



Religious change of new immigrants in the Netherlands: The event of migration

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ABSTRACT

Using data on recently arrived immigrants in the Netherlands, I study the role of migration in religious attendance and praying. For the majority of immigrants, the frequency of religious attendance and praying remains the same after migration, but a substantial group shows religious decline. I observe this drop of religiousness for both attendance and praying, but the drop is much more pronounced for attendance. Whereas 40% participate less often in Holland than before migrating, frequency of praying dropped among 17% only. The degree of religious continuity and decline differs dramatically across immigrant groups. Conditional upon pre-migration religiousness, I find that the “older”, well-established and numerically larger migrant groups of Turks, Moroccans, Surinamese and Antilleans more frequently attend religious meetings and pray than the “new” and smaller groups of Poles and Bulgarians. Religious continuity and decline seem less dependent on individual experiences.

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1. Introduction

For a long time, migration researchers in Europe and the United States have paid little interest to the religiousness of immigrants (Cadge and Ecklund, 2007). In the past decades, however, this has changed and particularly in the past few years, there has been a tremendous increase in studies on immigrants' religion, both in the United States (Akresh, 2011; Alanezi and Sherkat, 2008; Massey and Higgins, 2011), Canada (Connor, 2008, 2009b) and in Western Europe (Connor, 2010; Diehl and Koenig, 2009; Fleischmann et al., 2011; Güngör et al., 2011; Maliepaard et al., 2010, 2012; Smits et al., 2010; Van Tubergen and Sindradóttir, 2011; Voas and Fleischmann, 2012).

The current study aims to contribute to one topic of debate, namely the question whether the migration event itself and the subsequent stay in the host society have any consequences for the religiosity of immigrants. Prior research among recently arrived immigrants in the United States has shown that, when compared to their religious behavior in the country of origin, immigrants attend religious meetings less often after migration (Akresh, 2011; Connor, 2009a; Massey and Higgins, 2011). Such a disruptive pattern has also been found among recently arrived immigrants in Canada (Connor, 2008, 2009b).

There is less consensus about possible changes in the religiosity with length of stay in the host society. Massey and Higgins (2011) estimate an OLS regression of religious attendance, and after controlling for a host of factors, they do not find that length of stay in the US is related to frequency of religious attendance. Using the same New Immigrant Survey 2003 as Massey and Higgins (2011), but estimating a multinomial model and with less control variables, Akresh (2011) however finds that length of stay in the US is positively associated with religious attendance. Connor (2008, 2009b) finds mixed patterns among recently arrived immigrants in Canada, depending on the measure of religiosity. In a study of new immigrants

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in Quebec, he finds that with length of stay immigrants participate less often in religious meetings. With data from the Longitudinal Survey of Immigrants, he finds that over a 4-year period, religious participation declines with time, while religious volunteerism strongly increases.

In a study of non-western immigrants in the Netherlands, a positive association was found between length of stay and religious affiliation and religious participation (Van Tubergen, 2007). With data from the European Social Survey on 27 countries, Van Tubergen and Sindradóttir (2011) found a negative association between length of stay in the host society and various measures of religiosity (i.e., religious attendance, frequency of praying, and subjective attachment of religion). These studies, however, have relied on general samples of immigrants and due to the wide variation in time immigrants have been in the country, possible cohort effects and selective remigration patterns could be a confounding factor. Little is known about possible changes in the religious behavior and practices of newly arrived immigrants in Western Europe.

The present study tries to contribute to this growing literature, in three ways. First, I will test whether there is a drop in religiousness among recently arrived immigrants in the Netherlands, as has been found in the US and Canada, but which has not been tested in a European context. I will do so by considering both frequency of religious participation and frequency of praying. By examining these two dimensions of religiosity, I can further disentangle theories that emphasize that the event of migration either changes the supply-side or demand-side. Second, I assess the association between length of stay and religion with data on recently arrived immigrants, which has not been done before in Europe. Third, I study how the immigrant groups differ in their religiousness in the Netherlands. I contrast immigrants coming from the relatively new source countries of Poland and Bulgaria to those who belong to the larger and more well-established immigrant groups in the Netherlands: Turks, Moroccans, Surinamese and Antilleans. This multiple-group perspective allows me to assess whether the religious mobility between origin and destination is conditional upon group characteristics.

2. Theory and hypotheses

2.1. Social influence theory and religious market theory

In this study, I elaborate on two theories to understand the role of migration and length of stay in the religiousness of immigrants. These are social influence theory (Need and De Graaf, 1996; Te Grotenhuis and Scheepers, 2001) and religious market theory (Finke and Stark, 1998; Iannaccone, 1998; Stark and Iannaccone, 1994), two well-known theories in the sociology of religion (Ruiter and Van Tubergen, 2009).

According to social influence theory, individuals are affected by the religiousness of people in their social network: parents, relatives, spouse, neighbors, teachers, co-workers, and so on (Sherkat, 1998; Sherkat and Wilson, 1995). In more religious contexts and networks, individuals are more likely to become and remain religious themselves, due to socialization, reinforcement of norms and values, monitoring and social sanctioning. Also, in more religious networks, people might be involved in religious activities to please significant others (e.g., parents, spouse) who value participation in such religious activities (Sherkat, 1998; Sherkat and Wilson, 1995).

