New facets of social segregation in Athens: urban development, geographical mobility and gender.

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ABSTRACT

The main aim of this paper is to explore how interacting gender and ethnic changes in the labor market as well as changes in patterns of residential mobility since the 1990s contribute to shaping new forms of socio-spatial segregation in Athens. To capture these dynamics, first we examine changes in the occupational structure and in segregation indexes from 1991 to 2001 according to a classification of Esping-Andersen, modified so as to take into account the complex occupational hierarchies of the Southern European welfare regimes. Findings suggest that new gender and ethnic divisions in the occupational structure combine with residential mobility and introduce tendencies towards spatial fragmentation. Then we present, four crucial sets of intra-urban and migratory flows which reflect diversified occupational trajectories among women: a] Location of migrant domestic and unskilled service workers to central city and southern suburban areas, b] Greek managers and professionals, moving to “upper class suburbs”, c] Small Greek entrepreneurs and independent workers sprawling to peri-urban areas, d] Sales persons and clerks moving to inner suburban areas. We conclude by emphasizing that although polarizing trends due to occupational changes are evident, it is also necessary to further consider at smaller scale familial and informal arrangements which shape the welfare strategies of both stayers and movers.

KEYWORDS: SEGREGATION, GENDER, POLARISATION, IMMIGRATION, SOUTHERN EUROPE

(A) Introduction

(B) Insights from the international literature

In the early 1990s the famous social polarisation thesis (Sassen 1991, Mollenkopf & Castells 1991 among the most influential works) induced a new theoretical impetus for research in social segregation by highlighting how specific processes of economic restructuring and labour market changes affect the social and spatial structures of the so-called ‘global’ or ‘world’ cities. Hamnett’s (1996, 2004) contribution has been pivotal in addressing the importance of welfare regimes in shaping the social outcomes of economic restructuring and in elaborating the
distinction between professionalisation and polarisation. In Europe, the debate was taken forward with many authors emphasising welfare regime mediation to explain different patterns of spatial inequality affected by economic restructuring in cities further off the liberal context of the ‘global city’ (reviews by Maloutas 2004, Musterd and Ostendorf 1998). To reflect upon the international debate, this paper draws on feminist critiques and explores some of the gendered processes of occupational and urban restructuring that have attracted limited attention in the literature of segregation in the metropolises of the European South, as is Athens, the city of our study.

As feminist critiques successfully elaborated (McDowell 2005, Perrons 2004, Bruegel 1996, 2000), the gendered processes of restructuring introduce a complex set of occupational inequalities and strategies of social reproduction, which the initial formulations of both the ‘global city’ and the ‘welfare regime’ theorisations have not taken into account. Similarly, arguments that global processes alone cannot fully explain the rise of inequalities unless the gendered structure of occupations and transnational migration are taken into account have been supported by empirical findings (e.g. Baum 1997, Yeoh, Huang & Willis 2000). Noteworthy, Sassen gradually paid closer attention to the role of women in global migration circuits and to inequalities among women resulting from labour market dualisms and the casualisation of employment in service industries (Sassen 1998, 2002, 2003).

Moreover, labour market deregulation and commodification of domestic labour, as a form of de-familialisation of social policies, may also accentuate inequalities amongst women (McDowell 2006, McDowell et al 2005). A crucial question is whether ‘welfare regime’ concepts and occupational categories adequately handle the ethnic dimension of restructuring, particularly as long as migrant women to
Europe have rarely been the focus of welfare policies, although they themselves are increasingly involved in the provision of welfare.

Last but not least, polarisation is often studied in terms of socio-economic processes and outcomes, e.g. changes in the occupational structure incomes and opportunities, not in terms of spatial processes and outcomes, e.g. gentrification and housing inequalities (Hamnett 1996, 2004, Musterd 1998, and Maloutas 2004 elaborate on this). Spatial polarisation implies that social (class, ethnic, and gendered) segregation across city areas intensifies and conversely social mix weakens. Enhancing segregation or social mix is dependent upon two factors closely related to mobility: changes in the spatial division of labour (jobs) and changes in the allocation of residential space (housing). Welfare regime theorizations have been primarily concerned with real estate and housing allocation mechanisms and only sporadically have considered mobility as a potential form of spatial and gendered transformations mainly by focusing on gentrification processes (Bondi 1991, Hamnett 1991, Hamnett 2004). It so appears that global city theorizations were more receptive to new sociological accounts emphasizing the role of human, financial, and symbolic flows in shaping a post-fordist social and spatial order (Castells 1996, Lash and Urry 1994, Urry 2004). Yet, in such accounts, the impact of enhanced mobility and social class positions upon women’s lives are either ignored or schematically portrayed (McDowell 2006, Adkins 2004).

We would argue that processes of urban restructuring such as suburbanization, gentrification, and sprawling involve residential mobility as a means of achieving distinct modes of social reproduction, each of which connects ‘work’ (indeed various forms of work) and ‘home’ (indeed different kinds of homes) (McDowell et al 2006, Gregson, Simonsen & Vaiou 1999). Consequently, women across different
occupational and ethnic lines try to make the connections, have diversified goals and means to achieve them. As has been gradually recognized in empirical research, the gendered processes of segregation depend on historically and geographically varied, symbolic and material, forms of separation and boundaries between work and residential space (McDowell 1993, Bondi & Rose 2003). Mobility is but one of the means of coping with such separations, as appears in several respects (residential mobility, commuting and transportation) and so it is worth exploring if inequalities in mobility supplement other forms of inequality.

