



# Changes in immigrants' social integration during the stay in the host country: The case of non-western immigrants in the Netherlands

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## ABSTRACT

Previous studies on social integration of immigrants were predominantly of static nature. This article provides a dynamic account by distinguishing differences in social integration that develop shortly after immigrants' arrival in the host country from changes with length of stay. We examine contacts in leisure time between natives and non-western immigrants in the Netherlands. Theories from research on ethnic intermarriage are applied to these more common forms of contact. We use pooled cross-sectional survey data from 1988–2002. The results show that on average social integration increases with length of stay. Ethnicity, migration motive and home country education account for differences in integration that develop shortly after arrival and are maintained or even increased with length of stay, while the size of the immigrant group matters mainly at entry and then loses its influence over time. Age at migration exclusively explains differences in social integration that develop with length of stay.

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## 1. Introduction

The extent to which immigrants engage in social interaction with natives can be labeled social integration. Social integration is just one of the aspects of immigrant integration next to structural and cultural ones, which respectively refer to the incorporation of immigrants in the job market and the adoption of values and customs of the receiving society (Alba and Nee, 2003; Borjas, 1985; Portes, 1996; Van Tubergen et al., 2004). There are two main arguments as to why it is important to study social integration. Firstly, contact between ethnic groups can improve intergroup relations, thereby decreasing prejudice and conflict (Allport, 1954). Secondly, via such ties immigrants get access to the social capital of natives, which in turn facilitates their economic and cultural integration (Hagendoorn et al., 2003). For example, through natives, immigrants can more easily find employment on a wider job market (Kanas and Van Tubergen, forthcoming) or learn the language of the host society (Chiswick and Miller, 2001).

Social integration of immigrants has been examined both in terms of strong and weak ties. Marriage represents the strongest possible tie between members of two ethnic groups, and is therefore seen as an indicator of successful integration. The majority of studies on social integration have focused on ethnic intermarriages (Fu, 2001; Hwang et al., 1997; Kalmijn, 1998; Kalmijn and van Tubergen, 2006; Kulczycki and Lobo, 2002; Lievens, 1998; Qian et al., 2001; Rosenfeld, 2002; Van Tubergen and Maas, 2007). The remaining work in this field has examined weaker ties between ethnic groups, such as friendships or casual contacts (Dagevos et al., 2005; Emerson et al., 2002; Fong and Isajiw, 2000; Fong and Ooka, 2006; Quillian and Campbell, 2003; Sigelman et al., 1996; Weijters and Scheepers, 2003).

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A common feature of all these studies on social integration is their static nature. Research has only gone as far as to show that, for example, people who at the time of the survey speak the native language well have more contacts with natives (Weijters and Scheepers, 2003; Fong and Isajiw, 2000), or that immigrants who live in segregated areas have fewer contacts with natives compared to the ones living in mixed areas (Emerson et al., 2002; Gijssberts and Dagevos, 2004), and are less likely to be married to a native (Hwang et al., 1997; Lievens, 1998).

This study treats social integration as a *dynamic* phenomenon. Interaction between immigrants and natives tends to change over time, which is why it is important to study the *process* of social integration and not only the *level* of integration at a certain moment. Moreover, it has become clear that immigrants integrate with a different pace, and that there are even groups that eventually turn away from the host society (Portes and Zhou, 1993). In an attempt to understand the dynamics of social integration, we study how social integration changes over time for immigrants with distinct characteristics. A number of explanatory hypotheses are derived from an already established theory about the influence of preferences, opportunities and third parties (Kalmijn, 1998). The hypotheses incorporate the effects of immigrants' individual characteristics and the contextual characteristics encountered at the time of migration.

We make a distinction between differences in social integration that become visible shortly after arrival (labeled as "entry differences") and those that develop or persist over time ("longitudinal differences"). In this way it can be examined whether immigrants who find themselves in a closed ethnic group at the very beginning remain in such a position, or whether they open up or isolate themselves even more over time. In order to be able to investigate both entry and longitudinal differences, this study makes use of a longitudinal (synthetic cohort) design. Such a design makes it possible to distinguish between these two types of outcome when using data from cross-sectional surveys.

This study focuses on contact in leisure time. Conceptualizing social integration in this way allows for tracing changes over time, because immigrants can alter the number of interethnic acquaintances or the intensity of contact with them (Sigelman et al., 1996). By focusing on strong ties not much can be said about the *process* of social integration. Marriage is most commonly a singular and stable event in the individual's life course and is therefore not informative of changes in social integration during the immigrants' stay in the host country. Moreover, using weak ties as an indicator of social integration is also advantageous in that they represent a more common form of social interaction, thereby being applicable to a larger segment of the immigrant population (Joyner and Kao, 2005; Lievens, 1998).

While most of the studies on social integration have been conducted in classical immigration countries, such as the US (Hwang and Saenz, 1990; Joyner and Kao, 2005; Kulczycki and Lobo, 2002; Quillian and Campbell, 2003; Rosenfeld, 2002; Sigelman et al., 1996) and Canada (Fong and Isajiw, 2000; Fong and Ooka, 2006; Tzeng, 2000), less is known about immigrants in Europe. This study focuses on the Netherlands, which has become an immigration country quite recently. The two most prominent categories of immigrants are guest workers and migrants from the former Dutch colonies. With its migration history and the types of immigrants the Netherlands is comparable to other popular immigration countries in Europe, such as Germany, Belgium, France or Great Britain (Heath and Cheung, 2007). This implies that by studying social integration of immigrants in the Netherlands more can be learned about Europe as a whole. It is also interesting to compare the findings from this study with studies from classical countries of immigration. For example, race is one of the most prominent characteristics in the United States that affects cross-group interaction, both with respect to strong and weak ties (Lieberson and Waters, 1988; Qian and Cobas, 2004; Quillian and Campbell, 2003). In contrast, research on ethnic intermarriage in the Netherlands has discovered that cultural differences matter more than the racial ones (Kalmijn and Van Tubergen, 2006). The question then remains whether the same holds for weaker ties.

