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SEGREGATION AND URBAN UNREST IN SWEDEN

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**ABSTRACT**

In spite of having a substantial number of housing estates with large populations of recently arrived immigrant Sweden has, so far, experienced relatively few disturbances of the type reported in, for example, France, Britain and the US. In the early fall of 2009 there was, however, a wave of car burnings across Sweden which, according to media reports, were mainly concentrated in stigmatised, immigrant-dense neighbourhoods. In this paper we analyse the association between car burnings as a sign of urban unrest and ‘micro-riots’, and the isolation index for foreign-born individuals in residential areas. However we also use variables to test whether concentration of disadvantage, such as parents on social welfare, is associated with incidents of car burning. Our data is drawn from the Swedish National Council for Crime Prevention, BRÅ and a register database, PLACE. Our results show the importance of segregation for urban unrest and support residential desegregation as a policy against such ‘micro-riots’ as the burning of cars.
INTRODUCTION

Continued population growth in metropolitan areas, increasing income inequality, and high levels of migration from low to high income countries have turned segregation into one of the most intensively studied areas in geographical and urban research. Key issues in this research have been the measurement and mapping of segregation trends and patterns, together with studies of how segregation affects the opportunities of individuals with respect to education, employment, income, and political participation, see Kaplan et al (2011).

Recently, there have emerged two conflicting discourses concerning the effects of increasing residential segregation. On the one hand researchers with a background in social policy analysis maintain that the effects of segregation are not as pronounced as is generally assumed. Others, for example Wacquant (2008), argue that residential segregation plays an important role in how social conflicts are enacted in contemporary society. In this paper we will analyze which of these two views is supported by Swedish data on social disturbances in the form of car burnings.

With a share of foreign-born approaching 15 percent of the population, increasing ethnic residential segregation has become an important topic in Sweden. Sweden has not seen any major incidents of race-based urban unrest comparable with, for example, Paris in 2005, or Bradford, Burnley and Oldham in the UK, also in 2005 (Burgess and Wilson, 2003). Starting in 2007, however, Swedish newspapers reported incidences of riots, car burnings, and stone-throwing in Swedish suburbs with high concentrations of foreign-born people. In August 2009, the number of incidents rose rapidly, starting in Malmö (the largest city in south Sweden), but also hitting Stockholm and Göteborg (Sweden's largest and second largest cities), as well as middle-sized cities as Uppsala. These incidents were reported as riots and were considered by many commentators to be the result of social exclusion, segregation, and unemployment. This can be compared to a study by Olzak et.al. 1996 that report a significant correlation between residential segregation and the incidence of race riots.
So far, few studies have used quantitative data to analyze the incidence of urban disturbances in Sweden. Therefore the idea that rioting is related to segregation has not, as far as we know, been tested statistically. In this paper, we will use the number of car burnings as an indicator of urban unrest. Car burnings are in many ways an emblematic feature of urban riots. Moreover, since obtaining insurance compensation for a burned car is conditional on having made a police report, most car burning cases will be registered. We acknowledge that a car burning on its own does not constitute a case of urban unrest. However, in cases where car burnings are linked to other forms of delinquency they also tend to have a ritual character and a publicity component that make car burning distinct from, for example, theft or robbery.

Most studies of the effects of residential segregation have focused on individual outcomes such as educational achievement, unemployment and income (Ainsworth, 2002; Andersson et al., 2010; Galster et al., 2008; O'Regan and Quigley, 1996). A common finding is that people coming from disadvantaged neighborhoods perform worse, but much of this effect disappears when the individual background is controlled for (Brännström, 2004). This has led researchers to question the value of policies that focus on distressed neighborhoods and aim at reducing segregation. This study, in contrast, does not look at individual outcomes. Instead, car burnings are seen as a social phenomenon and we proceed to analyze what factors influence the appearance of this social-level phenomenon. Therefore, we argue that our approach is not subject to an ecological fallacy even though we correlated aggregate level data.

