

*Bend It Like Beckham: Ethnic Identity and Integration**

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PRELIMINARY DRAFT

Abstract

We propose a theoretical framework to study the determinants of ethnic and religious identity formation. We distinguish formally between two distinct motivational processes for identity formation which have been proposed in the social sciences: *cultural conformity* and *cultural defense*. The unique information on ethnic preferences and attitudes provided by the Fourth National Survey of Ethnic Minorities in the UK enables us to test the relative preponderance of these two motivating processes.

We find evidence consistent with intense ethnic and religious identity to be formed mostly as a *cultural defense* mechanism. Consistently, we document that identity and socialization to an ethnic or religious minority are, other things equal, more intense in mixed neighborhood than in segregated neighborhoods. We argue that this results have important and up-to-now unnoticed implications for integration and assimilation policies.

Key words: Ethnicity, identity, intermarriage, cultural transmission

JEL Classification: A14, J15

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Bengali, bengali / Bengali, bengali / No no no / He does not want to depress you/ Oh no no no no / He only wants to impress you / Oh.. Bengali in platforms / He only wants to embrace your culture / And to be your friend forever. [‘Bengali in Platform,’ Morissey, *Viva Hate*, 1988, Reprise/Wea]¹

One of the most important challenges facing modern societies, and at the same time one of our most significant opportunities, is the increase in ethnic and social heterogeneity in virtually all advanced countries. [Robert D. Putnam, John Skytte Prize Lecture, 2007]

1 Introduction

Recent ethnic riots² have placed the issue of ethnic and religious identity at the forefront of the political debate. Underlying the debate is the relationship between ethnic identity and group conflict.³ Indeed, as noticed by several observers, ethnic identities often take the form of “oppositional” identities, requiring and promoting the rejection of the majority/dominant behavioral norms; see, in particular, Ainsworth-Darnell and Downey (1998).⁴

Two opposing views characterize the theoretical analysis in the social sciences regarding the relationship between identity formation and conflict between ethnic/social groups; see e.g., Putnam (2007). A first group of social scientists argues that group conflict is reduced by assimilation and blurring of groups’ boundaries. *Assimilation theories* in political science and sociology (Gordon (1964), Moghaddam and Solliday 1991), *contact theory* in social psychology (Allport 1954) are e.g., direct expressions of this line of thought. The basic premise is the idea that social contacts between groups and intensive social interactions help weaken group loyalties and group prejudices and hence lead to a more culturally homogeneous society. Through this process, minority groups adopt inclusive identities and integrate, progressively adopting the language, values and systems of the dominant group. Underlying this reasoning is the principle that group identity is motivated by a tendency to *cultural*

¹Thanks to Andrew Clark for Morissey’s quote.

²The riots in Paris’ suburbs (November 2005) and the riots in many Muslim communities after the publications of vignettes representing the prophet Mohammed in a Danish newspaper (February 2006) are the most notable examples.

³The study of ethnic identity formation has a long theoretical and empirical tradition in social sciences: see e.g., Cross (1991), Phinney (1990), Ferdman (1995) in developmental psychology; Stryker (1980) in symbolic interactionist sociology; Tajfel (1981), Tajfel and Turner (1979), Turner et al. (1987) in social psychology; and Brewer (2001) in political psychology.

⁴This is the case, for instance, of “ghetto culture” in the U.S. (Wilson, 1987). Also, studies in the U.S. have found, for example, that African American students in poor areas may be ambivalent about learning standard English and performing well at school because this may be regarded as “acting white” and adopting mainstream identities (Austen-Smith and Fryer, 2005, Battu, Mwale, and Zenou, 2006, Delpit, 1995, Fordham and Ogbu, 1986, Ogbu, 1997, Fryer and Torelli, 2005, Selod and Zenou, 2006). As it is, these oppositional identities often produce significant economic and social conflicts. More generally, the relationship between ethnic diversity and economic performance is extensively studied and surveyed by Alesina and La Ferrara (2005).

conformity.⁵

The alternative view considers individuals motivated to retain their own distinctive cultural heritage and to identify with a ethnic/social group to generate a sense of positive distinctiveness from individuals who are not part of the group (Abrams and Hogg 1988, Turner 1982). Positive distinctiveness can be achieved through various cognitive and psychological mechanisms, from group solidarity to prejudice and negative stereotyping with respect to other groups. Negative attitudes towards members of other groups reassert social identity of the group. Along these lines are expressed theories of *multiculturalism* (Glazer and Moynihan (1970), Taylor and Lambert (1996)), *conflict* (Bobo (1999)), and *primordialism* in sociology (Calhoun, (1993) and Bobrow (1996)).⁶ Identity formation, according to this view, is a sort of *cultural defense* mechanism that allows individuals to reduce the psychological costs associated to cultural distinctiveness.

In their purest forms, *cultural conformity* and *cultural defense* are quite distinct theories of identity formation and have important different positive and normative implications for integration policies. They represent a fundamental conceptual distinction in the social science of culture and identity. To provide a conceptual frame to the issue of the determinants of identity formation, in this paper, we formulate a simple model which accounts for both *cultural conformity* and *cultural defense*. We can therefore formally establish the implications of these theoretical views of identity formation to guide an empirical investigation of, in particular, ethnic and religious identity. In particular, distinguishing between *cultural conformity* and *cultural defense* provides contrasting empirical implications on the way neighborhood segregation and identity formation interact in the process of ethnic integration. When *cultural conformity* is assumed to be the main motivational process of identity formation, neighborhood segregation and identity formation are likely to be complements for ethnic assimilation. On the contrary, when *cultural defense* is considered as the main process of identity formation, neighborhood segregation and identity formation tend to be substitutes for ethnic assimilation.⁷

More specifically, in this paper we study ethnic and religious identity formation as a social phenomenon at the level of the neighborhood. In particular we consider the demographic characteristics of the neighborhood where agents reside, and most importantly its ethnic and religious composition, as exogenous with respect to the identity formation mechanism.⁸ Furthermore, we link identity formation

⁵Economists capture the notion of *cultural conformity* through positive social interactions across individuals sharing the same characteristics, views and preferences; see e.g., Glaeser-Scheinkman (2000). In this view, therefore, individuals therefore form inclusive identities to integrate so as to exploit social interactions.

⁶At a broader level this view is also related to *social identity theory* in social psychology (Tajfel 1981, Turner 1982).

⁷In economics, the distinction between *cultural conformity* and *cultural defense* is also related to the notion of cultural complementarity and cultural substitutability between socialization mechanism defined formally by Bisin-Verdier (2000); see also Patacchini-Zenou (2004) for an empirical investigation. Indeed, in Bisin-Verdier (2000), when family and society role models tend to be substitutes in the process of socialization, families with a relatively minoritarian cultural trait have larger incentives to spend resources to socialize their children to the trait and hence guarantee its persistence. Conversely, under cultural complementarity the more minoritarian is a family's cultural trait, the smaller are the family's incentives to socialize their children to the trait and hence to limit cultural assimilation.

⁸This is of course a strong assumption, only partly justified by the observation that residential choices are done infrequently and are possibly dominated by factors and considerations (like e.g., vicinity to work) other than its neighborhood composition. In the empirical work, however, we go to great lengths to argue that there is no evidence of endogeneity

with homogamous marriages along ethnic and religious traits. It has been extensively documented in fact that interracial marriage is typically considered as a sign of inclination toward cultural assimilation (see, in particular, Al-Johar, 2005, Qian, 1999, Meng and Gregory, 2005, Tucker and Mitchell-Kernan, 1990) and that marriage choices are at least in part determined by parents' preferences to socialize their children to their own (parents') trait (see Bisin, Topa, and Verdier, 2004, and the evidence cited in Bisin and Verdier, 2000).