(B) Athens in the Southern European literature: questions, methods and data

Research into segregation in southern European cities has been enhanced to include socio-ethnic processes since the mid nineties when the metropolises of the South register as destinations of transnational migrants (Arbaci 2002, 2004, Maloutas & Karageorgiou 2001, Malheiros 2002, 2004, Lazaridis & Psimmenos 2000, Leal 2004, Petsimeris 1995). The inclusion of southern European cities in the circuit of transnational migration has been linked to a distinctive model of development and social reproduction whose predominant features are informality and labour market segmentation in an expanding service sector, casualisation of work and specialisation of labour market niches on the basis of ethnic characteristics (King et al 2000, King Fielding & Black 1997, Mingione & Quassilli 1997). Intersections of gender, ethnicity, and class have also been emphasized in qualitative studies across various southern European cities explaining the placement of women migrants into local niches of domestic work, the entertainment and sex industry (cf. the collection of papers by Anthias & Lazaridis 2000).

In the case of Greece, a number of recent studies (e.g. Cavounidis 2003, Maratou-Alipranti & Fakiolas 2003, Tastgoglou & Hadjiconstanti 2003) have
documented the economic and social vulnerability of female migrants exacerbated by casual employment relationships. Less attention was paid to the significance of spatiality for their social integration, with notable exceptions studies that highlight forms of segregation of Albanian women in inner city Athens (Psimmenos 2000, Lazaridis & Psimmenos 2000) or informal interactions with local women that facilitate social integration in Athenian neighbourhoods (Vaiou & Lykogianni 2006, Vaiou & Stratigaki 2006).

Nonetheless, the lack of sub-regional or intra-urban data covering changes throughout the past decade has constrained efforts to link macro and micro socio-economic changes. So from an empirical point of view there is a lacuna in the examination of gender and ethnic differences in the spatial division of labour and in the allocation of residential space across Southern metropolitan economies. This has profound implications since it restraints the theoretical framework upon which the bulk research on segregation is founded and also deprives case studies or qualitative research of rich macro scale information. This paper in part addresses this empirical gap by examining gender and ethnic changes in the occupational and spatial structure of Athens utilising data from 1991-2001 censuses, available at the spatial database of the Institute of Urban and Rural Sociology at the Greek National Centre for Social Research (hereafter IURS-NCSR).

The first question we attempt to answer is if economic restructuring has significantly affected the occupational structure of the Greek capital and whether women of different ethnic origin are placed within a polarised occupational structure. Compiling data from the 1991 and 2001 censuses we created a set of six occupational (6) categories based on Esping-Andersen’s classification (1993, 1999) modified as to as to take into account the complex occupational hierarchies and transformations of
the Southern European regimes including feminization of employment and casualisation of migrant labor (Mingione 1996, Mingione and Quassoli 1999). This classification was constructed following the instructions used for a more detailed Esping-Andersen’s social class scheme compiled for the European Social Survey waves (Leiusfild, Bison & Jensberg 2005). The resulting six occupational categories are disaggregated by sex and nationality. Greeks and Cypriots appear separately from nationals of all different countries. Given the macroscopic purposes of this paper and since the vast majority of the foreign population residing in Athens comprises of economic migrants, a finer distinction has not been applied.

Having established a broad picture of the most significant occupational changes, we turn to test if they also take a spatial form. To this purpose we examine changes in multi-group and two-group spatial segregation indices from 1991 to 2001 (Wong 2001, 2003a, 2003b, formulae in the appendix). All such indices are global measures, i.e. they provide a summary for changes that have occurred during the decade for the entire metropolitan area. Multi-group indices compare segregation between the total employed population and the total employed female population for all possible pairs between the six occupational categories. Two group measures concern segregation patterns between distinct pairs of the six occupational categories of women only. Units for the spatial analysis are 123 municipalities (local government entities) which can be taken to form the wider Athens metropolitan area.

Third we examine mobility as a particular strategy of social reproduction, a practice through which women handle, amongst other purposes, the divisions between work and residential space in contemporary capitalist cities. Such an approach enriches the conceptual categories of welfare regime theorizations and also provides linkages to wider themes of urban restructuring. Not only it may explain systemic
interdependencies between land allocation mechanisms and employment structures, but opens up the possibility for identifying their interlacing with different social and spatial subjectivities across and within cities.

In the trajectory of Southern European Cities the so called ‘employment linkage’ implies that people reside close to their place of work, that some social groupings actually built the city by maintaining this connection, and this historically resulted into a diffused model of industrialisation, and a sectoral pattern of segregation (Leontidou 1990). In this context, the boundaries between the spheres of production and social reproduction were constructed within households and, often, via mediation of patriarchal relations. But immigration and enhanced intra-urban mobility (Arapoglou 2006, Sayas 2006) are processes of contemporary cities in the South, signifying a profound change in such connecting practices, and a reshaping of their social geography.

To draw this analytical course, distinctions between various types work, residential space, and mobility are necessary. For the purpose of this paper we disaggregate between the total number of all foreign nationals and Greek women of different occupational categories who have moved into a given municipality after 1995 irrespectively of their prior residence. A detailed exploration of the data suggests that for the vast majority of Greek women these numbers represent intra-urban flows. For the majority of women immigrants these numbers represent direct transnational flows; a significant minority reports residence prior to 1995 in other areas outside Attica, but not many a change of residence within the metropolitan area. Our goal is to identify and analyse key flows revealing how the occupational transformations across gender and ethnic lines are linked to different urban processes. More specifically, to show how the occupational positions of women and their ethnic
background influence their destinations, and how, in a wider time span, their
decisions and practices contribute in shaping distinct city forms. A detailed
elaboration of movement across multiple time-space scales, ethnic origins, and
household arrangements would enrich the framework we suggest.

