.56	1.33	1.63	1.66	1.42
3. Routine non-manual occupations	SD	0.86	0.63	0.88	1.20	0.92	0.84	0.85
	N	77	55	90	9	8	38	277
	mean	1.35	1.36	1.60	1.88	2.05	2.00	1.68
4. Small employers	SD	0.78	0.80	0.85	0.90	0.89	0.94	0.90
	N	95	63	140	54	43	110	505
	mean	1.48	0.99	1.78	2.10	2.12	2.02	1.74
5. Manual supervisors and skilled manual occupations	SD	0.80	0.75	0.94	1.02	0.97	0.94	0.97
	N	103	69	156	24	82	108	542
	mean	1.47	1.48	1.85	1.83	2.09	2.20	1.88
6. (Semi-)unskilled manual occupations	SD	0.75	0.67	0.94	1.06	0.91	0.98	0.93
	N	78	49	113	9	70	124	443
	mean	1.38	1.21	1.69	1.83	1.96	2.00	1.62
7. Total	SD	0.78	0.77	0.92	0.98	0.93	0.96	0.92
	N	584	428	692	121	249	443	2517

Continued on next page

Appendix 2.3 continued

Mobility type: Occupational Mobility; Dependent variable: Ethnic intermarriage; Data source: NKPS								
		Respondent's class						
Father's class		1	2	3	4	5	6	7
	mean	5.74	5.52	6.62	7.08	5.95	7.04	6.08
1. Technocrats	SD	2.89	2.79	3.01	2.90	3.32	3.29	3.00
	N	277	192	210	26	39	69	813
	mean	5.29	5.75	6.43	6.38	5.86	5.70	5.78
2. Socio-cultural specialists	SD	2.86	3.09	2.41	4.60	3.59	2.32	2.90
	N	105	111	80	8	14	20	338
	mean	6.02	5.45	6.55	6.20	7.24	6.07	6.16
3. Routine non-manual occupations	SD	3.11	2.92	2.55	4.39	3.07	3.05	2.96
	N	129	91	132	10	33	42	437
	mean	6.55	5.85	6.73	8.00	7.53	7.29	6.83
4. Small employers	SD	3.12	2.65	2.72	3.34	2.98	2.88	2.98
	N	142	91	160	66	38	94	591
	mean	6.42	5.46	6.25	7.14	7.14	6.88	6.44
5. Manual supervisors and skilled manual occupations	SD	2.88	3.16	2.80	3.61	3.10	2.78	2.96
	N	169	102	197	21	83	147	719
	mean	6.42	5.38	6.55	6.19	6.78	7.19	6.54
6. (Semi-)unskilled manual occupations	SD	2.46	2.78	2.78	2.98	2.70	3.02	2.83
	N	85	68	163	21	65	125	527
	mean	6.04	5.57	6.52	7.27	6.89	6.94	6.34
7. Total	SD	2.94	2.89	2.76	3.43	3.07	2.95	2.96
	N	907	655	942	152	272	497	3425

Mobility type: Educational Mobility; Dependent variable: Stereotypes; Data source: SOCON								
		Respondent's education						
Father's education		1	2	3	4	5	6	7
	mean	1.24	1.26	1.88	1.46	2.20	1.00	1.36
1. University	SD	0.81	0.65	0.84	0.57	0.85	0.57	0.77
	N	56	40	17	12	2	2	129
	mean	1.30	1.32	1.15	1.46	1.48	1.63	1.34
2. Professional college	SD	0.58	0.65	0.63	0.66	0.83	0.72	0.65
	N	47	87	26	35	12	9	216
	mean	0.97	1.29	1.39	1.59	2.01	1.85	1.41
3. O and A levels	SD	0.74	0.72	0.61	0.63	0.62	0.92	0.76
	N	30	53	29	24	17	14	167
	mean	1.02	1.29	1.57	1.55	1.63	1.52	1.43
4. Secondary vocational	SD	0.66	0.73	0.91	0.66	0.67	0.86	0.74
	N	25	66	20	90	20	21	242
	mean	1.07	1.24	1.28	1.59	1.55	1.79	1.41
5. Lower general secondary	SD	0.67	0.72	0.72	0.69	0.84	0.65	0.75
	N	28	66	36	57	35	26	248
	mean	1.25	1.31	1.41	1.58	1.67	1.92	1.65
6. Elementary school and lower vocational school	SD	0.71	0.66	0.73	0.69	0.73	0.73	0.75
	N	52	213	94	307	203	468	1337
	mean	1.18	1.29	1.41	1.56	1.67	1.89	1.54
7. Total	SD	0.71	0.68	0.74	0.68	0.74	0.74	0.75
	N	238	525	222	525	289	540	2339

Continued on next page

Mobility type: Educational Mobility; Dependent variable: Ethnic threat; Data source: SOCON

Father's education		Respondent's education						
		1	2	3	4	5	6	7
1. University	mean	1.22	1.18	1.59	1.77	2.75	1.50	1.33
	SD	0.81	0.71	1.08	0.90	0.35	0.00	0.85
	N	57	41	17	11	2	2	130
2. Professional college	mean	1.29	1.34	1.34	1.69	1.32	1.33	1.39
	SD	0.84	0.87	0.62	0.89	0.84	0.71	0.84
	N	46	87	25	36	11	9	214
3. O and A levels	mean	0.98	1.09	1.18	1.72	1.94	2.07	1.34
	SD	0.81	0.75	0.83	0.88	0.93	1.07	0.91
	N	30	55	28	25	16	14	168
4. Secondary vocational	mean	1.13	1.23	1.55	1.60	1.70	1.64	1.46
	SD	0.73	0.79	1.15	0.84	0.78	0.73	0.85
	N	26	66	19	86	20	22	239
5. Lower general secondary	mean	0.87	1.11	1.07	1.43	1.73	2.02	1.33
	SD	0.85	0.73	0.71	0.76	0.80	0.70	0.82
	N	27	65	36	56	35	25	244
6. Elementary school and lower vocational school	mean	1.10	1.28	1.43	1.72	1.84	2.10	1.76
	SD	0.76	0.75	0.90	0.85	0.93	0.94	0.94
	N	50	214	95	308	200	479	1346
7. Total	mean	1.13	1.24	1.35	1.67	1.81	2.06	1.60
	SD	0.81	0.77	0.88	0.85	0.91	0.93	0.92
	N	236	528	220	522	284	551	2341

Mobility type: Educational Mobility; Dependent variable: Ethnic intermarriage; Data source: NKPS

Father's education		Respondent's education						
		1	2	3	4	5	6	7
1. University	mean	4.86	6.08	5.93	5.05	7.20	5.38	5.48
	SD	3.37	2.88	2.81	3.33	1.64	4.60	3.19
	N	111	96	28	22	5	8	270
2. Professional college	mean	5.72	5.71	5.35	5.97	7.13	7.32	5.83
	SD	3.02	2.82	2.88	2.93	3.28	3.32	2.94
	N	134	248	55	107	23	19	586
3. O and A levels	mean	5.69	6.38	7.00	6.44	7.12	5.73	6.42
	SD	2.64	3.05	3.37	2.67	2.48	3.61	2.96
	N	67	99	62	55	33	11	327
4. Secondary vocational	mean	6.08	6.11	6.49	6.91	6.90	7.55	6.58
	SD	2.98	3.07	2.60	3.03	2.44	3.20	3.01
	N	59	215	45	225	50	44	638
5. Lower general secondary	mean	5.39	5.86	6.63	6.66	6.94	7.32	6.37
	SD	3.21	3.05	2.95	2.96	2.98	3.03	3.08
	N	77	174	71	141	80	66	609
6. Elementary school and lower vocational school	mean	5.66	6.16	6.37	7.10	7.09	7.85	7.07
	SD	2.74	2.95	3.01	2.89	2.77	2.91	2.97
	N	138	592	150	690	432	1051	3053
7. Total	mean	5.53	6.05	6.36	6.85	7.06	7.77	6.69
	SD	3.02	2.96	3.01	2.95	2.77	2.96	3.04
	N	586	1424	411	1240	623	1199	5483

APPENDIX 2.4 TUTORIAL DIAGONAL MOBILITY MODELS

```
*****TUTORIAL Diagonal Mobility Models (DMM)*****
*****.
*****written by: Jochem
Tolsma*****.
*****last modified: 04-10-
08*****.
```

*******INTRODUCTION*******

This SPSS Tutorial on Diagonal Mobility Models (DMM) accompanies the publication:

Tolsma, J., De Graaf, N.D. and L. Quillian. 2009 'Does Social Mobility affect Antagonistic Attitudes towards Ethnic Minorities?', *British Journal of Sociology*, 60(2)

In this tutorial I will illustrate how to estimate the Diagonal Mobility Models used in this paper with SPSS as well as some other common DMMS

You can run this script on the fictive dataset which is included in the electronic version of the tutorial, see www.jtolsma.nl.

I refer to the following publications for more background information on DMM:

Hendrickx, J., De Graaf, N D., Lammers, J., and Ultee, W. 1993 'Models for status inconsistency and mobility: a comparison of the approaches by Hope and Sobel with the mainstream square additive model', *Quality and Quantity*, 27(4): 335-352

Sobel, M. E. 1981 'Diagonal Mobility Models: A Substantively Motivated Class of Designs for the Analysis of Mobility Effects', *American Journal of Sociology*, 46(6): 893-906

Sobel, M. E. 1985 'Social Mobility and Fertility Revisited: Some New Models for the Analysis of the Mobility Effects Hypothesis', *American Sociological Review*, 50(5): 699-712

Weakliem, D. L. 1992 'Does Social Mobility Affect Political Behaviour?', *European Sociological Review*, 8(2): 153-166

The major SPSS commands used in this tutorial are "NLR" and "CNLR", I refer to SPSS' command syntax reference for a detailed overview of these command.

*This tutorial has the following sections:

INTRODUCTION.

MEANS AND OLS.

*DMM WITH NLR.

 *BASIC MODEL.

 *MODEL WITH COVARIATES.

 *MODEL WITH ORIGIN AND DESTINATION DEPENDENT ACCULTURATION EFFECTS.

 *status dominance model.

 *depY dominance model.

 *MODEL WITH MOBILITY EFFECTS INDEPENDENT OF ORIGIN AND DESTINATION.

 *ORIGIN OR DESTINATION DEPENDENT SALIENCE PARAMETERS.

 *WEAKLIEM MODEL.

*DMM WITH CNLR.

 *ADDING CONSTRAINTS.

 *LOGISTIC DMMs.

*****.

*In this tutorial I suppose that:

**"depY" is your (normally distributed) dependent variable (for example, let depY represent tolerance. The higher the value of depY the more tolerant attitudes people hold towards ethnic migrants).

**"origin" is the variable that refers to the social origin (for example father's social class or first occupation of respondent or spouse's social class).

**"destination" is the variable that refers to the social destination (for example respondent's social class or current occupation of respondent).

*both the origin and destination consist of six categories, we thus have a 6 by 6 table with 6 diagonal cells (d1 to d6).

**"cov" is a covariate (for example church attendance a year).

*The examples below make use of the fictive dataset included in the electronic version of this tutorial (see www.jtolsma.nl)

*****MEANS and OLS*****.

*let us first have a look at the data.

MEANS

```
TABLES=depY BY destination BY origin
/CELLS MEAN STDDEV COUNT .
```

*This is of course similar to an OLS regression analyses in which we defined every cell of the destination by origin table.

*make the 36 dummies for combinations of origin and destination: first origin then destination.

```
do repeat x=0 to 35 / y=orides1 to orides36.
```

```
if origin eq (1+ trunc((x)/6)) & destination=( 1 + ((x) -
(trunc((x)/6))*6)) y=1.
```

```
if not ((origin eq (1+ trunc((x)/6))) & (destination=( 1 + ((x) -
(trunc((x)/6))*6)))) y=0.
```

```
end repeat.
```

```
exe.
```

REGRESSION

```
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT depY
/METHOD=ENTER orides2 orides3 orides4 orides5 orides6 orides7
orides8 orides9 orides10 orides11 orides12 orides13 orides14
orides15 orides16 orides17 orides18 orides19 orides20 orides21
orides22 orides23 orides24 orides25 orides26 orides27 orides28
orides29 orides30 orides31 orides32 orides33 orides34 orides35
orides36 .
```

*Do you already see mobility effects in our fictive dataset? I don't.

*Unfortunately, there is nothing in between the square additive model above and the model with main effects only.

*Why? See the papers referred to above.

*For completeness lets estimate the OLS regression model with main

effects only:.

*Of course we need to make dummies of our origin and destination variables.

do repeat x=1 to 6 / y=ori1 to ori6 /z=des1 to des6.

if origin eq x y=1.

if not (origin eq x) y=0.

if destination eq x z=1.

if not (destination eq x) z=0.

end repeat.

exe.

REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS R ANOVA

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT depY

/METHOD=ENTER ori2 ori3 ori4 ori5 ori6 des2 des3 des4 des5
des6.