The data source for this study is the Dutch immigrant survey (SPVA) that was repeated five times between 1988 and 2002. Large immigrant surveys with measures of social integration are rare in Europe, so the data about the Netherlands provide a valuable opportunity to get a better insight into the dynamics of interethnic contacts. The respondents are first generation Turkish, Moroccan, Surinamese and Antillean immigrants who have already been living in the Netherlands for various years. First generation refers to immigrants who were born outside the Netherlands. These four ethnic groups constitute the largest section of the non-western immigrant population in the country (Vermeulen and Penninx, 2000). Surinamese and Antilleans are colonial migrants, while Turks and Moroccans mainly came as guest workers. Members of all four groups usually have a notably lower socio-economic position than native Dutch (Van Tubergen et al., 2004), and especially Turks and Moroccans are underprivileged (Martens, 1999)<sup>1</sup>.

## 2. A theory about preferences, opportunities and third parties

Predictions about entry and longitudinal differences in immigrants' social integration will be derived from a theory about the role of preferences, opportunities and third parties. This is a standard theory that has been employed in research on ethnic intermarriage (Kalmijn, 1998). Here it is applied to the study of interethnic contacts in leisure time.

The starting proposition is that people make choices in accordance with their preferences. McPherson et al. (2001) have argued that social networks of every type, including friendships and marriage, are partially guided by people's preference for interaction with similar others. Research on intermarriage supports this line of thought by showing that people prefer to

<sup>1</sup> In 1998, for example, 10 percent of Surinamese and 13 percent of Antilleans were unemployed compared to 18 percent of Turks and 20 percent of Moroccans (Martens, 1999).

marry individuals who are culturally similar, since such similarity facilitates mutual understanding (Kalmijn, 1998). Psychological experiments conducted by Byrne (1971) show that cultural similarity can result in the development of personal attraction. Apart from cultural similarity, people also have a preference for marrying economically attractive others, who can bestow upon them economic well-being and status (Kalmijn, 1998).

Preferred choices have to be made within the structural constraints of the society. The opportunity to meet coethnics can be seen as one of the main constraints. This opportunity depends, among other, on the size of the ethnic group and the degree of segregation (Blau and Schwartz, 1984). Bigger and more segregated ethnic groups provide greater opportunity for meeting coethnics. In contrast, if few coethnics are available, immigrants are structurally conditioned to interact with natives, even if they have an intrinsic preference for culturally similar coethnics. Furthermore, it is assumed that immigrants who master the language of the receiving society have a better opportunity to get engaged in contact with natives.

Finally, the “third parties” could encourage or discourage interethnic contact (Kalmijn, 1998). By third parties is meant the family, the religious community or the host society, to name a few. They are the ‘outsiders’ who affect the interaction between an immigrant and a native. These third parties set the norms of behavior regarding social interaction (Pettigrew, 1998), and these norms can in turn shape individual preferences or create constraints. If the norms are internalized by the individuals, they develop into their preferences; if they are not internalized, they become the individuals’ constraints because third parties have the power to sanction undesirable behavior.

Thus, it can be argued that immigrants make behavioral choices guided by their preferences, but within the structural constraints of the receiving society and the norms propagated by third parties. Since the main idea of this study is that social integration is a dynamic process, it is also assumed that the interplay of preferences, opportunities and third party constraints changes over time, thereby bringing about a change in social integration.

## 2.1. Hypotheses

Using the theory on preferences, opportunities and third parties, we hypothesize about a number of individual and contextual characteristics that might explain entry and longitudinal differences in social integration of immigrants. The focus is on attributes that are commonly identified as relevant, both in cross-sectional studies on intermarriage (Kalmijn and Van Tubergen, 2006; Kulczycki and Lobo, 2002; Lievens, 1998; Hwang et al., 1997) and in studies on other forms of interethnic contact (Dagevos et al., 2005; Joyner and Kao, 2005; Weijters and Scheepers, 2003; Sigelman et al., 1996). These are ethnicity, age at migration, migration motive, education in the country of origin, immigrant group size at arrival and the rate of unemployment at arrival. These characteristics refer to the situation prior to, or at the moment of migration. Since the study does not make use of a panel design, this selection was made in order to be able to draw causal links between characteristics of immigrants and their later social integration. This is why age at migration and education in the home country are used instead of, for example, language skills or education in the host country, which could just as well be a result of social integration.

In formulating our hypotheses, we first make a ‘general’ prediction about the role of each characteristic, followed by a more ‘specific’ prediction about the timing of the effect (entry versus longitudinal). There are two conditions under which differences are expected already at the entry, and two conditions under which these differences are expected to remain or even enlarge over time.

We expect entry differences regarding characteristics that more or less immediately after arrival immerse immigrants in a certain social context which then from the start affects their social integration. This concerns the migration motive, group size at arrival and unemployment at arrival. Similarly, entry differences are also expected for immigrants who due to their pre-migration characteristics already arrive with a clearly higher preference for interaction with the native population compared to other groups. Colonial migrants and highly educated migrants fall into this category.

As to the differences over time, these are expected to increase for immigrants who are likely to invest more in their post-migration skills, for example, learn the language of the host country or gain additional education. This should hold for immigrants who arrive at a younger age and for the reason of study, as well as for those who are already more highly educated. Van Tubergen and Van de Werfhorst (2007) have shown that these three groups of immigrants indeed tend to invest more in further education. In addition, for contextual characteristics longitudinal differences are expected to persist if the characteristic itself does not fluctuate over time but shows a stable trend, as is the case with immigrant group size.

