

**Social disorganisation, immigration and perceived crime in Spanish  
neighbourhoods**

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## **Abstract**

This dissertation adopts a quantitative approach to investigate the determinants of residents' perceptions of neighbourhood crime, focusing specifically on a series of structural factors at the community level, in accordance with the social disorganisation model. Using different statistical models, including correlations, linear regression, multilevel models and spatial regression analyses, and several Spanish data sources, in particular the 2001 Population and Housing Census and a nationally representative survey conducted in 2006, the research confirms the relevance of its exogenous sources in explaining perceived neighbourhood crime. These include classical variables, such as neighbourhoods' socioeconomic status, residential stability, ethnic diversity, family disruption and degree of urbanisation, but also other features related to the time, skills and resources deployed by residents in their residential areas such as commuting time to work, the number of working hours and the availability of a second home. For its part, other local conditions traditionally associated specifically with perceived neighbourhood crime, such as social incivilities and physical decay, act as mediators of other contextual effects, in particular of the number of retail shops and offices.

The research also demonstrates the urban nature of the social disorganisation theory. That is, that the local conditions typically associated with social disorganisation, urban unease and the various social problems that can affect neighbourhoods, are better predictors of residents' perceptions of crime in town and large cities than in rural areas, operationalized as municipalities of less than 5,000 inhabitants. Small municipalities seem particularly successful in controlling their younger residents for neither the proportion of adolescents and young adults, nor the number of children per family exert an important effect on residents' perceptions of neighbourhood crime.

Among these local conditions, special attention has been devoted to measures of diversity and immigration demonstrating that their effect on residents' perceptions of neighbourhood crime, except for the positive impact of Asians, is not necessarily robust to different model specifications and statistical methods. This erratic immigrant effect is surprising given how consistent the belief in a crime-immigration nexus is among Spaniards.

Precisely on this point, the dissertation has investigated why the belief in a crime-immigration nexus varies significantly between individuals and across communities. Three variables have been identified as determining factors: contextual parochialism, right-wing ideology and the media. In rural areas with high residential stability, a significant presence of elderly population and a low socioeconomic status, residents are more likely to unconsciously associate immigration and crime, even when individual attributes are adjusted for and, more importantly, even if few migrants live in the surroundings. Not surprisingly, right-wing residents are more likely to associate both phenomena yet, in contrast to many statements by scholars and pundits, the media in Spain seems to exert a moderator effect.

**Declaration:**

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## **List of abbreviations**

AIC: Akaike Information Criterion.

CIS: *Centro de Investigaciones Sociológicas* (Centre for Sociological Research).

ESS: European Social Survey.

GDP: Gross Domestic Product.

HLM: Hierarchical Linear Models.

ICVS: International Crime Victim Survey.

INE: *Instituto Nacional de Estadística* (National Statistics Institute).

MVS: Madrid Victimisation Survey.

OLS: Ordinary Least Squares.

REML: Restricted Maximum Likelihood.

PPP: Purchasing Power Parity.

RLM: Robust Lagrange Multiplier.

UNODC: United Nations Office on Drugs and Crime.

## **CHAPTER 1. INTRODUCTION**

### **1.1. Introduction**

This dissertation is about Spanish local communities and perceptions of local crime, the main objective being to provide an understanding of how residents' perceptions of crime relate to a series of local conditions. Such purpose proceeds through the lens of the social disorganisation construct defined as the inability of local communities to realise the common values of their residents, solve commonly experienced problems and maintain effective social controls (Kornhauser, 1978; Sampson and Groves, 1989). Its advocates (Hunter, 1985; Kornhauser, 1978; Sampson and Groves, 1989; Shaw and McKay, 1969[1942], Thomas and Znaniecki, 1927) state that a series of local conditions—also referred as correlates or exogenous sources of social disorganisation<sup>1</sup>—determine the degree to which local communities are socially organised which, in turn, helps explain why certain areas are capable of warding off potential threats (Logan and Molotch, 2007[1987]) and reproduce themselves as a social system (Skogan, 1986). One such threat is crime, an unequivocal determinant of perceived neighbourhood crime.

However, according to the incivility thesis (Taylor, 2001), perceptions of neighbourhood crime reflect multiple influences beyond the level of crime (Quillian and Pager, 2001), if only because most residents have sporadic direct experiences of crime. In this regard, fear of crime and crime perceptions are associated with social incivilities and physical deterioration as much as with actual neighbourhood crime (Biderman et al., 1967; Conklin, 1975; Garofalo and Laub, 1978; Hunter, 1978; Skogan, 1990; Wilson, 1975).

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<sup>1</sup> That the literature refers to local conditions as exogenous sources of social disorganisation does not

Keeping these statements in mind, the main theoretical framework in the dissertation can be spelt out as follows. A series of local conditions, such as residential stability and ethnic diversity, determine the resources (financial, time, trust, organisational/communication efficacy) that local communities have at their disposal in order to create efficacious social networks at the private (family/acquaintances), parochial (local associations) and public (linkages with external agencies) levels (Hunter, 1985; Bursik and Grasmick, 1993). In turn, residents in socially organised communities are more likely to perceive less amount of crime for at least three reasons. These communities are more successful in controlling crime (Sampson and Groves, 1989; Sampson, Raudenbush and Earls, 1997) and deviant behaviour<sup>2</sup> more generally (e.g. rowdiness, noise, dirtiness), both of which are known explanatory factors of perceived neighbourhood crime (McPherson, 1978; Quillian and Pager, 2001). They are also more effective in keeping the housing stock (Skogan, 1986) and public facilities (Bursik, 2006) in good condition, limiting as a result the feeling of urban unease that ill-kept neighbourhoods transmit to residents and outsiders alike (Garofalo and Laub, 1978; Skogan, 1990; Wilson and Kelling, 1982). Finally, the sense of community and trust developed in the process of bringing together and coordinating neighbours are likely to improve residents' perceptions of crime, regardless of the level of crime in the community.