*****DMM with NLR*****.

*Model 1: BASIC MODEL.

*The parameters that are going to be estimated are defined together with their starting values in the MODEL PROGRAM command.

*Remember that our social category has 6 categories, we thus have 6 diagonal cells.

*The diagonal cells d1 to d6 receive the starting value "2" in this example, normally you could choose to use the grand mean of depY in your sample as starting value.

*p is the salience parameter.

*Our null hypothesis is that the origin does not have any impact on depY hence we give p the starting value "0".

MODEL PROGRAM p=0 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2.

vector d = d1 to d6.

COMPUTE PRED=p*d(origin) + (1-p)*d(destination).

NLR depY.

*interpretation:

*We have to refute our hypotheses that the origin does not have an

impact on depY.

*The relative impact of the origin is approximately $p*100\%$ and of the destination thus $(1-p)*100\%$.

*Note also that our social categories (social class or educational level for example) has an non-linear effect on depY.

*Model 2: MODEL WITH COVARIATES.

*adding covariates to the model is fairly straightforward: you have to define the parameter to be estimated and include it in the equation for PRED.

```
MODEL PROGRAM p=.5 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2 bcov=0.
vector d = d1 to d6.
COMPUTE PRED=p*d(origin) + (1-p)*d(destination) + bcov*cov.
NLR depY.
```

*interpretation:

*The interpretation of the parameter estimate of bcov is exactly the same as within OLS regression models.

*Since we assume that the standard errors of our dependent variable are distributed normally, the improvement of fit between models can be calculated by a standard F-test (See for example Greene Econometric Analysis Chapter 6 "Inference and Prediction").

*MODELS WITH ACCULTURATION EFFECTS.

*Model 3: status dominance model.

*Assume that the higher the origin/destination the higher the status.

*We want to test the status dominance hypotheses: that the impact of the highest status - whether origin or destination - will have the largest impact on depY.

*We thus need to calculate the impact for the origin/destination if its the highest status and if it is the lowest status.

*We create a dummy "hso" that is 0 if the destination has a higher status than the origin and 1 otherwise.

*Formally our hypotheses is that $p+bhso > (1-(p+bhso))$ and $1-p > p$, thus $0.5 - b < p < 0.5$

```
compute hso=(origin>destination).
```

```
value labels hso 1 'origin highest status' 0 'destination highest
```

status'.

```
MODEL PROGRAM p=.5 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2 bcov=0 bhso=0.  
vector d = d1 to d6.  
COMPUTE PRED=(p + bhso*hso)*d(origin) + (1-(p+ bhso*hso))*d(desti  
nation) + bcov*cov.  
NLR depY.
```

*Interpretation:

*Based only on the estimate of bhso we directly see that we have to refute our hypotheses.

*The correct F-statistic to test that $p < 0.5$ & $p + b > 0.5$ is described in for example Greene Econometric Analysis Chapter 6 "Inference and Prediction"

*Model 4: DepY dominance model.

*Our next hypotheses is that it is easier to acculturate to less tolerant norms. Thus the impact of origin/destination depends on which one could be characterised as being more tolerant.

*In our article we have exactly the opposite hypotheses, this is just a hypotheses to illustrate the point.

*The assumption within DMM is that stable members represent the reference attitudes of each category (diagonal mobility models are also referred to as diagonal reference models).

*We thus define tolerance on the basis of the attitudes of the stable members.

*The mean attitudes of the stable members (the diagonal cells in our table) are parameters in our model.

*The definition of the dummy is thus somewhat more complicated since it depends on the parameter estimates of the model.

*dtol is our tolerance dummy and formal hypotheses is that $dtol < 0$.

```
MODEL PROGRAM p=.5 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2 bcov=0 bdtol=0.  
vector d = d1 to d6.  
COMPUTE dtol=(d(origin)>d(destination)).  
COMPUTE PRED=(p + bdtol*dtol)*d(origin) + (1-(p+ bdtol*dtol))*d(d  
estination) + bcov*cov.  
NLR depY.
```

*Interpretation:

*The impact of the destination is larger when it is the less tolerant category than when it is the more tolerant category: btol larger.

*We thus find corroborative evidence of our (fictive) hypotheses.

*MODEL WITH MOBILITY EFFECTS INDEPENDENT OF ORIGIN AND DESTINATION.

*It is of course possible that mobility has an effect independent of the origin and destination.

*For example, our hypotheses could be that everyone who is downwards mobile experiences the same kind of frustration and that this frustration in turn leads to less tolerance towards ethnic migrants.

*We have to compute a downwards mobility parameter, but we already did this above when testing the status dominance parameter, the variable "hso".

*Model 5: downwards mobility model.

MODEL PROGRAM p=.5 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2 bcov=0 bdm=0.

vector d = d1 to d6.

COMPUTE PRED=(p)*d(origin) + (1-(p))*d(destination) + bcov*cov + bdm*hso.

NLR depY.

*Interpretation:

*We find corroborative evidence for our hypotheses.

*Downwards mobility does not cause people to adopt the attitudes of the highest (or lowest!) status category but has a negative effect on tolerance independent of origin and destinations.

*check if this also holds if we include the downwards mobility dummy in model 4.

*Model 6: combi of model 4 and 5.

MODEL PROGRAM p=.5 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2 bcov=0 bdtol=0 bdm=0.

vector d = d1 to d6.

COMPUTE dtol=(d(origin)>d(destination)).

COMPUTE PRED=(p + bdtol*dtol)*d(origin) + (1-(p+ bdtol*dtol))*d(destination) + bcov*cov + bdm*hso.

NLR depY.

*Interpretation:

*What we see now is that the impact of the origin/destination does not depend significantly anymore on which one contains the more tolerant core members.

*for a two by two table it can be shown that model 3 and 5 are mathematically equivalent.

*It is thus sometimes difficult (depending on the mobility taking place / and the 'real' effects going on) to empirically distinguish mobility effects which are due to origin and destination dependent acculturation

and mobility effects that are independent of origins and destinations.

*ORIGIN OR DESTINATION DEPENDENT SALIENCE PARAMETERS.

*It is of course possible that the impact of the origin varies across origin categories (for example due to different sizes of categories).

*We may want to calculate origin dependent salience parameters.

*model 7: DM1 model.

MODEL PROGRAM p1=.5 p2=.5 p3=.5 p4=.5 p5=.5 p6=.5

d1=2 d2=2 d3=2 d4=2 d5=2 d6=2.

vector d = d1 to d6.

vector p = p1 to p6.

COMPUTE PRED=(p(origin))*d(origin) + (1-p(origin))*d(destination)

.

NLR depY.

*interpretation:

*We see that origin category 3 has the largest impact of all origin categories (regardless of the destination category).

*Once again we have to use the... statistic to assess if differences between two categories are significant.

*or we may want to calculate destination dependent salience parameters.

*model 8: DM2 model.

MODEL PROGRAM p1=.5 p2=.5 p3=.5 p4=.5 p5=.5 p6=.5

d1=2 d2=2 d3=2 d4=2 d5=2 d6=2.

vector d = d1 to d6.

vector p = p1 to p6.

COMPUTE PRED=(p(destination))*d(origin) + (1-p(destination))*d(destination).

NLR depY.

*WEAKLIEM MODEL.

*It is also possible to formulate a parsimonious model for origin/destination weights that depend on the specific origin-destination combination.

* We define the origin weight as: $f \cdot p(\text{origin}) / (f \cdot p(\text{origin}) + p(\text{destination}))$.

* We use the following constraint: $p(6) = p1 \cdot p2 \cdot p3 \cdot p4 \cdot p5$.

MODEL PROGRAM p1=1 p2=1 p3=1 p4=1 p5=1 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2 f=1.

vector d = d1 to d6.

vector p= p1 to p5.

do if (not origin=6 & not destination=6).

COMPUTE PRED=(f*p(origin)/(f*p(origin) + p(destination))*d(origin) + (1-(f*p(origin)/(f*p(origin) + p(destination))))*d(destination)).

end if.

do if (origin=6 & not destination=6).

COMPUTE PRED=(f*(1/(p1*p2*p3*p4*p5))/(f*(1/(p1*p2*p3*p4*p5)) + p(destination))*d(origin) + (1-(f*(1/(p1*p2*p3*p4*p5))/(f*(1/(p1*p2*p3*p4*p5)) + p(destination))))*d(destination)).

end if.

do if (not origin=6 & destination=6).

COMPUTE PRED=(f*p(origin)/(f*p(origin) + (1/(p1*p2*p3*p4*p5)))*d(origin) + (1-(f*p(origin)/(f*p(origin) + (1/(p1*p2*p3*p4*p5)))))*d(destination) .

end if.

do if (origin=6 & destination=6).

COMPUTE PRED=(f*(1/(p1*p2*p3*p4*p5))/(f*(1/(p1*p2*p3*p4*p5)) + (1/(p1*p2*p3*p4*p5)))*d(origin) + (1-(f*(1/(p1*p2*p3*p4*p5))/(f*(1/(p1*p2*p3*p4*p5)) + (1/(p1*p2*p3*p4*p5)))))*d(destination) .

end if.

NLR depY.

*Interpretation:

*Based on the parameter estimates and the fit of the model I would conclude that the Weakliem model is not an improvement compared to model 4 and 5.

*How to interpret to f and p parameters if the model would fit our data is another matter. See for example the paper of D. Weakliem referred to above.

*DMM WITH CNLR.

*ADDING CONSTRAINTS.

*The origin and destination weights should theoretically lie within the [0,1] interval, but sometimes the data does not fit the theoretical model perfectly and obtained estimates of parameters are not theoretically possible.

*It could for example be that under specific circumstances the relative impact of origin/destination is (close to) zero but is estimated to be smaller than zero.

*You could force/constrain your (unsound) model to stay within the theoretical boundaries as follows.

*first let us create a new variable to illustrate the point.

```
do if origin>destination.
compute depY2=depY + rv.normal(3,1).
end if.
do if not (origin>destination).
compute depY2=depY.
end if.
exe.
```

*without bonds our model would be:.

*model 8:.

```
MODEL PROGRAM p=.3 d1=2 d2=1.9 d3=2.1 d4=2.2 d5=2.1 d6=2.2.
vector d = d1 to d6.
COMPUTE PRED=(p)*d(origin) + (1-(p))*d(destination).
CNLR depY2.
```

*note that without the constraints and given our initial values of the parameter estimates, our model would not even converge (after 50 iterations).

*and with constraints our model would be:
 *model 9:.

```
MODEL PROGRAM p=.3 d1=2 d2=1.9 d3=2.1 d4=2.2 d5=2.1 d6=2.2.
vector d = d1 to d6.
COMPUTE PRED=(p)*d(origin) + (1-(p))*d(destination).
CONSTRAINED FUNCTIONS.
COMPUTE w=p.
CNLR depY2
/BOUNDS 0<=w<=1.
```

*The interpretation of model 8 and 9 would be that we know that we have a bad model but that our best educated guess is that only the origin matters.

*Of course our model was ill specified.

*A better model would be (seen what we have done to create depY2):

*model 10:.

```
MODEL PROGRAM p=.3 d1=2 d2=1.9 d3=2.1 d4=2.2 d5=2.1 d6=2.2 b_
ill=0.
vector d = d1 to d6.
COMPUTE dtol=(d(origin)>d(destination)).
COMPUTE PRED=(p)*d(origin) + (1-(p))*d(destination) + b_ill*hso.
CONSTRAINED FUNCTIONS.
COMPUTE w=p.
CNLR depY2
/BOUNDS 0<=w<=1.
```

*LOGISTIC DMMs.

*To estimate DMMs for variables that are not normally distributed you have to define a LOSS function to be minimalised by CNLR.

