# Minority Segregation Processes in an Urban Context: a Comparison between Paris and Rome

## *Recent trends in ethnic segregation in cities: Paris and Rome compared*

**Abstract** The process of minority segregation within global cities is a complex phenomenon. In the European urban context, the process of minority segregation seems to differ in the old immigration countries (France, UK, Netherlands, Germany) from the new immigration countries (Italy, Greece, Spain, Portugal). The analysis compares two global cities (Paris and Rome), taking into consideration the current evolution of the minority segregation pattern. The study shows that no traces of increasing segregation emerge in either of the cities.

**Abstract** Il processo di segregazione delle minoranze etniche assume caratteristiche diverse nei paesi di antica immigrazione (Francia, Gran Bretagna, Paesi Bassi, Germania) rispetto a quanto osservato in quelli di nuovo accoglimento (Italia, Spagna, Grecia e Portogallo). L'analisi condotta nel contributo mette a confronto due città globali (Parigi e Roma, aree urbane appartenenti a due diversi gruppi di paesi tra quelli citati) che ospitano una consistenza presenza straniera. Contrariamente alle attese non sembra emergere un aumento della segregazione etnica nelle due città, dove anzi sembrerebbe manifestarsi un contenimento delle differenze tra le modalità insediative della popolazione straniera e di quella autoctona.

**Key words:** Minority residential segregation, Paris and Rome comparison, isolation and dissimilarity index

## 1 Introduction

Paris and Rome are global cities with large foreign populations[1], currently amounting to about 1.8 million in Paris (in 2007 18% of the total population) and 334 thousand in Rome (or 8.2% in 2011: Table 1). Both urban areas had seen an increase in the foreign population, moderate in Paris, quite striking in Rome. The

[1] The territory considered in this study is not limited to the municipalities of Paris and Rome alone, but extends further over what is defined as is the urban area. It is generally recognised that study of the residential inclusion of foreign populations cannot be limited to the core given the tendency of foreigners to settle also in the outlying areas. In the paper we use the definition of *aire urbain* for Paris, according to the official INSEE (Institut National de la Statistique et des Études Économiques) proposal. We create a *metropolitan area* for Rome, which includes the Rome municipality itself and three strata of contiguous municipalities. In sum 104 municipalities were included.

city has always exerted a force of attraction for the newly arrived, who tend to settle on the basis of spatial localisation models so characteristic that they have been widely addressed in the literature (Préteicelle, 2009; Barbagli and Pisati, 2012).

The aim of this study is to compare the two settlement models, seeking to detect some aspects regarding the territorial process of assimilation of the foreign population. The focus of interest has thus shifted to analysis of the recent dynamics of the territorial integration process shown by the foreign population in the urban areas of Paris and Rome over the last twenty years. In both cities we observe the spatial integration process by analyzing the what is termed the *de jure* population.

**Table 1:** Dynamic of de jure foreign population from '90 to '10. Paris and Rome urban areas. Absolute and percentage values.

| *Years* | *Paris Urban Area* | | *Years* | *Rome Urban Area* | |
|---|---|---|---|---|---|
| | *Absolute value* | *%* | | *Absolute value* | *%* |
| 1990 | 1,379,808 | 14.9 | 1991 | 55,496* | 2.3 |
| 1999 | 1,606,359 | 15.5 | 2001 | 131,706 | 3.5 |
| 2007 | 1,790,582 | 18.0 | 2011 | 334,432 | 8.2 |

*Note*: 85,619 de facto foreign population*
*Source*: population censuses, various years.

## 2 Data and Methods

The analysis proposed is based on data from the three last censuses. Different criteria are applied to define what is meant by foreign population: in Italy we consider citizenship, while in France the definition of *immigré* is used, an immigrant being defined as an individual born abroad from parents both lacking French citizenship at the moment of birth.

Two measures were used to analyze the territorial distribution of foreign population:
a. the index of dissimilarity (ID), a measure of *evenness* (Massey and Denton, 1988) which compares an observed spatial distribution to a theoretical, absolutely even distribution. The Index is defined as:

$$D = 0,5 \sum_i |A_i/A - N_i/N|$$

where, in our case, $A_i/A$ represents the share of the population belonging to group A in urban zone i[2], while $N_i/N$ similarly refers to the autochthon population;