Our empirical analysis relies on the Fourth National Survey of Ethnic Minorities (FNSEM) in the U.K. This survey asks a direct question about respondents' identification with their own ethnic group and additional (indirect) information about different dimensions of identity (e.g. attitudes towards inter-marriage, importance of religion and other aspects of individual's ethnic preferences). In addition, the data can be merged with the 1991 Census, so that it is possible to obtain a detailed picture of each individual's residential neighborhood at a very high level of spatial disaggregation.⁹

With FNSEM data we estimate our model of the joint determinants of ethnic and religious identity and homogamy both structurally and non-structurally. Our estimates provide evidence that intense ethnic identity might be due to *cultural defense* rather than to *cultural conformity*. Intense ethnic identity appears to be formed in social contexts in which the minority ethnic trait is mostly "threatened" either directly by the actions of the majority group (e.g., through explicit acts of rejection or harassment), or indirectly by being exposed to the interaction with the majority norm of behavior in mixed neighborhood. We also address the issue of the alleged specificity of Muslim immigrants with regards to the strength of their identity and their (lack of) assimilation tendencies; an issue which recently surged at the center of the political debate in Europe (see, e.g., Gallis, 2005). The results we obtain on the restricted sample of Muslim respondents are not qualitatively different from the ones found using the whole sample. On the other hand, quantitatively, the assimilation process of Muslims appears to be significantly slower than other ethnic and religious groups.¹⁰

Our empirical results are consistent with various recent empirical studies which indirectly address the issue of the process of identity formation by studying the link between identity and segregation. Notably Fryer and Torelli (2005) find that, in the National Longitudinal Study of Adolescent Health in the U.S., "acting white" behaviors among blacks are more developed in racially mixed schools.¹¹ Bisin, Topa, and Verdier (2004) document, using the General Social Survey data, that religious socialization

in the data. Finally, our test of cultural conformity in identity formation is valid independently of the issue of the endogeneity of the neighborhood composition.

⁹At the level of residential ward. A UK Census ward contains on average 3,000-4,000 residents.

¹⁰This is somewhat in contrast with the results of Manning-Roy (2007). They however measure identity somewhat cursorily, from the answers of respondents to a direct question regarding their "national identity" (in the U.K. Labor Force Survey).

On the other hand, our results on Muslim assimilation are more in line with those of Constant et al. (2006) and Georgiadis-Manning (2008).

¹¹Anthropologists have also observed that social groups seek to preserve their identity, an activity that accelerates when threats to internal cohesion intensify. Thus, groups may try to reinforce their identity by penalizing members for differentiating themselves from the group. The penalties are likely to increase whenever the threats to group cohesion intensify; for an early analysis of this issues, see Whyte (1943).

across U.S. states is more intense when a religious faith is a minority.¹² Finally, Putnam (2007) finds evidence in the Social Capital Community Benchmark Survey in the U.S. that trust in neighbors is negatively correlated to the racial heterogeneity of the neighborhood.

The analysis of the dependence of identity on ethnic composition at the level of the neighborhood may be of great interest also from a policy perspective. This is the case when assimilation is a policy objective and, more generally, when intense socialization practices and the formation of oppositional ethnic identities have important negative externalities. While the failure of integration policies in Europe and the U.S. is certainly reflected in the recent ethnic and racial riots, our empirical evidence for *cultural defense* suggests that, contrary to presumptions often exposed by social scientists and commentators, the intense and oppositional identities that give rise to such social conflicts are not *per se* favored by the segregation of the neighborhood in which ethnic and racial minorities tend to live.

2 A simple model of identity formation

Consider a member of a minority ethnic or religious group. We postulate that he/she faces a psychologically cost to interact with individuals of the dominant majority. Let q denote the proportion of the minority in the reference neighborhood, where the member of the minority resides. Let the psychological costs be denoted $C(q)$. Identity is defined as a psychological mechanism to potentially reduces such costs. We assume however that only agents in a homogamous marriage gain from identity.

Let identity be an index $I \in \{0, 1\}$ with $prob\{I = 1\} = \nu$.¹³ Let homogamy also be an index $H \in \{0, 1\}$ with $prob\{H = 1\} = \pi$. A minority agent married homogamously in a neighborhood with a fraction q of minority members and whose identity is ν faces psychological costs

$$(1 - \nu) C(q)$$

Identity is a choice of the agent.¹⁴ The utility cost of developing identity ν , $I(\nu)$ is increasing and convex (in the same units of the psychological costs $C(q)$); for simplicity we assume

$$I(\nu) = \frac{1}{2}\nu^2 \tag{1}$$

Minority agents also put effort in finding a spouse of the same ethnic and religious background. Let effort be denoted $\tau \in [0, 1]$. The minority agent first searches a spouse in a restricted pool of partners from his own community minority. By spending some resource cost, he finds his marital partner with

¹²Relatedly, Bisin and Verdier (2000) provide many examples of the resilience of ethnic and other cultural traits that can be explained by a similar mechanism, from the case of Orthodox Jews in Brooklyn to the case of aristocrats in France.

¹³More generally, we interpret ν as a measure of the intensity of identity.

¹⁴We recognize that identity is at least as much the choice of the agent as it is of the family. We have studied family socialization in previous work: Bisin-Verdier (2000, 2001) and Bisin-Topa-Verdier (2004). In fact our analysis can be extended to distinguish the various components of identity choice: Bisin-Patacchini-Verdier-Zenou (2008). For the purposes of the empirical work of this paper it is without loss of generality to think of agent and family preferences to be perfectly aligned and hence to interpret identity choice as determined inside the family.

probability π . With the residual probability $1 - \pi$, he remains unsuccessful and therefore goes to a common pool of partners including both minority and majority types. There he gets matched with a spouse of his community with probability q .

A minority agent married in a neighborhood with a fraction q of minority members has a probability of marrying homogamously equal to

$$\pi(\tau, q) = \tau + (1 - \tau)q \quad (2)$$

The utility cost of putting effort τ , $f(\tau)$ is increasing and convex (in the same units of the psychological costs $C(q)$); for analytical simplicity we assume

$$f(\tau) = \frac{1}{2}\alpha\tau^2 \quad (3)$$

where α is a measure of the relative costs of effort τ with respect to ν .

A minority agent's problem is:

$$\max_{\tau, \lambda} -\pi(\tau, q)(1 - \nu)C(q) - [1 - \pi(\tau, q)]C(q) - f(\tau) - I(\nu)$$

Given (1), (2) and (3), the first order condition of the problem are easily reduced to:

$$\nu = C(q)\pi \quad (4)$$

$$\pi = q + (1 - q)^2 \frac{C(q)}{\alpha}\nu \quad (5)$$

This is a clear simultaneous equation system in which (ν, π) are the endogenous variables and q the exogenous variable.

We are now ready to formally distinguish the *cultural defense* from the *cultural conformity* model of identity formation.

2.1 Cultural defense

In the cultural defense model the minority's psychological costs to interact with individuals of the dominant majority are increasing in the proportion of the majority in the reference neighborhood, where the member of the minority resides, $1 - q$. The simplest formulation therefore has:

$$C(q) = c(1 - q)$$

Then the first order conditions of the model are:

$$\nu = c(1 - q)\pi \quad (6)$$

$$\pi = q + \frac{c}{\alpha}(1 - q)^3\nu \quad (7)$$

A simple intuitive illustration of the cultural defense model can be obtained from these equations. Consider first condition (6), expressing how identity formation ν depends on the proportion q of minority members and on π the probability of homogamy. Clearly the larger the proportion q of minority

members and the more segregated the neighborhood, the smaller $C(q) = 1 - q$, the psychological cost of interacting with majority people and the smaller the incentives for identity formation as cultural defense. On the other hand, the larger the probability π of homogamous marriage resulting from socialization efforts, the larger the expected benefits from identity formation and the more intense is identity.

Interestingly, marital segregation, as reflected by π , and neighborhood segregation, as reflected by q , are substitutes in terms of culturally defensive identity formation. In other words, the marginal effect of marital segregation on defensive identity formation tends to be reduced the more segregated the neighborhood (ie. the larger is q).

Consider now equation (7) characterizing the (endogenous) probability of homogamy as a function of identity ν and neighborhood segregation q . The more intense identity formation, the larger the probability of homogamy. On the other hand, the effect of q on π is ambiguous and reflects two opposite effects. First, there is a direct effect related to the fact that the larger the proportion of minority people in the neighborhood, the larger the probability of finding a minority spouse in the common pool of potential partners. This effect is reflected in the first term q of (7). The second effect is illustrated by the second term $[1 - q]^2 C(q)\nu$ and shows the effect of a change in q on the marginal incentives to marital segmentation (i.e., the socialization effort τ). Indeed the more segregated the neighborhood (i.e., the larger is q), the smaller the incentives to spend resources to find directly a partner in the restricted pool of minority spouses. First because social interactions with the majority people are less costly psychologically and there is less of a need for defensive identity formation that can be effectively expressed in homogamous marriages. This is reflected by the term $C(q)$. Second, a larger proportion of minority people in the neighborhood reduces as well the incentives to make special efforts to find a spouse in a segregated marital pool, as minority people are already more likely to be found in the common marital pool. Both channels reduce therefore the incentives for socialization efforts τ , which in turn tends to reduce the probability of homogamy π .