*Below follows an example of a dichotomous variable.

```
compute depY3=(depY>=6).
fre depy3.
MODEL PROGRAM p=.5 d1=2 d2=2 d3=2 d4=2 d5=2 d6=2.
vector d = d1 to d6.
COMPUTE PRED=(exp(p*d(origin) + (1-p)*d(destination)) /
(1+exp(p*d(origin) + (1-p)*d(destination)))).
```

```
COMPUTE LOSS=-depy3*ln(pred)-(1-depy3)*ln(1-pred).
CNLR depY3
/LOSS=LOSS.
```

```
*****
*****.
```


APPENDIX 3.1 DESCRIPTIVE STATISTICS^a

	Minimum	Maximum	Mean value	%	Standard deviation	Pearson correlation ethnic intermarriage	Mean value ethnic intermarriage scale	Significance
Individual characteristics (N=6095)								
ethnic intermarriage scale	0.00	12.00	6.66		3.06			
Age (years)	18.00	79.00	46.75		14.95	0.22	6.72	0.00**
Sex							6.57	0.05~
Female				59				
Male				41				
education (years)	4.00	16.00	11.59		2.98	-0.22		
employment status (%)								
Pensioner				15			7.87	0.00**
Student				3			5.48	
Disabled				5			6.72	
unemployed				3			5.95	
In care of household				15			7.50	
higher professional				12			5.73	
lower professional				19			5.92	
routine non-manual				15			6.35	
small self-employed				2			6.62	
skilled manual				5			6.76	
unskilled manual				6			7.12	
religiosity								
church attendance per year	0.00	70.00	9.04		21.09	0.14		0.00**
missing value substitution				8				
denomination (%)								
missing				4			7.23	
no religion				44			5.97	
Roman Catholic				28			7.15	
Dutch Reformed/Calvinist				16			7.48	
other Calvinist				3			7.50	
other Christian denomination				3			6.46	
other religion				2			5.76	
parental education (years)	4.00	16.00	9.87		3.17	-0.19		
missing value substitution				2				

Continued on next page

father's social class (%)																			
higher professional	16														6.07				
lower professional	15														6.17				
routine non-mar.	11														6.39				
small self-employed	21														7.24				
skilled manual	15														6.64				
unskilled manual	22														7.02				
mother's denomination (%)																			
Missing	7														7.32				0.00**
no religion	17														6.08				
Roman Catholic	42														6.61				
Dutch Reformed/Calvinist	27														6.89				
other Calvinist	5														7.02				
other Christian denomination	2														6.59				
other religion	1														6.06				
Neighbourhood characteristics (N=2096)																			
percentage of ethnic minorities		0.00	79.42	7.10	9.71										-0.10				0.00 **
change in percentage of ethnic minorities		-22.00	21.00	0.74	1.85										-0.01				0.66
socio-economic disadvantage		-6.95	3.92	-0.05	1.01										0.00				0.98
change in socio-economic disadvantage		-8.40	4.55	-0.09	0.81										0.09				0.00 **
number of mosques and Muslim schools		0.00	8.00	0.20	0.60										-0.07				0.00 **
victims of burglary		0.00	0.50	0.04	0.05										-0.07				0.00 **
crime statistics		0.00	9.05	0.19	0.29										-0.06				0.01 *
relative-inwards moving mobility		0.41	348.48	39.05	20.67										-0.16				0.00 **
Municipality characteristics (N=437)																			
percentage of ethnic minorities		1.00	32.00	4.33	4.13										-0.15				0.00 **
change in percentage of ethnic minorities		-1.00	3.00	0.38	0.60										-0.09				0.05 ~
percentage of Moroccans		0.00	8.50	0.72	1.20										-0.09				0.05 ~
percentage of Turks		0.00	8.47	0.94	1.51										-0.09				0.06 ~
percentage of Surinamese		0.03	9.71	0.68	1.19										-0.11				0.02 *
socio-economic disadvantage		-5.03	3.95	0.04	1.04										-0.01				0.78
change in socio-economic disadvantage		-4.49	2.55	0.01	0.98										0.15				0.00 **
number of mosques and Muslim schools		0.00	61.00	1.10	4.32										-0.10				0.03 *
victims of burglary		0.00	0.15	0.04	0.02										-0.06				0.19
crime statistics		0.00	0.61	0.15	0.08										-0.15				0.00 **
relative inwards-moving mobility		12.50	150.20	37.20	11.98										-0.02				0.73
city size*1000		3.75	734.59	34.32	57.56										-0.12				0.01 *

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a Descriptives for non-centred variables

APPENDIX 3.2 HIERARCHICAL LINEAR INTERCEPT MODELS ESTIMATING OPPOSITION TO ETHNIC INTERMARRIAGE (0-12), CROSS LEVEL INTERACTIONS, $N=6095^a$

	Model 1		Model 2	
	b	SE	b	SE
Neighbourhood characteristics				
percentage of ethnic minorities	0.00	0.01		
change in percentage of ethnic minorities	0.00	0.02		
socio-economic disadvantage	-0.02	0.04		
change in socio-economic disadvantage	0.14	0.06		
Cross-level interactions				
education* percentage of ethnic minorities*10	-0.02*	0.01		
Municipality characteristics				
percentage of ethnic minorities*10			-0.15~	0.09
change in percentage of ethnic minorities			0.07	0.07
socio-economic disadvantage			-0.07*	0.04
change in socio-economic disadvantage			0.12*	0.04
Cross-level interactions				
Education*percentage of ethnic minorities*10			-0.01	0.01
Variance components				
Municipality	0.08*	0.04	0.03	0.03
Neighbourhood	0.00	0.00	0.00	0.00
Individual	8.15*	0.15	8.17*	0.15

* $p<0.05$; ~ $p<0.10$ (two sided test of significance)

^a controlled for individual-level characteristics

APPENDIX 3.3 OPPOSITION TO ETHNIC INTERMARRIAGE WITH SPECIFIC ETHNIC OUTGROUPS (SCALES 0-4), CONTEXT CHARACTERISTICSNI=6095^a

	Opposition to ethnic intermarriage with Moroccans					
	Model 1		Model 2		Model 3	
	b	SE	b	SE	B	SE
Neighbourhood characteristics						
socio-economic disadvantage	0.01	0.02	0.01	0.02	0.01	0.02
change in socio-economic disadvantage						
relative inwards moving mobility*10	-0.03 *	0.01	-0.02 *	0.01	-0.02 *	0.01
Municipality characteristics						
percentage of ethnic minorities*10	-0.04	0.03				
change in percentage of ethnic minorities	0.01	0.03			0.01	0.02
percentage of Moroccans*10			-0.14	0.09	-0.14	0.09
percentage of Turks*10			0.06	0.09	0.05	0.09
percentage of Surinamese*10			0	0.08	0.01	0.09
socio-economic disadvantage	-0.02~	0.02	-0.03~	0.02	-0.03~	0.02
change in socio-economic disadvantage	0.03 *	0.02	0.03 *	0.01	0.03 *	0.01
relative inwards-moving mobility*10	-0.02	0.01	-0.02	0.01	-0.02	0.01
Opposition to ethnic intermarriage with Turks (scales 0-4)						
	Model 1		Model 2		Model 3	
	b	SE	b	SE	b	SE
Neighbourhood characteristics						
socio-economic disadvantage	0.01	0.02	0.03~	0.02	0.01	0.02
change in socio-economic disadvantage						
relative inwards moving mobility*10	0.04 *	0.02	0.02 *	0.01	0.02 *	0.01
Municipality characteristics						
percentage of ethnic minorities*10	-0.02	0.03				
change in percentage of ethnic minorities	0.03	0.03			0.02	0.03
percentage of Moroccans*10			-0.12	0.09	-0.11	0.09
percentage of Turks*10			0.13	0.09	0.12	0.09
percentage of Surinamese*10			0	0.08	0.05	0.09
socio-economic disadvantage	-0.04 *	0.02	-0.04 *	0.01	-0.05 *	0.02
change in socio-economic disadvantage	0.03 *	0.02	0.03 *	0.02	0.04 *	0.02
relative inwards-moving mobility*10	0.01	0.01	0	0.01	0	0
Opposition to ethnic intermarriage with Surinamese						
	Model 1		Model 2		Model 3	
	p	SE	p	SE	p	SE
Neighbourhood characteristics						
socio-economic disadvantage	0.04 *	0.01	0.02	0.02	0.04 *	0.01
change in socio-economic disadvantage						
relative inwards moving mobility*10	-0.02 *	0	-0.02 *	0.01	-0.02 *	0.01
Municipality characteristics						
percentage of ethnic minorities*10	-0.04~	0.03				
change in percentage of ethnic minorities	0.04~	0.02			0.04~	0.02
percentage of Moroccans*10			-0.11	0.09	-0.11	0.09
percentage of Turks*10			0.05	0.09	0.04	0.09
percentage of Surinamese*10			0.02	0.08	-0.05	0.09
socio-economic disadvantage	-0.01	0.01	-0.01	0.01	-0.01	0.01
change in socio-economic disadvantage	0.03~	0.01	0.03~	0.01	0.03 *	0.01
relative inwards-moving mobility*10	0	0	0	0.01	0	0.01

^a*p*<0.05; ~*p*<0.10 (two sided test of significance)
controlled for individual-level characteristics

APPENDIX 4.1 DESCRIPTIVE STATISTICS

	N	Range	Percentage (categorical variables)	Mean (interval variables)	Standard deviation
<i>Dependent variables</i>					
Contact neighbours (times per year)	2746	0 - 78		44.85	32.40
Tolerance neighbours different race (It would bother me=1; not oppose=4)	2903	0 - 4		2.35	0.85
Generalised trust (people can be trusted=1)	2871	0 - 1	53		
Voluntary work (volunteer=1)	2716	0 - 1	41		
<i>Independent variables at the individual level</i>					
Age		16 - 99		47.89	17.89
Education (in years)		6 - 16.5		11.00	3.12
Missing values education			7		
Sex (male=1)			47		
Income (in 1000 euros)		0.4 - 10		2.10	1.14
Missing values income			21		
<i>Working status</i>					
Employed			55		
Not employed			45		
Health status (healthy=4)		1 - 4		2.87	0.77
Missing values health status			1		
<i>Denomination</i>					
No denomination			62		
Catholic			18		
Liberal Protestants			7		
Orthodox Protestants			4		
Islam			3		
Other religion			5		
Church attendance (times per year)		0 - 53		9.20	17.19
<i>Household composition</i>					
Single without			27		
Married with children			32		
Married without children			23		
Cohabiting with children			4		
Cohabiting without children			6		
Single with children			7		
Other household composition			2		
<i>Ethnicity</i>					
Native Dutch			75		
Turks			2		
Moroccans			1		
Surinamese			2		
Antilleans			1		
Indonesian			3		
Other			8		
Refusal			9		
<i>Independent variables at the neighbourhood level</i>					
Ethnic heterogeneity (maximum heterogeneity=0.67)	503	0.04 - 0.60		0.30	0.15
Native Dutch (%)		10.40 - 98.13		0.79	0.16
Western immigrants (%)		1.05 - 29.83		0.09	0.04
Non-western immigrants (%)		0 - 86.54		0.12	0.15

Continued on next page

Appendix 4.1 continued

Economic heterogeneity (maximum heterogeneity=1)	0.06 - 0.30	0.13	0.03
Mean income (in 1000 euros)	1.31 - 4.46	1.97	0.37
Crime (Zscore)	-0.43 - 1.53	0.06	0.35
Victims of burglary (per 1000 respondents)	0 - 333.33	63.19	60.39
Recorded offences (per 1000 residents)	0 - 3275	277.85	281.81
Criminal suspects (per 1000 residents)	0 - 117	36.37	17.89
Residential mobility (per 1000 residents)	30.00 - 248.60	0.03	0.16
Independent variables at the municipality level	245		
Ethnic heterogeneity (maximum heterogeneity=0.67)	0.04 - 0.59	0.23	0.11
Native Dutch (%)	52 - 98	0.86	0.08
Western immigrants (%)	1 - 30	0.07	0.04
Non-western immigrants (%)	1 - 35	0.06	0.05
Economic heterogeneity (maximum heterogeneity=1)	0.10 - 0.34	0.14	0.03
Mean income (in 1000 euros)	1.47 - 3.34	1.96	0.27
Crime (Zscore)	-1.70 - 4.18	0.35	1.14
Victims of burglary (per 1000 respondents)	0 - 242.42	54.50	35.81
Recorded offences (per 1000 residents)	0.35 - 815.97	233.56	135.27
Criminal suspects (per 1000 residents)	13.09 - 60.11	28.86	7.94
Residential mobility (per 1000 residents)	48.00 - 170.50	85.79	21.49

APPENDIX 4.2 CORRELATIONS BETWEEN LOCALITY CHARACTERISTICS^a

	1	2	3	4	5
<i>Neighbourhood level (N=503)</i>					
1. Ethnic heterogeneity	-	0.15	-0.14	0.42	0.64
2. Economic heterogeneity		-	0.54	0.18	0.15
3. mean income			-	-0.03	-0.28
4. crime				-	0.42
5. residential mobility					-
<i>Municipality level (N=245)</i>					
1. Ethnic heterogeneity	-	0.55	0.25	0.77	0.67
2. Economic heterogeneity		-	0.67	0.47	0.39
3. mean income			-	0.19	-0.15
4. crime				-	0.65
5. residential mobility					-

^a all correlations significant at the $\alpha < 0.05$ level (two sided test of significance)

APPENDIX 4.3 VARIANCE COMPONENTS OF HIERARCHICAL RANDOM INTERCEPT REGRESSION MODELS EXPLAINING SOCIAL COHESION

	Contact neighbours		Tolerance neighbours different race		Generalised trust		Voluntary work	
	b	se	b	se	b	se	b	se
<i>Empty model</i>								
Municipality-level	14.31**	1.67	0.05**	0.00	0.05**	0.01	0.15**	0.03
Neighbourhood-level	14.51**	2.49	0.03**	0.00	0.22**	0.05	0.09**	0.03
Individual-level	1018.50**	1.03	0.64**	0.04				
<i>Model controlled for composition effects^a</i>								
Municipality-level	4.24	3.07	0.04**	0.00	0.05**	0.02	0.07**	0.02
Neighbourhood-level	14.11**	2.45	0.02**	0.00	0.09**	0.03	0.07**	0.03
Individual-level	977.61**	1.03	0.61**	0.04				
<i>Full model^b</i>								
Municipality-level	2.49	8.24	0.03**	0.00	0.03*	0.01	0.01~	0.01
Neighbourhood-level	16.16**	2.26	0.02**	0.00	0.07**	0.03	0.07**	0.03
Individual-level	971.98**	1.03	0.61**	0.04				

~ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$ (two sided test of significance)

^a Individual level characteristics included: age, sex, marital status, household composition, level of education, level of income, work status, health status, denomination, church attendance, and ethnic origin.