Due to lack of data, the dissertation cannot fully test the causal path connecting local conditions to residents' perceived crime. Three important components are visibly absent. Namely, the specific mechanisms through which socially organised communities achieve their desired outcomes, the density and efficacy of social networks at the private, parochial and public levels of social order (i.e. direct measure of social

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<sup>2</sup> Deviant behaviour is here defined as actions or behaviours that fail to conform to social or shared norms, including formally-enacted rules, as well as informal violations of social norms (Macionis and Gerber, 2010).

organisation), and local crime rates. However, available data in Spain make possible the study of the complex causal effects connecting neighbourhoods' characteristics, residents' resources, social incivilities, neighbourhood deterioration and residents' perceptions of neighbourhood crime, and it does so for all Spanish census tracts (i.e. 34,000+ units).

Within the more general context of investigating perceptions of crime in local communities, the dissertation devotes special attention to the impact of immigration as a source of natives' uneasiness, concern for community and increased perceived crime. Bearing in mind that previous studies carried out in the United States (Sampson, Raudenbush and Earls, 1997), the United Kingdom (Sampson and Groves, 1989) and Spain (Rodríguez-Andrés, 2003) have demonstrated that ethnic diversity and actual crime rates are robustly associated at the aggregate level, the aim here is to examine whether the proportion of immigrants help explain residents' perceptions of neighbourhood crime in a specific urban environment (Madrid City). A further goal is to understand why the belief in a crime-immigration nexus, being so pervasive in Spain and elsewhere (European Social Survey, 2002; General Social Survey, 2000), varies across local communities and between survey respondents.

## **1.2. Objective and subjective measures of crime**

Measures of crime rates are generally flawed. Even *hard* measures of crime, such as police recorded crime, are not necessarily reliable for they often reflect the effectiveness of the law enforcement agencies rather than the level of criminal behaviour. However, whereas victimisation surveys, police recorded crime, judicial statistics and other official statistics are accepted in the field of criminology as reasonable proxies of actual crime rates, subjective, psychological or *soft* measures of crime—also referred to as



indirect forms of crime—are visibly not. The distinction between objective and subjective measures of crime, reflected in their different conceptual and empirical nature, is crucial to understand the theory, analyses and findings presented throughout this dissertation.

### *1.2.1. Differences between objective and perceived measures of crime: the emergence of indirect forms of crime as a social problem*

Given how infrequently the general public is victimised, particularly by violent and lethal crimes, it is surprising how much preferences and behaviour are shaped by crime-related issues (Wilson, 1975). Moving around the city, childrearing, withdrawing cash, getting dressed, physical and leisure activities, gun ownership, buying a house or voting are somewhat influenced by citizens' fear of crime (Dinas and Spanje, 2011; Lizotte, Bordua and White's, 1981; McGinn et al., 2008; Skogan and Maxfield, 1981; Warr, 1994).

This paradox is partially explained by the fact that individuals are extremely fearful of delinquent acts, low risks of victimisation potentially generating considerable doses of fear.<sup>3</sup> Yet, the main reason for this discrepancy is that indirect forms of crime, which can alone be a debilitating force driving residents to take a variety of precautionary measures (Conklin, 1975; Warr, 2000), are “now recognised as a more widespread problem than crime itself” (Bannister and Fyfe, 2001). In other words, indirect forms, or psychological measures, of crime can bring about hard consequences. These *soft* forms of crime (Conklin, 1971) have indeed emerged as social problems in their own right—related but distinct from actual crime itself—as revealed by distinctive

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<sup>3</sup> Feeling safe is a basic human need, ranked only behind physiological needs in Maslow's (1943) pyramid, and of equal status to domination, recognition and new experiences in Thomas and Znaniecki (1927).

spatial and temporal patterns (Conklin, 1975; Quillian and Pager, 2001),<sup>4</sup> and different determinants and implications (McGinn et al., 2008; Perkins and Taylor, 1996; Skogan, 1990; Wilson and Kelling, 1982). This should call into question the “commonsensical but questionable notion” that plans directed to control crime are in effect strategies to control fear (Warr, 2000).

There is ample evidence that objective and subjective measures of crime should be considered apart. For instance, in Wilson and Kelling’s (1982) seminal work, the authors describe how foot-patrolling affected residents’ perceptions of crime and feelings of security, even though crime rates had remained virtually unchanged. CCTV proponents often argue that even if their effectiveness as a crime-control instrument is contentious (Gill and Spriggs, 2005; Welsh and Farrington, 2004), it should be valued as a method that contributes to reduce residents’ fear of crime, increase feelings of safety and encourage individuals to venture into areas that were previously avoided. Or, take the case of “perceptually contemporaneous offenses” (Warr, 1984), or crimes that are erroneously believed to occur together, such as rape and homicide or burglary and violent injuries, even though rape rarely results in murder and burglaries typically happen when no one is at home (Warr, 2000). Or, yet again, consider the fact that certain groups, such as women and the elderly (Mesch, 2000; Warr, 1984), are victimised less frequently but perceive comparatively high levels of crime.