Religious market theory assumes that the demand for religion is stable over time within individuals, but differs across individuals. Variations in religious attendance are the result of the supply of religious products: if individuals find the religious product they desire, they are likely to attend religious meetings. If the supply is rich and in line with the demands of the population, attendance rates will be higher than when the supply of religious products is poorer (Finke and Stark, 1998).

2.2. The disruptive event of migration

Can the theories explain the previously found decrease in religiousness among recently arrived immigrants? Following social influence theory, this decrease in religiosity would be the result of the loss of a religious community that immigrants had in their home country. Without the same social network of religious people in their direct environment, new immigrants are less likely to attend religious meetings or pray in their host country. Furthermore, the origin countries of immigrants are generally more religious than the more liberal and secular host societies, which leads to exposure to more secular norms, values and practices after the event of migration. This is certainly the case here: religion plays a more prominent role in Poland, Bulgaria, Turkey, Morocco, Suriname and the Dutch Antilles than in the rather secular Dutch society. Based on social influence theory, I hypothesize that *new immigrants less often attend religious meetings and pray in the Netherlands than before they migrated* (H1).

In the spirit of the religious market theory, the decline in attendance is the result of poorer fit between demand and supply after migration. Whereas in their origin countries, the religion of immigrants is generally widespread (e.g., Islam in Morocco and Turkey, Islam and Eastern-Orthodoxy in Bulgaria, Catholicism in Poland), ethnic-cultural differences in religious practices and traditions are adopted by the market (e.g., Sunni versus Shiite Islam), religious services proceed in the immigrants' mother tongue, and regional differences in religious demand are adopted by the market, in their new destination country the religious market might not equally fit their religious demands. The religious market theory thereby hypothesizes that *new immigrants less often attend religious meetings in the Netherlands than before they migrated* (H2). If one sticks to the often made assumption within the religious market framework of stable demands for religion, no within-individual changes are expected in frequency of praying.

2.3. Length of stay

The theories hold opposite hypotheses regarding the effect of length of stay in the Netherlands. Social influence theory would argue that with increasing time in the Netherlands, immigrants will be more and more exposed to the secular norms and practices in Dutch society, gradually taking over some of these norms and practices themselves as well. Social influence theory thus expects that *with length of stay in the Netherlands, new immigrants will less often attend religious meetings and pray* (H3).

Religious market theory, or at least elaborations of this theory (Van Tubergen and Sindradóttir, 2011), would arrive at a different prediction. To the conventional assumptions of this theory, one could add the idea that in a market setting it takes time for individuals to find the products they wish to have – whether this is a suitable house or a place of worship. Acquiring information about religious products, such as a church or a mosque, seems a relevant issue for immigrants, who are newcomers in the market. Immigrants need to search for a place of worship that fits their specific demand. For example, for an imaginary immigrant A, this might be a mosque, which should not be too far away from his place of living, which belongs to members of his own ethnic group (e.g., Turkish) and that has the right level of strictness and orthodoxy, thus depending on the vision of the Imam. Searching for such a specific mosque that fits all these demands is costly, as it will take time and energy to find out whether such a mosque exists, to acquire information about suboptimal candidate mosques, to compare them and to evaluate their pros and cons (e.g., to make a choice between a suitable mosque in another city and a less-suitable mosque nearby). With increasing length of residence immigrants have had time to search for a suitable place of worship and have the opportunity to attend religious services more often. Thus, based on this extension of the religious market theory, it is expected that *with length of stay in the Netherlands, new immigrants will more often attend religious meetings* (H4). Again, according to the supply-side theory no changes in frequency of praying are expected.

2.4. Group differences

The migration experience is not necessarily the same across immigrant groups. Elaborating on the mechanisms set forth by both theories, an important distinction should be made between the new-immigrant groups from Poland and Bulgaria on the one hand, and that of the more traditional, well-established groups from Turkey, Morocco, Suriname and the Antilles.

Migration from Poland and Bulgaria has started in the 2000s and although migration from these countries has rapidly increased in the past years, both groups are still very small. Social influence theory would then argue that, as a result of the recentness and smaller size of these groups, many new immigrants from Poland and Bulgaria are not embedded in ethnic-religious communities. The market theory would emphasize that it will take some time for the market to adjust to the new religious demands of these immigrants (e.g., it takes some time to build a new church or mosque), who have different religions, languages and ethnic-cultural traditions than the Dutch mainstream (i.e., which is predominantly secular and Christian). Particularly for smaller and more recent groups, the supply of religious products will be suboptimal. This also holds for the Polish immigrants who, even though they are predominantly Catholic, may encounter language barriers and have ethnic-specific religious practices. And it might be true for the newly arrived Bulgarian immigrants, of which the majority (62% of the sample in this study) have a Muslim background and a large minority are affiliated to Eastern Orthodoxy (37%).