^b Models include all individual level characteristics, for the included locality characteristics and cross-level interactions we refer to Table 2.

APPENDIX 5.1 DESCRIPTIVE STATISTICS

Ethnicity	N ^a	Cohort (%) ^b					Final educational attainment (%)							Sex (%)		
		1917-1936	1937-1946	1947-1956	1957-1966	1967-1980	<PE	PE	LBO	MAVO	MBO	HAVO/VWO	HBO	University	Male	Female
Total	49359	8	14	19	29	29	19	31	11	11	14	5	6	3	51	49
Turks	12929	4	14	16	32	34	22	47	7	10	6	5	2	1	53	47
First generation	10495	5	15	17	34	29	24	47	6	10	5	5	2	1	54	46
Second generation	2382	0	2	3	9	86	5	46	13	13	13	5	3	1	50	50
Moroccans	11563	7	17	18	26	33	48	31	5	5	5	4	2	1	56	44
First generation	9517	7	18	18	26	30	52	29	4	4	3	3	2	1	58	42
Second generation	1973	1	2	7	16	75	12	42	9	10	15	5	4	2	46	54
Surinamese	10169	7	11	22	32	27	10	27	14	18	15	6	8	3	44	56
First generation	7694	8	12	25	34	22	11	26	14	19	14	5	8	2	44	56
Second generation	2423	2	3	11	23	61	4	28	14	14	17	11	8	4	45	55
Antilleans	6168	5	11	19	34	31	7	24	18	14	14	9	9	4	44	56
First generation	4786	6	12	21	35	27	7	25	19	14	15	8	9	3	45	55
Second generation	1353	4	6	13	28	49	4	20	12	11	13	17	12	10	43	57
Native Dutch	8530	18	16	22	24	19	1	17	17	8	32	4	14	6	51	49

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Ethnicity	N	Parental education (%)				Father's job status		
		Primary	Lower secondary	Higher secondary	HBO	University	Mean	SD
Turks, first generation	3672	94	3	2	0	0	26	9
Turks, second generation	1043	76	14	8	1	1	25	9
Moroccans, first generation	2199	96	2	1	1	1	23	9
Moroccans, second generation	706	88	6	4	1	1	22	9
Surinamese, first generation	2382	40	46	7	6	2	35	11
Surinamese, second generation	1161	25	44	15	11	5	35	10
Antilleans, first generation	1637	22	61	8	7	3	37	12
Antilleans, second generation	578	12	42	19	16	11	39	14
Native Dutch	2841	11	41	31	12	5	43	14

^a native Dutch weighted

^b native Dutch weighted; selection of respondents who made the transition after primary education; survey year 2002 not included

Source: SPVA 1988, 1991, 1998, 2002.

APPENDIX 5.2 CELL FREQUENCIES OF ETHNICITY BY COHORT BY FINAL EDUCATIONAL ATTAINMENT TABLEA

			Final Educational Attainment								Total
			<PE	PE	LBO	MAVO	MBO	HAVO/ VVO	HBO	University	Total
Turks	Cohort	1917-1936	283	148	7	2	0	0	1	0	441
		1937-1946	652	705	24	50	17	13	4	1	1466
		1947-1956	565	834	41	114	63	44	30	17	1708
		1957-1966	485	1321	190	362	213	210	79	42	2902
		1967-1980	158	477	137	152	160	131	60	32	1307
		Total	2143	3485	399	680	453	398	174	92	7824
Moroccans	Cohort	1917-1936	571	40	2	1	1	0	1	0	616
		1937-1946	1239	235	12	27	8	11	7	3	1542
		1947-1956	1039	355	30	71	26	33	22	10	1586
		1957-1966	934	588	92	110	74	117	55	72	2042
		1967-1980	214	333	100	73	154	67	56	36	1033
		Total	3997	1551	236	282	263	228	141	121	6819
Surinamese	Cohort	1917-1936	207	231	28	60	25	10	34	9	604
		1937-1946	167	238	79	178	101	13	83	19	878
		1947-1956	196	439	196	394	264	61	203	52	1805
		1957-1966	119	522	370	476	391	177	209	88	2352
		1967-1980	22	119	164	129	207	93	86	42	862
		Total	711	1549	837	1237	988	354	615	210	6501
Antilleans	Cohort	1917-1936	52	106	19	35	15	4	21	11	263
		1937-1946	61	163	83	83	43	28	51	15	527
		1947-1956	58	188	209	158	153	49	89	41	945
		1957-1966	86	277	299	169	264	135	158	80	1468
		1967-1980	21	72	105	69	116	61	105	60	609
		Total	278	806	715	514	591	277	424	207	3812
Native Dutch	Cohort	1917-1936	33	464	261	139	379	29	127	42	1474
		1937-1946	9	227	279	119	429	26	176	67	1332
		1947-1956	5	232	325	134	637	52	305	136	1826
		1957-1966	6	132	288	118	747	109	341	156	1897
		1967-1980	1	34	100	43	356	44	170	88	836
		Total	54	1089	1253	553	2548	260	1119	489	7365

^a N=32322; native Dutch weighted; students included; respondents younger than 25 excluded
Source: SPVA 1988, 1991, 1998, 2002.

APPENDIX 5.3 ROBUSTNESS OF ES ASSOCIATION PARAMETERS^A

Ethnicity ^b	Final educational attainment ^c	EC SC ES (Model M2)		EC SC ES ESC(1) (Model M3)		Saturated model	
		ES	z-value	ES	z-value	ES	z-value
Turks	<PE	4.90**	38.01	4.75**	25.02	4.67**	23.91
Moroccans	<PE	5.89**	45.60	5.74**	30.18	5.52**	28.55
Surinamese	<PE	3.13**	24.30	2.9**	15.28	2.74**	14.65
Antilleans	<PE	2.70**	19.86	2.53**	13.04	2.38**	12.52
Turks	PE	1.70**	36.77	1.87**	31.89	1.93**	21.54
Moroccans	PE	1.25**	24.81	1.34**	20.79	1.31**	14.55
Surinamese	PE	0.48**	10.53	0.49**	9.26	0.49**	8.48
Antilleans	PE	0.31**	6.09	0.29**	4.96	0.31**	4.80
Turks	LBO	-1.18**	-19.62	-1.28**	-14.53	-0.94**	-8.15
Moroccans	LBO	-1.38**	-19.47	-1.55**	-13.74	-1.30**	-8.67
Surinamese	LBO	-0.65**	-13.53	-0.72**	-12.72	-0.68**	-10.85
Antilleans	LBO	-0.34**	-6.77	-0.34**	-5.91	-0.42**	-6.17
Turks	MAVO	0.33**	5.37	0.28**	3.64	0.15	1.07
Moroccans	MAVO	-0.21**	-2.93	-0.11	-1.14	-0.28	-1.63
Surinamese	MAVO	0.64**	11.97	0.65**	11.23	0.60**	9.43
Antilleans	MAVO	0.23**	3.78	0.25**	3.77	0.26**	3.68
Turks	MBO	-1.91**	-34.50	-1.94**	-22.83	-2.15**	-8.17
Moroccans	MBO	-2.15**	-32.37	-2.63**	-20.25	-2.20**	-12.45
Surinamese	MBO	-1.29**	-29.79	-1.26**	-24.42	-1.27**	-21.63
Antilleans	MBO	-1.34**	-26.86	-1.34**	-22.45	-1.40**	-19.8
Turks	HAVO/VWO	0.11	1.39	0.2~	1.76	0.06	0.21
Moroccans	HAVO/VWO	-0.13	-1.51	0.24~	1.94	-0.02	-0.06
Surinamese	HAVO/VWO	-0.13~	-1.72	-0.19*	-1.96	-0.09	-0.87
Antilleans	HAVO/VWO	0.08	0.93	0.18~	1.84	0.15	1.24
Turks	HBO	-2.0**	-25.47	-2.01**	-16.76	-1.89**	-10.04
Moroccans	HBO	-1.9**	-22.20	-1.83**	-13.99	-1.67**	-9.22
Surinamese	HBO	-0.92**	-17.63	-0.76**	-13.23	-0.75**	-12.00
Antilleans	HBO	-0.83**	-14.24	-0.8**	-11.86	-0.69**	-9.65

** $p < 0.01$ * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a $N = 32322$, native Dutch weighted.

^b Native Dutch are reference category.

^c Deviation contrast, university is redundant category

Source: SPVA 1988, 1991, 1998, 2002.

APPENDIX 5.4 MULTI-NOMINAL LOGISTIC REGRESSION MODELS OF EDUCATIONAL CHOICE AFTER PRIMARY EDUCATION, BIRTH COHORTS 1960-1985^{ab}

	Model C					
	LBO/stop		MAVO/LBO		(HAVO+VWO) /MAVO	
	β	p	β	p	β	p
Constant	2.50**	0.00	1.49**	0.00	1.01**	0.00
Ethnicity						
Turks (1 st generation)	-4.97**	0.00	1.38**	0.00	-0.42~	0.09
Turks (2 nd generation)	-1.69**	0.00	-0.03	0.94	-0.17	0.71
Moroccans (1 st generation)	-4.09**	0.00	0.89**	0.00	0.15	0.63
Moroccans (2 nd generation)	-1.54*	0.01	1.03*	0.01	-0.42	0.39
Surinamese (1 st generation)	-2.17**	0.00	1.09**	0.00	-1.39**	0.00
Surinamese (2 nd generation)	-1.09*	0.04	0.70**	0.01	-0.24	0.36
Antilleans (1 st generation)	-1.86**	0.00	0.29	0.11	-0.46*	0.02
Antilleans (2 nd generation)	-1.38~	0.06	0.56	0.11	0.40	0.19
Cohort (birth year 1960=0) ^c	-1.21**	0.00	0.44**	0.00	-0.02	0.85
Cohort*Turks (1 st generation)	2.18**	0.00	-0.76**	0.00	0.18	0.40
Cohort*Turks (2 nd generation)	0.94*	0.01	0.26	0.28	-0.10	0.69
Cohort*Moroccans (1 st generation)	1.76**	0.00	-0.52*	0.02	-0.21	0.41
Cohort*Moroccans (2 nd generation)	0.73~	0.06	-0.23	0.36	0.01	0.96
Cohort*Surinamese (1 st generation)	1.49**	0.00	-0.72**	0.00	0.41*	0.02
Cohort*Surinamese (2 nd generation)	0.77*	0.03	-0.16	0.43	-0.17	0.35
Cohort*Antilleans (1 st generation)	1.15**	0.00	-0.29	0.12	0.15	0.41
Cohort*Antilleans (2 nd generation)	1.42*	0.01	-0.22	0.41	-0.36	0.12
Male (Female=ref.cat.)	0.35	0.39	-0.15	0.38	0.10	0.55
Male*Cohort	0.00	0.99	-0.26	0.13	0.02	0.88
Male*Turks (1 st generation)	1.20**	0.01	-0.18	0.49	0.12	0.67
Male*Turks (2 nd generation)	0.77	0.36	-0.23	0.69	0.84	0.20
Male*Moroccans (1 st generation)	0.26	0.59	-0.37	0.27	1.07**	0.00
Male*Moroccans (2 nd generation)	0.06	0.96	0.11	0.87	-0.16	0.86
Male*Surinamese (1 st generation)	-0.06	0.90	-0.65**	0.01	0.42	0.13
Male*Surinamese (2 nd generation)	1.24	0.18	-0.53	0.19	-0.10	0.81
Male*Antilleans (1 st generation)	0.61	0.24	-0.73**	0.01	0.68*	0.02
Male*Antilleans (2 nd generation)	0.94	0.43	0.21	0.69	0.03	0.96
Male*Cohort*Turks (1 st generation)	-0.43	0.26	0.42	0.10	-0.31	0.26
Male*Cohort*Turks (2 nd generation)	-0.61	0.25	0.33	0.36	-0.56	0.15
Male*Cohort*Moroccans (1 st generation)	0.03	0.93	0.51~	0.07	-1.06**	0.00
Male*Cohort*Moroccans (2 nd generation)	0.10	0.88	0.07	0.87	-0.01	0.99
Male*Cohort*Surinamese (1 st generation)	0.44	0.32	0.42~	0.09	-0.24	0.37
Male*Cohort*Surinamese (2 nd generation)	-0.63	0.27	0.24	0.41	0.08	0.77
Male*Cohort*Antilleans (1 st generation)	-0.39	0.38	0.46~	0.09	-0.40	0.15
Male*Cohort*Antilleans (2 nd generation)	-0.99	0.21	-0.17	0.67	0.04	0.91
Parental education (University=ref.cat.)						
Primary	-0.15	0.79	-1.74**	0.00	-1.96**	0.00
Lower secondary	0.27	0.64	-1.41**	0.00	-1.57**	0.00
Higher secondary	0.21	0.72	-1.17**	0.00	-1.46**	0.00
Tertiary vocational	-0.33	0.59	-0.45	0.16	-0.79**	0.00
Father's job status (status 32=0) ^b	-0.11**	0.01	0.15**	0.00	0.07*	0.01
Cox and Snell	0.29					
-2LL	26108	141				
Δ -2LL	172					

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a N=16219, native Dutch weighted

^b Control variables in model: survey year; mean substitution parental education; coding difference in father's job status; mean substitution of father's job status; unemployed father.