It is also interesting to observe that, for the choice of socialization effort and probability of minority homogamy, culturally defensive identity and neighborhood segregation (as reflected by q) are substitutes. More precisely, the marginal effect of defensive identity on minority homogamy tends to be reduced the more segregated the neighborhood (i.e., the larger is q).

2.2 Cultural conformity

In the cultural conformity model the minority's psychological costs to interact with individuals of the dominant majority are decreasing in the proportion of the majority in the reference neighborhood, where the member of the minority resides, $1 - q$. The simplest formulation therefore has:

$$C(q) = cq$$

Then the first order conditions of the model are:

$$\nu = cq\pi \tag{8}$$

$$\pi = q + \frac{c}{\alpha}q(1-q)^2\nu \quad (9)$$

Again a simple illustration can be obtained from these equations. Consider first (8) expressing now how conformist identity formation ν depends on the proportion q of minority members and π the probability of homogamy. Now the larger the proportion q of minority members and the more segregated the neighborhood, the higher $C(q)$ the psychological costs of interacting with minority people and the larger the incentives for cultural conformity identity formation. Similarly, the larger the probability π of homogamous marriage, the larger the expected benefits from cultural conformity identity and the more intense is that identity formation. Again the sign of the cross derivative is interesting. Simple inspection shows immediately that , marital segregation (as reflected by π) and neighborhood segregation (as reflected by q) are now complements in terms of cultural conformity identity formation. In other words, the marginal effect of marital segregation on conformity identity formation is larger, the more segregated the neighborhood (i.e., the larger is q).

Consider now equation (9) characterizing the (endogenous) probability of homogamy as a function of identity ν and neighborhood segregation q . Simple inspection shows again that the more intense identity formation, the larger the probability of homogamy. The effect of q on π is also ambiguous and reflects now three effects. First, there is as before the direct effect related to the fact that the larger the proportion of minority people in the neighborhood, the larger the probability of finding a minority spouse in the common pool of potential partners. This effect is illustrated by the first term q in (9). A second positive effect is illustrated by $\nu C(q)$ in the second term $[1-q]^2 \nu C(q)$. The larger q , the larger the conformity psychological gain of social interactions with other minority individuals in the neighborhood and the associated conformity identity process that can be effectively expressed in homogamous marriages. This increases the incentives for homogamous marriages and the marginal incentives to marital segmentation (i.e., the socialization effort τ).

The last effect of q on π is negative. As in the defensive identity model, it reflects simply the fact that a larger q reduces the incentives to make special efforts to find a spouse in a segregated marital pool., as minority people are already likely to be found in the common marital pool. This channel captured by the expression $[1-q]^2$ in the second term $[1-q]^2 \nu C(q)$ of equation (9) decreases the incentives for socialization efforts τ , and tends to reduce the probability of homogamy π .

Finally one may as well see how cultural conformity identity and neighborhood segregation (as reflected by q) interact in terms of the formation of homogamous minority marriages. The second cross derivative of π with respect to ν and q has the sign of

$$\frac{d}{dq} \{(1-q)^2 C(q)\}$$

the sign of which is in general ambiguous. Now when $C(0) = 0$, namely conformist gains are very small for small minority populations, it is easy to see that

$$\frac{d}{dq} \{(1-q)^2 C(q)\} > 0$$

for small enough values of q . In that case, neighborhood segregation and cultural conformist identity are complements for the choicer of homogamous probability of marriage.

2.3 Reduced form equations for cultural defense and conformity

It is immediate to derive the reduced form of the first order condition system in the case of cultural defense, (67):

$$\nu = \frac{cq(1-q)}{1 - \frac{c^2}{\alpha}(1-q)^4} \quad (10)$$

$$\pi = \frac{q}{1 - \frac{c^2}{\alpha}(1-q)^4} \quad (11)$$

Similarly, the reduced form of the first order condition system in the case of cultural conformity, (89), is:

$$\nu = \frac{cq^2}{1 - \frac{c^2}{\alpha}q^2(1-q)^2} \quad (12)$$

$$\pi = \frac{q}{1 - \frac{c^2}{\alpha}q^2(1-q)^2} \quad (13)$$

From the first order conditions of the cultural defense and the cultural conformity model it appears clear that:

Proposition 1. Assume $\frac{c^2}{\alpha} < 1$.

- Under cultural defense, ν is decreasing in q , for q large; while π is increasing in q .
- Under cultural conformity both ν and π are increasing in q .

3 Data and definition of the variables

The Fourth National Survey of Ethnic Minorities (FNSEM) was collected in 1993/94 in the U.K. by the Policy Studies Institute (PSI). FNSEM over-samples ethnic minority, distinguishing in particular six groups: Caribbean, Indian, Pakistani, African-Asian, Bangladeshi, and Chinese.¹⁵ It also contains detailed information about respondents' identification with their own ethnic group (e.g. attitudes towards inter-marriage, importance of religion and other aspects of individual's ethnic preferences) as well as variables aiming at capturing the heterogeneity within the non-white population in terms of individual, demographic, family and socio-economic characteristics (see Modood et al., 1997, for details). The data are merged with the 1991 Census in order to get valuable information of each individual's residential ward.¹⁶

The key variables in our analysis are *(i)* the ethnic composition of the residential neighborhood, q ; *(ii)* the intensity of the ethnic identity, ν ; *(iii)*, the probability of homogamous marriage, π . They are described in turn.

(i) The ethnic composition of the neighborhood is observed at the level of the residential ward from the 1991 Census data. For each individual i we consider the percentage of ward inhabitants of her/his

¹⁵For historical reasons Black Africans are not included. Furthermore, the survey only covers England and Wales.

¹⁶A UK Census ward contains on average 3,000-4,000 residents.

own ethnic group. It has been divided in seven classes, $q_i \leq 2\%$, $2\% < q_i \leq 5\%$, $5\% < q_i \leq 10\%$, $10\% < q_i \leq 15\%$, $15\% < q_i \leq 25\%$, $25\% < q_i \leq 33\%$, $q_i \geq 33\%$. As usual, the mean value of each interval is used in the regression analysis.

(ii) The survey contains a number of questions providing information on different dimensions of identity, in particular importance of religion, attitudes towards inter-marriage and the relevance of ethnicity in influencing the kind of school that people want for their children.¹⁷ It also asks a direct question about ethnic identity.¹⁸ We performed our analysis using separately the answers on each of these questions in turn. We also constructed a multidimensional measure following the standard approach in the sociological literature to derive quantitative information on sensitive topics using qualitative answers to a battery of related questions.¹⁹ We find that the different components of ethnic identity, as well as the aggregate measure, do not depend (qualitatively) differently on q . The results reported in this paper are obtained using the information on religious faith attachment, which is the variable with the highest coverage.²⁰ This variable, denoted by I , is coded as a dichotomous variable taking value 1 if the individual considers very important the role of religion in her/his life and 0 otherwise. The variable measuring the intensity of ethnic identity, ν , is then the probability that $I = 1$.

(iv) Homogamy H is a dummy variable taking value 1 if the respondent is married with a person of her/his own ethnic group and 0 otherwise. The variable π measures the probability that marriage is homogamous.

In order to purge our results from possible confounding factors, we include an extensive set of control variables. In addition to several individuals' observable characteristics (i.e., education, age, sex, fertility choices, employment status, job qualification, household house ownership, macro-region of residence, time spent in the UK, a dummy indicating whether the respondent is born in the UK), we introduce in the control vector variables aiming at capturing the influence of the social environment (family, friends, neighbors) and workplace using the language typically spoken in the family, with

¹⁷The precise questions are the following ones: "Is religion to the way you live your life not at all important, not very important, fairly important or very important?"; "If a close relative were to marry a white person would you not mind, mind only a little, mind, mind very much?"; "Is ethnicity in choosing a school for an eleven-years old child of yours not important, not very important, fairly important or very important?" and "If the available schools were similar in other ways, what proportion of one's ethnic group would you like in your children's school?", with possible answers: no preference, fewer than a half, about a half, more than a half.

¹⁸Specifically, in the FNSEM, the interviewees are asked if they agree or disagree and if so, whether strongly or just a little, with the statement: "In many ways, I think of myself as [respondent's ethnic group]".

¹⁹This is a standard factor analysis, where the factor loadings of the different variables (questions) are used to derive the total score (multidimensional measure). The Cronbach- α measure is then used to assess the quality of the derived index. In our case, we obtain an α equal to 0.86 ($0 \leq \alpha \leq 1$) indicating that the different items incorporated in the index have considerable internal consistency.