### 2.1.1. Individual characteristics

We first expect that ethnic origin affects social integration. Immigrants of Surinamese and Antillean descent (the ‘Caribbean groups’) have been exposed to Dutch culture during the colonial period, meaning that from the start they have a stronger preference for developing contacts with natives than immigrants of Turkish and Moroccan descent (the ‘Mediterranean groups’), who are more culturally dissimilar from the Dutch. For example, while Turks and Moroccans are mainly Muslims, members of the Caribbean groups are often Christians like the Dutch. Likewise, due to cultural similarity the Dutch society as a third party chooses Caribbean over Mediterranean immigrants when it comes to interaction. Although the Caribbean groups are more dark-skinned than the Mediterranean groups, following the findings of Kalmijn and Van Tubergen (2006) race is expected to matter less than cultural differences. Next to culture, the Caribbean groups have also been exposed to the Dutch language; upon arrival they have a greater opportunity for interaction with the Dutch compared to the Mediterranean groups, for whom migration to the Netherlands represents their first exposure to the language. Nevertheless, over

time Turks and Moroccans can learn Dutch, thereby improving their chances for interaction with natives and possibly catching up with the Caribbean groups. In this specific case, however, investing in post-migration skills such as language should not lead to an increasing gap between the groups, as was argued above, because the Caribbean immigrants are known for being very proficient in Dutch language already at arrival. Only the Mediterranean groups can invest in acquiring language skills and thus approach the Caribbean groups. It is hypothesized that *the Caribbean groups are more socially integrated than the Mediterranean groups (H<sub>1</sub>). Differences are expected to develop already at entry, and then fade away over time.*

Age at migration could influence social integration as well. Upon arrival, both younger and older immigrants are equally unfamiliar with the Dutch context. However, those who arrive at a young age are quicker at learning the language of the host society (Chiswick and Miller, 2001), meaning that they have more *opportunity* for interaction with natives. At the same time, immigrants who arrive at a younger age are less socialized into their own culture by *third parties*, such as educational institutions and media in the host country. Therefore, they internalize less the norms of their country of origin and are more likely to gradually accept the norms of the receiving society. On these grounds it is expected that *immigrants who enter at a younger age are more socially integrated than immigrants who enter at an older age (H<sub>2</sub>). Hardly any differences are expected in the beginning, but over time they should gradually develop.*

Based on their migration motive, immigrants are immersed in a specific context shortly after arrival. For example, earlier immigrants, who were mainly low educated Turkish and Moroccan men, came to the Netherlands on a temporary work contract (Vermeulen and Penninx, 2000). They occupied low-skill positions, where they were mostly surrounded by other members of their own group. Similarly, immigrants who are reunited with their spouse find themselves from the start in an ethnic context. Students, on the other hand, are usually placed in a completely different environment; they are surrounded by natives at schools and universities. These students then immediately have a greater *opportunity* to interact with the Dutch. Moreover, they also *prefer* to interact with these highly educated natives, given that people in general also have a preference for interaction with either similar others or the ones with a high status. Furthermore, as shown by Van Tubergen and Van de Werfhorst (2007), study migrants tend to invest more in their post-migration skills than work or family migrants, which gradually makes them become better equipped for interaction with natives. Thus, it is expected that *immigrants who come to the host country for study purposes are more socially integrated than immigrants who come for the purpose of work or family unification (H<sub>3</sub>). Differences are expected to develop already at entry and then increase further over time.*

Finally, the level of education obtained in the home country could put immigrants in a different position for interethnic interaction. Since most of the immigrants are lower educated than the Dutch majority, upon arrival they tend to concentrate in lower level schools and lower level occupations, where they are surrounded by other immigrants. Immigrants who are highly educated, on the other hand, find themselves in situations where they are exposed mainly to Dutch people, be it at university or at work. Thus, higher educated immigrants have more *opportunities* to establish contact with natives. They also tend to have a more universalistic view on life, meaning that ethnicity is a less relevant factor for their choice of friends. Instead they have a *preference* for contact with other highly educated people who share a similar worldview, and these are often Dutch. With time, highly educated immigrants are also more likely to learn the language of the host country (Espenshade and Fu, 1997; Van Tubergen and Van de Werfhorst, 2007), meaning that their opportunities for interaction with natives should increase even further with their stay in the Netherlands. It is therefore expected that *immigrants with higher achieved education in the home country are more socially integrated than the low educated ones (H<sub>4</sub>). Differences are expected to develop already at entry and then increase further over time.*

### 2.1.2. Contextual characteristics

The next set of characteristics refers to societal conditions at the moment of entry. The first condition is the relative size of the immigrant group, which shows a stable increase in the Netherlands over the past 40 years for all four groups (CBS, 2006). The more immigrants there are in the host country, the more *opportunity* there is to interact with coethnics (Blau and Schwartz, 1984). Analogously, when the immigrant group is large, it can act as a powerful *third party* and discourage contact with natives because such contact undermines immigrants' traditional norms. If the immigrant group is small upon arrival, immigrants are more likely to engage in contact with natives from the start. Given that this contextual indicator shows a stable trend in the Netherlands, the initial differences should not disappear over time. It is hypothesized that *immigrants who arrive at the time when the size of their immigrant community is small are more socially integrated than those who arrive at the time when the immigrant group is large (H<sub>5</sub>). Differences are expected to develop already at entry and then persist over time.*

The second factor is the unemployment rate in the receiving country at the moment of entry. If unemployment is high, ethnic competition might arise on the job market, and immigrants are then seen as a threat to the native society (Coenders and Scheepers, 1998). This implies that upon arrival they are not as often given jobs because employers, as *third parties*, choose Dutch over immigrant employees. These negative sentiments lead natives to avoid interaction with immigrants in free time. Unlike immigrant group size, which in the Netherlands increases regularly over time, unemployment rate tends to fluctuate (CBS, 2006). Therefore, its entry level most likely only affects social integration at the beginning. Later changes in integration are probably related only to current levels of unemployment. The second prediction about contextual effects is that *immigrants who arrive at the time of low unemployment are more socially integrated than those who arrive at the time of high unemployment (H<sub>6</sub>). Differences are expected to develop already at entry and then fade away over time.*

### 3. Methods

#### 3.1. Data and subjects

The data from the Dutch survey “Social Position and Use of Facilities by Ethnic Minorities” (SPVA) will be used (Veenman, 1988; Martens and Veenman, 1991, 1994; Martens and Tesser, 1998; De Koning and Gijsberts, 2002). This survey is exceptional because it consists of five cross-sectional waves that, when combined, cover a period of 14 years. The first wave was initiated in 1988, and was followed by 1991, 1994, 1998, and 2002 waves. While the survey has already been used for studying certain aspects of immigrant integration, it has not yet been employed for a dynamic analysis of social integration. The respondents in the SPVA belong to the four major immigrant groups in the Netherlands: Turks, Moroccans, Surinamese and Antilleans. These are the groups that have already been long established in the country and whose social integration can be followed over time.