(A) Economic and occupational restructuring: some evidence for polarizing trends

Since the decade of the 1990s the regional economy of Attica has experienced
a process of change reinforcing segmentations across and within manufacturing and
service industries (Kandylis, Arapoglou & Maloutas forthcoming, Sayas 2004).
Traditional manufacturing sectors, such as textiles and garments, remained stagnant
exhibiting minimal technological upgrade and productivity enhancement, whilst the
growth of printing, publishing, and the food industry was stipulated by responding to
the demand of localised sub-regional markets. At the same time the so called FIRE
knowledge intensive services have experienced significant rates of productivity and
profit growth although they were largely confined to the boundaries of the Greek
national market. Smaller employment and productivity increases have also been
recorded in constructions, due to the Olympic Games and public works, and in low
knowledge intensive services, such as tourism and recreation.

This picture does not conform to the portrait of Global city but does not
undermine Sassen’s (1991, 1998) argumentation that contemporary inequalities are
founded upon the differentiated profit-making capacities and internationalization of
economic sectors and upon segmentation of service employment. We can therefore,
expand to examine the effects of such changes in the occupational structure of the city.

Table 1 presents the six categories of the suggested classification and Table 2
reports the changes in occupational categories that took place between 1991 and 2001
The second column in Table 2 includes the shares of individuals in occupational categories according to the results of the ESS concerning 21 countries (Leiusfuld, Bison & Jensberg 2005), as we have elaborated them for comparative purposes. The occupational structure is drastically different in Athens than the overall structure of a presuming ‘European society’ and important changes seem to have occurred during the last decade.

The most significant difference concerns small business owners, independent crafts, and farm owners (Category D). Their share in Athens appears to be three times more than their relative share in other European countries. This reflects the large number of small business, crafts and independent workers associated with a model of diffused industrialization and atypical forms of work that we believe our classification has succeeded to capture. Also, the same occupations have recorded the highest rate of decline since 1991. In other words, the most expansive class is shrinking following the contraction of the small capitalist production in manufacturing. The same contraction is, however, not recorded for “manual production & construction workers and farm workers” (Category C) although their numbers have increased at a slower rate than the numbers of other occupations.

Second, the so-called “managerial” and “professional” classes (A and E respectively) are of a lesser magnitude in comparison to Europe (even if one considers the inflation of semi-professionals and welfare professionals in the public sector). Moreover, the rate of employment growth in these occupations is not adequate to change their relative share in the whole occupational structure neither does it reach
the levels of other European societies. This is particularly true for managerial positions which overall record a small but unexpected decline. Hence, trends for ‘professionalisation’ are rather weak.

Nonetheless, at the same time, sales and clerical occupations have rapidly expanded to reach shares above those recorded for the European countries of the ESS. In the initial Esping-Andersen’s taxonomy such occupations are seen as mediating between managers and workers in the fordist hierarchy. Nonetheless, data in Table 2 suggest it is more plausible to consider the growth of clerical and sales jobs as an effect of post-fordist transformations within the service economy. Such an interpretation is in line with other evidence presented in the following sections and better assists to understand divisions between ‘professionals’, ‘clerks and sales persons’ and ‘service workers’.

Last but not least, the most noticeable change is in service workers (Category F). Before the 1990s the share of service workers was relatively low. Moreover, a detailed analysis of data reveals that this impressive increase is due to the rise of unskilled occupations, associated by Esping-Andersen (1993) with the “service proletariat”.

According to this picture the occupations forming the core of the old industrial order are shrinking, whilst routine service and sales occupations are expanding. Professionalisation is limited, as long as the expansion of knowledge intensive services related to production and international mediation proceeds at low pace. In this sense there is evidence of polarization without professionalisation and without contraction of the fordist working class. Moreover, it appears that post-fordist changes span across sectors and transform occupational categories and the relational aspects upon which classes are formed. Concomitantly, there is increased segmentation
particularly within the service sectors. Data urges to consider transformations within manufacturing and the service occupations across new gender and ethnic lines. The following sections elaborate these issues further.

Table 3 presents the main changes that have occurred in the occupational distribution of women between 1991 and 2001. Overall employment growth reaches a 41.8%, a percentage which is more than two times that of the total employment growth reported in Table 2, vividly depicting the processes of feminization of employment. It is also evident that this growth is concentrated in categories F (service workers and servants), B (clerks and sales persons), and E (professionals) recording also the largest shares of female employment.

Some further interesting conclusions can be reached when comparing Tables 2 and 3. First, the highest overall growth is recorded in those categories (B and F) we are aware of gendered occupational segregation. Second, the numbers and shares of female entrepreneurs in the total active population increase (Category D) as is the number of women managers (A). The converse is true for women in manufacturing, i.e. there is a decline in the number and shares of women industrial workers (Category C) although the working class has not contracted, mainly due to the recruitment of migrant men. Fourth, the rapid increase in recreation and personal services (included in Category F) reflects the extensive utilisation of women migrants as domestic labourers and low skilled labourers in tourism and personal services. However, the increase in services is not only due to migrants. Although migrant women heavily concentrate in category F (approximately 65%) they form an approximately 38% of
women employed is similar jobs. So, exclusive emphasis on ethnicity as the key to understanding occupational transformations in southern European cities would be misinformed.