Among these forms of indirect victimisation, residents react ultimately out of fear of crime (Lewis and Salem, 1986; Skogan, 1990). Yet fear of crime is a “multiplicative function of the perceived seriousness and perceived risk of the offenses” (Warr and Stafford, 1983). Therefore, fear of crime—an emotionally based measure—mediates the effect of perceived crime—a cognitive based measure—on the adoption of

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<sup>4</sup> See, for instance, the “reassurance gap” in the United Kingdom whereby during the Tony Blair’s government crime was falling sharply but perceptions of crime were not, or at least not at the same rate (*The Economist*, 02-06-2012).

defensive and avoidance behaviours (Ferraro and LaGrange, 1992; Lizotte, Bordua and White, 1981; Rountree and Land, 1996). These include the avoidance of night time activities (Mesch, 2000), physical activities (McGinn et al., 2008) and parks (Conklin, 1975), acquiring protective firearms (Lizotte, Bordua and White, 1981) or opening a store (Conklin, 1975).

So, perceived crime has a direct effect on fear which, in turn, shapes residents' adoption of precautionary measures. The question then arises as to what determines perceptions of crime in the first place?

#### *1.2.2. The multidimensional nature of perceived neighbourhood crime*

The correspondence between perceptions and reality is frequently imperfect, the field of neighbourhood crime being no exception. It is now widely accepted that residents' assessment of local crime are only partly accurate, being also influenced by communities' physical and social disorder (LaGrange, Ferraro and Supancic, 1992; Lewis and Maxfield, 1980; Sampson and Raudenbush, 1999; Skogan, 1990; Wilson and Kelling, 1982), the mass media (Conklin, 1975; Heath, 1984; Liska and Baccaglini, 1990), their personal traits (Mesch, 2000), personal experiences with crime (Quillian and Pager, 2001), conversations with friends (Conklin, 1975), as well as by other individual and contextual factors. As Wilson (1975) suggests, citizens are so fearful of criminal events mainly because they are confronted with daily hassles and physical decay in their environment, such as panhandlers, corner boys, run-down buildings or graffiti, and not necessarily as a result of personal experiences. In assessing the levels of crime, residents are more likely to be influenced by often irrelevant but more visible and frequent events.

### **1.3. The social organisation of local communities**

This dissertation is about “soft” measures of crime. It is also about local communities and the sort of ecological conditions that determine their everyday functioning and shape the manner in which residents perceive their environment. Therefore, local communities, and not individuals, households or the macro-structure, constitute the primary, albeit not the only, unit of analysis in the research. Local communities are here conceptualised as the various territorial groups that connect the household with the wider and “imagined” society (Anderson, 1983). For the purposes of this dissertation, local communities are defined as geographically based organisations that partially satisfy two conflicting conditions. As opposed to households and buildings, they “satisfy a complex set of needs”, helping residents in the management of their daily lives (Logan and Molotch, 2007[1987]). As opposed to cities and regions, members should have a reasonable chance of directly, or indirectly, knowing a decent proportion of community members. Setting a size threshold, in the way that Plato (1992) did for the ideal city, would be rather arbitrary, if only because individuals experience, exploit and define their lived environment in very different ways. Even if a common rule of thumb could be applied to define residents’ lived environment, such as the 15 minutes walking rule often used in CIS (*Centro de Investigaciones Sociológicas*) surveys, the problem of identifying neighbourhoods’ boundaries would persist as collecting data on personally defined neighbourhoods would be a Herculean task. However, most scholars would agree that local communities can be safely equated with census tracts—where residents number in the thousands—and especially with neighbourhoods—where residents number in the tens of thousands. Evidence for this statement comes from the abundant studies, within the urban crime literature, that employ either census tracts or neighbourhoods as units of analysis (Bursik and Grasmick, 1993; Oberwittler, 2004; Sampson and Groves, 1989; Sampson, Raudenbush and Earls, 1997; Simcha-Fagan and

Schwartz, 1986; Warner, 2003). In the case of rural areas, municipalities may be a good proxy for communities but as a general rule census tracts and neighbourhoods are here considered as the closest representation of local communities. Therefore, in the dissertation census tracts and neighbourhoods are equated with local communities, often using them interchangeably.

But, why are territorial organisations relevant in the first place? First and foremost, because of Tobler's (1970) first law of geography: "Everything is related to everything else, but near things are more related than distant things". Second, because of the historical and architectural rationale behind administrative divisions. Neighbourhoods and other administrative divisions usually owe their existence to previous self-governing entities<sup>5</sup> or to architectural barriers (e.g. railways, major highways), conferring them a distinct identity. Even without these "solid" foundations, newly created administrative divisions soon generate local social networks and citizens' attachment, especially among their youngest residents. This is not to deny that residents' daily activities and ego networks do extend beyond the neighbourhood (Goldhaber and Schnell, 2007), as is often the case in large cities and certain social groups (e.g. migrants, childless adults) and for family, work, school or hobby-related networks. Neither is it to deny that the "mechanic solidarity" of traditional societies has been substituted by the "organic solidarity" (Durkheim, 1934[1893]) of modern societies (Portes and Vickstrom, 2011), altering the ability of local communities to employ mechanisms of social control over its members. However, even today, local communities are expected to play a role, if only because distance increases the cost of maintaining social interactions. Thus, *ceteris paribus*, individuals are more likely to form strong ties with relatives, colleagues, schoolmates and friends that live nearby

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<sup>5</sup> See the process of municipal annexation in the late 19th and early 20th centuries in Spain or the United States.

which, in combination with the prevalence of residential segregation, may help to explain why migrants and urban residents are frequently so embedded in their migrant enclaves and “urban villages” (Gans, 1962).