In the present study we acknowledge that residential segregation can have social effects both by generating neighbourhood effects and by influencing the way people evaluate their opportunities. But our focus will be on urban level residential segregation as a potential explanatory factor. One reason is that we do not have data on car burnings at the neighbourhood level, only at the municipal level (urban district level in the metropolitan municipalities).
The paper is organized as follows. Section 1 reviews the literature concerning segregation, social unrest and violence. Section 2 discusses the Swedish context and presents our empirical design. In Section 3 we present our results and Section 4 concludes.

**EARLIER RESEARCH**

A traditional starting point for a discussion on the effects of segregation on crime is social disorganization theory. This theory has its roots in research carried out in the 1940s and earlier, and it argues that high levels of crime in a neighborhood can be explained by a breakdown of systems for social control (Shaw and McKay, 1942). When the same people moved on to a new area, their behavior changed to accommodate to the new neighborhood. Since the 1980s, interest in this theory has re-emerged and it has been the basis for numerous studies of intra-urban variation in crime rates (Shihadeh, 2009). An important development has been the concept of collective efficacy, denoting the ability of a community to promote life-styles that reduce the risk of violence and crime (Sampson et al., 1997). Segregation, defined as concentrated disadvantage has been shown to imply lower collective efficacy and, hence, to increase crime rates (Uslaner, 2010).

A different view posits that segregation leads to higher crime and riot rates because of isolation. The argument is that minority isolation from contacts with the majority population can result in limited access to those social networks that are essential for finding, for example, employment. Hence, the relational part in the definition of residential segregation is more important. Poor employment prospects will, in turn, increase the probability that young adults get involved in criminal activities. It has also been argued that socio-economically more successful minority members move out from areas with a large minority population, and that this will deprive these areas of positive role models (Shihadeh, 2009). Another (contradictory) argument found in American race riot literature is that poverty differentials between people of different races are less likely to produce unrest while inter-
group contact and situations favorable to group mobilization - solidarity and competition - produce unrest (Bergesen and Herman, 1998; Olzak et al., 1996).

Also breaking with the disorganization theory, where segregation is seen as a problem of concentrated disadvantage in one area, is the institutionalist concept used by the sociologist Wacquant (2008), which sees segregation as isolation and a relational problem between areas in an urban setting (for comment on Wacquant analysis see Agnew, 2010). In his work he describes the difference between the American so-called ghetto and the French banlieu in that the institutions in those countries handle unrest differently. The American ghetto, according to Wacquant, is ethnically and socially homogenous and characterised by low state interventions. The French banlieues are ethnically and socially much more diverse and their isolation is mitigated by strong public institutions. In the same vein Swedish policies were targeted directly at so-called distressed urban areas on the outskirts of the three metropolitan areas (Palander, 2006). Institutions aimed to solve the problems in the particular urban areas. In addition the renewed conquering, landwinning idea, accounted for in the introduction, is that the general Swedish welfare state caters sufficiently for geographical inequalities and consequently no direct focus on distressed neighbourhoods is needed. This might in part be a result of disappointment with area based policies during the 1990s (Palander, 2006).

Importantly for this study, Wacquant also discussed the idea that outbursts of collective violence may not be a racial issue. He asks if this violence is about race or about bread; although riots might look like race riots, in fact no ethnic group-related demands are ever posed. Instead there are underclass and working class demands such as for decent jobs, affordable or improved housing, public services, and fair treatment by the police and other agencies of the State (Wacquant, 2008). Paying heed to these ideas by Wacquant, we will analyse not only the share of foreign-born, but also the share of parents outside the labourmarket as well as parents on welfare in different geographical areas of Sweden.
Wacquant also discusses violence from above – the structural violence of mass unemployment, relegation of people to decaying neighbourhoods and stigmatization (2008). These forces have been even more harmful to people in distressed urban neighbourhoods with a general upswing in inequality, according to Waquant (2008, pp. 25). To approach this idea of structural violence we use an isolation index in this study. This index is not a perfect measure of relegation of people to decaying and stigmatized neighbourhoods but the idea is nevertheless similar to Wacquant’s.