^c Cohort parameter * 10

APPENDIX 5.5 MULTI-NOMINAL LOGISTIC REGRESSION MODELS OF EDUCATIONAL CHOICE AFTER HIGHER SECONDARY EDUCATION,
BIRTH COHORTS 1960-1980^{ab}

	Model C			
	HBO/stop		University/HBO	
	β	p	β	p
Constant	1.08	0.10	-0.05	0.94
Ethnicity				
Turks (1 st generation)	-2.95**	0.00	0.98~	0.08
Turks (2 nd generation)	-1.27	0.12	0.37	0.66
Moroccans (1 st generation)	-3.89**	0.00	1.10	0.18
Moroccans (2 nd generation)	-3.35*	0.03	2.23	0.12
Surinamese (1 st generation)	-1.45**	0.00	1.07**	0.00
Surinamese (2 nd generation)	-0.48	0.35	0.89*	0.03
Antilleans (1 st generation)	-0.59	0.11	0.33	0.31
Antilleans (2 nd generation)	-1.51*	0.01	0.69	0.15
Cohort (birth year 1960=0) ^c	-0.22	0.41	0.55**	0.01
Cohort*Turks (1 st generation)	0.29	0.46	-0.22	0.60
Cohort*Turks (2 nd generation)	0.64	0.29	-0.42	0.48
Cohort*Moroccans (1 st generation)	1.55**	0.00	-0.79	0.14
Cohort*Moroccans (2 nd generation)	1.90~	0.05	-1.19	0.17
Cohort*Surinamese (1 st generation)	0.41	0.28	-0.60~	0.07
Cohort*Surinamese (2 nd generation)	0.13	0.75	-0.72*	0.03
Cohort*Antilleans (1 st generation)	0.55	0.14	-0.70*	0.02
Cohort*Antilleans (2 nd generation)	0.69	0.17	-0.38	0.33
Male (Female=ref.cat.)	0.62*	0.03	0.54*	0.01
Male*Cohort	-0.48*	0.04	0.05	0.81
Male*Turks (1 st generation)	-0.04	0.93	-0.30	0.51
Male*Turks (2 nd generation)	-0.07	0.91	-0.34	0.57
Male*Moroccans (1 st generation)	0.86	0.11	-0.05	0.93
Male*Moroccans (2 nd generation)	0.54	0.53	0.08	0.91
Male*Surinamese (1 st generation)	-0.02	0.95	-0.39	0.21
Male*Surinamese (2 nd generation)	-0.51	0.27	-0.03	0.94
Male*Antilleans (1 st generation)	-0.06	0.88	-0.31	0.31
Male*Antilleans (2 nd generation)	0.15	0.78	0.25	0.52
Parental education (University=ref.cat.)				
Primary	-0.26	0.35	-1.01**	0.00
Lower secondary	-0.27	0.30	-0.79**	0.00
Higher secondary	-0.01	0.96	-0.79	0.00
Tertiary vocational	0.52~	0.07	-0.48*	0.01
Father's job status (status 32=0) ^b	0.00	0.50	0.01*	0.02
Cox and Snell	0.25			
-2LL	4073	78		
Δ -2LL	17			

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

^a $N=2589$, native Dutch weighted

^b Control variables in model: survey year; mean substitution parental education; coding difference in father's job status; mean substitution of father's job status; unemployed father.

^c Cohort parameter * 10

Source: SPVA, 1988, 1991, 1994, and 1998.

APPENDIX 7.1. PARAMETER ESTIMATES OF MULTIPLE MEDIATOR MODELS PREDICTING OPPOSITION TO ETHNICALLY MIXED RELATIONSHIPS (DIRECT EFFECTS OF EDUCATION ON MEDIATOR VARIABLES AND DIRECT EFFECTS OF CONTROL VARIABLES ON ETHNICALLY MIXED RELATIONSHIPS)

	1st gen. Turks		1st gen. Moroccans		1st gen. Surinamese		1st gen. Antilleans		native Dutch	
	b	se	b	se	b	se	b	se	b	se
<i>Direct effect of education on mediators</i>										
Group threat	0.05**	0.02	0.02	0.01	0.04**	0.01	0.02	0.01		
Dutch media	0.11**	0.02	0.12**	0.02	0.09**	0.01	0.04*	0.02	0.04**	0.01
Origin media	0.01	0.02	0.01	0.02	0.02	0.01	-0.02**	0.02		
Positive contact	0.05**	0.01	0.04**	0.01	0.05**	0.01	0.04**	0.01	0.01~	0.01
Negative contact	0.03~	0.02	0.04**	0.01	0.02~	0.01	-0.01	0.02		
<i>Direct effects control variables</i>										
Age	-0.06	0.04	-0.06	0.05	-0.02	0.03	-0.02	0.02	0.02	0.03
Sex (female=ref.)	-0.22*	0.10	0.01	0.11	0.01	0.07	0.04	0.06	0.03	0.08
Language proficiency	-0.14~	0.08	-0.25**	0.09	-0.05	0.11	-0.20**	0.07		
Church attendance	0.04**	0.01	0.01	0.01	0.02	0.02	0.00	0.01	0.05**	0.02
Labour market position (un- and non-employed=ref.)										
Technician	-0.15	0.29	0.40	0.29	-0.02	0.14	0.06	0.12	-0.10	0.15
Socio-cultural specialists	0.01	0.30	0.34	0.27	0.08	0.13	-0.17	0.12	-0.15	0.14
Routine non-manual	0.22	0.22	0.13	0.21	0.21	0.11	-0.07	0.10	-0.03	0.14
Small self-employed	-0.28	0.26	0.06	0.34	-0.02	0.24	-0.40	0.26	0.22	0.20
Manual supervisors / skilled manual labourers	0.48*	0.20	0.19	0.20	0.16	0.15	0.03	0.12	0.30~	0.18
Unskilled manual labourers	0.19	0.12	-0.01	0.13	0.25*	0.10	0.07	0.08	0.00	0.15
Students	-0.09	0.23	0.51*	0.21	0.06	0.21	-0.14	0.11	-0.12	0.18
R ²	0.25		0.24		0.09		0.08		0.13	
N	791		777		707		734		1014	

Continued on next page

	2nd gen. Turks		2nd gen. Moroccans		2nd gen. Surinamese		2nd gen. Antilleans	
	b	se	b	se	b	se	b	se
<i>Direct effect of education on mediators</i>								
Group threat	0.00	0.03	0.01	0.03	0.00	0.02	0.00	0.03
Dutch media	0.08*	0.03	0.00	0.04	0.05*	0.02	-0.03	0.04
Origin media	-0.04	0.04	-0.02	0.04	-0.02	0.02	0.01	0.02
Language proficiency	0.01*	0.01	0.00	0.01	0.01	0.00	0.01	0.01
Positive contact	0.01	0.02	0.01	0.03	0.03*	0.01	0.04*	0.02
Negative contact	0.00	0.03	-0.01	0.04	-0.01	0.02	-0.08*	0.03
<i>Direct effects control variables</i>								
Age	-0.06	0.20	-0.07	0.18	0.03	0.06	-0.04	0.09
Sex (female=ref.)	0.07	0.18	0.03	0.22	0.04	0.10	0.05	0.09
Language proficiency	-0.04	0.37	0.03	0.45	0.27	0.28	-0.06	0.18
Church attendance	-0.03	0.03	0.03	0.03	0.08*	0.03	0.00	0.02
Labourmarket position (un- and non-employed=ref.)								
Technician	-0.01	0.52	-0.42	0.72	0.01	0.22	-0.24	0.21
Socio-cultural specialists	-0.25	0.54	0.34	0.53	-0.30	0.24	0.03	0.25
Routine non-manual	-0.24	0.35	0.35	0.41	-0.13	0.18	0.05	0.19
Small self-employed	-0.50	0.70			0.04	0.48	-0.19	0.59
Manual supervisors / skilled manual labourers	0.82	0.51	0.55	0.60	-0.04	0.33	0.69**	0.25
Unskilled manual labourers	0.30	0.34	0.46	0.53	-0.40	0.27	-0.17	0.21
Students	0.15	0.31	0.36	0.35	-0.03	0.19	-0.17	0.21
R ²	0.13		0.18		0.11		0.18	
N	261		177		273		173	

** $p < 0.01$; * $p < 0.05$; $-p < 0.10$ (two sided test of significance)

APPENDIX 7.2 PARAMETER ESTIMATES OF MULTIPLE MEDIATOR MODELS PREDICTING IDENTIFICATION WITH THE ORIGIN COUNTRY (DIRECT EFFECTS OF EDUCATION ON MEDIATOR VARIABLES AND DIRECT EFFECTS OF CONTROL VARIABLES ON IDENTIFICATION WITH THE ORIGIN COUNTRY)

	1st gen. Turks		1st gen. Moroccans		1st gen. Surinamese		1st gen. Antilleans	
	b	se	b	se	b	se	b	se
<i>Direct effect of education on mediators</i>	see appendix 7.1							
<i>Direct effects control variables</i>								
Age	-0.01	0.03	-0.02	0.03	-0.03	0.04	-0.15**	0.04
Sex (female=ref.)	-0.14	0.08	-0.04	0.08	-0.09	0.09	-0.05	0.09
Language proficiency	-0.31**	0.06	-0.25**	0.06	-0.02	0.13	-0.33**	0.11
Church attendance	0.00	0.01	0.00	0.01	0.00	0.02	0.01	0.02
Labour market position (un- and non-employed=ref.)								
Technician	-0.14	0.22	0.07	0.21	-0.15	0.17	0.07	0.19
Socio-cultural specialists	0.02	0.23	-0.44*	0.20	-0.13	0.16	-0.17	0.18
Routine non-manual	0.12	0.17	-0.35*	0.15	-0.10	0.13	0.06	0.15
Small self-employed	0.00	0.19	0.34	0.25	-0.16	0.30	0.50	0.40
Manual supervisors / skilled manual labourers	-0.04	0.15	-0.02	0.15	0.08	0.19	-0.05	0.19
Unskilled manual labourers	0.06	0.09	-0.05	0.10	0.13	0.13	-0.06	0.13
Students	-0.01	0.18	0.10	0.16	0.14	0.26	0.11	0.16
	2nd gen. Turks		2nd gen. Moroccans		2nd gen. Surinamese		2nd gen. Antilleans	
	b	se	b	se	b	se	b	se
<i>Direct effect of education on mediators</i>	see appendix 7.1							
<i>Direct effects control variables</i>								
Age	-0.08	0.14	-0.17	0.12	-0.15 ~	0.08	-0.20	0.15
Sex (female=ref.)	0.10	0.13	0.33*	0.15	-0.13	0.13	-0.06	0.16
Language proficiency	-0.45~	0.25	0.01	0.31	0.29	0.37	0.26	0.30
Church attendance	0.04*	0.02	0.01	0.02	0.07 ~	0.04	0.01	0.04
Labour market position (un- and non-employed=ref.)								
Technician	0.67~	0.36	0.20	0.50	0.02	0.28	-0.18	0.35
Socio-cultural specialists	0.31	0.37	-0.06	0.37	0.05	0.31	-0.27	0.43
Routine non-manual	0.23	0.24	0.28	0.28	0.05	0.24	-0.28	0.33
Small self-employed	0.07	0.48			0.45	0.62	-0.38	1.00
Manual supervisors / skilled manual laborers	0.87*	0.35	0.10	0.41	-0.11	0.43	-0.10	0.44
Unskilled manual labourers	0.44~	0.24	-0.06	0.36	0.26	0.34	0.08	0.36
Students	0.36~	0.21	0.11	0.24	0.20	0.24	-0.18	0.36

** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$ (two sided test of significance)

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SUMMARY IN DUTCH / NEDERLANDSTALIGE SAMENVATTING

Inleiding

Iedereen probeert de wereld overzichtelijker te maken door zowel dingen als individuen in hokjes, groepen of categorieën in te delen. Dit categorisatie-proces leidt er automatisch toe dat men relatief positief denkt over de groep waartoe men zichzelf rekent en dat men relatief negatief denkt over en weerstand voelt tegen groepen waartoe men zichzelf niet rekent. De groepen waartoe men zichzelf niet rekent noem ik in het onderstaande de *uitgesloten groepen*.¹ Grenzen tussen categorieën of groepen kunnen binnen verschillende dimensies getrokken worden. Voor veel mensen is etniciteit een belangrijke dimensie. Duidelijke grenzen tussen de eigen etnische groep en uitgesloten etnische groepen maken de wereld niet alleen eenvoudiger maar dragen bovendien bij aan een positieve groepsidentiteit, iets waarnaar iedereen streeft. Hoewel iedereen dus categoriseert, zal, als etnische groepen concurreren om economische goederen, (politieke) macht, en ruimte voor culturele normen en waarden, het categorisatie-proces met betrekking tot etniciteit sterker zijn en eerder optreden.