[2] The territorial grid used in the study includes *IRIS* in Paris, the *Ilots Regroupés pour l'Information Statistique*, a socio-spatial division equivalent to a census tract introduced by INSEE (see, for the definition, Pan-Ké-Shon and Verdugo, 2015). As far as Rome is concerned, we used two territorial grid levels: first, a macro one including the 122 urban zones - or *toponomastic zones* - in which the Rome municipality is subdivided plus the 103

b. the isolation index (IS), a measure of the degree of *exposure* of each subgroup in each area of residence (Bell, 1954; Pan Ké Shon and Verdugo, 2015). The index was calculated – for each urban zone - as the subgroup-weighted mean of the subgroup proportion. In formal terms, with $P_i$ that represents the amount of the population in urban zone i:

$$IS = \sum_i A_i/A \times A_i/P_i$$

The isolation index is particularly sensitive to the size of the group examined, and it is therefore difficult to make longitudinal and cross-sectional comparison among groups unless they are constant as size in time and space. To try to correct this measure we calculate an adjusted isolation index ($IS_a$) simply calculating the difference between the observed IS and the expected IS, that of the overall population, assuming an even distribution of the subgroup. For example, let us suppose that the overall percentage of the group out of the total population is 10% and that IS yields the value of 30%; in other words, that the probability that a member of our ethnic subgroup meet another member of the same subgroup, calculated considering the different weights of this population in each of the zones, is three times that obtained by simply considering the population as a whole. In this case, the difference between the IS and the proportion of the subgroup in the population is 20%. The more uneven the distribution of the subgroup across the city proves, the higher will be the value of the IS, and thus also the difference shown by the latter with respect to the proportion of the subgroup in the overall population.

## 3 Results

Paris showed considerable variability in the dissimilarities between the various groups. The territorial model for Turks proved the most distant from that of the native population, while that of the European community's came closest. The dynamics over the period 1990-2007 showed no significant variations. An appreciable reduction of dissimilarity was observed in the case of the North African community, while the communities showing greater similarity reveal a tendency towards differentiation over time (Table 2)[3]. This stability is relatively surprising given the large increase in the relative number of non-European immigrants over the period.

Several mechanisms can explain these results but an important change mentioned in the recent literature is the generalization of the access of immigrants to public housing, which had two main consequences. First, it decreased the most extreme forms of segregation which where correlated with quite difficult housing conditions (Verdugo, 2011). Second, it decreased the share of immigrants locating in Paris

municipalities surrounding Rome; second, a micro territorial grid including census blocks in which at least one resident is counted in census years.

[3] Considering the adjusted version of the Dissimilarity Index (for the sake of brevity not reported here), on checking for the random component of the territorial distribution (see Pan-Ké-Shon and Verdugo, 2015) no trace of increase emerges in the 1990-2007 years in the index constructed for Italians and Spanish immigrants (on the contrary, the index shows a decrease).

region as immigrant tend to choose increasingly to locate in regions where public housing was more easily available (Verdugo, forthcoming).

**Table 2**: Dissimilarity Index by national origin and geo-cultural origin. Paris Urban Area. 1990-2007

| *National and geo-cultural origin* | *Observed indices* | | |
|---|---|---|---|
| | *1990* | *1999* | *2007* |
| Algeria | 38.6 | 37.6 | 36.6 |
| Morocco | 38.8 | 37.8 | 36.3 |
| Tunisia | 39.4 | 38.3 | 36.2 |
| Turkey | 55.3 | 58.4 | 55.1 |
| Italy | 29.7 | 33.2 | 32.2 |
| Spain | 29.1 | 31.5 | 31.2 |
| Portugal | 25.8 | 27.4 | 28.2 |
| | | | |
| Sub-Saharan Africa | 38.8 | 35.0 | 35.4 |
| North Africa | 34.3 | 34.0 | 34.0 |
| East Asia | 40.7 | 39.5 | 37.2 |
| Middle East | 37.3 | 40.5 | 36.8 |
| South Europe | 20.3 | 22.6 | 22.7 |
| Other European | 28.7 | 28.9 | 28.8 |
| Total | 22.1 | 22.6 | 23.6 |

*Source*: French Population Censuses, various years.

Rome showed a decidedly sharp fall in the dissimilarity index over the 20-year period 1991-2011. This finding is borne out both by the evidence of analysis applied to the macro-zones (i.e. the 122 urban zones into which the Rome municipality is divided plus the 103 municipalities in its hinterland) and on constructing the indicator at the level of census blocks (Table 3)[4].

Analysis of the isolation index also yields results quite consistent with the dissimilarity analysis. In this case, following the method previously described (see above), the difference between the IS value observed and the percentage of foreigners out of the total population is analysed. In fact, considering that the isolation index is particularly sensitive to the size of the foreign percentage in the population (which itself accounts for an increase in the index), the index reflects fairly closely the exposure dynamics of the groups studied if considered net of the percentage of each group in the total population.

[4] Similar results were obtained by Heins and Strozza (2008: 582) and by Barbagli and Pisati (2012: 257).