The migration experience of new immigrants is different for the larger and more established groups. Migration from Turkey and Morocco started in the 1960s, when large groups of low-skilled manual workers migrated to Western European countries, including Holland. These migration flows were followed by family reunification and family formation. Migration from the former Dutch colonies of Suriname and the Dutch Antilles have been always there, but at an increased rate since the beginning of the 1970s. The predominantly Muslim populations of Turks and Moroccans have been successful in establishing ethnic-religious communities, and also the immigrants from Suriname and the Antilles (both of these groups being predominantly Christian) have found their way to practice their religion.

Following social influence theory, one would emphasize that the newly arrived immigrants belonging to these four well-established groups find themselves embedded in an ethnic-religious network (Alanezi and Sherkat, 2008). Based on the religious market theory, one could argue that the market has had time to incorporate the ethnic-religious specific demands of these four older groups and that it is easier for new immigrants belonging to these groups to find the religious products they want. Based on both theories, I therefore hypothesize that, conditional upon pre-migration religiousness, *new immigrants from Turkey, Morocco, Suriname, and the Antilles will attend religious meetings more often in the Netherlands than new immigrants from Poland and Bulgaria* (H5). Drawing on social influence theory, I also expect that conditional upon pre-migration religiousness, *new immigrants from Turkey, Morocco, Suriname, and the Antilles will pray more often in the Netherlands than new immigrants from Poland and Bulgaria* (H6).

2.5. Post-migration bonding and bridging ties

Within groups, there can be large differences for immigrants in their migration experience, depending on the ties that immigrants have. Following the logic of social influence theory, what matters is the frequency with which new immigrants have contacts with co-ethnics (“bonding ties”) vis-à-vis with Dutch majority members (“bridging ties”). Bonding ties will help to retain the religious practices and beliefs, whereas bridging ties lead to an increased exposure to more-secular

attitudes and behavior (Maliepaard and Phaet, 2012; Van Tubergen, 2007). I therefore hypothesize that among new immigrants in the Netherlands *bonding ties will have a positive effect and bridging ties a negative effect on frequency of religious attendance and praying* (H7).

3. Data

Data are from the *Socio-Cultural Integration Processes among new immigrants in Europe (SCIP)*, a survey funded by Norface, which receives core funding under the European Union's ERA-NET scheme of the European Commission 6th framework. The survey is conducted in the Netherlands, Germany, England and Ireland, but due to differences in fieldwork methods and design, as well as differences in migration and socio-historical ways, a comparative perspective is beyond the scope of this paper. In this study I use the data from the Netherlands (Lubbers et al. the Netherlands Institute for Social Research, Central Bureau of Statistics Netherlands, 2011). The survey has been extensively piloted, and cognitive interviewing was done before the fieldwork started. The fieldwork of the Dutch survey of SCIP took place between November 2010 and June 2011.

Data were collected among Bulgarian, Polish, Moroccan, Turkish, Antillean and Surinamese migrants, who migrated legally to the Netherlands at a maximum of 1 year before data collection started. The Central Bureau of Statistics Netherlands obtained the sample of migrants from the municipality registers. Potentially, immigrants could be longer in the Netherlands, if they did not register when they arrived. Indeed, quite a large number of immigrants, particularly Poles, appeared to have remained for a longer time in the Netherlands before they officially registered. This means that in the dataset, there are immigrants who have been longer than 1 year in the Netherlands before the data collection started. I limit the number of years immigrants could have been in the Netherlands to three.

Migrants were approached and interviewed in their mother tongue. Interviews were conducted face-to-face. Interviewers returned up to six times to an address on various times and dates to improve response rates. Respondents received a monetary incentive of 10 euro for their participation. In line with previous findings in the Netherlands, the response rate is highest among Turkish immigrants (66%), and lowest among Moroccans (36%). The average response rate is 51%, just below that of the first waves of the *Longitudinal Survey of Immigrants to Canada* (60% response) and the *New Immigrant Survey* (68%). For all groups it turned out that when a potential respondent was found at home, refusals were low. The highest refusal rate was found among Moroccans (18%), the lowest among the recent migrants from Turkey (6%). Regarding gender and age the data are representative. With regard to region of living, there is a slight overrepresentation of the Western part of the Netherlands – excluding the larger cities.

In total, 3355 respondents participated. I excluded respondents who fall outside the age range of 18–65 ($n = 39$), who do not belong to the six immigrant groups ($n = 187$), as well as immigrants who have been longer than 3 years in the Netherlands – as they did not belong to the original sample and because of potential recall bias ($n = 400$). Questions about religious behavior and practices were not asked to respondents who indicated to have no religion, and I therefore excluded these respondents from the analysis ($n = 197$). Further analysis (not reported here) revealed that the probability to belong to the 'no religion' category is not dependent on length of stay in the Netherlands. After excluding respondents who did not give answers to the dependent variables or some of the predictors, I end up with 2244 cases.