In order to obtain enough immigrant respondents a stratified random sample was drawn. The first step consisted of choosing communities inhabited by many immigrants, so as to ensure that the immigrant population is large enough. Depending on the year of the survey, 10–13 Dutch cities were chosen in which the immigrants were most highly concentrated at the time. Ethnic group membership was the second stratification criterion. The proportion of each ethnic group in the sample reflects their proportion in the total population.

The data were collected by means of personal interviews conducted by bilingual interviewers. First, heads of households were approached, and afterwards other members of the household were interviewed. Across the waves the non-response was approximately 34 percent for Turks, 43 for Moroccans, 46 for Antilleans and 51 for Surinamese (De Koning and Gijsberts, 2002). While these percentages are substantial, they are not regarded as exceptionally high in the Netherlands, given that the country is famous for the low participation of its population in surveys (Stoop, 2005).

Several categories of immigrants had to be excluded from the analysis. First, only heads of households are analyzed, since other members of the household received a shorter questionnaire in which some of the variables relevant for this study were omitted. Second, we excluded women of Turkish and Moroccan background. Only 15 percent of Turkish and 13 percent of Moroccan households interviewed are led by a woman. These Turkish and Moroccan female heads of households are a selected group (i.e. widows, or more emancipated women) and are therefore excluded from our study. Finally, most of the respondents in the SPVA surveys are first generation immigrants. The second generation immigrants are excluded from the analysis because they had not actually migrated, so for them it is not possible to look at the effect of length of stay in the host country. By omitting these three categories of immigrants, a large sample still remains ( $N = 14,099$ ), comprising 3726 Turkish, 3452 Moroccan, 4096 Surinamese and 2825 Antillean respondents.

#### 3.2. Measurements

##### 3.2.1. Dependent variable ‘interethnic contact’

*Interethnic contact* is a continuous variable recorded on a four-point scale, with values 0, 1, 2 and 3. A higher value stands for more contact with natives. It was constructed by taking a sum score of answers on three questions present in all surveys that measure several aspects of social integration. These are ‘contact with Dutch people in associations’ (yes/no), ‘having Dutch people over for a visit’ (yes/no), and ‘predominantly having contact with Dutch in free time’ (yes/no). Unfortunately, no measures of frequency or quality of contact were available.

Table 1 displays percentages of immigrants who have answered ‘yes’ to the questions. Overall, 65 percent of immigrants receive Dutch visitors, 45 percent have contact with Dutch in free time, and 15 percent have contact with Dutch people in associations. This means that many immigrants do not interact much with natives. This is roughly in line with the findings of Sigelman et al. (1996) on interracial friendships in Detroit, where the majority of Blacks and Whites (57 and 73 percent, respectively) do not have friends belonging to the other race. Table 1 also shows that, from the four groups, Surinamese and Antilleans have noticeably more contact with Dutch than Turks and Moroccans.

The three questions theoretically seem to represent different levels of social integration. Having occasional Dutch visitors at home is very likely an easier step on the integration ladder than spending one’s free time predominantly with Dutch people. Being a member of a Dutch association represents yet a more demanding aspect of social integration. In order to check out if the three variables indeed make a scale, Mokken scaling technique was applied. Given that each of the three variables was constructed somewhat differently in each of the surveys, it was checked separately whether every dataset satisfies the

**Table 1**

Total and ethnic group related percentages of immigrants who receive Dutch visitors, have contact with Dutch in free time, and have contact with Dutch in associations.

	Turks	Moroccans	Surinamese	Antilleans	Total
Having Dutch people over for a visit	60.2	53.5	72.0	76.3	65.2
Predominantly contact with Dutch in free time	26.2	36.3	56.2	64.5	45.1
Contact with Dutch in associations	8.5	8.0	19.1	24.6	14.7



**Table 2**  
Descriptive statistics of the variables.

	Range	Mean/Proportion	S.D.
<i>Dependent variable</i>			
Interethnic contact	0–3	1.27	.96
<i>Individual characteristics</i>			
Length of stay in NL	1–71	17.36	9.35
<i>Ethnicity</i>			
Turkish	0/1	.26	
Moroccan	0/1	.24	
Surinamese	0/1	.30	
Antillean	0/1	.20	
Age at migration	0–78	22.70	10.42
<i>Migration motive</i>			
Study	0/1	.15	
Work	0/1	.35	
Family	0/1	.32	
Other	0/1	.18	
Education in the home country	0–7	1.44	1.73
<i>Contextual characteristics</i>			
Cohort group size/100	.20–2.39	.70	.45
Cohort unemployment/1000	.02–.61	.23	.16
<i>Control variable</i>			
Women	0/1	.27	

Mokken criteria. The values of Loevinger H statistic for separate surveys are .46 (1988), .38 (1991), .58 (1994), .53 (1998) and .52 (2001). This test confirms that overall the three items form a moderate to strong scale, and can be taken together in the analysis.

### 3.2.2. Independent variables

*Length of stay* and *age at migration* are entered as continuous variables measured in years<sup>2</sup>. *Ethnicity* is a categorical variable with four categories (Turkish, Moroccan, Surinamese, and Antillean). Note that because we excluded Turkish and Moroccan women, the effect of ethnic background is assessed for males only. *Migration motive* consists of four categories: work, study, family, other (among which: social security, political situation in the home country, and medical reasons). Both ethnicity and migration motive are included as dummies in the regression analysis. *Education in the country of origin* is treated as a continuous variable with a scale ranging from '0 = no education' to '7 = tertiary education'. *Gender* is used as a control variable. This variable represents the difference between men and women among the Surinamese and Antilleans.

The contextual predictors *cohort group size* and *cohort unemployment* are continuous variables measured at the Dutch national level (CBS, 2006). They are coded in such a way that each year of entry (1972–2002) represents one cohort. Cohort group size, thus, stands for the size of the four specific ethnic communities in each year of entry relative to the total population (in percentages), while cohort unemployment indicates the overall annual (per mil) rate of unemployment in the Netherlands. Municipality or neighborhood figures for group size would have been a better measure than the national figures because the concentration of coethnics in one's neighborhood is a more direct indicator of opportunity to engage in contact with them. However, people move, and no information is available about their initial place of residence, which would have been needed for estimating the effect of group size at the moment of entry. Table 2 gives an overview of all the variables employed in this study<sup>3</sup>.