²⁰Because of the survey design, more detailed questions about particular topics, which include self and culture and opinions, are asked to different sub-samples. Specifically, in the FSEM sample design, in each ethnic minority household, up to two adults were selected at random to answer questions about themselves. Because the number of questions to be asked would have made the interview too long if everybody had been asked all of the possible questions, two versions of the questionnaire were used. They contain different level of detail on the different topics. In single adult households, the questionnaire was assigned at random.

friends, at work, a dummy capturing instances of discrimination and one indicating whether the marriage is arranged by the parents. We also include the ward unemployment rate. We report the estimation results for the model specification including the more extensive set of controls. Precise definitions of all these variables, as well as our sample descriptive statistics, can be found in Table 1. Excluding the individuals with missing or inadequate information on our target variables, we obtain a final sample of 1,565 individuals.

[Insert Table 1 here]

4 The empirical model

We proceed structurally, putting directly to data the model in the previous section.²¹

From their reduced form equations, (10-11) and (12-13), it is straightforward to nest the cultural defense and cultural conformity models:

$$\nu = \frac{cq\psi(q)}{1 - \frac{c^2}{\alpha}(\psi(q))^2(1-q)^2} \quad (14)$$

$$\pi = \frac{q}{1 - \frac{c^2}{\alpha}(\psi(q))^2(1-q)^2}, \quad (15)$$

with $\psi(q) = \gamma_1 - \gamma_2q$ and

$$\gamma_1 = \gamma_2 = 1 \quad \text{defense} \quad (16)$$

$$\gamma_1 = 0, \gamma_2 = -1 \quad \text{conformity}$$

Empirically, to discriminate between the two models it is sufficient to verify whether γ_2 is greater or smaller than zero.

Furthermore, we need to extend the model to account for a vector of exogenous regressors which affect the agents' choice of identity and homogeneity. To this end, we simply assume that the exogenous regressors enter through the costs of identity and homogeneity:

$$I(\nu) = \frac{1}{2}\nu^2 - \gamma_\nu x_\nu \nu, \quad I(\tau) = \frac{1}{2}\alpha\tau^2 - \gamma_\tau x_\tau \tau$$

where x_j are the exogenous determinants of the cost, regressors in the empirical implementation, and $\gamma_\nu x_\nu, \gamma_\tau x_\tau$ represent the vector notation: $\gamma_\nu x_\nu = \sum_{j=1}^N \gamma_{\nu,j} x_j, \gamma_\tau x_\tau = \sum_{j=1}^N \gamma_{\tau,j} x_j$.

We can then write the reduced form equations to take to data:

$$\nu = \frac{cq\psi(q)}{1 - \frac{c^2}{\alpha}(\psi(q))^2(1-q)^2} + \frac{1}{1 - \frac{c^2}{\alpha}(\psi(q))^2(1-q)^2} \gamma_\nu x_\nu + \frac{c\psi(q)}{1 - \frac{c^2}{\alpha}(\psi(q))^2(1-q)^2} \gamma_\tau x_\tau \quad (17)$$

²¹

See Bisin-Patacchini-Verdier-Zenou (2008) for a non-structural linear probit analysis of the same data.

$$\pi = \frac{q}{1 - \frac{c^2}{\alpha}(\psi(q))^2 (1-q)^2} + \frac{c\psi(q)(1-q)^2}{1 - \frac{c^2}{\alpha}(\psi(q))^2 (1-q)^2} \gamma_\nu x_\nu + \frac{1}{1 - \frac{c^2}{\alpha}(\psi(q))^2 (1-q)^2} \gamma_\tau x_\tau \quad (18)$$

where $\psi(q) = \gamma_1 - \gamma_2 q$.

Observe that, although the effects of the exogenous regressors will be taken into consideration in the estimation procedures, they are not additively separable from the effect of q . In fact, equations (17) and (18) clearly show that q acts as a multiplier of the effects of each of the different control variables considered or, in other words, that the impact of the control variables depends on q .

4.1 Identification

For each agent we observe q , x_ν , x_τ the realization of $I \in \{0, 1\}$ and the realization of $H \in \{0, 1\}$. Since $prob\{I = 1\} = \nu$ and $prob\{H = 1\} = \pi$ we identify with ν the fraction of agents with identity $I = 1$ and with π the fraction of agents with homogamous marriages $H = 1$.

Parameters $\gamma_1, \gamma_2, c, \alpha, \gamma_\nu, \gamma_\tau$ are then identified.²² An informal argument goes as follows. The parameters γ_1, γ_2, c and α are identified off of variation of q , from equations (17) and (18). Variation in x_ν, x_τ identifies instead γ_ν, γ_τ . This is the case even without exclusion restrictions, that is, if a single vector x enters in the determination of ν and π : $x_\nu = x_\tau = x$. For given $q, c, \alpha, \gamma_1, \gamma_2$, in fact, in this case γ_1, γ_2 solve

$$\begin{aligned} \frac{\gamma_\nu + c\psi(q)\gamma_\tau}{1 - \frac{c^2}{\alpha}(\psi(q))^2(1-q)^2} &= k_\nu \\ \frac{c\psi(q)(1-q)^2\gamma_\nu + \gamma_\tau}{1 - \frac{c^2}{\alpha}(\psi(q))^2(1-q)^2} &= k_\tau \end{aligned}$$

where k_ν, k_τ are the estimated coefficients of x in the equation for ν and π , respectively, for given q . It is easy to check that one such solution exists.

4.2 Implementation

Writing a likelihood and searching for the structural parameters $(\gamma_1, \gamma_2, c, \alpha, \gamma_\nu, \gamma_\tau)$ is straightforward.²³

Because there are no a-priori arguments to select the variables to be included as determinants of the costs of identity and homogamy, we consider $x_\nu = x_\tau = x$.

We observe n (independent) bivariate Bernoulli trials with a pair of characteristics being studied at each trial. The probabilities of the outcomes vary over the trials.

$$prob\{I_i = x_i\} = \begin{cases} \nu_i & x_i = 1 \\ (1 - \nu_i) & x_i = 0 \end{cases} \quad \text{and} \quad prob\{H_i = y_i\} = \begin{cases} \pi_i & y_i = 1 \\ (1 - \pi_i) & y_i = 0 \end{cases}$$

Once the joint determination of I and H is explicitly accounted for by the forms of the probabilities ν and π , the two random variables may be assumed as independent. Hence

$$prob\{I_i = x_i, H_i = y_i\} = \nu_i^{x_i} \times (1 - \nu_i)^{1-x_i} \times \pi_i^{y_i} \times (1 - \pi_i)^{1-y_i}$$

²²In particular there are no issues of *logical consistency*, as they might arise in models in which, for each agent, ν and/or π depend on the realization of I and/or H (see Maddala, p. 118-9 and Wilde, 2000).

²³Otherwise one can proceed via GMM as in Bisin-Topa-Verdier (2003).

The likelihood function can be written as:

$$L = \prod_{i=1}^n \nu_i^{x_i} \times (1 - \nu_i)^{1-x_i} \times \pi_i^{y_i} \times (1 - \pi_i)^{1-y_i} \quad (19)$$

The maximization of the likelihood function (19) under the two (alternative) sets of constraints (16) will then uncover which one of the two models of identity formation better fits our data: the higher the likelihood the more likely it is that the corresponding scenario is realized.

4.3 Results

Table 2 contains the results of the maximum likelihood analysis. An unconstrained maximization of the likelihood returns the results listed in Table 2a. A positive estimate of γ_2 would be in line with the cultural defense model, whereas a negative estimate would support the cultural conformity model. Table 2a shows that such an estimate is indeed positive, which indicates that a cultural defense mechanism of identity formation should be at work. The maximization of the likelihood function (19) under the two (alternative) sets of constraints (16) will then further uncover which one of the two models of identity formation better fits our data: the higher the likelihood the more likely it is that the corresponding scenario is realized. The last two rows of the table report such constrained maximized likelihoods. The results show that the maximized likelihood value is much higher when the constraints implied by the cultural defense model (i.e. $\gamma_2 > 0$) are imposed.^{24,25} The parameter estimates for the cultural defense model (i.e., the preferred one) are reported in Table 2b.²⁶

[Insert Table 2 here]

Controlling for the covariates, Figure 1 documents the cultural defense model’s predictions regarding, respectively, identity and homogamy, ν and π , as a function of the neighborhood fraction of the minority, q .

[Insert Figure 1 here]

Other things equal, living in a ward with a (sufficiently) higher percentage of own ethnic minority group is associated with a lower identity and a lower probability of homogamy.

4.3.1 Robustness

Structural estimates of the model can be criticized on the fact that they rely, both for identification and for estimation/inference, on the specific functional form assumptions we are making in the model, e.g.,

²⁴The estimation has been performed using R programming language (www.r-project.org). The code is available upon request.