4. Dependent variables

4.1. Religious attendance

Respondents were asked the question "Apart from such as special occasions as weddings, and funerals, about how often do you attend religious worship since you moved to the Netherlands?" Answer categories were: (1) more than once a week, (2) once a week, (3) once a month, (4) only on specific holy days, (5) once a year, (6) less often, and (7) never or practically never. As is typical in research on religious attendance (Ruiter and Van Tubergen, 2009), the ordered nature of the dependent variable could not be retained in the analysis. The assumption of parallel slopes is violated for multiple predictors (as found by the Brant test in Stata 12). I used a multinomial logistic regression model instead, collapsing some categories in order to have sufficient observations in each of them. I end up with three outcomes: (1) once a week or more (labeled "weekly" attenders); (2) once a month up to less often than once a year ("moderate"), and (3) never or practically never ("never"). Sensitivity checks showed that the substantive conclusions remained the same when I collapsed variables differently (e.g., when I combined the "less often" outcome together with the "never or practically never" outcome).

4.2. Praying

The measure of praying is based on the question "how often do you pray outside of religious worship since you moved to the Netherlands?" For Muslims, the wording "communal prayers" was used instead of "religious worship". The answer categories were: (1) "every day", (2) "several times a week", (3) "a few times a month", (4) "several times a year", (5) "less often", and (6) "never". For Muslims, there was an additional answer category, (0) "five times a day", which I combined with category (1) "every day" in order to do a single analysis. Also for praying, the parallel slopes assumption was violated in the

ordered logit model and I used the multinomial logistic model instead. I differentiate between three outcomes: (1) every day or more (“daily”), (2) less than every day up to less often than several times a year (“moderate”), and (3) never (“never”).

5. Independent variables

5.1. Length of stay

Measured in months since the time that respondents moved to the Netherlands. In additional analyses, using dummy variables for months instead of a continuous variable, no evidence was found for a non-linear relationship between duration and religion. For reasons of parsimony, I present the results of the linear specification.

5.2. Pre-migration religious attendance and praying

Pre-migration religious attendance and *pre-migration praying* are measured with the same question wording and answer categories as current religious attendance and praying. Respondents were prompted to think about their religious activities “before moving to the Netherlands”. To parallel the coding of the dependent variables, I used the same three categories. It should be noted that this is a subjective self-reported measure, and although such subjective measures are used in prior research as well, little is known about direction and magnitude of possible bias.

5.3. Pre-migration demographic variables

Based on the country of birth of the respondent, I differentiate between six *immigrant groups*. These are: Poles, Bulgarians, Turks, Moroccans, Surinamese and Antilleans. I also control for *gender* (to capture gender-specific practices in religious attendance among Muslims) and *age at migration* (measured in years). As controls, I include a measure of *pre-migration living area*, which indicates whether the respondent was born and raised in a larger city (1 = yes, 0 = no). I also incorporate measures of the years of *pre-migration schooling in the country of origin*, as well as the years of *pre-migration schooling in other countries* before moving to the Netherlands. Both measures capture the total years of education a respondent has followed, before migration to the Netherlands. Respondents were asked what their main activity was just before they moved to the Netherlands. I constructed a *pre-migration main activity* variable, which differentiates between those who were (1) employed, (2) unemployed, (3) in education, and (4) inactive. *Pre-migration visits to Netherlands* measures whether the respondent, before he moved to the Netherlands, has resided in the Netherlands for a period of more than 4 weeks (yes = 1, no = 0).

5.4. Post-migration bonding and bridging ties

I measure bonding and bridging ties with three different measures. First, I consider social contacts in daily encounters, based on the question “How often do you spend time with people from . . .,” where people were asked to report their contact frequency with people from their country of origin, Dutch majority members, and other groups. Answer categories were: (1) “every day”, (2) “several times a week”, (3) “a few times a month”, (4) “several times a year”, (5) “less often”, and (6) “never”. Because of the skewed distribution, I contrasted (1) every day with all other categories. I included then the variables on frequency of daily *contacts with co-ethnics*, *contacts with Dutch*, *contacts with other groups*. To capture strong ties more directly, I include a variable for *relationship status* that differentiates between (1) single, (2) co-ethnic spouse living in same household, (3) co-ethnic spouse living elsewhere, (4) interethnic couple, and (5) has a relationship, but birth country spouse is unknown. Finally, to also take into account transnational bonding ties, I include a variable *return visits to origin country*, which indicates whether the respondent has ever visited the origin country since he/she moved to the Netherlands (yes = 1, no = 0).

5.5. Post-migration control variables

I take into account the ethnic composition of the municipality in which the respondent currently lives. I include the percentage of the adult population that is of immigrant origin. An immigrant includes both first and second generation immigrants (i.e., native-born people with at least one foreign-born parent). Data are from Central Bureau of Statistics Netherlands (CBS) and pertain to the year 2010. CBS does not provide group-specific data on the population size of the Bulgarian immigrants on the municipality level (as it does for the other groups). In further analyses (available upon request), I used a group-specific measure (i.e., the percentage of the population that is of the same origin as the respondent), excluding the Bulgarians, but results did not differ from the findings presented here.

I include a dummy variable *currently employed*, capturing whether the respondent currently has a job (1) or not (0), where part-time jobs or seasonal jobs are also counted as jobs. I further take into account *household size*, which is the number of people living in the same household as the respondent (including the respondent).

Descriptive statistics of the independent variables are presented in Table 1.

Table 1
Descriptive overview of independent variables.