### 3.3. Analysis

The method that will be used is the "synthetic cohort design". It has been employed previously by, among others, Borjas (1985) for assessing economic incorporation of immigrants in the US, and by Myers and Lee (1998), who examined the trends in immigrants' residential assimilation in the US. Here the same method is applied to the field of social integration. The main idea of the synthetic cohort design is that groups of individuals (in this case the ones who arrived in the same year in the host country) can be tracked in a way that is analogous to how individuals are followed with proper panel data. In this study, five Dutch surveys that have been conducted in the years 1988, 1991, 1994, 1998 and 2002 are pooled into one dataset. Hence, the integration of immigrants who arrived in, for instance, 1960 can be observed in each period and compared to that of immigrants who arrived in every other year. In this way it is possible to separate the effects of length of stay and

<sup>2</sup> Age is probably a relevant determinant of interethnic contact, with younger people being more socially active. Unfortunately, it could not be included in the analysis because of perfect collinearity: age at migration + length of stay = age.

<sup>3</sup> Correlations between independent variables are all below .38, except for three cases: cohort group size and length of stay =  $-.587$ , cohort unemployment and cohort group size =  $.598$ , and cohort unemployment and length of stay =  $-.740$ .

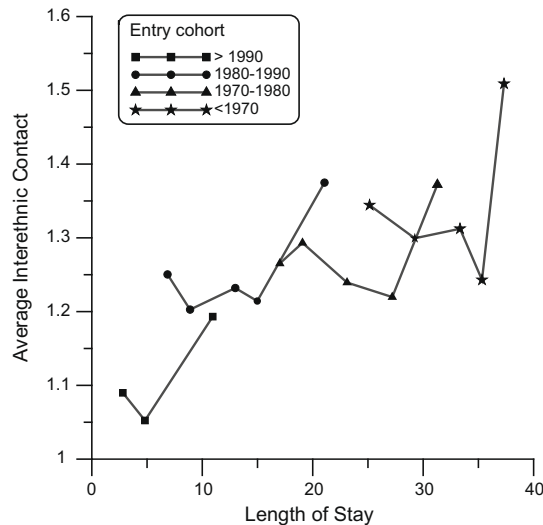


Fig. 1. Changes in interethnic contact during the time spent in the host country for four broad cohorts of immigrants.

immigration cohort. Moreover, the values for contextual characteristics encountered at arrival can easily be assigned to the respondents.

In order to test the hypotheses, hierarchical (i.e. multilevel) regression analyses will be performed<sup>4</sup>, with individual respondents nested within ethnic groups in specific immigration years. By accounting for the nested structure of the data, the standard errors of the contextual predictors can be correctly estimated (Raudenbush and Bryk, 2002). While *cohort unemployment* varies only with the year of immigration, irrespective of ethnicity, *cohort group size* refers to the size of one's own ethnic group in a specific year, which is why the second level in our design also accounts for clustering within the ethnic group. We first estimate a model with length of stay only, followed by a static model that captures the main effects of the abovementioned characteristics, and a dynamic model that also includes interactions between the characteristics and length of stay.

#### 4. Results

To get a first idea of how interethnic contact changes with length of stay, Fig. 1 was created. It shows a general trend of social integration for four large immigrant cohorts. The cohorts comprise immigrants who came to the Netherlands before 1970, between 1970 and 1980, between 1980 and 1990, and after 1990. Points on the lines represent values for the years 1988, 1991, 1994, 1998 and 2002, respectively. Immigrants from the youngest cohort, who migrated after 1990, are not present in the first two data sets, which is why they only have three points of measurement. This figure is presented only for descriptive purposes.

Overall there seems to be an increase in social integration with length of stay—if a line were to be drawn through all the points, it would have an upward slope. However, in some periods a decrease in integration can be observed. This holds for all the cohorts in period four; there is a drop in integration in 1998 compared to 1994. For the second and the third cohort, a similar drop occurs in 1991 compared to 1988. In addition, the last measurement is exceptionally high for all the cohorts. This could be a period effect, such as a decrease in unemployment in that year. However, it could also be an effect of the survey; since different individuals are observed in different surveys, it is perhaps the case that, for example, immigrants from the last survey are better educated than those from earlier surveys. In Fig. 1 we have not controlled for these compositional differences. In order to get a more informative picture of social integration, we need to switch to multivariate analysis.

The results of the three hierarchical linear regression models are displayed in Table 3. Model 1 estimates only the effect of length of stay on interethnic contact to give a general impression of how contact changes over time for immigrants as a whole. The results show that, on average, the longer the immigrants stay in the Netherlands, the more they get socially integrated. However, this change in social integration is not very large. One standard deviation increase in length of stay is associated with a .08 unit increase in social integration.

Model 2 corresponds to the “static” models encountered in most previous studies on social integration; it estimates the main effects of individual and contextual characteristics at *average* length of stay. The results from Model 2 represent the test of our general hypotheses. In Model 3 the interactions between the characteristics and length of stay are added, which allows for a test of the dynamic hypotheses. The main effects in this third model are interpreted as the initial differences between immigrants; they reflect what happens shortly after entry to the Netherlands. The interactions indicate whether the gaps

<sup>4</sup> Unemployed respondents from the 1988 dataset are not included in the analysis ( $N = 1645$ ). The question about ‘predominantly having contact with Dutch in free time’ was in that wave only posed to employed people.