²⁵A more rigorous statistical comparison is problematic in these cases because the distribution of the resulting likelihood ratio tests with inequality constraints is non-standard; see Chernoff (1954), Wilks (1938), Self-Liang, (1987), Shaw-Geyer (1997).

²⁶Here the value of γ_2 is set at 1 (see (16)).

the quadratic form of the cost functions, as well as the specific production function for identity and homogamy. A more informal approach to distinguish between cultural defense and cultural conformity would exploit Proposition 1: in the cultural conformity model the graph of ν as a function of q is monotonic increasing while, in the case of cultural substitution is decreasing for q large enough.

In fact, our main objective is not to estimate the structural parameters of the model as much as to distinguish cultural defense from cultural conformity. Can this objective be in fact pursued more robustly by means of a non-structural analysis? In this section we investigate this possibility by using an approximation to (17-18). In this case, however, the parameters α and c are not identified. Nonetheless, we can distinguish cultural defense from cultural conformity by testing the different prediction of the model under the two scenarios.

The system of equations we estimate is:

$$\begin{aligned}\nu &= \beta_1 q + \beta_2 q^2 + \gamma_\nu x_\nu \\ \pi &= \delta_1 q + \delta_2 q^2 + \gamma_\tau x_\tau,\end{aligned}$$

where we include a quadratic function in q , to allow for non-linear dependence identity and homogamy on q , as the theoretical model predicts for cultural defense. Under the added assumption of normality for the errors, the system constitutes a bivariate probit model that can be estimated using (full-information) maximum likelihood. The variance-covariance matrix of the errors is identified as standard in probits.²⁷

Table 3 contains the results. The panel on the right-hand shows the effects of q on identity for different levels of q (i.e., we report $\frac{\partial \nu}{\partial q} = \beta_1 + \beta_2 q$ and $\frac{\partial \pi}{\partial q} = \delta_1 + \delta_2 q$). The dominance of the cultural defense scenario comes again into view. Indeed, for both ν and π we find that the effect q turns into negative for q large enough.²⁸

[Insert Tables 3 here]

Taken as a whole, our empirical results clearly points towards cultural defense rather than cultural conformity as the behavioural mechanism underlying the observed evidence.

4.3.2 Endogeneity of location choices

If ethnic minorities congregated in specific neighborhoods because of some unobservable characteristics that affected their ethnic or religious identity, our analysis of the relationship between neighborhood segregation and identity would be invalid and the estimates biased.

²⁷The estimated system of equation is thus:

$$\begin{aligned}\nu &= \beta_1 q + \beta_2 q^2 + \gamma_\nu x_\nu \\ \pi &= \beta_3 q + \gamma_\tau x_\tau\end{aligned}$$

²⁸The estimation has been performed using Stata version 10. The code is available upon request.

To address this issue we show that results are qualitatively unchanged when we restrict the sample to a subset of respondents who are arguably “constrained” on where they live. While our data source does not provide a direct question on the reasons underlying the location of individuals in a given neighborhood, the questionnaire asks the individuals their judgment on the quality of the residential area in terms of ethnic composition. Furthermore, it asks whether, given a location choice, they would prefer to move or to stay in the area. We therefore select a sub-sample of respondent composed of individuals *i*) who state that the neighborhood in which they reside is "poor" for "being with other people of their own ethnic group" but nonetheless declare they they do not wish to move; and individuals *ii*) who state that the neighborhood in which they reside is "good" for "being with other people of their own ethnic group" but nonetheless declare they they do wish to move.

In our interpretation, in these two groups the choice of the residential neighborhood is likely to be exogenous with respect to their concerns about the ethnic composition of the neighborhood.²⁹

Thus, in order to check whether our evidence is driven by endogeneity issues stemming from the individuals’ residential location choices, we run our analysis on these two sub-samples. We display in Table [to be added] the results. From a preliminary analysis it appears that the results are not different across sub-samples and from the ones referring to the whole sample. We provisionally conclude that endogeneity of location choices does not seem to be a major concern in our analysis.³⁰

[complete analysis of endogenous location decision - with syntethic panels - to be added]

5 Is Muslim identity different?

A large debate in Europe concerns the alleged specificity of Muslim immigrants with regards to the strength of their identity and their (lack of) assimilation tendencies.³¹

Several of the ethnic groups for which we have data have in fact a significant Muslim population. Notably, Pakistani and Bangladeshi are predominantly Muslim, while Indians and African-Asian have substantial Muslim minorities. Furthermore, the FNSEM survey contains a question asking the respondent to identify his/her religious faith. In this section we exploit therefore our data to address directly the alleged Muslim specificity issue.

To this end we repeat our structural and non-structural analysis on the restricted sample of Muslim respondents (roughly the 43 percent of the whole sample). We maintain however the distribution

²⁹Consider indeed, for example, the individuals belonging to the group in *i*). If their residential choice is driven by their concerns about ethnicity-related issues, they should have declared to prefer to move out in order to search for more satisfactory neighborhoods in terms of ethnic composition. The fact that they say that they prefer to stay in that neighborhood signals that other reasons are driving their location choice, such as budget constraint, distance to jobs, availability of local services or other amenities, quality of accommodation, their concerns about their children’s education, closeness to parents or other family reasons. A similar reasoning applies for the individual belonging to the group in *ii*).

³⁰This is consistent with the related robustness analysis in Bisin-Patacchini-Verdier-Zenou (2008).

³¹This position has been taken, in a rather extreme form, by several nationalist parties, e.g., the Lega in Italy, the Front National in France. But similar though less extreme positions have been taken by center-right parties essentially all over Europe. A clear example of the inflamed rhetoric that often accompanies this debate is Fallaci (2006).

by ethnic group as the relevant neighborhood composition variable in the identity formation and socialization processes.

Table 4 reports our structural estimates. Table 5 reports our non-structural estimates. They are not qualitatively different from those in Table 2 and 3 for the whole sample. The cultural defense model remains the mechanism more likely to represent the observed evidence. Indeed, the estimate of γ_2 is still positive and the maximized likelihood value with the constraints imposed by the cultural defense model is higher than the value which is obtained when the likelihood is constrained accordingly to the cultural conformity mechanism of identity formation. Controlling for the covariates, Figure 2 documents the cultural defense model's predictions regarding, respectively, identity and homogamy, ν and π , as a function of the neighborhood fraction of the minority, q .

[Insert Figure 2 here]

Such a finding signals that the relationship between ethnic assimilation effort and ethnic neighborhood composition is not different for Muslims in respect of other minorities. In other words, other things equal, ethnic identity and socialization effort are more intense in mixed rather than in segregated neighborhoods even when only the Muslim identity is considered.

[Insert Table 4 here]

Nonetheless, we find that the predicted assimilation speed³² is significantly lower for Muslims. This is best documented by Figures 3 and 4, which report - for both the whole population and for the Muslim subsample - identity and homogamy as a function of "time from arrival" for first generation immigrants and for "age" for second generation immigrants. Note in particular that, in the Muslim subsample identity and homogamy are never decreasing in "time from arrival," not even for second generation immigrants.

[Insert Figures 3 and 4 here]

6 Discussion of results and policy implications

Our analysis suggests on the contrary that integration policies favoring the formation of mixed neighborhoods, fearing the effects of geographical segregation, are possibly minimally effective if not counterproductive. Figures 5 and 6 report on simple simulations based on our structural estimates to illustrate this point. Identity and homogamy as a function of "time from arrival" for first generation immigrants and for "age" for second generation immigrants are reported under different assumptions on the composition of the neighborhoods where minorities live: i) all neighborhoods with the average q of the population, ii) all neighborhoods with the minimal q of the population, iii) all neighborhoods with the maximal q of the population.

³²Predictions are based on the structural estimates.

[Insert Figures 5 and 6 here]

We note that integrationist policies, which include school busing, affirmative action in public schools and in the workplace, forced integration of public housing, and laws barring discrimination in housing and employment, consistently with the view that identity formation mechanisms are driven by *cultural defense*, have often had limited effects and are even being at times opposed by the same minority groups in whose interest they have been pursued (see e.g., Jacoby, 1998, and Thernstrom and Thernstrom, 2002). J. Coleman, for instance, fifteen years after the Coleman Report (1966) which originally proposed busing, admitted that, “the assumption that busing would improve achievement of lower-class black children has now been shown to be fiction;” (cited in Jacoby, 1999).³³ But Moving to Opportunity (MTO) programs in the United States that relocates families from high- to low-poverty neighborhoods (and from racially segregated to mixed neighborhoods) also have had positive but arguably small effects (see, in particular, Ludwig, Duncan, and Hirschfield, 2001, and Kling, Ludwig, and Katz, 2005).³⁴ In Europe different integration policies and ambitious social programs have been implemented in urban areas where immigrants live but they also have had limited results. This is the case, for instance, for the creations of Zones of Educational Priority (ZEP) and for the rehabilitation of bleak housing projects in immigrant neighborhoods under the guise of urban policy (‘politique de la ville’) in France. Finally, even racially integrated schools have recently lost much of their appeal in African-American communities (see e.g., the ethnographic study of Gussin Paley, 1995, for schooling).