Variable	Mean (proportion)	Std. dev.	Min	Max
Length of stay (months)	11.90	7.05	0	36
Country of birth				
Poland	0.22		0	1
Bulgaria	0.15		0	1
Turkey	0.29		0	1
Morocco	0.11		0	1
Suriname	0.13		0	1
Antilles	0.10		0	1
Pre-migration attendance				
Weekly	0.34		0	1
Moderate	0.51		0	1
Never	0.15		0	1
Pre-migration praying				
Daily	0.31		0	1
Moderate	0.53		0	1
Never	0.15		0	1
Pre-migration visit to Netherlands	0.17		0	1
Male	0.48		0	1
Age at migration	30.39	9.17	16.75	64.41
Years of schooling origin	13.30	83.27	0	2010
Year of schooling elsewhere	0.45	2.32	0	25
Pre-migration activity				
Employed	0.45		0	1
Unemployed	0.24		0	1
School	0.22		0	1
Other	0.10		0	1
Daily contacts with co-ethnics	0.66		0	1
Daily contacts with Dutch	0.41		0	1
Daily contacts with others	0.30		0	1
Relationship status				
Co-ethnic partner, same household	0.39		0	1
Single	0.30		0	1
Co-ethnic partner, not in same household	0.05		0	1
Partner, other origin	0.17		0	1
Partner, origin unknown	0.08		0	1
Return visit	0.39		0	1
% Immigrant, municipality	39.99	11.76	5.76	49.90
Householdsize	2.71	1.50	1	10
Currently employed	0.44		0	1

6. Results

6.1. The disruptive event of migration

Comparing the religiosity of recently arrived immigrants before and after migration shows evidence for both continuity and decline. For the majority of immigrants, the frequency of religious attendance and praying remains the same. At the same time, there is evidence that after migration to the Netherlands, immigrants on average less often attend religious meetings (Table 2) and less often pray (Table 3) than before they moved.

Specifically, cross-classifying the religious attendance of immigrants in their origin country and the Netherlands shows that 40% are below the diagonal, meaning that immigrants attend religious meetings less often than before they moved (Ta-

Table 2
Cross-classification of pre- and post-migration religious attendance (absolute numbers).

Pre-migration	Post-migration						
	Never	Less often	1× Year	Holy days	1× Month	1× Week	>1 Week
Never	300	8	2	12	2	2	5
Less often	60	113	9	17	2	8	3
1× Year	17	7	14	5	0	0	0
Holy days	235	52	17	355	27	20	5
1× Month	53	25	7	31	71	14	3
1× Week	95	60	9	77	108	257	5
>1 Week	12	4	5	6	9	21	112

Table 3

Cross-classification of pre- and post-migration praying (absolute numbers).

Pre-migration	Post-migration					
	Never	Less often	Yearly	Monthly	Weekly	Daily
Never	279	43	8	5	6	5
Less often	76	314	19	7	5	5
Yearly	35	53	144	31	7	5
Monthly	15	43	33	149	32	15
Weekly	5	13	9	48	120	22
Daily	8	11	9	16	25	643

ble 4). Around 53% are religiously stable, whereas only 7% indicate to attend religious meetings more often nowadays than before they migrated. Table 4 shows that there are considerable group differences in religious mobility patterns. On one end of the extreme are the Poles, of which 67% attend religious meetings less often in the Netherlands than in Poland. Bulgarians (41% decline) and Antilleans (43% decline) also show great reductions in attendance, whereas of the Turks and Moroccans only 25% attend religious services less often in Holland than in the country of origin.

Continuity rather than decline characterizes patterns of praying. Of recent immigrant, 73% show the same frequency of praying in Holland as in their country of origin. Among the rest of the population, I find a decline in frequency of praying, but the decrease is not so pronounced as with attendance. Specifically, around 17% pray less often after migration than before, whereas 10% pray more often than before they moved to Holland. There are group differences as well. Again the Poles show the greatest decline: 30% pray less often as against 12% more often. There is considerable continuity among the Moroccans (92% stable, 3% decline).

6.2. Multinomial logit regression

I present the outcomes of the multinomial logit regression models of religious attendance (Table 5) and praying (Table 6) by their Average Marginal Effects (AMEs). The marginal effect expresses how $P(Y = 1)$ changes as the predictor changes (from 0 to 1 in case of categorical variables, and with a unit increase for continuous variables), while keeping the other variables in the model constant. With Marginal Effects at Means (MEMs), this change is evaluated at the means of all other variables. Because the mean is only one value of many more that are possible, it is generally preferred in the literature to evaluate the change by using the entire range of values. In economics, AME is well-known and often used (Wooldridge, 2009) and several researchers have advised sociologists to follow this practice as well, given several attractive features of AME over (log) odds ratio's (Mood, 2010).

Using the margins command in Stata 12, I estimate for both attendance and praying three outcomes: $P(Y = 1)$, $P(Y = 2)$, and $P(Y = 3)$. Considering religious attendance, the sample average probability to fall into the category of $P(Y = 1)$, i.e. "never" attending religious meetings, is 0.34. Around 46% of the respondents are "moderate" attenders, and about 20% participate every week. One could use these probabilities as a baseline. For praying, 18% of the respondents never pray, 50% belong to the moderately frequent prayers, and 30% pray every day.