**Table 3**  
Hierarchical linear regression of interethnic contact in the Netherlands.

	Model 1	Model 2	Model 3
Intercept	1.178 (.041) <sup>***</sup>	1.144 (.060) <sup>***</sup>	.994 (.084) <sup>***</sup>
Length of stay (LS)	.009 (.001) <sup>***</sup>	.005 (.002) <sup>†</sup>	.014 (.004) <sup>***</sup>
<i>Individual characteristics</i>			
Ethnicity (ref. Turkish)			
Moroccan		.253 (.044) <sup>***</sup>	.654 (.069) <sup>***</sup>
Surinamese		.732 (.051) <sup>***</sup>	.773 (.078) <sup>***</sup>
Antillean		.894 (.042) <sup>***</sup>	.684 (.064) <sup>***</sup>
Age at migration		-.013 (.001) <sup>***</sup>	.000 (.002)
Migration motive (ref. study)			
Work		-.108 (.030) <sup>***</sup>	-.162 (.059) <sup>**</sup>
Family		.062 (.027) <sup>†</sup>	-.070 (.053)
Other		.013 (.028)	-.125 (.054) <sup>†</sup>
Education in the home country		.079 (.005) <sup>***</sup>	.085 (.009) <sup>***</sup>
<i>Contextual characteristics</i>			
Group size (cohort)		-.231 (.044) <sup>***</sup>	-.389 (.057) <sup>***</sup>
Unemployment (cohort)		-.034 (.109)	-.067 (.155)
<i>Interactions</i>			
Ethnicity*LS			
Moroccan			-.024 (.003) <sup>***</sup>
Surinamese			-.006 (.004)
Antillean			.010 (.003) <sup>***</sup>
Age at migration*LS			-.001 (.000) <sup>***</sup>
Migration motive*LS			
Work			.002 (.003)
Family			.004 (.003)
Other			.006 (.003) <sup>†</sup>
Education in the home country*LS			.000 (.001)
Group size (cohort)*LS			.014 (.005) <sup>**</sup>
Unemployment (cohort)*LS			-.002 (.011)
<i>Control variable</i>			
Women		-.175 (.021) <sup>***</sup>	-.162 (.021) <sup>***</sup>
<i>Model fit</i>			
-2 log likelihood	37122.14	36130.21	35922.12
Contextual variance (N = 123)	.155 (.019)	.014 (.003)	.005 (.002)
Individual variance (N = 14,099)	.790 (.009)	.752 (.009)	.745 (.009)

Notes: Dependent variable is interethnic contact. Unstandardized coefficients and standard errors presented. Significance level: <sup>†</sup> $p < .05$ , <sup>\*\*</sup> $p < .01$  and <sup>\*\*\*</sup> $p < .001$ .

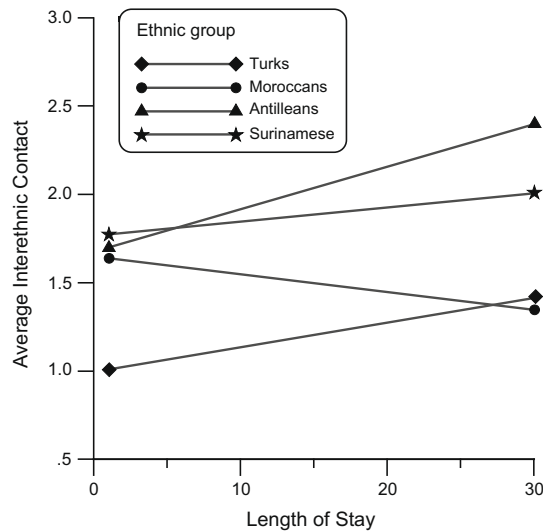
**Table 4**  
Comparison of the effects of individual and contextual characteristics on interethnic contact at entry and after 30 years of residence; standardized values.

	Effect on Y per standard deviation change in X	
	At entry	After 30 years
Ethnicity (ref. Turkish)		
Moroccan	.65 <sup>***</sup>	-.07
Surinamese	.77 <sup>***</sup>	.59
Antillean	.68 <sup>***</sup>	.98
Age at migration	.00	-.31
Migration motive (ref. study)		
Work	-.16 <sup>**</sup>	-.10
Family	-.07	.05
Other	-.13 <sup>†</sup>	.06
Education in the home country	.15 <sup>***</sup>	.15
Cohort group size	-.18 <sup>***</sup>	.03
Cohort unemployment	-.01	-.02

Significance level: <sup>†</sup> $p < .05$ , <sup>\*\*</sup> $p < .01$  and <sup>\*\*\*</sup> $p < .001$ .

between different categories of immigrants widen or shrink with each additional year of stay in the host country. Model 2 has a better fit than Model 1, and adding the interactions in Model 3 further improves the fit of the model. While Model 2 explains away about 91 percent of the contextual variance that was found in Model 1, in Model 3 this variance is reduced by





**Fig. 2.** Ethnic group specific development of interethnic contact during 30 years of residence in the Netherlands; trends predicted according to Model 3, Table 3.

97 percent. This means that almost all the variation that was initially detected on the contextual level was due to the composition of the cohorts and the conditions in the Netherlands at the time of arrival of a cohort<sup>5</sup>.

The coefficients from Models 2 and 3 will be consulted simultaneously when discussing the role of each characteristic. In addition, in order to be able to compare the effects of different characteristics, standardized coefficients have been computed. We distinguish between effects at entry and after 30 years of residence; a time range in which most of the immigrants in our study fall. Entry differences are calculated as: the main effect of the characteristic\*S.D. (in the case of dummy variables we use 1 instead of the S.D.). Differences after 30 years of residence are calculated as: [(30\*interaction) + main effect of the characteristic]\*S.D. The corresponding coefficients are displayed in Table 4.

First, ethnicity plays a role in social integration. At an average length of stay, and controlling for other determinants, Surinamese, Antillean and Moroccan men have more interethnic contact than Turkish men<sup>6</sup> (Table 3, Model 2). At the same time Surinamese and Antilleans also score significantly higher than Moroccans. Overall Moroccans are more comparable to Turks than to the Caribbean groups. This is in line with hypothesis 1, which predicted higher levels of social integration for the members of the Caribbean compared to the Mediterranean groups. To look at this issue in a more dynamic fashion, we need to consider Model 3. The main effects indicate that, at entry, Moroccans, Surinamese and Antilleans all have more interethnic contact than Turks, and that those three ethnic groups are very comparable to each other. The interactions, however, show that Moroccans gradually lose their initial head-start with respect to Turks: interethnic contacts for Moroccans decrease over time. Surinamese maintain their distance from Turks (the interaction with length of stay is not significant), while the largest gap forms between Turks and Antilleans—the latter gain increasingly more contact over time. The findings are not entirely in line with the expectations about entry differences: not only the Caribbean groups are better integrated from the beginning compared to Turks, but also Moroccans seem to have a better start. As to the longitudinal differences, the effect is contrary to the predicted one. The differences between ethnic groups do not fade away. Turks never catch up with Surinamese and Antilleans, and Moroccans, who are upon arrival close to the Caribbean groups, are left behind over time. Looking at the standardized coefficients in Table 4, we can compare the effects of ethnicity at entry and after 30 years of residence. At entry, immigrants of Moroccan, Surinamese and Antillean origin all score about two thirds of a unit higher on interethnic contact than Turks, with Surinamese background contributing to the largest difference. Given that contact is measured on a four-point scale with the mean of 1.27 and the standard deviation of .96, a difference of two thirds of a point is quite substantial. After 30 years Moroccans end up having less contact than Turks. In the same time span Antilleans increase their distance from Turks from two thirds of a unit to nearly a whole unit. The ethnic trends in social integration are captured in Fig. 2.