**Table 3**: Dissimilarity and Isolation Index by geo-cultural origin. Rome Area. 1991-2011

| *Groups* | *Dissimilarity Index (D)* | *Isolation Index (IS) [1]* | *% [2]* | *Difference [1] - [2]* |
|---|---|---|---|---|
| | | *1991* | | |
| Total | 28.3 | 2.7 | 1.5 | 1.2 |
| by census block | 57.0 | 6.2 | 1.5 | 4.7 |
| | | *2001* | | |
| Europe | 19.9 | 2.6 | 1.6 | 1.0 |
| Africa | 21.4 | 0.9 | 0.5 | 0.4 |
| America | 24.0 | 0.8 | 0.5 | 0.3 |
| Asia | 33.8 | 1.8 | 0.8 | 1.0 |
| Total | 18.2 | 5.0 | 3.5 | 1.5 |
| by census block | 43.7 | 9.8 | 3.5 | 6.3 |
| | | *2011* | | |
| Total | 14.4 | 9.7 | 8.2 | 1.5 |
| by census block | 34.8 | 16.5 | 8.2 | 8.4 |

*Source:* Italian Population Census

As far as Paris is concerned (Table 4), a slight increase in the isolation of the foreign population emerges (IS ranging from 18.6% in 1990 to 22.3 in 2007), but once measurement is adjusted no such increase is observed. Moreover, the index level also appears relatively low (about 4%: Table 4), and extremely low in the case of the long-established European communities, namely the Spanish (0.3 in 2007) and Italians (0.4), as well as the Tunisians (0.9 in the last year).

In the case of Rome, over the period between 1991 and 2011 a significant increase in IS is observed (from 2.7 to 9.7%: Table 3), but it practically disappears when the values of the adjusted index are considered. It is, however, worth noting that the trend of the index constructed at the level of census blocks shows a systematic increase over the period in terms of both the index and the adjusted value. This datum hardly fits in with the pattern previously observed; it will be further investigated with closer analysis (see Table 3).

In Paris at 2007 a small percentage of immigrants live in neighbourhoods with a high percentage of foreigners: bearing in mind the definition of a segregated neighbourhood as an area with at least 30% of foreigners, this applies to 26% of the foreigners in Paris (Figure 1), while the majority lives in areas where this percentage is less than 30% (about 40% of the foreigners lives in areas where the foreign population percentage ranges from 15 to 25%).

**Table 4:** Isolation Index by national origin and geo-cultural origin. Paris Area. 1990-2007

| *National and geo-cultural origin* | *Observed indices [1]* | | | *% on total population [2]* | | | *Difference [1]- [2]* | | |
|---|---|---|---|---|---|---|---|---|---|
| | *1990* | *1999* | *2007* | *1990* | *1999* | *2007* | *1990* | *1999* | *2007* |
| Algeria | 4.4 | 3.9 | 4.6 | 2.1 | 2.1 | 2.5 | 2.3 | 1.9 | 2.1 |
| Morocco | 3.9 | 3.9 | 4.2 | 1.4 | 1.6 | 2.0 | 2.5 | 2.3 | 2.2 |
| Tunisia | 2.1 | 1.9 | 1.8 | 0.9 | 0.9 | 0.9 | 1.2 | 1.0 | 0.9 |
| Turkey | 2.8 | 3.5 | 3.2 | 0.4 | 0.5 | 0.6 | 2.4 | 3.0 | 2.6 |
| Italy | 1.3 | 1.1 | 1.0 | 0.8 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 |
| Spain | 1.3 | 1.0 | 0.8 | 0.8 | 0.6 | 0.5 | 0.5 | 0.4 | 0.3 |
| Portugal | 3.7 | 3.7 | 3.4 | 2.5 | 2.4 | 2.2 | 1.2 | 1.3 | 1.2 |
| Sub-Saharan Africa | 3.9 | 4.1 | 5.9 | 1.6 | 2.2 | 3.2 | 2.3 | 1.9 | 2.7 |
| North Africa | 8.0 | 7.9 | 9.0 | 4.4 | 4.5 | 5.4 | 3.6 | 3.4 | 3.6 |
| East Asia | 5.0 | 5.4 | 5.7 | 1.4 | 1.8 | 2.2 | 3.6 | 3.6 | 3.6 |
| Middle East | 2.8 | 3.2 | 3.0 | 1.1 | 1.0 | 1.1 | 1.7 | 2.2 | 1.9 |
| South Europe | 5.1 | 4.8 | 4.3 | 4.0 | 3.5 | 3.2 | 1.1 | 1.3 | 1.1 |
| Other European | 2.8 | 2.8 | 3.1 | 1.8 | 1.8 | 2.0 | 1.0 | 1.0 | 1.1 |
| Total | 18.6 | 19.3 | 22.3 | 14.9 | 15.5 | 18.0 | 3.7 | 3.8 | 4.3 |

*Source*: French Population Censuses, various years

In Rome over 60% of the foreigners live in areas where the foreign population percentage ranges from 5 to 10% (2011), and only a very small percentage (less than 2%) is concentrated in zones showing over 25% (Figure 1).