(A) Spatial segregation: some further evidence for the significance of gender

As presented in the previous section economic changes introduce some tendency for occupational polarization across gender and ethnic lines but the question is whether these lead to spatial forms. First we focus on the global intensity of segregation comparing the values of the multi-group spatial segregation index suggested by Wong (2001, 2003a, 2003b), a measure summarising changes that have occurred during the decade for the entire metropolitan area. Then we draw attention to emerging forms of segregation between distinct occupational categories of women by comparing the values of two-group indices and obtain significant information about the spatial interdependence of socio-economic processes reported in the previous section.

Table 4 contains the values of the global multigroup spatial segregation, $D(s_{AB,C,D,E,F})$, estimated both for the total employed population and for the female employed population in 1991 and 1991. The percentage change is reported in the last column of the table.

Values of the spatial dissimilarity index in Table 4 verify that social mix is a prominent feature of the Athenian space and suggest that the low intensity of segregation in the metropolitan region has globally not been significantly affected by the polarizing trends discussed above. The values of the global multi-group spatial
segregation index are low and the difference between 1991 and 2001 shows a lessening of spatial separation. This is not to deny that inequalities exist but that there is no profound separation between occupations.

Yet, by comparing the estimations between the total and the female employed population we can see that the occupational structure does have a spatial effect, and that the gendered form of transformations does, indeed, take a spatial form. Values of the index in 1991 were lower for women than for the total employed population. But values of the index for women also record a significant increase in the decade of the 1990s, and in 2001 become almost equal to those for the total employed population. This finding reveals the combined spatial effect of the feminisation of service employment and its segmentation. It also suggests that household arrangements and strategies of social reproduction are increasingly constrained in coping with the polarizing tendencies of the occupational structure overall.

What is of interest for this paper is that, given the prevalence of social mix, the transformations of the occupational structure do create a trend for separation between different occupational groupings of women. We examine this in more detail with the help of Table 5 containing values of two group measures of spatial segregation between all possible pairs of women’s occupations. Table 5 includes values estimated for 1991, 2001 and the percentage changes in the period under discussion.

Insert Table 5 about here

First, it can easily be inferred from these estimations that the historical segregation of the industrial working class strata is still influencing the residential allocation of women. Values for paired indexes between category C and A, E, are
moderate as also between C and B for both 1991 and 2001, confirming the historical formation of the Athenian space across the West-East divide. Significantly, this tendency has further intensified during the decade of the 1990s. Segregation indices between manufacturing workers, managers, and professionals increase and reach significantly high values. In this case, we may say that there are trends for spatial polarization to which, as we later on elaborate, both the immobility of workers and the mobility of managers and professionals contribute.

Second, the transformations regarding the contraction of the numbers of women workers and the feminization of service occupations are starting to shape a new fragmented spatial pattern. Values between categories D and C are low reflecting the diffused model of industrialization. Historically, working class, craftswomen, and small firm owners have been residing in the western part of the city. But, this type of spatial interaction between workers, independents and small owners seems to be weakening (as indicated by the increase in values between D and C, Table 5) due to a complex array of socio-spatial processes, which, as we later on discuss, involves on the one hand the contraction of the workers, and on the other the relocation of small entrepreneurs and independents to peri-urban areas. Moreover, the spatial distinction between production workers and saleswomen or clerks is becoming less clear (the most significant decrease in paired indices concerns categories B and C, Table 5). It would be plausible to interpret this result, as a spatially bounded intergenerational replacement of the industrial working class (i.e. daughters of workers now employed in sales and office occupations).

Third, an important change concerns new service occupations (F) of which migrant domestic laborers are a significant, but not exclusive, part. Their place of residence today clearly separates from that of managers and of the working class. This
was not the case a decade ago. Likewise, a significant increase in separation can be read when examining new servant occupations in pairs with: professionals (E), sales women and clerks (B), and small entrepreneurs and independents (D). Yet, values still indicate the prevalence of mixing particularly between (B) and (F) pointing out that boundaries between these two categories are both socially and spatially fluid. In search of some explanations we direct our analysis to the mobility patterns of such groups.

(A) **Restructuring work and residential space: women’s trajectories in the space of flows**

According to Lash and Urry (1994), some of the contemporary character of mobility owes to the strengthening of systemic forces, the diffusion of distanciated transactions and the disembeddedness of subjects, struggling for reflexivity and meaning, and undertaking more risks. In the case of Athens, new transportation networks and public works facilitating sprawling and commuting, enhancement of housing credit and circulation of images of suburbia homes, international brokerage of migrant labor; such could be viewed as strengthening of abstract systems, the prevalence of systemic forces of post-fordism penetrating key aspects of welfare strategies: where to work, where to live. Yet, intra-urban flows are also shaped by neighboring, and friendship, landownership and kinship, etc. Likewise transnational flows rely on the spread of more or less dense ethnic networks; mobility relies on ties in both the country of origin and in the host country.