Secondly, we hypothesized and indeed found that immigrants who arrive at an older age are less socially integrated than those who arrive at a younger age (Table 3, Model 2). As expected, the main effect of age at migration is not significant, meaning that there are no entry differences between young and old arrivals. We did find, however, that age at migration affects the development of interethnic contacts longitudinally, which is in line with our expectations. The interaction in Model 3 indicates that immigrants who arrive young gradually develop contacts with natives at a higher rate than

<sup>5</sup> Therefore, there is no need to control additionally for immigration year. Another argument against such control is that of high collinearity. Unemployment and especially group size correlate with immigration year, and immigration year + length of stay = survey year.

<sup>6</sup> Remember that we excluded Turkish and Moroccan women.

immigrants who arrive at an older age. Second column in Table 4 indicates that one standard deviation increase in age at migration is associated with a .31 unit drop in interethnic contact after 30 years spent in the host country.

Migration motive also plays a role. Compared to study migrants, work migrants on average have less contact with natives, which is in agreement with hypothesis 3. Work migrants indeed start off with fewer contacts than students: upon arrival, they score .16 units less on interethnic contact compared to study migrants. This difference is maintained over time—the interaction is not significant. This means that migration motive indeed has a long-term effect on interethnic contact, but unlike our specific prediction in hypothesis 3, the gap between students and work migrants does not become even wider over time. In addition, and contrary to the expectation, family migrants tend to have more contact with natives than study migrants (Model 2). When we separate this general effect into an entry and longitudinal part in Model 3 neither is significant. Furthermore, migrants who came for other reasons have on average as much contact with natives as students. However, this appears to be the result of low social integration at entry and catching up over time. At entry, migrants with other motives score .13 units less on interethnic contact than study migrants, but after 30 years they end up having .06 units of interethnic contact more than study migrants.

In line with hypothesis 4, education in the home country has an overall positive effect on social integration: in Model 2 higher educated immigrants are shown to have more interethnic contacts than lower educated immigrants. When looking at entry and longitudinal differences in Model 3 it becomes clear that education matters already in the beginning: the main effect is significant. Table 4 shows that one standard deviation increase in education is associated with .15 unit increase in interethnic contacts at entry. The interaction with length of stay is not significant, meaning that the initial differences between higher and lower educated immigrants are maintained over time. While our hypothesis about entry differences is confirmed, the results are not fully in line with the longitudinal prediction, where not only a continuation but an increase in the gap between lower and higher educated immigrants was expected.

As to the contextual factors, group size at arrival is negatively related to interethnic contact, which confirms hypothesis 5. At an average length of stay, and controlling for other determinants, immigrants who arrive at the time when their group is large have less interethnic contact than those who arrive at the time when the group is small. Model 3 displays a negative main effect of group size and a positive interaction. This suggests that the larger the immigrant group is at the time of entry, the less integrated the immigrants are initially. One standard deviation increase in cohort group size corresponds to a drop in interethnic contacts of .18 units. With length of stay this gap becomes smaller, and after 30 years the positive interaction effect just about compensates for the negative effect at entry. The entry differences are in line with our expectations, while the longitudinal differences, contrary to our prediction, do not persist but fade away over time.

Finally, contrary to hypothesis 6, unemployment at arrival is not related to interethnic contacts<sup>7</sup>.

## 5. Discussion

This study gave a twist to the study of immigrants' social integration by looking at it from a dynamic perspective. By using a pooled set of cross-sectional data and applying a synthetic cohort design we examined changes in social integration of non-western immigrants during their stay in the Netherlands. The dynamic approach was facilitated by focusing on more widespread forms of integration: contact with natives in leisure time. Theories from research on ethnic intermarriage were extended and applied to more common forms of contact. An innovative feature is the distinction between entry and long-term differences in social integration.

We find that immigrants in the Netherlands become increasingly socially integrated during the time spent in the host country. However, the pace at which this increase occurs is rather slow, and it depends strongly on individual and contextual characteristics. These can be grouped into three categories: (1) the characteristics that result in entry differences which then persist or even increase with length of stay in the host country, (2) characteristics that are relevant mainly at entry and then fade away over time and (3) those that become important only in the long run.

Ethnicity, migration motive and education fall into the first category: they play a role at entry, and they continue affecting the differences in social integration over time. With regards to ethnicity, Turks, who start off with less interethnic contact than the other three groups, become more similar to Moroccans over time. Surinamese keep their initial advantage, and Antilleans gain increasingly more contact over time, thereby distancing themselves even further from Turks. According to the theory, the Caribbean groups are from the start familiar with Dutch culture, and might therefore prefer interacting with natives. For the same reason, Dutch society as a third party approves more of interaction with the Caribbean immigrants. Moreover, these immigrants already speak the host language, which gives them a better opportunity for interaction. Contrary to the expectation that ethnic differences would fade away with length of stay in the host country, Turks and Moroccans do not catch up with Surinamese and Antilleans. A reason for this could be that they do not invest as much in learning the language. Guest workers usually come with the idea of a temporary visit, while colonial migrants are often viewed as potentially settling permanently (Castles and Miller, 2003). It should be noted that ethnicity is the best predictor of both entry and longitudinal differences. The effect of ethnicity is four to five times stronger than the effects of other significant characteristics.

<sup>7</sup> We checked how sensitive the results are to the absence of unemployed respondents from the oldest survey by leaving that survey out. The results with and without the 1988 dataset are very much comparable. All the effects go in the same direction, and the same predictors are significant.