There are few studies of the specific association between segregation and riots, but Olzak et al published a study analysing the association between race riots and segregation in the United States from 1960 to 1993 (Olzak et al., 1996). They used riots reported by the New York Times and placed them in large Standard Metropolitan Statistical Areas. They found, using both a dissimilarity index and an isolation index, that economic hardship and poverty were not the main triggers causing riots. Instead they found that high levels of segregation followed by interracial contacts generated competition which had a significant positive association with unrest. Decreases in the isolation index (that is, increased contacts) augmented the rate of race riots. Olzak et al argue against commonly believed explanations which see disparities in income, education and housing as the most important factors causing disorder (Holloway and McNulty, 2003; Krivo et al., 2009; Lee and Ousey, 2007; Stretesky et al., 2004). Olzak et al build on the idea that increases in political opportunity for the powerless strengthen the likelihood of collective action of all types. The authors suggest that periods of Black protest and unrest accompanied a decline in racial disparities. Importantly, they also observe that a history of riots in an area led to a higher likelihood of experiencing additional riots. In the Swedish debate however it is argued that the loss of stability when school terms begin and end before and after vacations makes these periods critical times of the year for unrest and riots (Forsström, 2010).

In the 2000s French cités were hit by waves of unrest. There has been much debate over the causes of the problem. Haddad and Balz (Haddad and Balz, 2006) discuss whether the failure of French
immigrant policy was to blame, or whether the riots were a response to social problems such as poor public housing and education. A number of American commentators, on the other hand, pointed to the religion of Islam as the origin of the problem. French society and immigration policy is strictly assimilationist. However, French first and second-generation immigrants (mostly from former French colonies) mainly remain on the periphery of French society. One important explanation for this is their geographical place of residence and general environment. The riots took place in cités around the large French cities. The populations of French cités suffer from problems of crime, unemployment and poor education (Haddad and Balz, 2006). The authors point to the lack of access to education and other resources as a factor creating discontent. The lack of access also lays the ground for high unemployment and the locking in of individuals both geographically and physically to the environments in the suburb. In this way discontent may spread more easily among peers and convince them to show their discontent in the streets.

In a school segregation study, Burgess and Wilson (2003) find that areas of high dissimilarity and isolation indices coincide almost exactly with the locations of severe disorder in the towns of Bradford, Oldham and Burnley in England in the summer of 2001. Here the focus is on social problems exclusively (ethnicity and religion are not discussed). In the Cantle report following the riots in 2001, segregation in education was mentioned as a contributory factor to the lack of community cohesion which in turn led to disorder (Cantle, 2001).

**DATA**

In Sweden, car burnings are not classified as arson as long as they do not endanger the life of others. Instead they are classified as crimes inflicting damage through fire, and data on this type of crime is reported by the National Council for Crime Prevention, BRÅ.

Between 2002 and 2009, there was an increase in the number of car burnings per year per 100,000 inhabitants in Sweden from 40 to almost 70 (see Figure 1). Newspaper reports of unrest in Swedish
neighborhoods peaked in 2008 and 2009 and included reports of car burnings. In many cases car burnings were accompanied by stone throwing, attacks on fire brigades, and clashes with the police (Forsström, 2010).

![Figure 1: Time trend of car burnings per year per 100,000 inhabitants in Sweden](image)

**FIGURE 1. TIME TREND OF CAR BURNINGS PER YEAR PER 100,000 INHABITANTS.**

In our study a total number of 326 geographical areas were used. These correspond to the areas from which crimes are reported by the Swedish National Council for Crime Prevention. Out of these 326 areas, 285 are municipalities and 41 are urban districts. The 41 urban districts are located in the three metropolitan areas of Sweden; Stockholm, Göteborg and Malmö.