That geography and local communities influence the set of networks in which residents take part can be derived from various empirical findings. For instance, the assignment<sup>6</sup> or selection of schools is extremely influenced by households’ place of residence, limiting the geographical reach of children and young adults’ social networks. Even middle-aged adults who have left their “original” community frequently return in search of family support, if only on a temporary basis (e.g. to help with childrearing or following a divorce) (Michielin, Mulder and Zorlu, 2008). A clear indication of the importance of geography in shaping ego networks is the degree to which residents are residentially stable. For instance, in 2006 a typical Spanish citizen had spent half of her life in the same residential area (CIS survey 2634) and three-quarters in the same municipality (CIS survey 2632), enough time for individuals to build a dense local network of relatives, friends and acquaintances, and enough residential stability for communities to establish “traditions and institutions” (Short, 1969).

Among these local networks, the focus in this dissertation is on those that contribute to the social organisation of the community. Following Hunter (1985), local social networks are classified into three levels depending on their level of intimacy and their links with the “outside world”. The private order corresponds to the series of “strong ties” (Granovetter, 1973) that residents establish with family and friends, and in which social control is exerted directly through criticism, ostracism, social support and other informal means, and indirectly through feelings of attachment (Hirschi, 1969). In

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<sup>6</sup> In the Spanish case, location is a key admission criterion of public and subsidized schools, with households living nearer having priority.

the parochial order, the local interpersonal networks extend beyond family and friends (i.e. non-intimate networks) but remain within the local community. In contrast with the private and public orders, at this level social control is communitarian *sensu stricto*, and is exerted by the interlocking of acquaintances and meso-level organisations (e.g. schools, voluntary organisations) through informal and “soft” mechanisms, such as surveillance, supervision and the identification of local offenders. The public order incorporates the various “weak ties” (Granovetter, 1973) that neighbours establish with agencies outside the neighbourhood in order to secure the public goods and services that are essential for an “effective regulatory capacity” (Bursik and Grasmick, 1993).

Unfortunately, in the Spanish context there are no widely available measures of local social networks—whether they be private, public or parochial—or of the various mechanisms that communities have at their disposal to control their prospective offenders and ward off external threats. Instead, the focus is on the ecological factors that determine the degree to which communities are socially organised or, in other words, the extent to which they are able to realise the common values of its residents and maintain effective social controls (Kornhauser, 1978). Since this line of research was first advanced by Shaw and McKay (1969[1942]) the structural factors associated with communities’ social disorganisation have evolved considerably. Building on the initial set of local conditions of poverty, heterogeneity and residential turnover (Kornhauser, 1978), recent research also considers family disruption (Sampson, 1987) and urbanisation (Sampson and Groves, 1989) as exogenous sources of social disorganisation, whereas poverty is generally relabelled as socioeconomic status.

The number of ecological factors to bear in mind, however, should not be informed exclusively by previous research. Instead, any environmental variable which is likely to affect the density of any of Hunter’s (1985) three levels of social order—

private, parochial and public—should be part of an explanation of communities’ social organisation. This brings us back to more general explanations of how people form stable friendships and why they get involved in voluntary associations (Kitschelt, 1993; Verba and Nie, 1972; Verba, Schlozman and Brady, 1995). Five types of resources are here identified as crucial for residents’ socialisation and participation in community life: communication and organisational efficacy, trust (in neighbours), time spent in the community, and financial resources, plus a commonality of interests that render the deployment of these resources “worth the trouble”.

In addition to the classical social disorganisation exogenous sources, this study also incorporates a series of local conditions that are likely to impinge on neighbours’ involvement in community life. For instance, commuting time to work, having access to a secondary residence and working long hours all reduce the time spent in the community contributing to neighbours’ disengagement from community life and social control activities. Envision a community where the bulk of its adult population works long hours, commutes long distances, and spends their spare time at their holiday homes. It is difficult to imagine how a neighbourhood without “eyes on the streets” (Jacobs, 1961) could be socially organised, fend off opportunistic offenders, control “menacing” local youth and inspire feelings of safety among its residents.

Although this literature was originally intended to understand spatial variations of crime within US metropolitan areas, there is no reason to suspect that these empirical indicators, or so-called exogenous sources, of social disorganisation are not relevant in the context of Spain. For one thing, regardless of the role played by public agencies, neighbourhoods tend to be better organised where residents have more resources at their disposal, such as income, time or communication skills, and this holds true for local communities everywhere. In this regard, and although not as acute as in



the United States, urban stratification is clearly visible in Spanish metropolitan areas (see chapter 6). The existence of spatially stratified cities implies that the indicators of social disorganisation will be unequally distributed across the urban space and, as in the US context, are likely to be determinants of geographic variation in crime rates. For another, previous research has demonstrated that the Social Disorganisation Theory can be exported, with caveats, beyond US metropolitan areas, including rural areas (Osgood and Chambers, 2000), other Anglo-Saxon countries (Jobes et al., 2004; Sampson and Groves, 1989), as well as low-crime societies (Oberwittler, 2004). Finally, the buffer effect associated with the Welfare State, that could potentially limit the impact of local conditions on various social outcomes, is likely to be moderate in the context of Spain. For instance, according to the OECD tax revenues in Spain made up only 30.7 percent of GDP in 2009, being in fact closer to Switzerland (30.3 percent), and even the United States (24 percent), than to the EU average (37 percent). Among the characteristics of a community that are hypothesised to impinge on its social disorganisation and, in turn, on its residents' perception of crime, special attention is devoted to the most controversial of all: ethnic diversity. In Shaw and McKay's seminal work (1969[1942]), they showed the percentage of foreign-born and black residents in an area was correlated with area delinquency, though they warned that "one must beware of attaching causal significance to race or nativity" because "within the same type of social area, the foreign born and the natives, recent immigrant nationalities, and older immigrants produce very similar rates of delinquents" and because "no racial, national, or nativity group exhibits a uniform, characteristic rate of delinquents in all parts of Chicago". According to their analyses, residential stability and economic factors prevailed over ethnic diversity in the explanation of communities' rates of delinquency.