The other two determinants that matter both at entry and over time are migration motive and education in the home country. Immigrants who come for study are from the first year onwards more integrated than the labour immigrants, probably because they are immediately surrounded by natives at schools and universities. These initial differences are maintained during the stay in the host country. Similarly, higher educated immigrants gain more contacts with natives in the first year, and over time they maintain their advantage. They find themselves more often in a Dutch context and also prefer to interact with highly educated people, who are most often Dutch. Our finding about the integrative force of education is in line with research on intermarriage (Kalmijn, 1998). However, it remains unclear why highly educated and study migrants do not distance themselves even further from lower educated migrants and from those who come in search of work, as we expected. Studying the same ethnic groups in the Netherlands, Van Tubergen and Van de Werfhorst (2007) have shown that highly educated and study migrants invest more in post-migration skills, but maybe such skills do not affect later social integration, or maybe the possible positive influence of post-migration skills is offset by a negative influence of some other post-migration characteristics. Future research could look further into this issue.

A determinant that leads mainly to entry differences in social integration is the size of the immigrant group at arrival. The effect at entry is negative. Immigrants who arrive when their group is smaller have more opportunity to interact with natives and are less controlled by their communities. This result is in line with research on intermarriage: Hwang et al. (1997) and Lievens (1998) find a similar negative association. However, unlike education, which divides people with regards to their integration all throughout their lives, group size at the moment of entry is not as detrimental for later social integration. The longer the immigrants' stay in the host country, the less the initial size of their group affects their social integration.

Age at migration, by contrast, does not affect differences at entry but is an important predictor of changes over time. Immigrants who arrive at a younger age integrate increasingly more with length of stay in the host country compared to the ones who migrate older. One possible explanation is based on language acquisition. Right after arrival in the Netherlands neither the young nor the old ones speak the language. However, with the length of stay young people learn the language faster, and with it they gain the opportunity to interact with the Dutch. In addition, immigrants who migrate at a younger age are probably less socialized into their own culture by third parties in the home country, which is then reflected in a faster acceptance of the norms of the receiving society and a development of a stronger preference for interaction with the Dutch.

Unemployment at arrival does not seem to fall into any of these three categories. It is a predictor that turned out to be irrelevant for explaining differences in social integration. It is probably the case that current unemployment rate is more illustrative of social integration than unemployment rate encountered at entry. However, given that the correlation between group size and unemployment is high ( $r = .598$ ) and that for unemployment there are only 31 cases on the contextual level, it could also be the case that there was simply not enough power for obtaining good estimates of both characteristics simultaneously.

Our results deviate in one important way from American studies on interethnic contacts. While in the US the racial divide is very prominent (Lieberson and Waters, 1988; Qian and Cobas, 2004; Quillian and Campbell, 2003), in the Netherlands race does not play such an important role. Earlier research on ethnic intermarriage in the Netherlands (Kalmijn and van Tubergen, 2006) has already confirmed this idea in relation to strong ties. The present study demonstrates that the same contrast exists with regard to weak ties: in the Netherlands dark-skinned (Caribbean) immigrants have comparably more contact with natives than their whiter counterparts from Turkey and Morocco. Apparently, in the United States, race seems to be the more important dividing line, whereas cultural barriers play a pivotal role in understanding interethnic contacts in the Netherlands. It is difficult to conclude which part of cultural dissimilarity is responsible for the situation in the Netherlands. Turks and Moroccans have little command of the Dutch language, and they are overwhelmingly Muslim. Both dimensions could explain our finding, and further research is needed on this issue.

The findings from our study might be partly applicable to other European countries. In general, one would expect to detect similar patterns with respect to individual and contextual characteristics. In addition, it is highly probable that, because of strong cultural dissimilarities, Turks and Moroccans will likewise develop fewer interethnic contacts in other European nations, such as France, Belgium, Germany and Sweden. However, with respect to former colonial groups, the situation is unclear. For example, some former colonial groups like the Indians and Pakistanis in the UK and the Algerians in France are reasonably proficient in the host country language, but they are religiously different from societies' mainstream, which makes them possibly more like Turks and Moroccans in their pattern of social integration. These conclusions need to be validated with empirical evidence.

Another issue to be considered in further research concerns the use of panel data. While the synthetic cohort design is a good method for testing the hypotheses about pre-migration characteristics, it cannot be applied to post-migration characteristics, such as education in the host country or language proficiency. These characteristics are measured at the time of the interview, and could be a cause of social integration just as well as a result thereof. In a panel analysis this causality can be better modeled. Importantly, by including such characteristics answers could be given to questions that arise from this research, such as why exactly the Caribbean groups develop more contact over time than the Mediterranean groups (maybe they continue speaking the language better or are more likely to marry a native), or why the size of the immigrant community at arrival becomes less influential for social integration over time (maybe some immigrants move to ethnically concentrated neighborhoods and others to 'Dutch' neighborhoods, which then more directly influences their contacts with natives than the overall size of their community at arrival). In addition to further elucidating our findings, panel data can be used to study remigration. From pooled cross-sectional data it cannot be determined how many people returned to their home countries, and if they were a selected group. From Turks and Moroccans who had arrived in the mid seventies, 30–40 percent

remigrated 10 years later (Nicolaas and Sprangers, 2006). It could be the case that people who integrated the least were the ones who left the country.

Furthermore, it appears that important changes in social integration take place quickly after migration, within the first year or even first couple of months. Most of the characteristics we used in this study were indeed estimated to be significant within the first year after arrival, and these initial differences were often kept or even amplified over the life course. An interesting extension of the present research would be to conduct a panel survey in which immigrants are interviewed more frequently in this early period so as to check whether this is indeed a formative period after which changes in social integration decelerate.

Lastly, it should be noted that the conclusions drawn from this study refer exclusively to first generation immigrants. Research on immigrant integration is increasingly directed at investigating the integration of the children of the original immigrants, the so-called second generation (e.g. see Portes and Zhou, 1993). However, in order to understand the social integration of the second generation, one first has to have a good grip on the experiences of the first generation. This study, consequently, sets the stage for future research on the development of interethnic contacts over time among second generation immigrants.

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