Figure 2 shows how common it is to observe certain number of car burnings in a given year in the areas for which the National Council for Crime Prevention reports crimes. As can be seen in the graph, for most areas there are less than ten of car burnings reported in any given year. The median number of car burnings in an area was six in 2002 and increased to ten in 2009. In certain areas the number of car burnings reported is much higher. For the 90th percentile, 33 car burnings were reported in 2002 increasing to 51 in 2009.
If we look at the distribution of car burnings across geographical units there is a clustering to the metropolitan areas of Stockholm, Göteborg and Malmö (see Figure 3 and Figure 4). Comparing the earlier period (2002 to 2005) with the latter (2006-2009) there is an increased tendency of clustering of car burnings to the metropolitan regions which is the expected pattern. In the earlier period an area in mid-Sweden (Dalarna) also show a cluster of car burnings.
FIGURE 3. AVERAGE NUMBER OF CAR BURNINGS PER 100 000 INHABITANTS 2002-2005.
FIGURE 4. AVERAGE NUMBER OF CAR BURNINGS PER 100 000 INHABITANTS 2006-2009.
There are different measures of segregation. In this study we have chosen the isolation index because it links a possible causal mechanism for segregation to individual behavior. The isolation index presupposes a division of the population into a majority group, A, and a minority group, B, and it measures the probability that a minority member will be matched with a member of the minority if matches are picked randomly from the neighborhood of the minority person. Thus, if all minority persons live in a neighborhood where there are only minority persons the probability of a minority match is one (meaning a high degree of isolation). If minorities are evenly distributed across neighborhoods the index will be the same as the minority share in the total population.

In this study the distribution of Swedish born and foreign born across SAMS neighborhoods as defined by Statistics Sweden, is used to calculate isolation indexes for the 326 geographical areas we focus on.

As shown in Figure 5, the isolation index is high in the metropolitan regions of Sweden. Furthermore there are municipalities in the mid-south of Sweden having a high isolation index as well as municipalities close to borders. The municipalities close to borders are hosting predominantly Norwegians (south-west) and Finns (north-east). During the 1990s the levels of residential segregation increased in the metropolitan parts of Sweden but post-2000 the rate of increase has been slower (The National Board of Health and Welfare, 2010). This corresponds to the trend that we find in our data.
Beside our measure of segregation, the isolation index, we include four control variables: Share of foreign born, share of young adults (15-24 years), share of parents on welfare, and share of parents outside labor market in the municipality (table 1). We include the share of foreign born for the reason that ethnic background is singled out as an important explanatory factor for urban social
unrest in the popular accounts of these incidents. As shown below, municipalities with similar immigrant shares can have varying levels of segregation, depending on how immigrants are distributed across neighborhoods. The share of young adults is included because this is an age group which generally has high rates of criminal activity. The share of parents on welfare and the share of parents outside labor market are included as measures of marginalization which possibly produce neighborhood effects.

For all, except the data on car burnings, we use an extensive register database at Uppsala University called PLACE. The database contains detailed annual information about all Sweden resident individuals' work-related, socioeconomic and educational status during the years 1990 through 2008. The material in this study makes use of the variables presented in Table 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Std. Deviation</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log car burnings per 100 000 inhabitants*</td>
<td>2 462</td>
<td>1.10</td>
<td>6.90</td>
<td>0.73</td>
<td>3.75</td>
</tr>
</tbody>
</table>

**Control variables**

- Share of foreign born 2 624 0.02 0.56 0.08 0.10
- Share of young adults (15-24 years) 2 624 0.08 0.23 0.01 0.12
- Share of parents on welfare 2 624 0.00 0.37 0.04 0.05
- Share of parents outside labor market 2 624 0.08 0.51 0.05 0.16

**Main variables**

- Isolation index residential area 2 624 0.02 0.50 0.09 0.13

*Sources: PLACE and the Swedish National Council for Crime Prevention, BRÅ.*

| TABLE 1. DESCRIPTIVE STATISTICS. |

| TABLE 2. CORRELATION MATRIX. |
Table 2 presents the bivariate correlations between the variables we use. The first row shows the bivariate correlations between car burnings and our explanatory variables. These correlations tend to go in the expected directions. The table also shows that there is a strong correlation among the explanatory variables. Figure 6 gives a more detailed picture of the correlation between share of foreign born and the isolation index. In spite of a very high correlation between these two variables (0.96), there is still a variation in the isolation index among municipalities that have similar shares of foreign born. This variation can be seen as the result of higher or lower concentrations of foreign born in specific neighborhoods.
In order to test if segregation has an effect on the number of car burnings we have estimated a panel regression with random area effects using observation of car burnings for eight years: 2002-2009. The dependent variable in our models is the log of car burnings per 100,000 inhabitants. The results are presented in Table 3.