Doordat iedereen categoriseert en bovendien concurrentie tussen etnische groepen veel voorkomt, zal iedereen een bepaalde weerstand voelen tegen bepaalde (leden van) uitgesloten groepen. Toch verschillen mensen binnen een etnische groep wel in de mate van weerstand tegen uitgesloten etnische groepen. De redenen voor deze verschillen zijn tot nu toe nog niet helemaal duidelijk. In dit proefschrift heb ik geprobeerd om beter te verklaren *waarom mensen verschillen in de mate van weerstand tegen uitgesloten etnische groepen*. Deze vraag is onderdeel van de sociologische onderzoekstraditie waarin veel onderzoek is verricht naar de sociale samenhang en het ontbreken daarvan tussen en binnen groepen.

Tot nu toe werden redenen voor verschillen in de mate van weerstand tegen uitgesloten groepen vooral gezocht in relatief statische kenmerken van personen (bijvoorbeeld: geslacht, leeftijd, opleidingsniveau, arbeidsmarktpositie, mate van religiositeit, persoonlijkheidskenmerken, enzovoort) of in kenmerken van de groepen waartoe deze mensen zichzelf rekenen (bijvoorbeeld: groepsstatus, groepsgrootte, autochtoon of allochtoon, enzovoort). Hoewel deze kenmerken zeer belangrijk zijn om verschillen in de mate van weerstand te verklaren, volstaan zij niet in de verklaring. Voor een beter begrip van de verschillen in de mate van weerstand zijn tevens andersoortige verklaringen nodig.

In hoofdstuk 2 beargumenteer ik dat ervaringen van intergenerationale sociale mobiliteit – het stijgen of dalen op de beroeps-, of onderwijsladder in vergelijking met je ouders – van invloed kan zijn op de mate van weerstand tegen uitgesloten etnische groepen. In hoofdstuk 2 neem ik dus ook meer ‘dynamische’ kenmerken van individuen in ogenschouw. In hoofdstuk 3 en 4 zoek ik additionele verklaringen voor weerstand tegen uitgesloten etnische groepen in de leefomgeving van het individu; in eigenschappen van de buurt en gemeente waarin men woont. Hoofdstukken 2, 3 en 4 vormen samen het eerste deel van dit boek.

Één van de meest consistente bevindingen binnen de sociologie is dat hoger opgeleiden binnen autochtone bevolkingsgroepen minder weerstand tegen etnische minderheden hebben dan relatief lager opgeleiden binnen de autochtone bevolking. Enigszins verbazingwekkend is het

dan ook dat de relatie tussen opleidingsniveau en weerstand tegen uitgesloten groepen binnen allochtone bevolkingsgroepen weinig wetenschappelijke aandacht heeft genoten. In het tweede deel van dit boek probeer ik dit goed te maken.

Er zijn verschillende redenen waardoor hoger opgeleiden minder weerstand tegen etnische minderheden hebben dan lager opgeleiden. Zo ervaren hoger opgeleide autochtonen minder (economische en culturele) groepsdreiging van etnische minderheidsgroepen dan lager opgeleiden, hebben zij in het algemeen een positievere sociale identiteit dan lager opgeleiden en is etniciteit een minder belangrijk onderdeel van hun sociale identiteit dan voor lager opgeleiden. Hierdoor zullen zij minder behoefte hebben om duidelijke grenzen te trekken tussen mogelijke etnische categorieën. Met minder duidelijke groeps grenzen krijgt weerstand tegen uitgesloten groepen minder kans. Ervaringen en vaardigheden opgedaan binnen het onderwijssysteem zouden ook bijdragen aan de relatieve tolerantie van hoger opgeleiden. Zo zouden hoger opgeleiden op school bepaalde vaardigheden leren die hen in staat stellen een complexere wereld aan te kunnen, waardoor de behoefte om te categoriseren verder afneemt. Ook hebben hoger opgeleiden langer de tijd gekregen om de dominante norm van tolerantie, die binnen de school wordt overgedragen, zich eigen te maken.

Ik beargumenteer in deel 2 van dit boek dat etnische onderwijsongelijkheid kan leiden tot verschillen in (de sterkte van) de samenhang tussen opleidingsniveau en de mate van weerstand tegen uitgesloten etnische groepen. Tot op heden ontbrak echter een gedetailleerde beschrijving van etnische onderwijsongelijkheid in Nederland. Dit heb ik daarom zelf onderwerp van onderzoek gemaakt in Hoofdstuk 5. In Hoofdstuk 6 zijn verklaringen voor onderwijsverschillen tussen etnische groepen in Nederland verder onderzocht. Hoofdstukken 5 en 6 passen binnen de sociologische onderzoekstraditie die zich bezighoudt met sociale ongelijkheid. In dit boek dienen zij tevens als opmaat voor hoofdstuk 7. Hier heb ik opnieuw verschillen in de mate van weerstand tegen uitgesloten groepen als onderzoeksobject genomen. Meer precies, in hoofdstuk 7 onderzoek ik, ditmaal onder allochtone bevolkingsgroepen binnen Nederland, in welke mate en waarom opleidingsniveau samenhangt met weerstand tegen (andere) uitgesloten etnische groepen.

In het onderstaande zal ik kort per hoofdstuk de behandelde onderzoeksvraag bespreken en de belangrijkste bevindingen samenvatten. Tot slot geef ik aan welke richting toekomstig onderzoek met betrekking tot weerstand tegen uitgesloten groepen mijns inziens op zou moeten gaan.

Hoofdstuk 2: sociale mobiliteit en weerstand tegen etnisch uitgesloten groepen

Het genoten opleidingsniveau en iemands positie op de arbeidsmarkt zijn zeer belangrijke voorspellers van de mate van weerstand tegen etnisch uitgesloten groepen. Zoals gezegd geven relatief hoger opgeleiden minder blijk van weerstand dan lager opgeleiden. Ook kleine zelfstandigen en (ongeschoolde) arbeiders hebben meer weerstand tegen uitgesloten groepen dan mensen met posities in de hogere regionen van de arbeidsmarkt. Naast de eigen sociale positie waren er uit eerder wetenschappelijk onderzoek ook indicaties dat het opleidingsniveau van de ouders en de arbeidsmarktpositie van de ouders van invloed zouden zijn op de mate van weerstand. Het relatieve belang van de eigen sociale positie in vergelijking met de sociale positie van de ouders voor de verklaring van de mate van weerstand was echter tot nog toe onbekend, evenals mogelijke effecten van unieke combinaties van sociale posities van ouders en hun kinderen op de mate van

weerstand. Beiden heb ik onderzocht in hoofdstuk 2 en deze twee onderwerpen worden gevangen in de volgende algemene onderzoeksvraag:

In welke mate draagt intergenerationele sociale mobiliteit bij aan de verklaring voor weerstand tegen uitgesloten etnische groepen?

Naar aanleiding van mijn studie concludeer ik dat de invloed van de sociale positie van de ouders tot op heden onderschat is geweest. Vooral als een zoon of dochter een sociale positie bezit waarvan de mensen over het algemeen minder tolerant zijn dan de sociale positie van hun vader, lijkt hun mate van weerstand meer op de gemiddeld relatief tolerante houding van leden van de sociale positie van hun vader. Ik merk daarbij op dat die positie van de zoon of dochter niet noodzakelijk een lagere status dan de sociale positie van hun vader inhoudt. Bovendien komt de mate van etnische weerstand in deze gevallen soms zelfs sterker overeen met de houding indicatief voor de sociale positie van de vader dan met de houding indicatief voor de eigen sociale positie. Met andere woorden, voor individuen die sociaal mobiel zijn naar een positie waarbinnen de mate van weerstand over het algemeen sterker is dan de positie van hun vader, is de sociale positie van hun vader een betere voorspeller voor de eigen mate van weerstand dan de eigen, huidige positie.² Kortom, tolerante houdingen worden makkelijker overgedragen via de (context van de) sociale positie dan intolerante houdingen. Een plausibele verklaring hiervoor is dat in de Nederlandse samenleving als geheel tolerantie de norm is.

Hoofdstuk 3: de directe leefomgeving en weerstand tegen uitgesloten etnische groepen

Naast kenmerken of eigenschappen van individuen was het reeds bekend dat ook zogenoemde contextkenmerken van invloed zijn op houdingen ten aanzien van uitgesloten etnische groepen. Tot dusverre onderzocht men echter vooral kenmerken van landen en dan met name de invloed van immigratie en indicatoren voor de economische gesteldheid van een land op deze weerstand.

Immigratie en een slechte of verslechterende nationale economie zou namelijk volgens de Etnische Competitie Theorie (ECT) samenhangen met (objectieve) groepscompetitie en dus ook met ervaren groepsdreiging. Uiteindelijk zou dit volgens de ECT leiden tot een toename in de weerstand tegen uitgesloten etnische groepen. Echter, vanuit dezelfde theorie kan mijns inziens afgeleid worden dat niet alleen kenmerken van landen maar ook van gemeenten of buurten van invloed kunnen zijn op de individuele weerstand die men heeft tegen uitgesloten etnische groepen. Bovendien beargumenteer ik dat onder autochtonen de mate van weerstand tegen uitgesloten groepen, naast de relatieve grootte van uitgesloten etnische groepen in een buurt of gemeente of de economische gesteldheid van een buurt of gemeente, ook zal samenhangen met de mate van veiligheids-dreiging (criminaliteit in de leefomgeving en de verhuismobiliteit) en culturele dreiging (de aanwezigheid van moskeeën). Dit inzicht leidde tot de volgende onderzoeksvraag:

In welke mate dragen kenmerken van Nederlandse gemeenten en buurten die indicatief zijn voor de mate van ervaren economische, culturele en veiligheids-dreiging bij aan de verklaring van weerstand tegen uitgesloten etnische groepen?

De invloed van de lokale leefomgeving op de mate van weerstand tegen uitgesloten groepen bleek zwak te zijn in vergelijking met kenmerken van het individu. Wel concludeer ik op basis van mijn studie dat de lokale leefomgeving ertoe doet: als identieke mensen (bijvoorbeeld: mensen van dezelfde leeftijd, geslacht, opleidingsniveau, enzovoort) wonen in verschillende buurten of gemeenten, is ook hun gemiddelde weerstand tegen uitgesloten groepen anders.

Ik vond geen ondersteuning voor het idee dat kenmerken waarvan ik verwacht dat ze samenhangen met culturele groepsdreiging of met veiligheidsdreiging de weerstand tegen uitgesloten etnische groepen doen toenemen. Alleen kenmerken die samenhangen met economische dreiging beïnvloeden, zoals de Etnische Competitie Theorie voorspelde, weerstand tegen uitgesloten etnische groepen. Ik vond ook geen bewijs voor het idee dat de aanwezigheid van specifieke uitgesloten etnische groepen in de buurt of gemeente juist weerstand tegen deze specifieke etnische groep doet toenemen.

Het is te eenvoudig om te stellen dat zodra men woont in een gemeente of buurt met relatief veel allochtone Nederlanders, men meer weerstand voelt tegen deze groepen. Uit mijn onderzoek blijkt dat de aanwezigheid van leden van uitgesloten groepen wel bijdraagt aan een toename in groepsdreiging maar vooral voor lager opgeleiden. Tegelijkertijd echter nemen contactmogelijkheden tussen verschillende groepen toe als er meer leden van uitgesloten groepen in de buurt of de gemeente wonen. Positieve contactervaringen met leden van uitgesloten etnische groepen zullen de weerstand die men initieel had tegen deze groep doen verzwakken. Een toename van groepsdreiging door de aanwezigheid van uitgesloten etnische groepen in de directe leefomgeving waardoor weerstand toeneemt, wordt dus waarschijnlijk deels teniet gedaan door meer positieve intergroepscontacten. Bovendien is het waarschijnlijk dat zodra men de buurt of gemeente als onprettig ervaart vanwege de bevolkingssamenstelling, men uiteindelijk naar een betere buurt verhuist. Deze 'selectieve verhuismobiliteit' bemoeilijkt het correct in kaart brengen van de invloed van buurt- en gemeentekennmerken op weerstand tegen uitgesloten groepen.