Moving beyond stereotypes it has been steadily recognized that women’s movement is not dependent on men: employment opportunities and multiple household arrangements shape different forms of geographical mobility (for immigration in Europe: Bailey and Boyle 2004, for women immigrants to Greece,
Focusing on the relationship between occupational restructuring and mobility our first step is to examine which of the occupational categories contributes most to enhanced mobility. According to census data for Athens the total number of employed women movers consists of 38,186 foreign nationals and 99,282 Greeks who have moved into a given municipality after 1995 irrespectively of their prior residence. For the vast majority of Greek women these numbers represent intra-urban flows. For the majority of immigrant women these numbers represent direct entry into the city. The total number of movers represents 22.7% of all employed women. Such proportions are relatively high, considering that they concern only a 5 year period and movement across large areal units (municipalities). Table 6 gives a breakdown of women movers by occupational category and nationality.

The largest proportion of movers consists of “saleswomen and clerks” (category B), followed by “service workers” (F) and “professionals” (E). Only a small share consists of women workers and small entrepreneurs. As is evident, the residential relocation of Greek women contributes most to overall mobility among employed women.

To identify and analyse key flows revealing how the occupational transformations across gender and ethnic lines are linked to different urban processes we use Moran’s I index (Anselin, 1995, 2002, 2005). We calculate the global Moran’s I index to measure the intensity of spatial clustering for each occupational category of movers (Anselin 1995, calculation formula in appendix). High values of this statistic
indicate that the destination areas of movers neighbor to each other. We also calculate the local values that the index takes in each municipality, known as Local Indicator of Spatial Autocorrelation (LISA), to map the spatial clusters of the destinations of each occupational category (Anselin 2002, calculation formulae in appendix). LISA values facilitate the classification of the destinations of movers into clusters as shown in the figures below:

Positive LISA values indicate that neighbouring municipalities have similar concentrations of each occupational category of movers. Respectively, the wider areas of neighbouring municipalities with similar concentrations are called “hot spots”. “Hot spots” are clusters of two kinds: Neighbouring municipalities of high concentrations (high-high hot spots) and neighbouring municipalities of low concentrations (low-low hot spots). Negative LISA values indicate that concentrations of each occupational category of movers vary across neighbouring municipalities. Respectively, the wider areas of neighbouring municipalities with dissimilar concentrations are called “outliers”. “Outliers” are also clusters of two kinds: pockets of high concentrations found within a wider area of low concentrations, and pockets of low concentrations found within a wider area of high concentrations. This methodology enabled us to identify four significant flows reported in the following sections.

(B) Suburban flows: Greek professionals expanding compactness in northern suburbs

Insert Figure 1 about here

The global Moran I estimated for women in professional, technical and semi-professional positions has a value of 0.477 indicating high levels of spatial
concentration. As appears in Figure 1 (high-high “hot spots”), women making inroads to professional occupations tend to cluster within municipalities located on a north-eastern axis, originating from the center of the conurbation to its northern and eastern buildup outskirts. This flow contributes to the ‘increased compactness’ of the host areas while, at the same time, indicating a suburbanisation tendency. As was noted above most of these flows are intra-urban relocations and are in line with the prevailing tendency of population decentralization in the decade 1991-2001 (Sayas 2006). Noteworthy, that the insignificant flows (low-low “hot-spots” in Figure 1) of this socio-occupational group into the western part of the conurbation are an indication that the east-west social class division of the Athenian social space is further enhanced.

(B) Suburban flows: Greek sales and clerks moving to southern suburbs

Insert Figure 2 about here

Turning to the residential relocations of Greek women working as clerks and sales persons, a very low value of the global Moran I (0,100) was calculated, indicating that their movement spreads throughout the conurbation. This group is overrepresented in southern urban areas (high-high Hot spots’ in Figure 2) with a heavy concentration of locally oriented services and trade, but otherwise spreads evenly in the wider Athens area. This tendency can be related both to a ‘diffused tertiarisation’ of Athenian space in the decade that we are examining and to ‘employment linkage’ considerations in the residential choices of this occupational group. The diffused destinations of movers combine with the growth of sales occupations among non-movers, particularly in
working class municipalities, and contribute to the socio-spatial mix, mentioned in the previous sections.

(B) Location of migrant service workers in central, northern and southern suburban areas

Another highly significant flow is that of migrant service workers. This flow comprises the largest transnational movement into Athenian space and the second largest flow in terms of residential relocation of occupational groups. The global Moran I index for this group has a value of 0.486 reflecting the high level of spatial concentration of flows in a small number of spatial units. The processes that are emerging from the LISA maps (figure 3) show two parallel movements. One is a significant centralizing tendency including the central Athens municipality and its surrounding municipalities; the other is a decentralizing tendency including two significant spatial clusters in the northern and southern suburbs. These two clustering tendencies more or less reflect the structure of employment opportunities for these women. The central area offers both job opportunities and cheap housing whereas the northern and southern suburbs offer ‘in-house’ employment by higher income households. Notably, central concentrations of migrant women cannot be associated with processes of ghetto formation (Vaiou & Stratigaki 2006), without however neglecting significant housing inequalities and exclusions operating at local scales (Psimmenos 2000). What is also highly significant is the absence of high numbers of relocations of these women into traditional working class areas in the eastern part of the wider Athens area (Low-Low ‘hotspots’).
(B)  

Sprawling as transformation: Greek small business owners and independent crafts moving to peri-urban areas

Insert Figure 4 about here

The residential relocation, in the period 1995-2001, of Greek women active as ‘small entrepreneurs’ constitutes one of the more interesting tendencies in the restructuring of the socio-spatial profile of the wider Athens area. Despite the fact that the total number of persons in this occupational category who are moving is small, compared to the groups presented above, their trajectory is a very significant one, both for the geography of the urban area and the evolving spatial segregation patterns in the decade 1991-2001. The value of the global Moran I calculated for this category is 0.281 reflecting a strong tendency for concentration. As shown in the LISA map (High-High ‘hot spots’ in Figure 4) small business owners are directed to the northern and southern periurban areas. It has been documented elsewhere (Sayas 2006) that in these, formerly, mainly ‘rural’ vacation-home areas, a considerable amount of population increase is taking place. This increase is also reflected in a housing stock increase and a transformation of second homes into primary residences.