As shown in the results table, the hypothesis that residential segregation has an effect on car burnings is supported by the data. In areas with a high isolation index, our preferred measure of residential segregation, the incidence of car burnings is higher than in areas with low levels of segregation. Thus, in contrast to studies focusing on individual level outcomes, our evidence suggests that residential segregation is a factor that influences social outcomes. Our results are more along
the lines of Olzak et al (1996). Their index was built on blacks and whites whereas ours is founded on foreign born and Swedish born, but they were constructed in the same way.

Moreover, in our results, the estimated regression parameter or share of foreign born is not significant. This can be taken to indicate that contrary to what is reported in the media, immigrant presence as such is not a factor that increases the risk of car burnings. Instead, it seems as if processes that channel immigrants and non-immigrants to different neighborhoods are a greater concern.

Besides residential segregation, two factors are singled out as possible risk factors for car burnings. The first is the youth share. Areas with a large share of 15-24 years old face a higher risk of experiencing car burnings. This tallies with findings of an increased risk for social unrest in countries and regions with a youth bulge (Urdal, 2006). Although the estimated regression parameter for the youth share is three times larger than for the isolation index its effect on the variation in car burnings is restricted by a relatively small variation across areas, see Table 1.

The second additional risk factor is the share of parents on social welfare. This indicates that economic deprivation is a potentially important factor (compare Shihadeh 2009). On the other hand, in our results, the share of parents not in the labour market does not have a significant effect. This finding is contrary to that of the important study by Wilson (1987), where unemployment is blamed for many social problems, including crime. Our results, again, are closer to those found by Olzak, Shanahan and McEneany (1996).
TABLE 3. MODEL TESTING CAR BURNINGS WITH ISOLATION INDEX FOR RESIDENTIAL AREA.

Parameter Estimates

| Term                          | Estimate | Std Error | Prob>|t| |
|-------------------------------|----------|-----------|-----|
| Intercept                     | 2.344    | 0.189     | <.000 |
| **Control variables**         |          |           |     |
| Share of foreign born         | 0.066    | 1.089     | 0.952 |
| Share of young adults (15-24 years) | 9.025    | 1.516     | <.000 |
| Share of parents on welfare   | 2.299    | 0.832     | 0.006 |
| Share of parents outside labor market | -1.112  | 0.808     | 0.169 |
| **Main variable**             |          |           |     |
| Isolation index residential area | 2.939    | 0.841     | 0.001 |
| R Square Adj.                 |          | 0.541     |     |
| n=2 462                      |          |           |     |

CONCLUDING REMARKS

In this paper we have analyzed the effect of residential segregation on social unrest in Swedish cities as measured by car burnings. Our results show that residential segregation is a factor contributing to urban unrest in Sweden. In municipalities with a high residential isolation index, (that is, where the probability of a minority person meeting another minority person in their neighborhood is high), the amount of car burnings is higher. In our interpretation, these results support Loïc Wacquant’s view that urban unrest can be seen not as ethnically based but rather as a reaction of social exclusion as it is expressed in residential segregation.
Moreover, the results in our paper support residential desegregation as a policy against urban micro-riots such as the burning of cars. Our results are in line with other findings in the literature on the links between criminal activity and discontent. Residential segregation based on resources and country of birth reduces social cohesion and collective efficacy, which in turn increases the risk of crime and unrest. In addition, our results show that both neighborhood youth bulges and social exclusion as measured by welfare dependence should be seen as risk factors for unrest.
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REFERENCES


Burgess, S., Wilson, D., 2003, Ethnic Segregation in England’s Schools, CMPO Working Paper Series No. 03/086, CMPO is funded by the Leverhulme Trust., Bristol.