Far from supporting policies to establish segregated neighborhoods, in this paper, we simply document that the effect of mixed neighborhood on identity formation and socialization might be perverse, because of *cultural defense*.

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³³The failure of the busing and other civil right policies is certainly also due to the whites’ flying from de-segregated schools and neighborhoods.

³⁴Similarly, the Toronto housing program where adults were assigned as children to different residential housing projects (Oreopoulos, 2003) did not give the expected results in terms of education outcomes.

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Table 1: Description of data

		n.obs: 1,565	
<i>Variable</i>	<i>Explanation of the variable</i>	<i>Mean</i>	<i>St.dev.</i>
Identity/Importance of religion	In the text	0.61	0.49
Homogamy	In the text	0.93	0.26
Ward density of own ethnicity	Percentage of residents of the respondent's ethnic group in the ward	13.59	10.76
Age at arrival	Respondent's age in years at arrival in the UK	21.04	10.31
Female	Dummy variable taking value one if the respondent is female.	0.47	0.50
Born in the UK	Dummy variable taking value one if the respondent is born in the UK	0.10	0.30
Arranged Marriage	Dummy variable taking value one if the husband/wife of the respondent has been chosen by the parents.	0.36	0.48
Discrimination	Dummy variable taking value one if the respondent had been insulted or threatened in the last year for reasons to do with race or colour.	0.10	0.30
Children	Dummy variable taking value one if the respondent has children.	0.91	0.29
Years since arrival	Number of years since respondent's arrival in UK.	20.25	11.44
British degree	Dummy variable taking value one if the respondent has a UK degree.	0.21	0.41
British high education	Dummy variable taking value one if the respondent has a UK O-level (or equivalent) or above qualification.	0.16	0.37
Foreign education	Dummy variable taking value one if the respondent has a qualification achieved abroad.	0.28	0.45
Employed	Dummy variable taking value one if the respondent is employed.	0.47	0.50
Manager	Dummy variable taking value one if the respondent is a manager.	0.03	0.161
Employee	Dummy variable taking value one if the respondent is an employee	0.57	0.50
English spoken at home	Dummy variable taking value one if English is the language normally spoken at home with family members (who are older) by the respondent.	0.12	0.33
English spoken with friends	Dummy variable taking value one if English is the language normally spoken with friends (outside work) by the respondent.	0.52	0.50
English spoken at work	Dummy variable taking value one if English is the language normally spoken at work by the respondent.	0.48	0.50
House owner	Dummy variable taking value one if the household owns (or is buying) the accommodation	0.76	0.43
Ward unemployment rate	Ward unemployment rate	14.40	5.22

Table 2: Maximum likelihood results
-Structural approach-
Dependent variable: (1) Identity, (2) Homogamy

	Table 2a		Table 2b	
	Unconstrained likelihood		Cultural defense	
	(1)	(2)	(1)	(2)
c	0.0714***		0.0512***	
	(0.0034)		(0.0054)	
alpha	2.2742**		1.5414***	
	(0.1088)		(0.1535)	
Gamma1	-0.8924***		-0.4757***	
	(0.1820)		(0.1444)	
Gamma2	0.7980***		-	
	(0.0317)			
Age at arrival	0.0172***	0.0207***	-0.0173	0.0220***
	(0.0061)	(0.0062)	(0.0033)	(0.0082)
Age	-0.0203	-0.0201***	0.0067*	0.0019
	(0.0144)	(0.0060)	(0.0037)	(0.0125)
Age^2	-0.0004	-0.0004**	-0.0004	0.0015***
	(0.0003)	(0.0002)	(0.0003)	(0.0003)
Female	0.1028	0.2241**	0.0326	0.0471
	(0.1082)	(0.1086)	(0.0929)	(0.1179)
Born in the UK	0.0082	-0.0101	0.0056	0.0149
	(0.2806)	(0.1292)	(0.1300)	(0.1940)
Arranged marriage	-0.0135	-0.3388***	0.0216	0.0296
	(0.1462)	(0.1325)	(0.0780)	(0.1107)
Discrimination	0.0330	0.2157**	0.0420	0.0632
	(0.1463)	(0.1099)	(0.0958)	(0.1357)
Children	0.0529	0.3008***	-0.0184	0.0894
	(0.1179)	(0.1079)	(0.0606)	(0.1097)
Years since arrival	-0.0031	-0.0083**	-0.0093***	0.0084
	(0.0055)	(0.0035)	(0.0017)	(0.0055)
Years since arrival^2	-0.0004**	-0.0005***	0.0002**	-0.0009***
	(0.0002)	(0.0001)	(0.0001)	(0.0001)
British degree	-0.0601	-0.3172***	-0.0435	0.0035
	(0.2325)	(0.1075)	(0.0759)	(0.2643)
British high education	-0.0122	-0.2323**	0.1059	-0.0355
	(0.1880)	(0.1211)	(0.0978)	(0.1912)
Foreign education	-0.0038	-0.2448	-0.0144	-0.0343
	(0.1416)	(0.1355)	(0.0675)	(0.1254)
Employed	-0.0168	-0.0922	-0.0065	-0.0030
	(0.1859)	(0.1803)	(0.0873)	(0.2295)
Manager	0.0082	0.3625***	0.0207	-0.00008
	(0.1517)	(0.1439)	(0.1111)	(0.1512)
Employee	-0.1866	-0.1032	-0.0372	-0.1320
	(0.1272)	(0.1274)	(0.0699)	(0.1369)
English spoken at home	0.2059	0.3106***	0.0053	0.0577
	(0.1427)	(0.1080)	(0.1115)	(0.1472)
English spoken at work	-0.0025	0.0419	0.0701	0.0081
	(0.1372)	(0.1683)	(0.0707)	(0.1468)
English spoken with friends	0.0304	0.2487**	0.0016	-0.0085
	(0.1193)	(0.1246)	(0.0931)	(0.1405)
House owner	0.0822	0.2072**	-0.0630	0.0628
	(0.1168)	(0.1011)	(0.0807)	(0.1176)
Ward unemployment rate	0.0995***	0.0942***	-0.0260***	0.0113
	(0.0167)	(0.0125)	(0.0024)	(0.0200)
Constrained likelihood	-1446.305			
Cultural defense				
Constrained likelihood	-1635.733			
Cultural conformity				

Table 3: Maximum likelihood results
-Non-structural approach-
Dependent variable: (1) Identity, (2) Homogamy

			Effects of q		
	(1)	(2)		(1)	(2)
Age at arrival	0.0070 (0.0051)	0.0263** (0.0109)	q>33%	-0.0494	-0.0588
Age	0.4783** (0.2407)	-0.1089** (0.1867)	33%<q<25%	-0.0398	-0.0348
Age^2	-0.0078* (0.0040)	0.0007 (0.0027)	25%<q<15%	-0.0182	0.0192
Female	0.1026 (0.0916)	0.1465 (0.1566)	15%<q<10%	-0.0002	0.0642
Born in the UK	-7.7124** (3.5243)	1.9340 (3.1218)	10%<q<5%	0.0118	0.0942
Arranged marriage	0.3992*** (0.0983)	0.9357** (0.3771)	5%<q<2%	0.0214	0.1182
Discrimination	0.0220 (0.1341)	-0.0797 (0.1913)	q<2%	0.0250	0.1273
Children	0.0110 (0.1607)	0.1173 (0.2114)			
Years since arrival	-0.0202 (0.0204)	0.0293 (0.0355)			
Years since arrival^2	0.0003 (0.0004)	-0.0009 (0.0007)			
British degree	0.1247 (0.1157)	-0.5482*** (0.1552)			
British high education	0.3393** (0.1335)	0.2217 (0.1715)			
Foreign education	-0.1033 (0.1009)	-0.0559 (0.1816)			
Employed	-0.2587** (0.1115)	0.0089 (0.1758)			
Manager	0.2872 (0.2367)	-0.0247 (0.3045)			
Employee	-0.6926 (0.0960)	-0.3045* (0.1773)			
English spoken at home	-0.2830** (0.1379)	0.6298*** (0.1928)			
English spoken at work	0.0470 (0.1240)	0.4075** (0.2008)			
English spoken with friends	-0.0502 (0.1111)	0.2099 (0.1883)			
House owner	-0.0358 (0.1193)	0.6545*** (0.1749)			
Ward unemployment rate	0.0428*** (0.0101)	0.0086 (0.0154)			