In terms of resources, ethnic diversity *per se* may hinder social organisation and its associated construct of “collective efficacy” (Sampson, Raudenbush and Earls, 1997), through its debilitating impact on neighbours’ social trust (Putnam, 2007), commonality of interests (Alesina, Baqir, and Easterly, 1999; Alesina and La Ferrara, 2005) and organisational efficacy (Deutch 1966; Hardin 1995).<sup>7</sup> However, these mechanisms have been fiercely disputed (Aizlewood and Pendakur, 2005; Habyarimana et al., 2007; Laurence and Heath, 2008; Marschall and Stolle, 2004)<sup>8</sup> and frequently what is interpreted as a “diversity effect” may actually be confounded with a plain “immigrant effect”.<sup>9</sup> This is all the more likely since immigration in and of itself may be related to social disorganisation and perceptions of crime through various mechanisms. For instance, those originating from non-democratic countries may lack the communication and organisation skills of “civically engaged” host societies. Also, economic migrants typically lag behind in terms of financial resources and length of residence in their local communities, the latter being exacerbated by the fact that their residential mobility, at least in the initial stages of the migratory process, is exceptionally high (Recaño, 2002). Throughout the dissertation, the effects of ethnic diversity and immigrant concentration on residents’ perceptions of neighbourhood crime are tested simultaneously and in separate analyses.

But, what exactly is ethnic diversity? Theoretically, the answer seems quite straightforward: the presence of different ethnic groups in a social unit (geographical area). In practical terms, however, the measurement of ethnic diversity hinges upon the controversial operationalization of ethnicity, and the way in which diversity is

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<sup>7</sup> According to the efficacy mechanism (Habyarimana et al., 2007) homogeneous communities can draw on a “reservoir of common cultural material” that facilitates communication and organisation among their members.

<sup>8</sup> For a comprehensive review of the social trust mechanism see van der Meer and Tolsma (2011).

<sup>9</sup> Particularly in the Spanish case, where immigration is a recent process, one needs to be careful in interpreting the effects of ethnic diversity measures. In fact, ethnic diversity indices and the proportion of immigrants—operationalized as foreign nationals or foreign-born—are almost perfectly correlated in the datasets employed in this dissertation.

effectively quantified. For instance, ethnicity could be based on a readily observable characteristic (e.g. race or language), a classification based on self-report, a legal distinction (i.e. citizenship), on geography (i.e. country of birth), or on the context of socialisation (i.e. 1<sup>st</sup>, 1.5, 2<sup>nd</sup> and 3<sup>rd</sup> generation immigrants). Ultimately, the operationalization usually depends on the type of data collected by statistical agencies. As in most countries of continental Europe, the Spanish Institute for Statistics (INE) collects data on nationality and country of birth, avoiding information on race or personally-defined ethnicity. Measures of ethnic diversity also depend on the specific method of estimation. Proportions of specific ethnic groups are often used as a proxy of ethnic diversity (Sampson, Raudenbush and Earls, 1997; Shaw and McKay, 1969[1942]) yet indices, most notably the Herfindahl index, are most commonly employed. Differences between the various estimations methods, however, are blurred in settings where the majority group represents more than three quarters of the population in the multiple areas (e.g. census tracts, neighbourhoods, districts) that make up citywide or nationwide analyses.

There are reasons to believe that ethnic diversity and immigrant concentration may play a particularly important role in the explanation of perceived crime in Spanish neighbourhoods. In addition to a purported indirect effect operating through communities' social organisation, ethnic diversity may have a direct effect on residents' perceptions of neighbourhood crime. Since the belief in a crime-immigration nexus is so widespread (European Social Survey, 2002; General Social Survey, 2000), and immigrant areas are often identified with neighbourhood decay, the presence of immigrants could directly affect residents' assessment of area delinquency. Besides, the sudden and massive arrival of culturally, religiously and racially different people that started off in the late 1990s may have been especially conducive to natives perceiving

greater threat (Citrin and Sides, 2008), especially if we consider that Spanish society had been, prior to 1990, relatively ethnically homogeneous.

Precisely because the typical citizen equates crime with immigration—but not necessarily *vice versa* (Solé et al., 2000)—and this mental association is likely to influence his or her evaluation of neighbourhood crime, delving into the nature and sources of this widespread belief is a useful exercise, particularly in the context of this dissertation. While studies on individual and contextual determinants of anti-immigrant attitudes are numerous, to the author's knowledge there is no empirical study addressing the issue of crime specifically, let alone with reference to local communities. This is particularly surprising given that crime is a fundamental concern, associated with immigration both in Europe (European Social Survey, 2002) and the United States (General Social Survey, 2000), and that substantial and interesting differences in the explanatory factors of crime-related and other anti-immigrant attitudes exist (Citrin and Sides, 2005, 2006). Three variables are advanced as potential determinants of the belief in a crime-immigration nexus. First, the media and its “tendency to turn any shocking crime into a news story” are hypothesised to generate and reinforce such belief (Cea and Valles, 2008). Second, left-right ideology is believed to act as a lens through which residents evaluate their environment and, more importantly, as a shortcut when information about the real crime-immigration link is missing or too costly to obtain (Popkin, 1991). Finally, drawing on sociological categories such as Durkheim's (1934[1893]) mechanic and organic solidarity or Tönnies (2002[1887]) *Gemeinschaft* and *Gesellschaft*, the impact of what is termed as contextual parochialism is evaluated. Following Thomas and Znaniecki (1927), the “celebration of diversity” (Bannister and Fyfe, 2001) is characteristic of cosmopolitan environments, typically associated with urban areas and significant residential turnover. In addition to its intrinsic academic

value, shedding light on the individual and contextual determinants of the belief in a crime-immigration nexus may also help in the interpretation of the immigrant-related effects on residents' perceptions of neighbourhood crime in the various ecological models carried out throughout the dissertation.