The multinomial regression models show that with increasing length of stay in the Netherlands, immigrants move away from the "never" attendance category, whereas "moderate" attendance increases. More precisely, further analyses (not presented here), show that the predicted probability of never attending religious meetings is 0.38 at arrival in Holland (i.e., length of stay = 0 and all other regressors are equal to sample values), and this predicted probability shrinks to 0.28 after 3 years. The SCIP data do not give evidence to suggest that duration in the Netherlands affects weekly religious attendance. Thus, I observe only a change from never attending to moderate attendance, while weekly attendance remains constant over

Table 4

Comparison of religiosity before and after migration, by immigrant group (%).

	Religious attendance			Praying		
	Decline	Stable	Increase	Decline	Stable	Increase
Turks	25	68	7	16	73	11
Moroccans	25	63	12	3	92	5
Surinamese	38	56	6	17	73	10
Antilleans	43	51	6	20	75	5
Poles	67	28	5	30	58	12
Bulgarians	41	54	5	13	77	10
Total	40	53	7	17	73	10

Table 5
Multinomial logistic regression of religious attendance. Presented are average marginal effects.

Variables	P(Y = 1) "never"		P(Y = 2) "moderate"		P(Y = 3) "weekly"	
	dy/dx	se	dy/dx	se	dy/dx	se
Length of stay (months)	-0.003**	(0.001)	0.004***	(0.002)	-0.001	(0.001)
Country of birth (Poland = ref.)						
Bulgaria	-0.050*	(0.029)	0.041	(0.044)	0.009	(0.042)
Turkey	-0.177***	(0.027)	0.024	(0.036)	0.152***	(0.032)
Morocco	-0.190***	(0.029)	-0.027	(0.042)	0.217***	(0.042)
Suriname	-0.116***	(0.029)	0.031	(0.040)	0.086**	(0.034)
Antilles	-0.138***	(0.031)	0.069	(0.043)	0.070*	(0.037)
Pre-migration attendance (Never = ref.)						
Weekly	-0.531***	(0.013)	0.202***	(0.045)	0.329***	(0.044)
Moderate	-0.446***	(0.014)	0.503***	(0.036)	-0.058*	(0.034)
Pre-migration visit	-0.035	(0.023)	0.009	(0.026)	0.027	(0.018)
Male	-0.027	(0.018)	-0.029	(0.022)	0.056***	(0.017)
Age at migration	-0.003**	(0.001)	0.001	(0.001)	0.002**	(0.001)
Years of schooling origin	0.006***	(0.002)	-0.007***	(0.002)	0.001	(0.002)
Years of schooling elsewhere	-0.009**	(0.004)	0.012**	(0.005)	-0.003	(0.004)
Pre-migration activity (employed = ref.)						
Unemployed	0.001	(0.023)	-0.004	(0.026)	0.004	(0.018)
Education	-0.004	(0.026)	0.036	(0.031)	-0.032	(0.022)
Other	0.018	(0.034)	-0.044	(0.037)	0.026	(0.026)
Daily contacts co-ethnics	-0.007	(0.019)	0.024	(0.021)	-0.017	(0.015)
Daily contacts Dutch	-0.036*	(0.021)	0.044*	(0.025)	-0.008	(0.019)
Daily contacts others	0.078***	(0.023)	-0.100***	(0.025)	0.022	(0.020)
Relationship status (co-ethnic partner in household = ref.)						
Single	0.023	(0.023)	-0.023	(0.026)	0.000	(0.019)
Co-ethnic partner, not in household	0.041	(0.042)	-0.015	(0.045)	-0.026	(0.028)
Mixed partner	-0.015	(0.028)	0.005	(0.031)	0.009	(0.019)
Partner, origin unknown	0.045	(0.033)	-0.043	(0.038)	-0.001	(0.028)
Return visit	0.005	(0.024)	-0.008	(0.028)	0.004	(0.019)
% Immigrants, municipality	-0.000	(0.001)	-0.000	(0.001)	0.001	(0.001)
Household size	-0.010	(0.006)	0.009	(0.007)	0.001	(0.005)
Currently employed	-0.018	(0.021)	0.054**	(0.023)	-0.036**	(0.016)

N = 2246, LL = -1614.9, LR chi2(54)=1468.25, Pseudo R2 = 0.31.

* p < 0.1.

** p < 0.05.

*** p < 0.01.

a 3-year period. Whereas length of stay is associated with an increase in moderate attendance, I do not find any relationship between duration and frequency of praying (Table 6).

There are pronounced group differences in both religious attendance and praying, conditional upon pre-migration attendance and praying (which are included as control variables in the models). Immigrants who belong to the larger and well-established groups (Turks, Moroccans, Surinamese and Antilleans) have a lower probability to never attend religious meetings than the Poles, whereas there is no significant difference between Poles and Bulgarians. Specifically, on average Turks' probability of never attending religious meetings is 18% points lower than that of the Poles (reference group). For Moroccans, it is 19% points lower; for Surinamese and Antilleans this is 12% and 14% points, respectively. All four traditional groups are more likely to attend religious meetings weekly than the Poles and Bulgarians.