Hoofdstuk 4: de directe leefomgeving en de mate van sociale samenhang

De studie die ik in hoofdstuk 3 beschreven heb, riep verschillende vervolgvragen op. In hoofdstuk 3 keek ik in hoeverre buurt- en gemeentekennmerken invloed hebben op weerstand tegen uitgesloten etnische groepen. Dit heb ik gemeten door te kijken naar de weerstand tegen etnisch gemengde huwelijken, de weerstand die men heeft om verblijfsvergunningen toe te kennen aan migranten en door te bepalen in hoeverre men een negatieve houding heeft ten opzichte van de multiculturele samenleving. In grote lijnen kwamen de verklaringsmodellen voor deze drie indicatoren voor weerstand tegen etnisch uitgesloten groepen overeen. Recentelijk is geopperd dat wanneer door het leven binnen etnisch diverse leefomgevingen de sociale samenhang *tussen* verschillende etnische groepen afneemt ook de sociale samenhang *binnen* de eigen etnische groep afneemt. In hoofdstuk 4 stelde ik me daarom de vraag in hoeverre de verklaringsmodellen voor weerstand tegen uitgesloten etnische groepen ook bruikbaar zijn voor de sociale samenhang in Nederland in meer algemene zin.

Waar ik in hoofdstuk 3 onderzocht in hoeverre de autochtone bevolking verschilt in de

mate van weerstand tegen specifieke uitgesloten etnische groepen, onderzocht ik in hoofdstuk 4 in hoeverre iemands eigen etniciteit van invloed is op de mate van weerstand tegen uitgesloten etnische groepen en sociale samenhang in algemene zin.

In hoofdstuk 4 heb ik de invloed van etnische en economische diversiteit, het gemiddeld inkomen, het criminaliteitsniveau en de mate van verhuismobiliteit binnen buurten en gemeenten op de mate van weerstand tegen uitgesloten etnische groepen en op verschillende indicatoren voor de sociale samenhang in meer algemene zin onder de loep genomen. De enigszins lange onderzoeksvraag van hoofdstuk 4 luidde:

In welke mate en voor wie dragen kenmerken van Nederlandse gemeenten en buurten zoals etnische en economische diversiteit, het gemiddeld inkomen, het criminaliteitsniveau en de mate van verhuismobiliteit bij aan de verklaring van weerstand tegen uitgesloten etnische groepen en verschillende indicatoren voor de sociale samenhang in Nederland in meer algemene zin?

Opnieuw bleek dat de invloed van de lokale leefomgeving in vergelijking met kenmerken van het individu relatief zwak zijn, maar dat de lokale leefomgeving er wel degelijk toe doet. Ik vond dat mensen die in een etnische diverse buurt wonen niet per definitie meer weerstand hebben tegen uitgesloten etnische groepen – in overeenstemming met mijn resultaten uit hoofdstuk 3 – of minder sociale samenhang vertonen in meer algemene zin. Vooral de laatste bevinding spreekt eerder onderzoek uit Amerika duidelijk tegen en heeft daarom de aandacht getrokken van zowel lokale als nationale beleidsmakers in Nederland.

Van de andere onderzochte buurt- en gemeentekennmerken bleek alleen een gunstige lokale buurteconomie samen te hangen met meer sociale samenhang. De overige kenmerken bleken irrelevant. De sterkte van de invloed van buurt- en gemeentekennmerken (of de af- en aanwezigheid daarvan) op de onderzochte indicatoren van sociale samenhang verschillen niet per etnische groep.

Met hoofdstuk 4 sluit ik deel 1 van dit boek af. In dit deel heb ik aangetoond dat om verschillen in de mate van weerstand tegen uitgesloten etnische groepen beter en vollediger te begrijpen het nodig is om ervaringen van sociale mobiliteit en de invloed van de lokale leefomgeving in beschouwing te nemen. In het tweede deel van dit boek richt ik me op één van de belangrijkste, meer traditionele verklaringen voor weerstand tegen uitgesloten groepen, te weten het hoogst behaald (of gevolgd) opleidingsniveau.

Keer op keer wordt door middel van empirisch onderzoek bevestigd dat leden uit autochtone bevolkingsgroepen toleranter zijn naarmate zij meer jaren onderwijs hebben genoten. Echter, onder allochtone bevolkingsgroepen is de richting en de sterkte van het verband tussen jaren opleiding en mate van tolerantie onbekend. In deel 2 zal ik zowel de verschillen tussen etnische groepen in behaalde opleidingsniveaus centraal stellen alsmede de verschillen in de samenhang tussen jaren opleiding en mate van weerstand tegen uitgesloten etnische groepen.

Hoofdstuk 5: trends in onderwijsongelijkheid tussen etnische groepen in Nederland

In hoofdstuk 5 onderzoek ik geboortecohort trends in onderwijsongelijkheid op basis van etniciteit.

Hiermee verlaat ik de hoofdvraag van dit boek naar de verklaringen voor de verschillen in de mate van weerstand tegen uitgesloten etnische groepen. Hier zijn twee belangrijke redenen voor.

Ten eerste, er zijn aanwijzingen dat de sterkte van het verband tussen opleidingsniveau en mate van weerstand bij autochtone bevolkingsgroepen afhangt van de verdeling van onderwijsdiploma's onder de bevolking. Als gevolg van de onderwijsexpansie behalen steeds minder mensen geen of een relatief lage opleiding. De mensen met een relatief lage opleiding zijn hierdoor steeds sterker op elkaar gaan lijken als het gaat om (academische) vaardigheden. Waarschijnlijk mede als gevolg hiervan is het verband tussen opleidingsniveau en mate van weerstand onder autochtone Nederlanders de afgelopen decennia sterker geworden; de mensen met een lage en een hoge opleiding zijn steeds meer van elkaar gaan verschillen in de mate van weerstand tegen uitgesloten etnische groepen. Nu verwachtte ik dat als er verschillen tussen de etnische groepen in Nederland bestaan in de verdelingen van opleidingsniveaus, het verband tussen opleidingsniveau en mate van weerstand ook goed zou kunnen verschillen tussen etnische groepen. Om echter een toetsbare voorspelling te doen over de verschillen in dit verband tussen autochtone en allochtone Nederlanders, was het nodig om de verdeling in opleidingsniveaus tussen en binnen etnische groepen in Nederland in kaart te brengen aangezien zo een studie tot op heden ontbrak.

Ten tweede, één van de vernieuwende aspecten van dit boek is dat ik zowel de mate van weerstand tegen uitgesloten etnische groepen onderzoek onder autochtone Nederlanders als onder allochtone Nederlanders. De mate van weerstand tegen uitgesloten groepen onder allochtone Nederlanders vertelt iets over de mate van culturele integratie. Zoals reeds eerder gesteld zou de mate van onderwijsintegratie – in hoeverre allochtone Nederlanders in vergelijkbare mate zijn vertegenwoordigd binnen opleidingsniveaus als autochtone Nederlanders – sterk samenhangen met de mate van culturele integratie. Om een completer beeld te krijgen van de integratie van allochtone Nederlanders binnen onze gedeelde samenleving is het mijn inziens echter onvoldoende om alleen te kijken naar de mate van culturele integratie (de mate van afwezigheid van weerstand tegen uitgesloten etnische groepen) en de relatie tussen onderwijsintegratie en culturele integratie, maar verdient de mate van onderwijsintegratie ook apart aandacht.

Het bovenstaande heeft geleid tot de volgende concrete onderzoeksvraag die in hoofdstuk 5 beantwoord wordt:

Hoe zien de geboortecohort-trends in onderwijsverschillen tussen etnische groepen met betrekking tot het hoogst-bereikte opleidingsniveau en overgangen na het primaire onderwijs en het secundaire onderwijs eruit, en in welke mate zijn verschillen in sociale herkomst hier verantwoordelijk voor?

De belangrijkste conclusie die ik op basis van mijn studie kan trekken is dat de onderwijsverschillen tussen autochtone Nederlanders en allochtone Nederlanders niet over de gehele linie aan het afnemen zijn. Turkse, Marokkaanse, Surinaamse en Antilliaanse Nederlanders blijven (vooral) ondervertegenwoordigd binnen het tertiaire onderwijs. Bovendien lijkt er een tweedeling te ontstaan binnen het Nederlandse onderwijsstelsel waarbinnen de algemene opleidingsrichtingen (dat is: HAVO, VWO en universiteit) het domein worden – of beter gezegd: blijven – voor autochtone Nederlanders en de beroepsopleiding (VMBO, MBO en in minder mate het HBO) wel toegankelijk

blijken voor allochtone leerlingen.

De tweede generatie allochtone Nederlanders doet het beter dan de eerste generatie, maar de verschillen tussen de generaties zijn met de tijd wel steeds kleiner geworden. Het is daarom nog maar de vraag of met de volgende generatie de etnische onderwijsongelijkheid verder afneemt. De verschillen in sociale herkomst tussen allochtone en autochtone leerlingen kunnen lang niet alle etnische onderwijsongelijkheid verklaren. Dit betekent dat er gezocht moet worden naar andere verklaringen. De studie van hoofdstuk 5 geeft aanleiding om deze te zoeken in een uitbreiding van het zogenoemde Breen-Goldthorpe-model.

Hoofdstuk 6: verklaringen voor etnische onderwijsongelijkheid

De centrale stelling van het Breen-Goldthorpe-model is dat studenten samen met hun ouders keuzes maken over de te nemen route door het onderwijsstelsel die zij baseren op: de sociale opbrengsten van de mogelijk te behalen niveaus (sociale status), de kosten behorende bij de verschillende onderwijstrajecten en de verwachte kansen om succesvol de verschillende mogelijke trajecten succesvol af te ronden. Ik gebruik dit model om verschillen tussen etnische groepen, mannen en vrouwen, en sociale klassen te verklaren in keuzes na het hoger algemeen secundair onderwijs (VWO).

Ik verwachtte dat mannen en vrouwen en etnische groepen binnen Nederland verschillende verwachtingen zouden hebben over hun slaagkansen, zelfs als we studenten vergelijken die dezelfde schoolprestaties hebben neergezet. Als de inschattingen van toekomstig schoolsucces verschillen tussen groepen, zou dit volgens het Breen-Goldthorpe-model dus een aannemelijke verklaring zijn voor verschillen in de keuzes die gemaakt moeten worden na het succesvol afronden van het VWO.

De studie die ik beschreven heb in hoofdstuk 6 is om drie redenen vernieuwend. Ten eerste, hoewel het Breen-Goldthorpe-model vaak is toegepast om verschillen tussen sociale klassen in schoolkeuzes te verklaren, is het vrij uniek om dit model toe te passen voor de verklaring van verschillen in schoolkeuzes tussen mannen en vrouwen en tussen etnische groepen. Ten tweede, tot op heden worden inschattingen van slaagkansen voor de verschillende opleidingsopties zelden ook daadwerkelijk zelf gebruikt om schoolkeuzes te verklaren.⁴ Ten slotte, ik pas het model niet alleen toe om keuzes tussen onderwijsniveaus te verklaren maar ook om keuzes voor onderwijsrichtingen te verklaren. De onderzoeksvraag van hoofdstuk 6 luidde:

In welke mate kunnen verschillen tussen sociale posities, mannen en vrouwen, en etnische groepen in inschattingen van slaagkansen de aanwezige verschillen tussen deze groepen verklaren in de studiekeuze binnen het hoger onderwijs?

Ik heb aangetoond dat studenten inderdaad verschillende inschattingen maken van hun slaagkansen, ook nadat we rekening houden met eerdere prestatieverschillen. Bovendien verklaren deze inschattingen van slaagkansen beter waarom groepen verschillen in hun schoolkeuzes dan de eerdere schoolprestaties. Een belangrijke conclusie is daarom dat de assumptie binnen het Breen-Goldthorpe-model, dat eerdere schoolprestaties voldoende zijn om schoolkeuzes te verklaren (en verschillen hierin tussen groepen), bijgesteld moet worden.

Verwachtingen over toekomstig schoolsucces bleken vooral van belang voor het verklaren van verschillen tussen mannen en vrouwen (maar ook, hoewel in iets mindere mate, tussen sociale posities) in keuzes voor opleidingsrichtingen. Met het Breen-Goldthorpe-model kan ik voor een aanzienlijk deel verschillen in schoolkeuzes verklaren, maar toch bleek ik met dit model maar nauwelijks in staat om verschillen in schoolkeuzes tussen studenten met een verschillende etnische achtergrond te verklaren.