## 4 Discussion

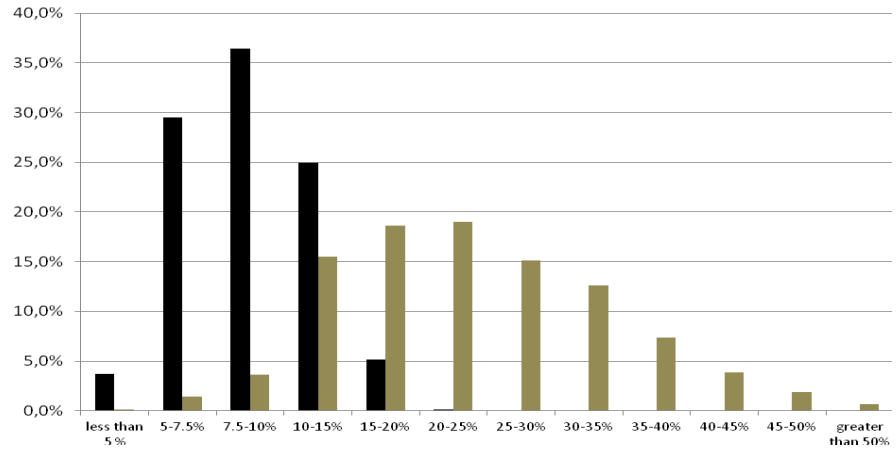
We can therefore consider trends in segregation in Paris and Rome over the last twenty years within a single framework. No trace of increasing of segregation emerges in these two areas: neither of the segregation indexes shows an increase in segregation for the foreign population as a whole. Moreover, where it is possible to carry out dynamic analysis distinguishing amongst the nationalities of the groups under examination – at the moment, only in the urban area of Paris – segregation shows a generally declining trend, more notable among the groups from Maghreb.

Thus the urban area of Paris, too, appears to show the same pattern of trends in segregation observed, according to some authors (Pan-Ké-Shon and Verdugo, 2015), for the urban areas of France as a whole.

Nevertheless, as for the rest of the country, there remain large differences between European and non-European immigrants. In a context in which the relative share of European immigration decreased rapidly, this has led to an overall moderate increase in immigrant segregation levels in Paris.

More importantly, recent research suggests that second-generation immigrants from non-European origins tend to concentrate disproportionately on neighbourhoods in which first-generation immigrants are already overrepresented. This has potentially led to an increase in the share of neighbourhoods concentrating inhabitants from non-European origins. However, these evolutions are difficult to measure empirically as information on second-generation status is not available in the French census data.

**Figure 1:** Distribution of immigrant groups by share of immigrants in each zone (IRIS in Paris, urban zone plus municipalities in Rome). Paris (2007: in gray) and Rome (2011: in black).




The first findings thus appear to bear out the conclusions arrived at in analysing segregation in Italian cities (Barbagli and Pisati, 2012) over a shorter period (the last decade) with a reference to a more limited territory of than considered here (not the urban areas but only the municipal areas). In general, the authors argue that the moderate fall in the level of segregation observed between 2001 and 2011 is not to be accounted for with variables like the rate of increase in immigrant communities or the geographical areas of origin (*ibid*, 253). We may conclude that the recent moderate changes in the global levels of residential segregation of foreigners are not clearly attributable to any factors that can be identified with a reasonable degree of certainty. In the case of Paris, too, factors are at work that are difficult to identify at this aggregate level of analysis, while it has emerged fairly evidently that the classical explanatory factors such as the length of residence play mostly marginal roles[5].

It is, moreover, to be borne in mind that the analysis is presented here is limited to comparing recent trends in segregation between Paris and Rome, without being able

[5] «La ségrégation ne baisse que faiblement avec l'ancienneté de l'arrivée des immigrés en logement privé (… et …) les taux de ségrégation moyens ne diminuent que faiblement au fil du séjour en France pour les personnes vivant en logement social» (Verdugo, 2011: 188).

to address comparison *between the levels*. In any case, comparison between the levels of segregation in the two urban areas cannot be performed on the basis of construction of the indexes proposed insofar as the indexes are affected by the numerousness, form and extensiveness of the territorial units taken for analysis. Further stages of research will see the possibility to define measurements that can conform to the rules for generalisation of segregation level assessment over time and in different areas. This possibility lies, we believe, both in the definition of spatial association measurements and in some recent contributions based on social interactions (Echenique and Fryer, 2007).

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