With respect to praying, group differences are less pronounced but generally follow the same pattern. Turks, Moroccans, Surinamese and Antilleans show higher levels of religiousness compared to Poles, when we consider the probability to fall into the group of respondents that pray "daily". Bulgarians pray slightly more frequently than Poles.

I assess the role of bonding and bridging ties by considering daily contacts, relationship and return visits to the home country. Overall, I find no clear support for the hypothesis that bonding ties foster religiousness or that bridging ties decrease religious attachment. Specifically, results show that having daily ties to co-ethnics is unrelated to religious attendance (Table 5), whereas such bonding ties are only associated with a 2.5% points decrease in the probability to never pray – a statistically significant, but practically small effect. Further, having a co-ethnic partner (living in the same household, or elsewhere), is not associated with religious activities. Whether immigrants have visited their home country after migration or not has no association with religion either.

Regarding bridging ties, I find that having daily contacts with Dutch decreases the probability to never attend religious meetings, and increases moderate attendance – contrary to expectations. Along the same lines, such bridging ties are positively associated with praying daily. Further, conditional upon pre-migration religiosity, I find no evidence that immigrants who have a relationship are less religious.

Table 6
Multinomial logistic regression of praying. Presented are average marginal effects.

Variables	P(Y = 1) "never"		P(Y = 2) "moderate"		P(Y = 3) "daily"	
	dy/dx	se	dy/dx	se	dy/dx	se
Length of stay (months)	0.001	(0.001)	0.000	(0.001)	-0.001	(0.001)
Country of birth (Poland = ref.)						
Bulgaria	-0.075***	(0.020)	0.115***	(0.034)	-0.040	(0.028)
Turkey	-0.006	(0.022)	-0.026	(0.028)	0.033*	(0.019)
Morocco	-0.108***	(0.041)	-0.248***	(0.074)	0.356***	(0.083)
Suriname	-0.025	(0.026)	-0.018	(0.032)	0.043*	(0.023)
Antilles	-0.055**	(0.027)	-0.007	(0.035)	0.062**	(0.028)
Pre-migration praying (never = ref.)						
Daily	-0.389***	(0.023)	-0.338***	(0.062)	0.726***	(0.065)
Moderate	-0.454***	(0.017)	0.453***	(0.028)	0.001	(0.023)
Pre-migration visit	-0.030*	(0.017)	0.015	(0.020)	0.015	(0.012)
Male	0.011	(0.013)	0.000	(0.016)	-0.011	(0.010)
Age at migration	-0.003***	(0.001)	0.002**	(0.001)	0.001	(0.001)
Years of schooling in origin	-0.001	(0.001)	0.000	(0.002)	0.000	(0.001)
Years of schooling, elsewhere	-0.006**	(0.003)	0.010***	(0.003)	-0.004*	(0.002)
Pre-migration activity (employed = ref.)						
Unemployed	-0.018	(0.016)	-0.007	(0.019)	0.026**	(0.012)
Education	-0.009	(0.019)	0.035	(0.024)	-0.026	(0.016)
Other	-0.028	(0.026)	0.038	(0.030)	-0.010	(0.017)
Daily contacts with co-ethnics	-0.025*	(0.014)	0.041**	(0.016)	-0.016	(0.010)
Daily contacts with Dutch	0.002	(0.015)	-0.050***	(0.019)	0.047***	(0.014)
Daily contacts with others	0.036**	(0.016)	-0.020	(0.020)	-0.017	(0.013)
Relationship status (co-ethnic partner in household = ref.)						
Single	0.022	(0.017)	-0.009	(0.020)	-0.013	(0.013)
Co-ethnic partner, not in household	0.067*	(0.036)	-0.051	(0.039)	-0.017	(0.021)
Partner, other origin	0.018	(0.020)	-0.001	(0.024)	-0.017	(0.015)
Partner, origin unknown	-0.026	(0.022)	0.016	(0.027)	0.010	(0.018)
Return visit	0.010	(0.018)	-0.022	(0.021)	0.011	(0.014)
% immigrant, municipality	0.001**	(0.001)	-0.001	(0.001)	-0.000	(0.000)
Household size	-0.004	(0.004)	0.002	(0.005)	0.002	(0.003)
Currently employed	-0.021	(0.015)	0.047***	(0.018)	-0.026**	(0.012)

N = 2230; LL = -918.69, LR chi2(54) = 2710.60, Pseudo R2 = 0.60.

* $p < 0.1$.

** $p < 0.05$.

*** $p < 0.01$.

7. Conclusions and discussion

Three major conclusions can be drawn from this study.

First, the event of migration reduces on average the religious activity of recently arrived immigrants in the Netherlands. Although for the majority of immigrants, the frequency of religious attendance and praying remains the same, a large group of immigrants attends less often religious meetings and prays less often than before they moved. This disruptive pattern is in line with observations among recently arrived immigrants in the United States (Akresh, 2011; Connor, 2009a; Massey and Higgins, 2011) and Canada (Connor, 2008, 2009b). I observe this drop of religiousness in the Netherlands for both attendance and praying, but the drop is more pronounced for attendance. Whereas 40% participate less often in Holland than before migrating, frequency of praying dropped among 17% only. The decline in both participation and praying is predicted by social influence theory, whereas only the significant drop in attendance is in line with the religious market theory.