In hoofdstuk 5 toonde ik reeds aan dat de onderwijsintegratie van etnische minderheden niet volledig is en bovendien stukt. Dit kan er voor zorgen dat opleidingseffecten met betrekking tot weerstand tegen uitgesloten etnische groepen anders kunnen zijn (zwakker is de verwachting) onder Turkse, Marokkaanse, Surinaamse en Antilliaanse Nederlanders dan onder autochtone Nederlanders. Na hoofdstuk 6 waarin ik aangetoond heb dat verschillen in schoolkeuzes tussen etnische groepen niet verklaard kunnen worden door het Breen-Goldthorpe-model, is het des te aannemelijker dat opleidingseffecten verschillen tussen etnische groepen. In het laatste empirische hoofdstuk van dit boek, hoofdstuk 7, maak ik de verschillen in opleidingseffecten tussen etnische groepen tot mijn onderzoeksobject.

Hoofdstuk 7: genoten opleiding en weerstand tegen uitgesloten etnische groepen

Waar bij autochtone Nederlanders meer opleiding consistent samengaat met minder weerstand tegen uitgesloten etnische groepen, lijken hoger opgeleide allochtone Nederlanders juist meer discriminatie te ervaren, en meer culturele verschillen te ervaren met de autochtone bevolking. Verschillende onderzoekers zien hierin aanwijzingen voor de aanwezigheid van een integratieparadox, waarmee zij bedoelen dat juist structureel geïntegreerde allochtone Nederlanders minder sociaal- en cultureel geïntegreerd zouden zijn. Toch is het tot op heden niet aangetoond dat hoger opgeleide allochtone Nederlanders in het algemeen meer weerstand tegen autochtone Nederlanders ervaren of zich minder als Nederlander identificeren.

Er zijn verschillende redenen om aan te nemen dat het opleidingseffect – het effect dat men met meer jaren genoten opleiding, minder weerstand tegen (andere) uitgesloten etnische groepen ervaart – verschilt tussen etnische groepen. Één reden is reeds aan bod gekomen, namelijk als het zo is dat de gemiddelde verschillen in cognitieve vaardigheden tussen lager en hoger opgeleiden groter zijn bij autochtone Nederlanders dan bij allochtone Nederlanders, zou dit tot gevolg kunnen hebben dat opleidingseffecten kleiner zijn bij allochtone Nederlanders dan bij autochtone Nederlanders. Andere belangrijke verklaringen voor het opleidingseffect bij autochtone Nederlanders kunnen gevonden worden in de mate van ervaren etnische dreiging die verschillen tussen opleidingscategorieën en in de mate van contacten met leden uit uitgesloten etnische groepen. In hoeverre deze redenen voor het opleidingseffect onder autochtone Nederlanders ook geldig zijn om het al dan niet aanwezige opleidingseffect onder allochtone Nederlanders te verklaren was echter onbekend. Dit heeft geleid tot de volgende onderzoeksvraag:

In welke mate en waarom hangt onder allochtone Nederlanders genoten opleiding samen met de mate van weerstand tegen autochtone Nederlanders (in dit verband de belangrijkste uitgesloten etnische groep) en met de mate van identificatie als Nederlander?

Op grond van de resultaten van hoofdstuk 7, heb ik laten zien dat, zoals verwacht, over het algemeen het opleidingseffect onder allochtone Nederlanders zwakker is dan onder autochtone Nederlanders. Voor de tweede generatie etnische minderheden in Nederland gaat de hoogte van de genoten opleiding niet samen met een afname in de weerstand tegen autochtone Nederlanders. Vooral voor Turkse en Marokkaanse Nederlanders van de tweede generatie valt dit te verklaren door het feit dat onder de hoger opgeleiden niet meer positieve contactervaringen voorkomen dan onder de lager opgeleiden en bovendien ook niet minder negatieve contactervaringen. Wel dien ik op te merken dat de tweede generatie over het algemeen minder weerstand voelt tegen autochtone Nederlanders en zich meer identificeert als Nederlander dan de eerste generatie. Toch geeft het afwezige positieve effect van opleidingsniveau op interetnische tolerantie reden tot zorgen. Sociale stijging onder allochtone Nederlanders zal – ook al gaat dit gepaard met een sterkere Nederlandse identiteit - niet noodzakelijk leiden tot minder weerstand tegen autochtone Nederlanders.

In tegenstelling tot hetgeen ik verwachtte op basis van eerdere resultaten bij autochtone Nederlanders, bleek ervaren groepsdreiging niet samen te gaan met meer weerstand tegen uitgesloten etnische groepen onder allochtone Nederlanders. Tot slot vond ik dat allochtonen die meer Nederlandse media en minder media uit het respectievelijke herkomstland consumeren minder weerstand hebben tegen autochtone Nederlanders en zich meer identificeren als Nederlander. Alleen bij tweede generatie Marokkaanse Nederlanders lijkt de consumptie van Nederlandse media bij te dragen aan meer weerstand. Een voor de hand liggende reden zou kunnen zijn dat vooral de Marokkaanse bevolkingsgroep negatief belicht wordt in de media.

Hoe nu verder?

Een belangrijk theoretisch model waar ik in dit boek gebruik van heb gemaakt om weerstand tegen uitgesloten etnische groepen te verklaren is de Etnische Competitie Theorie. Deze theorie stelt dat competitie tussen etnische groepen om economische goederen, (politieke) macht, en normen en waarden zal leiden tot een ervaren groepsdreiging. Deze groepsdreiging kan weer leiden tot een toename in weerstand tegen uitgesloten etnische groepen. Naar aanleiding van hoofdstuk 2, waarin ik heb aangetoond dat men zich sterker aanpast aan tolerante houdingen dan aan intolerante houdingen, vermoed ik dat feitelijke competitie tussen etnische groepen niet in alle omstandigheden tot een zelfde mate van ervaren groepsdreiging zal leiden. Concreter verwacht ik dat een toename in feitelijke competitie (bijvoorbeeld door toegenomen migratie of een economische recessie) minder snel zal leiden tot een toename van ervaren groepsdreiging in relatief tolerante samenlevingen dan in relatief intolerante samenlevingen.

Waarom hangt onder allochtone Nederlanders groepsdreiging – gemeten als waargenomen groepsdiscriminatie – niet samen met meer weerstand tegen uitgesloten etnische groepen zoals de Etnische Competitie Theorie voorspelt? Of anders gezegd: waarom zijn allochtone Nederlanders die geen groepsdiscriminatie waarnemen, niet toleranter ten aanzien van autochtone Nederlanders? Waar onder autochtone Nederlanders vooral de mensen in lagere sociale posities meer groepsdreiging ervaren, zijn het onder allochtone Nederlanders vooral de mensen in relatief hogere sociale posities. Ik vermoed dan ook dat groepsdreiging minder snel tot uiting komt in

weerstand tegen uitgesloten etnische groepen, naarmate men persoonlijk meer hulpbronnen heeft om de gevolgen van groepsdreiging te verzachten.

Ik heb in dit boek aangetoond dat er een invloed uitgaat van de lokale leefomgeving op de mate van weerstand tegen uitgesloten etnische groepen. Het juist in kaart brengen van de reactie die de aanwezigheid van uitgesloten etnische groepen in een buurt oproept, is echter lastig aangezien door de aanwezigheid van leden van uitgesloten etnische groepen tegelijkertijd groepsdreiging kan ontstaan, er meer positieve contactmogelijkheden zijn en inwoners kunnen besluiten om de buurt of gemeente de rug toe te keren. Op basis van mijn studies verwacht ik dat deze drie 'verklarende mechanismen' (groepsdreiging, positief contact en selectieve residentiële verhuismobiliteit) in ongelijke mate en op een ander moment optreden onder relatief hoog en relatief laag opgeleiden.

Bovengenoemde drie verwachting zou ik graag in toekomstig onderzoek aan een kritische toets onderworpen willen zien.

Tot slot

In dit boek heb ik aangetoond dat wanneer men de processen die leiden tot weerstand tegen uitgesloten etnische groepen beter wil begrijpen, het dan nodig is om naar de invloed van sociale mobiliteit te kijken. Mensen nemen eerder relatief tolerante houdingen over waarmee men in aanraking komt als gevolg van sociale mobiliteit dan intolerante houdingen. Als men juist zelf afkomstig is van een relatief tolerante sociale positie, dan neemt men niet (of in ieder geval minder) de intolerante houdingen van de nieuwe sociale positie over.

Ook de lokale leefomgeving is van invloed op de mate van weerstand tegen uitgesloten etnische groepen. Vooral binnen economisch zwakkere en verzwakkende buurten is de mate van weerstand hoger. Ik vond geen bevestiging voor de verwachting dat dit ook zo zou zijn binnen buurten en gemeenten met relatief grote groepen etnisch uitgesloten.

De hoogte van iemands opleiding is onder autochtone bevolkingsgroepen een belangrijke voorspeller van de mate van weerstand tegen uitgesloten etnische groepen. Dit is in minder mate het geval onder allochtone bevolkingsgroepen. Voor een deel is dit te begrijpen doordat de onderwijsintegratie nog niet voltooid is. Het is echter niet te verwachten dat dit in de nabije toekomst zal gebeuren, aangezien vooral op de hogere niveaus onderwijsachterstanden robuust bleken te zijn. Verschillen tussen etnische groepen in de keuzes omtrent onderwijscarrières zijn nog steeds slecht te verklaren middels een rationele keuze benadering.

Hopelijk heeft deze Nederlandse samenvatting de lezer een idee kunnen geven over hoe ik ons (wetenschappelijk) begrip omtrent weerstand tegen etnisch uitgesloten groepen heb willen vergroten en inspireert het u om er zelf verder over na te denken.

Noten

1. In het Engels wordt de groep waartoe men zichzelf rekent de *ingroup* genoemd en uitgesloten groepen *outgroups*. Deze termen zijn moeilijk te vertalen naar het Nederlands. Ik gebruik voor de *ingroup* de term *eigen groep* en voor *outgroup* de term *uitgesloten groep*. Met uitgesloten groepen bedoel ik simpelweg alle groepen waartoe men zichzelf niet rekent. Het woord *uitgesloten* refereert in dit verband niet naar actieve processen van discriminatie. In het dagelijks taalgebruik spreekt men in dit verband ook wel over *wij en zij*.
2. Dat de sociale positie van de vader een belangrijkere voorspeller is gaat alleen op als we kijken naar intergenerationele beroepsmobiliteit. Wel is het zo dat zowel voor beroepsmobiliteit als onderwijsmobiliteit de positie van de vader meer invloed heeft op de mate van weerstand voor zonen en dochters die zelf een relatief intolerante positie bekleden.
3. In plaats van de werkelijke slaagkansen te gebruiken, gebruiken onderzoekers – veelal vanwege beperkingen opgelegd door de beschikbare data – de schoolprestaties tijdens de eerdere schoolloopbaan. De assumptie die deze onderzoekers moeten maken is dat verschillen in schoolprestaties overeenkomen met verschillen in inschattingen van slaagkansen. Ik zette vraagtekens bij deze assumptie en dit bleek terecht; schoolprestaties zijn niet voldoende om verschillen in inschattingen van schoolsucces te verklaren.

CURRICULUM VITAE

Jochem Tolsma was born in Kerkwijk, the Netherlands, on the 15th of December 1977. He obtained his Master's degree in Natural Sciences at the Radboud University Nijmegen in 2002. After this, he worked for a brief period as a youth worker in Bos en Lommer, Amsterdam. He then decided to study Social Cultural Sciences at the VU University Amsterdam and obtained his Master's degree in 2004. In September 2004, he became a PhD student at the Interuniversity Center for Social Science Theory and Methodology (ICS). He worked on his PhD thesis at the Department of Sociology of the Radboud University Nijmegen, the Netherlands. Currently, he holds a position as Assistant Professor at the Department of Sociology at Radboud University Nijmegen.

His fields of interest include ethnic hostility, ethnic educational differentials, criminology, the influence of the local living environment on a wide array of outcomes (e.g. ethnic hostility, residential sorting) and quantitative research methods. Among other things, he is currently aiming to integrate (the causes and consequences of) implicit associations into the theoretical framework of Ethnic Competition Theory.

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Why do some individuals express more ethnic hostility than others? The quest for sociological explanations for ethnic hostility is not new but many previous scholars focused predominantly on static characteristics of individuals of dominant ethnic groups that would presumably affect ethnic hostility. In Part 1 of this book I will contend that experiences of social mobility should be taken into account as well. Furthermore, in Part 1, I will show that conditions of the local living environment have an impact on ethnic hostility, next to characteristics of individuals.

Educational attainment is an important determinant of ethnic hostility among society's dominant ethnic group, with higher education being associated with less ethnic hostility. In part 2 it becomes clear that not only educational integration of ethnic minorities lags behind but also that the relationship between educational attainment and ethnic hostility is (much) weaker for ethnic minority groups. Possible reasons for this weaker relationship are being investigated.

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