We can safely argue that most of the relocation of small female entrepreneurs to these areas is associated with the increase in the small local –market oriented trade, service and leisure economic activity, a result of the growing demand from the emerging socio-spatial organization of Athenian periurban space. This sprawling tendency is expected to increase given the infrastructure development (public works, transportation networks) which was set in motion in the period preceding the 2004 Olympiad, increasing the accessibility and attractiveness of these areas.
(A) Conclusions

This paper has attempted to address an empirical gap in the examination of gender and ethnic changes in the occupational and spatial structure of Athens during the decade of the 1990s. In particular we started to explore the links between three interrelated issues, which allow us to reflect upon the international literature of social and spatial polarization in contemporary cities.

First, we explored how economic restructuring affected the occupational structure of the Greek capital. We designed a modified Esping-Andersen classification of occupations, which we believe has succeeded to grasp the major transformations which have occurred during the 1990s. According to our findings a gender specific occupational structure seems to be emerging out of complex transformations. The occupations forming the core of the old industrial order are shrinking, whilst routine clerical and sales occupations are expanding. Professionalisation is limited, as long as the expansion of knowledge intensive services related to production and international mediation proceeds at low pace. The share of manual and technical workers has not contracted as would have been assumed by post-industrial theorizations, but its ethnic and gendered composition has changed mainly due to the recruitment of male migrants in manufacturing and constructions. We consider this a process of working class ‘replacement’ along ethnic and gendered lines.

At the same time female employment has grown along two occupational paths. The first path, directs female employment to clerical and sales occupations, in that respect the occupational structure converges to North European ones. The second path directs female employment to mostly unskilled leisure services and care occupations indicating a southern European version of commodification of social reproduction. In
the light of such evidence we would argue that tendencies for polarization may be introduced not by professionalisation or by the contraction of the working class, as is often discussed in the Northern European literature, but mainly by the contraction of the traditional small employers, the growth of clerical occupations and unskilled servant occupations. We suggest it is necessary to explore further changes in household composition which accompany the above mentioned occupational transformations and affect income distributions.

The second issue we addressed was if occupational changes have a spatial form. Our findings suggest that social mix is still a prominent feature of the Athenian space. Yet, there is ample evidence that feminisation of employment overall increases spatial segregation among the female population. When examining the separation of different occupational groups of women in pairs we detected a new fragmented spatial pattern which includes both residential mix and separation. On the one hand, the feminization of sales and clerical occupations seems to be leveling down spatial separations. For example, the spatial distinction between manual workers and waged saleswomen or clerks is becoming less clear. We consider this as an effect of the diffused, in situ, growth of female employment most evident in working class areas. This finding reinforces our view about a spatially bounded intergenerational replacement of the working class. Likewise, the ‘employment-residence linkage’ of female traders and entrepreneurs in either traditional working class areas or developing peri-urban areas contributes to social mix.

On the other, socio-spatial separation concern unskilled service occupations of which domestic labor of migrants is a significant, but not exclusive, part. Their place of residence today in many cases clearly separates from that of managers and of production and construction workers. Similarly, service workers are increasingly
separated from professionals, small business owners and independents. Such evidence, points to practices of spatial closure affected by post-fordist restructuring.

Third, in search of some explanations for the production of the above mentioned spatial patterns we turned to examine the most significant mobility patterns of occupational groups. The largest proportion of movers consists of saleswomen and clerks, followed by service workers and professionals. Only a small share consists of women production workers and small entrepreneurs. Therefore, there are trends for spatial fragmentation to which, both the immobility of production workers and the mobility of managers and professionals contribute. In particular, the traditional segregation of the working class was further intensified during the decade of the 1990s.

Spatial clusters of the destinations of different occupational categories suggest that a preoccupation with gentrification would conceal other processes, like suburbanising compactness or sprawling, which enhance fluidity and fragmentation. Processes of suburbanisation combine with professionalisation and feminisation of clerical and sales occupations shaping two distinct trajectories amongst Greek women. Professionals tend to relocate in northern suburbs and contribute to the compactness of such areas, whilst salespersons and clerks move to southern suburbs perhaps attracted by the growth of commercial jobs there. Migrant domestic workers preferably locate in central areas where rents are affordable, but also many are to be found in northern and southern suburban areas often in residences of their employers. Greek women, owners of small crafts and trade business, move to peri-urban areas responding to the demand for goods and services which is locally induced by population growth and sprawling.
These flows effect and are effected both by the established socio-spatial organization of the wider Athens area and the occupational transformations emerging in the period 1991-2001. The results of the empirical exploration presented in this paper are by no means exhaustive, but, hopefully, they can support the investigation of significant themes deserving closer examination and scrutiny. Occupational categories alone are only indicative of the material and symbolic inequalities across gender and ethnic lines. Differences between women in occupational and housing opportunities do not preclude interactions and commonalities at places of work and residence, public and private space. Informal household arrangements and housing strategies of both stayers and movers may level down employment cleavages. Such are some of the issues arising from this paper, urging for synthetic work across quantitative and qualitative studies, large and small scale research.
(A) References:


Leifulfuld, H., Bison I., Jensberg H. (2005), ‘*Social Class in Europe: European Social Survey 2002/3*’, Research monograph, NTNU: University of Trento

McDowell, L. (2006) ‘Reconfigurations of Gender and Class Relations: Class differences, Class Condescension and the Changing Place of Class Relations’, *Antipode*, 825-850
(A) Appendix: Formulae for Segregation and Autocorrelation Indices

**Spatial segregation index (Wong, 2003b)**

Where:

\[
D(s) = D - \frac{1}{2} \sum_{i} \sum_{j} w_{ij} |z_i - z_j| \times \frac{1/2[(P_i/A_i) + (P_j/A_j)]}{\text{MAX}(P/A)}
\]

\[
w_{ij} = \frac{d_i}{\sum_{j} d_{ij}}
\]

D is the dissimilarity index, \(z_i\) and \(z_j\) are the proportions of the respective occupational groups, \(w_{ij}\) are the elements of the spatial weights matrix and \(P_i/A_i\) is the perimeter-area ratio for areal unit I and \(\text{MAX}(P/A)\) is the maximum perimeter-area ratio among all area units in the study region.

**Multi group segregation index (Wong, 2003b)**

\[
D(m) = \frac{1}{2} \sum_{i} \sum_{j} |N_{ij} - E_{ij}|
\]

\[
E_{ij} = \frac{N_i - N_j}{N}
\]

Where

\(N_{ij}\) is the population count of the jth occupational group in areal unit i, \(N_i\) is the total population regardless of groups in areal unit i, \(N_j\) is the total population in of group j in the entire study area, \(N\) is the total population of the study area and \(P_j\) is the population in occupational group j.

The spatial version used here is based on the concept of composite population counts.

\[
CN_{ij} = \sum_{k} d(N_{ki})
\]

is the composite population count where \(d(.)\) is a function of defining the neighbours of areal unit i.
Global Moran’s I: (Anselin, 2005)

\[ I = \frac{\sum \sum w_{ij}(y_i - \bar{y})(y_j - \bar{y})}{\sum \sum w_{ij} \sum (y_i - \bar{y})^2} \]

Where, \( w_{ij} \) are the elements of the spatial weights matrix, \( y_i \) is the number of female movers of each occupational category in the \( i \)th location and \( \bar{y} \) the mean of female movers of each occupational category in the metropolitan area of Athens, while \( n \) is the total number of municipalities in the metropolitan area of Athens.

Local Indicator of Spatial Autocorrelation (Anselin et al, 2002)

\[ I_{kl}^j = z_k^j \sum_j w_{ij} z_l^j, \]

Where

\[ z_k = \frac{|x_k - \bar{x}|}{\sigma_k} \text{ and } z_l = \frac{|x_l - \bar{x}|}{\sigma_l} \]

and \( w_{ij} \) are the elements of the spatial weights matrix.
### Table 1: Six occupational categories- modified EA version

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Managers and executive personnel</td>
</tr>
<tr>
<td>B</td>
<td>Sales, administrative, and clerical occupations (engaged in basically routine tasks of control, administration and distribution)</td>
</tr>
<tr>
<td>C</td>
<td>Manual production &amp; construction workers and farm workers (including skilled, lower level technical and unskilled workers, but excluding independent crafts classified in category D)</td>
</tr>
<tr>
<td>D</td>
<td>Small business owners, independent crafts, and farm owners</td>
</tr>
<tr>
<td>E</td>
<td>Professionals, technicians and semi-professionals (including school teachers, laboratory personnel, qualified nurses, designers etc)</td>
</tr>
<tr>
<td>F</td>
<td>Skilled (cooks, hairdressers, etc.) and unskilled service workers (cleaners, waitresses, bartenders, domestic workers, etc)</td>
</tr>
</tbody>
</table>
### Table 2: Occupational Changes in Athens 1991-2001

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>9,0%</td>
<td>51595</td>
<td>4,2%</td>
<td>45949</td>
<td>3,2%</td>
<td>-10,9%</td>
</tr>
<tr>
<td>B</td>
<td>24.1%</td>
<td>323369</td>
<td>26,3%</td>
<td>393352</td>
<td>27,4%</td>
<td>21,6%</td>
</tr>
<tr>
<td>C</td>
<td>22.5%</td>
<td>279653</td>
<td>22,7%</td>
<td>311863</td>
<td>21,7%</td>
<td>11,5%</td>
</tr>
<tr>
<td>D</td>
<td>5.3%</td>
<td>227872</td>
<td>18,5%</td>
<td>195917</td>
<td>13,6%</td>
<td>-14,0%</td>
</tr>
<tr>
<td>E</td>
<td>24.2%</td>
<td>237327</td>
<td>19,3%</td>
<td>283167</td>
<td>19,7%</td>
<td>19,3%</td>
</tr>
<tr>
<td>F</td>
<td>14,9%</td>
<td>108314</td>
<td>8,8%</td>
<td>205779</td>
<td>14,3%</td>
<td>90,0%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>1228130</td>
<td>100%</td>
<td>1436027</td>
<td>100%</td>
<td>16,9%</td>
</tr>
</tbody>
</table>