Notes. Marginal effects at the sample means and (robust) standard errors in parentheses are reported. A constant and regional dummies are included. Results weighted for population proportions. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4: Maximum likelihood results
Muslim sub-sample
-Structural approach-
Dependent variable: (1) Identity, (2) Homogamy

	Table 4a		Table 4b	
	Unconstrained likelihood		Cultural defense	
	(1)	(2)	(1)	(2)
c	0.0576***		0.04661***	
	(0.0059)		(0.0052)	
alpha	2.4764 ***		1.5727***	
	(0.2597)		(0.2878)	
Gamma1	-0.6920**		-0.5925	
	(0.3077)		(0.3996)	
Gamma2	0.8299***		-	
	(0.0743)			
Age	0.0235	0.0744	-0.0313	-0.0340
	(0.0855)	(0.0452)	(0.0818)	(0.0642)
Age^2	-0.0015	-0.0020	0.0010	0.0012
	(0.0041)	(0.0019)	(0.0038)	(0.0024)
Female	0.1894	0.3728	0.2426	0.2065
	(0.2429)	(0.2636)	(0.2606)	(0.2115)
Born in the UK	0.0146	-0.0545	0.0671	0.2809
	(0.4742)	(0.4934)	(0.4624)	(0.2982)
Arranged marriage	0.1943	0.4747**	0.1825	0.4298*
	(0.2512)	(0.2460)	(0.2311)	(0.2317)
Children	-0.0537	0.4261	0.0518	0.3454
	(0.2949)	(0.3066)	(0.2776)	(0.2262)
Years since arrival	-0.0002	0.0156	-0.0027	-0.0002
	(0.0144)	(0.0141)	(0.0175)	(0.0120)
Years since arrival^2	0.00003	0.0003	0.0002	0.0003
	(0.0004)	(0.0005)	(0.0006)	(0.0005)
British degree	0.0159	-0.1766	0.0310	-0.5441**
	(0.2939)	(0.3138)	(0.3598)	(0.2585)
British high education	-0.0037	-0.2545	-0.0635	-0.1536
	(0.4082)	(0.2998)	(0.4047)	(0.3232)
Employed	-0.1830	-0.3026	-0.0242	-0.1377
	(0.3849)	(0.2679)	(0.3286)	(0.2006)
Manager	-0.0266	-0.5059	0.0356	-0.1573
	(0.4429)	(0.4450)	(0.4199)	(0.3245)
English spoken at home	-0.0090	-0.2607	0.0400	-0.0604
	(0.2778)	(0.2868)	(0.2846)	(0.2276)
English spoken at work	-0.0831	-0.6300***	-0.5607*	-0.5645**
	(0.3759)	(0.2364)	(0.3094)	(0.2531)
House owner	0.0290	0.3347	-0.0223	0.3504
	(0.2721)	(0.2103)	(0.2371)	(0.2129)
Ward unemployment rate	0.1452***	0.0772***	0.1469***	0.0791***
	(0.0301)	(0.0180)	(0.0248)	(0.0163)
Constrained likelihood	-503.023			
Cultural defense				
Constrained likelihood	-650.306			
Cultural conformity				

Table 5: Maximum likelihood results
Muslim sub-sample
-Non-structural approach-
Dependent variable: (1) Identity, (2) Homogamy

			Effects of q		
	(1)	(2)		(1)	(2)
Age	0.3093 (0.5523)	-1.7055 (1.2966)	q>33%	-0.0357	-0.1242
Age^2	-0.0057 (0.0101)	0.0262 (0.0221)	33%<q<25%	-0.0285	-0.0922
Female	-0.0864 (0.1726)	0.2051 (0.3415)	25%<q<15%	-0.0123	-0.0202
Born in the UK	-4.3430 (7.3333)	24.4610 (18.5582)	15%<q<10%	0.0012	0.0398
Arranged marriage	0.4201*** (0.1425)	0.5314* (0.2877)	10%<q<5%	0.0102	0.0798
Children	0.4970* (0.2640)	1.3659*** (0.3758)	5%<q<2%	0.0174	0.1118
Years since arrival	-0.0117 (0.0340)	-0.1932** (0.0967)	q<2%	0.0201	0.1239
Years since arrival^2	-0.00002 (0.0008)	0.0037** (0.0018)			
British degree	0.0178 (0.2479)	-0.2006 (0.3542)			
British high education	-0.2607 (0.2425)	-1.3034*** (0.3777)			
Employed	-0.3135 (0.1985)	-0.0161 (0.3353)			
Manager	-0.3952 (0.3795)	0.9972 (0.6373)			
English spoken at home	-0.7777*** (0.2724)	-0.2911 (0.4476)			
English spoken at work	0.1621 (0.1990)	-0.7788* (0.4267)			
House owner	-0.0590 (0.1727)	0.3203 (0.3235)			
Ward unemployment rate	0.0275* (0.0164)	0.0278 (0.0316)			

Notes. Marginal effects at the sample means and (robust) standard errors in parentheses are reported. A constant and regional dummies are included. Results weighted for population proportions. * significant at 10%; ** significant at 5%; *** significant at 1%.

Figure 1: Identity and homogeneity as a function of neighborhood composition-
controlling for covariates; whole sample

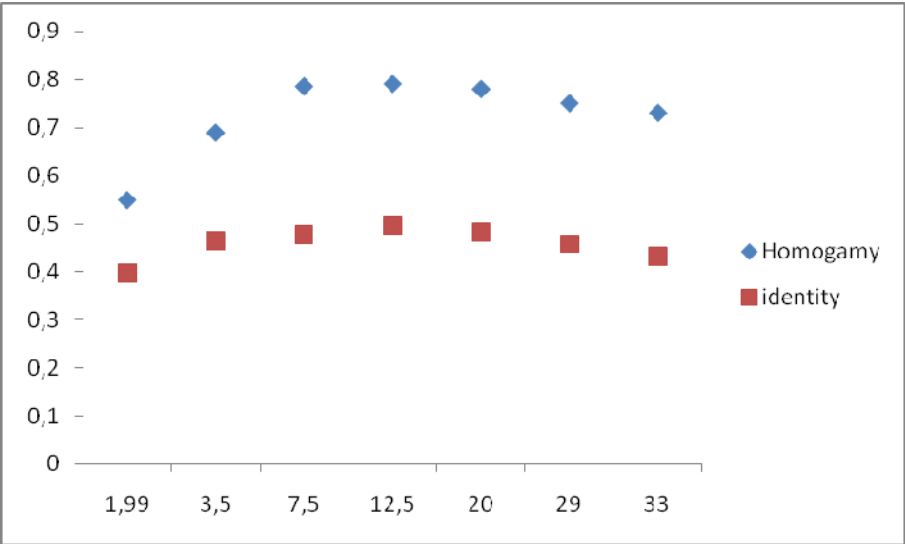


Figure 2: Identity and homogeneity as a function of neighborhood composition-
controlling for covariates; Muslim sub- sample

