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# CRIME AND SPACE IN INTERMEDIATE CITIES: FINE-TUNING A MODEL OF TERRITORIAL ANALYSIS IN GERONA, TARRAGONA AND LÉRIDA

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This article investigates the location logic of petty larcenies and mugging with violence and intimidation, for the period: 2008-2011, in three intermediate cities of Catalonia. The aim is to validate and fine-tune previously-formulated hypotheses on crimes which follow patterns of a structural nature, that is, which have a tendency towards territorial stability linked to urban features and functions. These crimes have been compared with crimes against public order and assaults.

This study has enabled a definition of the type of areas that attract and stabilise such phenomena; this makes possible consideration of the characteristics of public space that can favour the citizen's sense of security.

## I. CRIME AND SPACE

The relationship between crime, space and sense of security has been studied from many differing perspectives. In this study, which is particularly focussed on public space, its uses and people's sense of security, we start from the idea that the direction of movement is double: places have an influence on the social interactions that take place there, while these, at the same time, modify and give them form.

If this approach is translated to the relationship between crime and space, it should be possible to confirm that some crimes leave a mark where they take place and, in turn, certain enclaves, due to their morphological and functional features, may favour the occurrence of these crimes. Therefore, urban space, with its characteristics (morphology, levels of activity, flows and functions) must be understood as an active factor in the occurrence of certain crimes. This socio-spatial interdependence can have the consequence of creating a negative image of particular locations which then causes its progressive deterioration; at the same time, this has an impact on the social uses that are subsequently made of them.

Lastly, before presenting the concrete objectives of this study, it is worth noting the principles on which it is based and which guide the research itself, and also the methodology used.

We start from the concept that certain criminal activities that are perceived as local and close to us are formulated in complex international networks in an increasingly globalised world (in all aspects of social and economic life). Twenty-first century crime must be seen, overwhelmingly, as a *glocal* phenomenon.

We have not overlooked either the fact that the mapping of police interventions is not the same as the reality of crime (as a considerable number of criminal acts are either not included in the statistics or are not georeferenced). Consequently, these maps will have to be understood as indicators and should be complemented with further information, such as data from surveys and interviews, in order to establish an idea of the perception of security which, furthermore, is highly influenced by several conflicts that are sometimes more significant than crime.

It also seems important to state our conviction that both crime and conflict are, to a certain degree, social constructions in which specific shared stereotypes bear considerable weight, together with certain discourses that become socially assumed as truths.

#### II. AIM OF THE STUDY

This study will fine-tune an explanatory model that was previously presented for Lérida, and which will be compared with the empirical work carried out in Gerona and Tarragona. The most pressing objective therefore is to validate or reject the statements made for the first city and to see to what extent they are applicable to cities of similar rank and size characteristics.

The first study covered the period 2005-2007; this second one, territorially wider, went from 2008-2011. Taken together they span a period of six years and are devised according to the same pattern.

We worked on three bases: the mapping of databases of the *Mossos d'Esquadra* (Regional Police of Catalonia); three victimation surveys (International Crime and Victimation Survey) of a sample of 2 500 people from Lérida and Gerona respectively, and 1500 from Tarragona; and, finally, interviews with around twenty different types of civic organisation in each of the cities.

Although these three sources offer complementary data, this study will primarily rely on the mapping of the police data. Fourteen types of crime were studied which we considered the most influential in shaping the sense of security, either because they occur in public spaces or because they create a certain amount of social alarm. These pages focus on those that display a location logic of a structural nature, that is, tend to be connected to specific morphologies or urban functions.

Previous analyses explained that, from the case of Lérida, such contraventions tend to be found in commercial or recreational areas; here, though, these locations have been and refined, thereby achieving greater accuracy and knowledge of their internal dynamics.

The mapped data from Gerona and Lérida corresponds to 2008, 2009 and 2010. In the case of Tarragona, only data from 2009 and 2010 has been studied, due to the *Mossos d'Esquadra* commencing a process of deployment in November 2008, for which reason there is incomplete data for that year.

#### III. DATA BOUNDARIES AND METHODOLOGY

First and foremost, we should point out the divergences between police statistics and reality. On the one hand, this is due to the fact that a significant number of contraventions do not enter the database for different reasons (from non-existence of a complaint to unawareness of being the victim of a categorised crime).

On the other, there are noticeable deficiencies in the geolocalisation of many of these criminal acts which have been summarised in a series of tables; this has allowed us to establish certain regularities linked to the nature of the contravention itself. *Grosso modo*, it should be possible to confirm that petty larcenies give rise to high levels of imprecision in their location; this was always likely, considering that such crimes are committed when taking advantage of carelessness or confusion and for which reason the victim is often unable to specify where the event took place. At the other end of the scale are crimes committed against family members and robberies from the inside of vehicles, since in both cases, if a complaint is registered, the whereabouts of the criminal act leave little doubt.