The different hypotheses advanced in the dissertation are all tested with quantitative methods, ranging from simple descriptives to multilevel regression models. This is not to say that qualitative research was overlooked or discarded as a valuable methodological strategy. Quite the opposite. Previous qualitative research, most notably *There goes the neighbourhood* by Wilson and Taub (2006) and a less ambitious project conducted in Madrid city (Cachón, 2008), has served as a scheme for generating hypotheses, contextualising this research and interpreting the findings.

Why should perceived neighbourhood crime in Spanish communities be relevant other than to quantitative Spanish criminologists? Crime in Spain, and in fact in Southern Europe, is an understudied field where applications of the social disorganisation framework have been exceptionally rare. This is unfortunate, for at least three reasons. First, the combination of relatively low crime rates with moderate to high levels of subjective crime that is typical of Southern European societies (Dijk, Kesteren and Smit, 2007) may turn out to be an ideal context in which to examine the impact of communities' physical decay and social disorder on residents' perceptions of neighbourhood crime. Second, Spain has turned into an extremely diverse society only recently. Since 1998, as much as six million new immigrants have settled in Spain raising the stock of foreign-nationals from less than 2 per cent in 1998 to more than 12 per cent in 2009. This sudden social change is interesting in that rapid changes may have additional disruptive effects (Hopkins, 2010), but also because Spanish urban sociologists are facing a situation that, *mutatis mutandis*, reminds of the context that

early sociologists of the Chicago School encountered almost a century ago and in which the social disorganisation perspective developed (Thomas and Znaniecki, 1927; Shaw and McKay, 1969[1942]). Finally, these sudden changes fortunately coincided with the most comprehensive and detailed population and housing census ever conducted in Spain, and in which both objective and subjective data were collected from residents. To the author's knowledge, no other exhaustive census asks respondents about local areas' conditions such as crime, noise, cleanliness or pollution—that is, information that is typically collected through standard surveys. Among other advantages, using census data allows for very detailed analysis of perceived crime differences within and between rural areas, towns, and medium and large cities.

The discussion up to this point has set forth some relevant and contentious issues concerning the study of perceived neighbourhood crime, social disorganisation, and the crime-immigration nexus, the consideration of which is essential to the analyses carried out in the dissertation. Several aspects stick the different parts of the dissertation together. Namely, a similar outcome variable (i.e. perceived neighbourhood crime), a quantitative approach, an ecological perspective and a social disorganisation framework. However, each chapter has its own “character” as reflected in the hypotheses investigated, the methods employed and its specific contribution to the extant literature. Precisely for this reason, a brief description of the specifics of each chapter becomes even more necessary.

#### **1.4. Structure of the dissertation**

Chapter 2 *Social disorganisation: history, theoretical developments and applications to the explanation of perceived neighbourhood crime* sets out the theoretical foundations of the dissertation in that it describes the social disorganisation model and its specific

applications to the understanding of residents' perceptions of neighbourhood crime. Starting with the work of early urban sociologists the chapter introduces the main tenets of the theory first introduced by Thomas and Znaniecki (1918), and later applied by Shaw and McKay (1969[1942]) so as to account for crime rates' variations within some of the largest US cities of the time, such as Chicago, Philadelphia or Boston. The focus is mainly on the so-called exogenous sources; that is, structural characteristics of local communities that shape their ability to realise common goals, solve collective problems and live in accordance to shared values (Bursik and Grasmick, 1993; Kornhauser, 1978; Sampson and Groves, 1989). After delving into recent developments of the model, particularly those related to the systemic and capital/collective efficacy perspectives (Bursik, 2006), the author proposes an alternative approach whereby the causal path of the social disorganisation model is divided into three pillars (exogenous sources, dimensions and social outcomes) that are connected through a series of mechanisms. Whereas the resources that residents have at their disposal connect the local conditions (exogenous sources) to the three levels of social order (dimensions), the mechanisms of social control connect the dimensions to relevant social outcomes. The chapter concludes making reference to the few studies that apply the social disorganisation model to the explanation of perceived neighbourhood crime, including those that use perceptions of crime as a proxy of crime (Sampson, Raudenbush and Earls, 1997) and those that hypothesise that these perceptions respond to multiple influences (incivility thesis).

Chapter 3 *Conceptualising and measuring crime perceptions* focuses on the only outcome variable that is investigated throughout the dissertation—residents' perceptions of neighbourhood crime—and sets the context for the rest of the study. Among other things, the chapter describes accessible crime information in Spain, presents trends in

citizens' concern for public safety and crime-related issues, shows basic descriptives of crime perceptions in Spanish communities and their correlation with other local characteristics and provides information on the sociodemographics of offenders and victims according to the International Crime Victim Survey (2005) and Madrid Victimization survey (2008). More importantly, this chapter offers valuable information in order to select the appropriate model specification in the empirical chapters and adequately interpret the results. Firstly, it offers an empirical test of the conceptualisation of the dependent variable as a combination of visual cues available to residents (social incivilities, physical decay and neighbours' sociodemographics) and actual crime levels. Secondly, it provides empirical evidence on the importance of community dynamics in explaining perceptions of neighbourhood crime by separating individual and contextual effects in multilevel regression models.