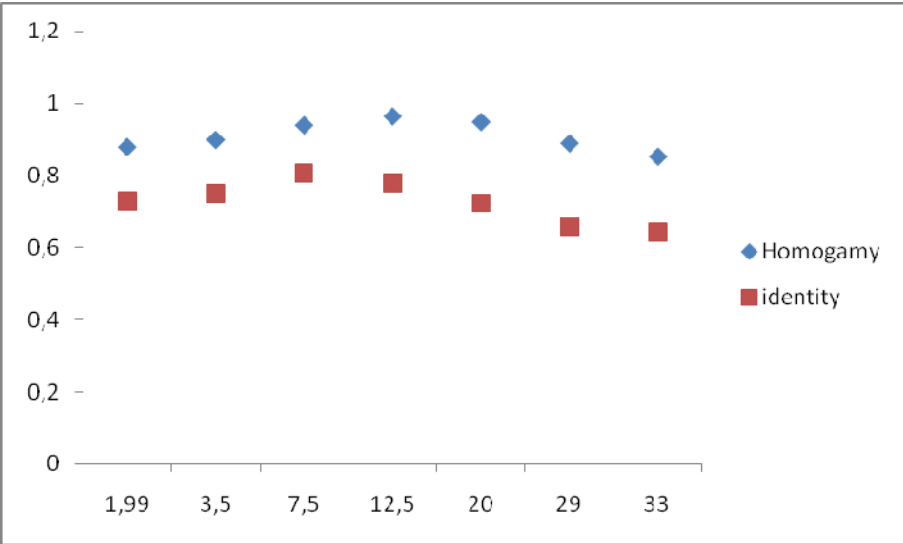


Figure 3 Predicted Identity as a function of time spent in the UK

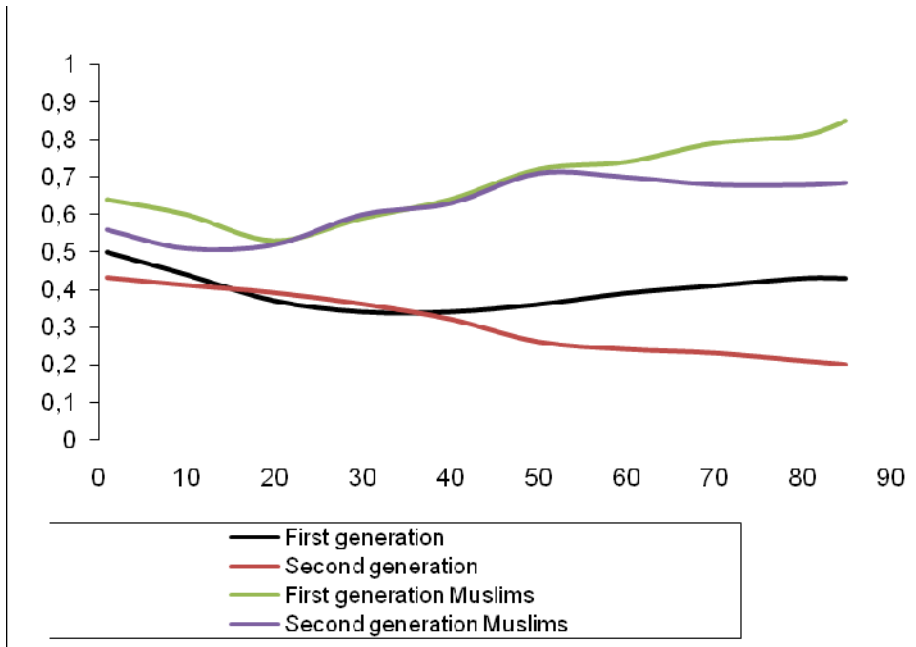


Figure 4 Predicted Homogamy as a function of time spent in the UK

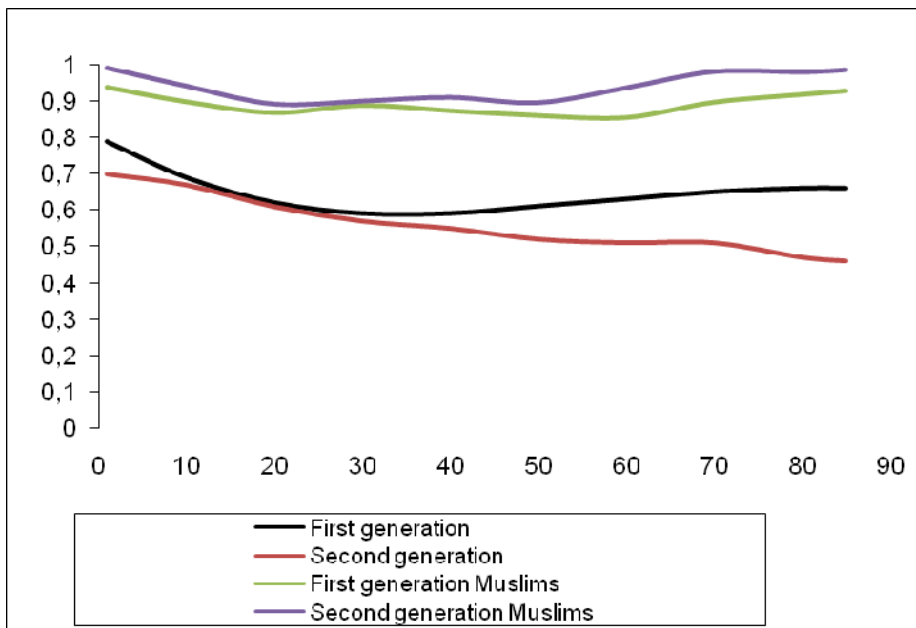
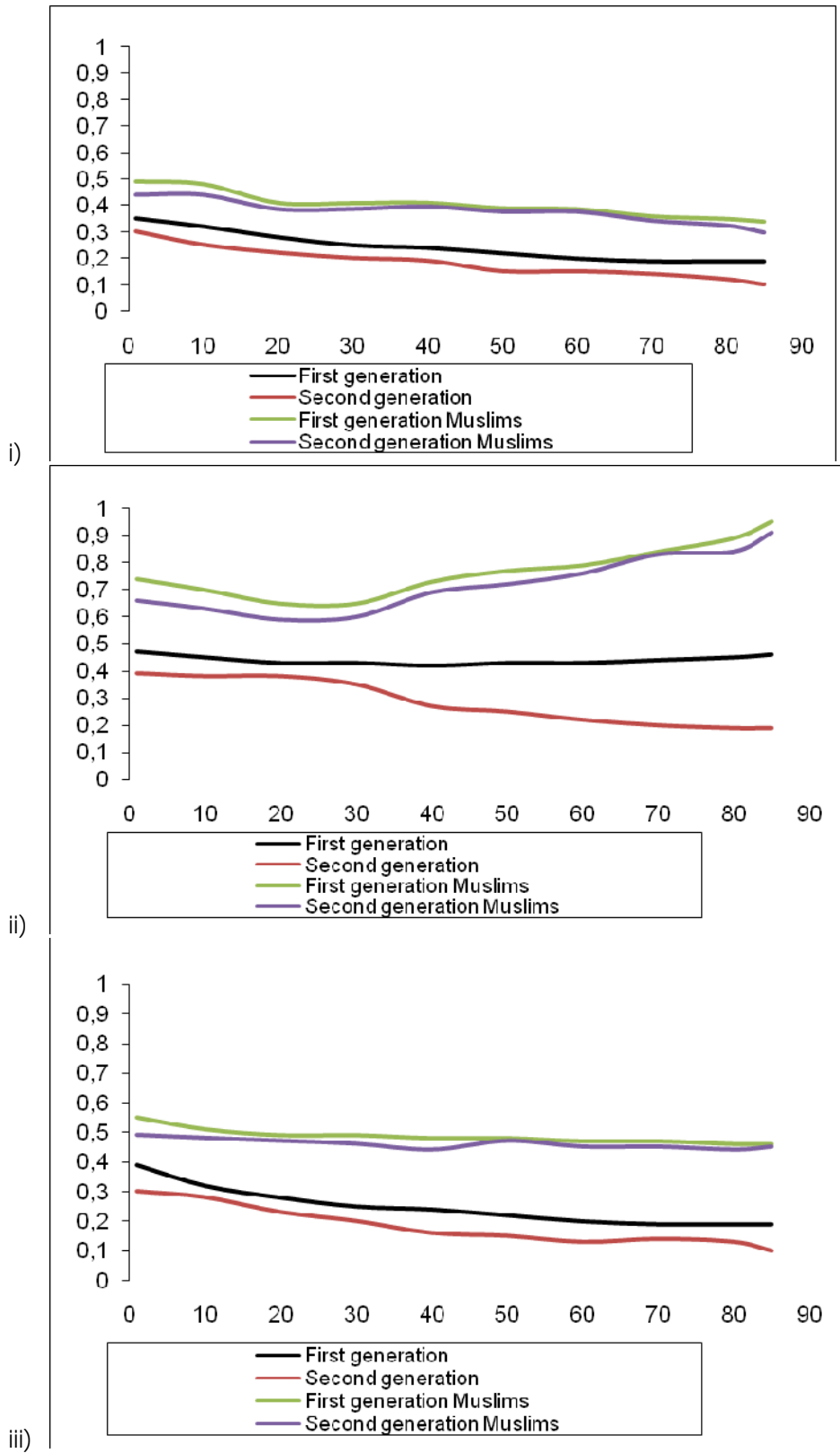


Figure 5 Predicted Identity as a function of time spent in the UK – i) at minimum q , ii) at average q , iii) at maximum q



iv) Figure 5 Predicted Homogamy as a function of time spent in the UK – i) at minimum q, ii) at average q, iii) at maximum q