Second, the degree of religious continuity and decline differs dramatically across immigrant groups in the Netherlands. Conditional upon pre-migration religiousness, I find that immigrants who belong to the "old" immigrant groups of Turks, Moroccans, Surinamese and Antilleans more frequently attend religious meetings and more often pray than the "new" groups of Poles and Bulgarians. Interestingly, this means that both the well-established Muslim groups from Turkey and Morocco and the well-established, predominantly Christian, groups from Suriname and the Antilles show more religious continuity in the Netherlands than the recent Muslim immigrants from Bulgaria and the Christian immigrants from Poland. Thus, rather than predominant religious affiliation in the home country, the relevant distinction for religious continuity is the size and history of the immigrant community in the Netherlands. The stronger continuation of pre-migration religiosity among immigrants who belong to the larger and older groups could be the result of stronger protection to assimilative forces, i.e. the larger ethnic networks promote the religious monitoring of co-ethnics and protect them against the more secular Dutch norms and practices. Considering religious practices, another possible explanation is that the religious market is better adapted to the demands of the immigrants from the older and larger groups, as these groups have been in Holland for a longer period and are numerically far larger than the "new" groups. Either way, the large group differences show that religious continuity and decline after migration is conditional upon the group to which one belongs.

Third, the pre- to post-migration decline in religion seems less dependent on individual experiences. Whether an immigrant has lived in the Netherlands for, say, just 3 months or is there already for 25 months increases attendance a bit, but not much. Length of stay in the Netherlands does not increase the odds of weekly attendance, and duration in the Netherlands is unrelated to frequency of praying. I find no meaningful impact of relationship status, whether one has daily contacts with Dutch, co-ethnics and others, or of return visits. These individual conditions do not accelerate or diminish the pre- to post-migration decline in religion.

This study also leads to new questions and points of discussion for further study.

One is this: why is there only a modest increase in religious attendance with length of stay, and no change at all with regard to praying? For one thing, my findings on the Netherlands do not deviate from prior research, as earlier studies have found mixed results and no strong effects of length of stay as well (Akresh, 2011; Connor, 2008, 2009b; Massey and Higgins, 2011; Van Tubergen, 2007; Van Tubergen and Sindradóttir, 2011). Theoretically, it could be that opposing forces are working simultaneously: on the one hand (following religious market theory), it takes time for immigrants to acquire information about the new religious market and to find a suitable place of worship (i.e., leading to an increase in participation over time), and on the other hand (following social influence theory) with additional time they are exposed to and affected by the more secular norms and practices of the receiving country (decreasing participation and praying). With respect to praying, however, the supply side offers no constraints, but nevertheless I do not see a clear decline in frequency of praying with time (as hypothesized by social influence theory). The hypotheses deduced from the market theory are confirmed here, given an increase in religious attendance with immigrants' length of stay in the Netherlands while no change in praying with length of stay.

Further research is encouraged to study how immigrants search and find places of worship and whether indeed it takes some time to find a suitable church or mosque, either in their neighborhood or further away. Massey and Higgins (2011:1380) emphasized the importance of religious supply nearby: "if no church or temple exists within one's locality, the frequency of attendance is a moot point". Earlier studies on Muslim immigrants in Belgium and the Netherlands used quite direct measures of religious supply (i.e., number of mosques in the neighborhood) and these studies confirmed that proximity to religious provisions is positively related to religious attendance (Maliapaard et al., 2012; Smits et al., 2010). However, it is yet unclear whether these findings indicate a truly causal effect or that locational choice is (partly) affected by the demand for religious products.

Another question for additional research is why there seems to be no strong and consistent effect of bonding and bridging ties on the religiosity of new immigrants. Such patterns of social influence have been observed earlier among immigrants who have been on average much longer in the Netherlands (Maliapaard and Phalet, 2012; Van Tubergen, 2007). Possibly, previous studies have overestimated the role of social ties, as both studies relied on cross-sectional data without controlling for prior religiosity. It could be that immigrants who are more religious, invest more in co-ethnic ties (and invest less in bridging ties) than immigrants who are less religious. In my study, I take into account pre-migration religion and indeed, when I leave out prior religiosity (results not presented) there appears to be a stronger positive "effect" of bonding ties on religious attendance and praying.

The puzzling finding of a positive relationship between bridging ties and religiosity among new immigrants also needs further study. If true, it would mean that over time, as immigrants gradually develop more ties with Dutch majority members, they will become more religious. Possibly, such bridging ties provide important resources – varying from political power to build a place of worship in the neighborhood to information on suitable places of worship. Alternatively, interethnic contacts could make new immigrants aware of their distinctiveness, of public hostility towards immigrants and of ethnic discrimination. Perceptions of exclusion and discrimination may lead immigrants to reaffirm their religion as an oppositional identity (Fleischmann et al., 2011).

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