Chapter 4 *Exogenous sources of social disorganisation, spatial heterogeneity and perceived crime in local communities in Spain* examines the effect of the exogenous sources of social disorganisation on perceived neighbourhood crime for all census tracts in Spain in a series of multilevel or hierarchical linear models. These exogenous sources include classical local conditions such as residential stability, diversity, residents' socioeconomic status, the prevalence of family disruption and urbanisation. In addition, a set of community characteristics related to the resources that residents may potentially deploy in their communities are also incorporated into the analyses, such as commuting time to work and overtime work and the availability of a second home. Finally, the inclusion of control variables (proportion of women and elderly population and commercial activity), measures of spatial heterogeneity and variables originating in the literature on informational cues and the incivility thesis (building deterioration, noise, cleanliness) yield interesting results and serve to improve further the performance of the



models. A simplified model is subsequently tested for villages, small towns, medium-sized cities and large cities which speaks directly to the literature of rural-urban comparisons of crime (Lee, Maume and Ousey, 2003; Osgood and Chambers, 2000).

Chapter 5 *Latent beliefs in a crime-immigration nexus: right-wing conservatism, media effects and contextual parochialism* adopts a slightly different perspective to the rest of empirical chapters in that the perspective is not exclusively ecological, examining both the individual and contextual determinants of the latent belief in a crime-immigration nexus. Latent because respondents are not directly asked their opinion about such connection; instead the main outcome variable is the constructed using respondents' opinions about the presence of foreign nationals and neighbourhood crime. The chapter assesses how widespread the latent belief in a crime-immigration link is, evaluates if such opinion is robust to different modelling strategies and explains why it varies between individuals and across communities, focusing specifically on three variables: media effects, right-wing conservatism and contextual parochialism. The findings also serve to gauge the relative importance of respondents and communities' characteristics in accounting for perceived neighbourhood crime.

Chapter 6 *Perceived neighbourhood crime and immigration in Madrid City: a spatial analysis* comes back to ecological analyses of chapter 4 but concentrating instead on a single city (Madrid). It focusses on the ecological crime-immigration nexus and seeks to account for the acute spatial interdependence of the dependent variable. The chapter analyses the bivariate association between the proportion of immigrant groups, based on country of birth, and residents' perceptions of neighbourhood crime. It follows with multivariate analyses of these same relationships incorporating the exogenous sources of social disorganisation, a proxy for social disorganisation itself (i.e. electoral turnout) and employing different regression models that account for

spatial interdependence (i.e. spatial error model, spatial lag model and multilevel linear regression model of census tracts and neighbourhoods).

Chapter 7 summarises the findings and discusses their main implications for the literature on perceived crime, social disorganisation, local communities and the crime-immigration nexus.

## **CHAPTER 2. SOCIAL DISORGANISATION: HISTORY, THEORETICAL DEVELOPMENTS AND APPLICATIONS TO THE EXPLANATION OF PERCEIVED NEIGHBOURHOOD CRIME**

### **2.1. Introduction**

This dissertation is fully embedded in the social disorganisation framework that emerged within the Chicago School as early as the 1920s, and which has recently developed into the systemic model and the social capital/collective efficacy approach of what Bursik (2006) denotes as the “New” Chicago School. As a matter of fact, several other debates/literatures—such as the role of the media in generating stereotypes or the importance of inequality in breeding criminal behaviour—are relevant to the empirical questions that this dissertation deals with. Nevertheless, it is the recent reformulations of the social disorganisation model, its application to the explanation of crime perceptions and its interpretation of the crime-immigration nexus that permeate most of this study.

This chapter provides a detailed description of the social disorganisation model and a discussion of its most recent developments—particularly those related to perceived neighbourhood crime (Quillian and Pager, 2001; Taylor, 2001)—and its stance on the crime-immigration relationship. This enables the development of the theoretical framework used in the thesis and provides the context for the generation of a set of testable hypotheses and expectations. In short, this chapter addresses three major issues: what is the social disorganisation model of urban crime and how can it help us in understanding residents’ perceptions of crime and their belief in a crime-immigration nexus. An alternative theoretical perspective, within the social disorganisation theory, is also proposed whereby what is relevant is the influence of local conditions on the

specific mechanisms of social control, rather than on the levels or dimensions of social disorganisation.

## **2.2. Social disorganisation theory: from urban determinism to collective efficacy**

Strongly linked to its psychological counterpart, or social control theory, the social disorganisation theory has been the dominant sociological explanation of crime in an intermittent fashion; leading the scene prior to World War II (Park, Burgess and McKenzie, 1925; Thomas and Znaniecki, 1927; Shaw and McKay, 1969[1942]), fading with the emergence of serious criticisms based on the study of subcultures (Whyte, 1943; Cohen, 1955; Sutherland, 1949) and the advancement of socio-psychological models of deviant behaviour (Sykes and Matza, 1957; Merton, 1938; Hirschi, 1969), and reviving again with Kornhauser's (1978) reformulation of Shaw and McKay's work (1969[1942]) and further developments of the model (Sampson, 1987; Bursik and Grasmick, 1993; Sampson, Raudenbush and Earls, 1997).

In its simplest formulation, the theory states that communities' social disorganisation, itself affected by a set of environmental/structural characteristics, accounts for spatial variations in (urban) crime rates. In its more elaborate form, the model is based on interactional networks within communities that connect residents in more or less formal relationships, and the neighbourhood with external institutions (Bursik, 2006). These are private, parochial and public networks (Hunter, 1985) that, through the emergence of common values and goals and the maintenance of effective social controls, can effectively contribute to solve problems in the community (Kornhauser, 1978). The theory, therefore, lies on two important assumptions. A weak assumption that asserts that social variables, originating and developed within social relationships, affect human behaviour (i.e. sociological assumption), and a more controversial assumption, according to which the territorial or spatial community

(Gusfield, 1975), either by itself or in interaction with individual, family and macro-structural factors, is a relevant level of aggregation (i.e. ecological assumption). It is the latter that proves more contentious since both the “Old” and the “New” Chicago School often adopt a community interpretation without sufficient empirical support.<sup>10</sup> Where reliable evidence exists (that is where contextual effects have been properly isolated and measured) neighbourhoods are shown to typically account for a statistically significant but modest proportion of crime variance (Oberwittler, 2004),<sup>11</sup> providing only partial support to the ecological assumption.