For the mapping, we used the CrimeStat III software. First of all, we calculated the NNI (Nearest Neighbour Index) that marks the degree of randomness in the spatial distribution of a specific phenomenon; this allowed us, before producing the map, to distinguish which crimes would display groupings significant for being non-random. The next stage was mapping the data using the NNHSC function (Nearest Neighbour Hierarchical Spatial Clustering) which draws a polygon whose vertices represent distribution phenomena and which encloses those points with a concentration greater than what we would expect from a random sample. Next, an ellipse was produced inside each polygon, which contained those criminal acts that showed a higher degree of concentration. For an enhanced understanding of the phenomenon, we superimposed onto this mapping, which highlights the particularly relevant places, all the marks provided by the databases. For obvious reasons of space, this article only presents a small selection of the maps created.

#### IV. ANALYSIS OF THE EMPIRICAL DATA.

To facilitate the analysis of data and the indication of regularities, we chose to set out their presentation from the crimes themselves.

## IV.1. Petty larcenies

With a clear location logic, these contraventions tend to occur in busy enclaves whose functions give rise to absentmindedness and confusion. We distinguished two categories amongst them: areas linked to a specific spot or establishment and other, more extensive areas with less-defined borders, but with important similarities.

Regarding the first type, we identified in each of the three cities a group of places that tend to be found near shopping centres. Regular travelling markets ('mercadillos') also give rise in their vicinity to a concentration of this sort of crime, as well as the major nodes and axes of transport networks. Each of these spatio-functional categories appears clearly in the mapping of the three cities.

With regard to the more vaguely-defined areas, we displayed the typical concentration of commercial zones with indistinct boundaries together with recreational areas with similar characteristics. In the first case, we distinguished between those found in the historical core of a city and those in the expanded areas («ensanches»). In the former, we insisted on their precariousness as ecosystems that are threatened by an excessive tertiarisation, touristisation and loss of social life (hence the importance of their multifunctionality). All these zones are clearly visible in the three cities, which reinforces the concept that regularities exist that enable the detection of enclaves where, because of their morphology and functionality, it is highly probable that certain criminal acts take place there. We also demonstrated how in the important recreational areas there is a correlation between these crimes and assaults and crimes against public order.

# IV.2. Mugging

It is worth pointing out that, in the three cities, there is a marked quantitative difference between these criminal acts and petty larcenies since they represent between 8% and 15% of total robberies; for this reason the location patterns are less clear.

In spite of numerous studies that tend to locate this phenomenon in recreational or commercial areas at night time, our data analysis leads to relatively different conclusions being drawn. We have seen confirmation of a spatio-temporal coincidence with non-violent robberies that deserves consideration. The low level of violence associated with crimes in the context of our study allows us to assume that, where violence occurs, these types of robberies are in fact larcenies that have gone wrong and where the robber has resorted to a degree of aggression before completing the robbery or fleeing from the scene.

In terms of locations, it should be noted that shopping centres and regular travelling markets («mercadillos») are less significant as poles of attraction for this particular crime; otherwise, though, the patterns of location coincide quite significantly and once again we encounter the commercial hubs located in the historic city centres of Lérida and Gerona and the recreational areas and outskirts commercial zones of the three cities.

We have also found some significant enclaves for this type of violent crime that are not coincidental with non-violent theft. In general, these are residential areas which sometimes display an unusual morphology that can enable concealment and escape.

## V. CONCLUSION

In this article, we have validated a previously-formulated explanatory model of the location logic of certain specific crimes and which has now been applied to other cities of similar size and characteristics (Gerona, Lérida and Tarragona). For petty larcenies we have distinguished poles that depend on specific spots (shopping centres, regular markets and bus and train stations) from those produced by larger spaces whose borders are relatively diffuse, such as certain commercial and recreational areas.

We have also outlined the relationship between these places and robberies with violence or intimidation, as well as finding certain specific points of difference.

This analysis has enabled us, furthermore, to draw conclusions with regard to possible politics of urban intervention related in principle to this problematic and which we present schematically in continuation:

- 1. Excessive functional specialisation harms public space, making it more vulnerable to specific attacks, including the proliferation of certain crimes.
- 2. The above is particularly true when concerning historical enclaves that are often especially fragile and have a precarious equilibrium.
- 3. In the process of marking out urban functions, the role assigned to the residential function is particularly important; here there should be a search for complexity and heterogeneity that leads to integration and social cohesion.
- 4. This all leads us to confirm the need for high-quality public spaces, the achievement of which depends on multiple factors.

To conclude, there is a need to create environments suitable for citizens to live in, while respecting, valuing and strengthening their heterogeneity and complexity. This means, therefore, favouring spaces whose characteristics configure them as something valuable and complex, more along the lines of the *SafeScape* project than *Defensible Space*, and whose own quality and that of the social links established in them, stimulate a diverse and intensive use.