Source: IRUS-NCSR-2001 Census Data, Authors’ estimations, Leiusfuld et al 2005
Table 3: Changes in the occupational distribution of women 1991-2001 in Athens

<table>
<thead>
<tr>
<th>Classification of Occupations</th>
<th>1991</th>
<th>2001</th>
<th>Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10680</td>
<td>2.5%</td>
<td>11576</td>
<td>1.9%</td>
</tr>
<tr>
<td>B</td>
<td>167148</td>
<td>39.1%</td>
<td>239970</td>
<td>39.6%</td>
</tr>
<tr>
<td>C</td>
<td>47649</td>
<td>11.1%</td>
<td>43118</td>
<td>7.1%</td>
</tr>
<tr>
<td>D</td>
<td>43051</td>
<td>10.1%</td>
<td>46223</td>
<td>7.6%</td>
</tr>
<tr>
<td>E</td>
<td>106727</td>
<td>25.0%</td>
<td>146308</td>
<td>24.1%</td>
</tr>
<tr>
<td>F</td>
<td>52129</td>
<td>12.2%</td>
<td>119048</td>
<td>19.6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>427384</td>
<td>100.0%</td>
<td>606243</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: IRUS-NCSR-2001 Census Data, Authors’ estimations

Table 4: Metropolitan Multi-group Segregation in Athens: 1991-2001

<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th>2001</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SD(AB,C,D,E,F)</td>
<td>SD(AB,C,D,E,F)</td>
<td>1991-2001</td>
</tr>
<tr>
<td>Segregation between occupations of the total employed population</td>
<td>0.099083</td>
<td>0.090749</td>
<td>-8.4%</td>
</tr>
<tr>
<td>Segregation between occupations of the total employed female population</td>
<td>0.0708203</td>
<td>0.0909</td>
<td>28.3%</td>
</tr>
</tbody>
</table>

Source: IRUS-NCSR Census Data, Authors’ estimations
Table 5: Spatial Segregation between different occupational categories of women in Athens

<table>
<thead>
<tr>
<th>Categories</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>0,125</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0,278</td>
<td>0,222</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>0,147</td>
<td>0,111</td>
<td>0,157</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>0,107</td>
<td>0,099</td>
<td>0,293</td>
<td>0,172</td>
<td>0</td>
</tr>
<tr>
<td>F</td>
<td>0,154</td>
<td>0,078</td>
<td>0,182</td>
<td>0,108</td>
<td>0,106</td>
</tr>
</tbody>
</table>

Spatial Segregation in 2001: D(s) Values

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>0,223</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0,353</td>
<td>0,205</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>0,239</td>
<td>0,119</td>
<td>0,198</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>0,147</td>
<td>0,116</td>
<td>0,295</td>
<td>0,171</td>
</tr>
<tr>
<td>F</td>
<td>0,288</td>
<td>0,13</td>
<td>0,231</td>
<td>0,186</td>
</tr>
</tbody>
</table>

Changes in Spatial Segregation 1991-2001 (% change)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>78,4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>27,0%</td>
<td>-7,7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>62,6%</td>
<td>7,2%</td>
<td>26,1%</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>37,4%</td>
<td>17,2%</td>
<td>0,7%</td>
<td>-0,6%</td>
</tr>
<tr>
<td>F</td>
<td>87,0%</td>
<td>66,7%</td>
<td>26,9%</td>
<td>72,2%</td>
</tr>
</tbody>
</table>

Source: IRUS-NCSR-2001 Census Data, Authors’ estimations

Given the size of areal units, values above 0,2 indicate a moderate form of separation.
Table 6: Break down of women employed movers by occupation and nationality

<table>
<thead>
<tr>
<th>Category</th>
<th>Total movers</th>
<th>Share of Greeks (intra-urban flows)</th>
<th>Share of foreign nat. (transnational flows)</th>
<th>Share of Category (Greek + foreign)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A movers</td>
<td>2526</td>
<td>1,7%</td>
<td>0,2%</td>
<td>1,8%</td>
</tr>
<tr>
<td>B movers</td>
<td>43550</td>
<td>29,3%</td>
<td>2,3%</td>
<td>31,7%</td>
</tr>
<tr>
<td>C movers</td>
<td>7615</td>
<td>3,5%</td>
<td>2,0%</td>
<td>5,5%</td>
</tr>
<tr>
<td>D movers</td>
<td>10650</td>
<td>4,8%</td>
<td>2,9%</td>
<td>7,7%</td>
</tr>
<tr>
<td>E movers</td>
<td>36189</td>
<td>24,1%</td>
<td>2,2%</td>
<td>26,3%</td>
</tr>
<tr>
<td>F movers</td>
<td>36938</td>
<td>8,8%</td>
<td>18,1%</td>
<td>26,9%</td>
</tr>
<tr>
<td>Total movers</td>
<td>137468</td>
<td>72,2%</td>
<td>27,8%</td>
<td>100%</td>
</tr>
</tbody>
</table>

1 Calculations were performed using D. W. S.Wong’s ArcView application available at http://geog.gmu.edu (results reported in Tables 4 and 5).

2 Figures 1,2,3,4 and calculations presented below were performed with the GeoDa 0.95-i5, August, 3, 2004 software developed by Luc Anselin (Anselin 2005). Calculation Formulae provided in Appendix.