In what follows, a chronological account of the model is presented, followed by a description of the main constructs, dimensions and mechanisms associated with the theory: local social networks and the levels of social order, associational membership, supervision and guardianship, and the notion of collective efficacy.

### *2.2.1. The origins*

Influenced by the massive rural-urban migrations of the late nineteenth and early twentieth century, some early sociologists believed that the disruption of the social fabric was an inevitable process associated with urbanisation and industrialisation. Neighbourhood residents were forced to live in an individualistic and capitalist environment—freed from moral and social restraints—where they could no longer “benefit” from the social order of primary contacts and community attachments prevalent in smaller human agglomerations. Social transformations from a rural to an urban setting included a move from “steady, uniform, harmonious and consistent” to

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<sup>10</sup> In Shaw and McKay (1969[1942]) the ecological assumption, or the conclusion that “delinquency is a product chiefly of community forces and conditions”, is supported by the fact that “in Chicago the rates of delinquents for many years have remained relatively constant in the areas adjacent to centers of commerce and heavy industry, despite successive changes in the nativity and nationality composition of the population”.

<sup>11</sup> Oberwittler (2004) reports that neighbourhoods explain three to four per cent of total variation in juvenile violence in 61 rural and urban neighbourhoods. Such results are consistent with similar studies conducted in the US (Simcha-Fagan and Schwartz, 1986; Cheong and Raudenbush, 2000).

“unsettled, disorganized and inconsistent” social influences (Sutherland, 1924). In this unsettled urban context, creativity, productivity and cosmopolitanism grew accordingly, but so did human avarice, antisocial behaviour and anomie. Accounts for this rural-urban transformation abound in the social sciences and can be found in Tönnies’ (2002[1887]) transition from *Gemeinschaft* to *Gesellschaft* (from community attachments to an associational basis), in Wirth’s substitution of primary contacts for secondary contacts (Wirth, 1938) or in Durkheim’s concept of anomie and normlessness (1951[1897]). It is in this context that Thomas and Znaniecki (1927) developed the term social disorganisation referring to the “passive demoralisation” that rural immigrants suffered in their new urban environments, and formally defined as the fading of the influence of social rules on individual members of the group (Bursik, 2006).

The shift from rural *organisation* to urban *disorganisation*, however, was neither a linear nor a socially accepted process. Individually, reactions to the cultural strain and conflict posed by urbanisation were conditional on their socioeconomic success. Skilful and industrious individuals were to take advantage of the new urban conditions, rapidly adopting a more progressive way of life, while the worse off were to yearn for the good old times sticking to their old customs (Thomas and Znaniecki, 1927). Collectively, the *unfriendly* urban order was fiercely opposed by immigrant groups who tried to transplant their village way of life to the urban neighbourhood, for as Park, Burgess and McKenzie (1925) note “America actually has been colonised not by races or by nationalities, but by villages”. Actually, sociologists had previously observed that even though sticking with rural customs could be individually detrimental it could also be socially constructive. As the authors of *The City* remarked “It was actually those immigrant groups who were successful in keeping with their traditions that have been most able to withstand the shock of the new environment”, or again in Lind (1930),

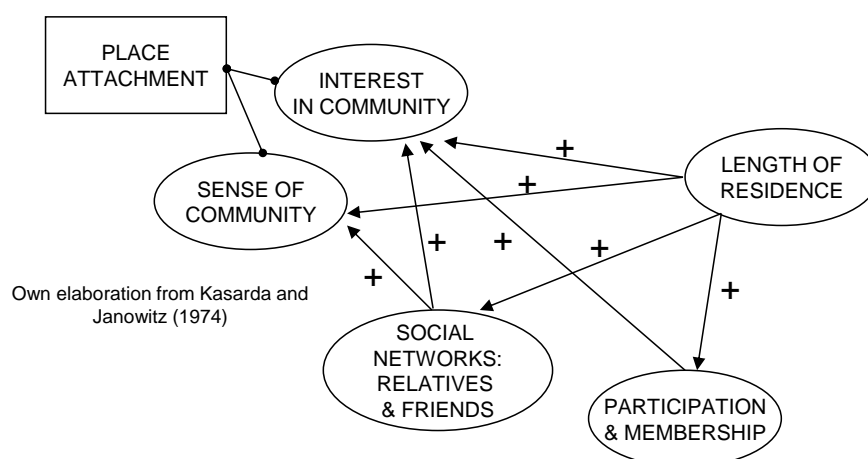
“(…) the conservative pressure of the immigrant ghetto still provides effective resistance to the disintegrating forces of urban life”. This was especially true for Asian communities who presented the lowest crime rates as they “have organized what we may call control organisations to deal at once with disputes arising among themselves and with the larger community outside” (Park, Burgess and McKenzie, 1925). Thus, although scholars then believed the city to be proof of an ongoing cultural decadence—as shown by its high crime rates and other urban malaises (Lind, 1930; Shaw and McKay, 1969[1942])—they did not claim this process was linear or inexorable. In fact, new social worlds and social solidarities were emerging in the “urban villages” (Gans, 1962) of the metropolis (Kasarda and Janowitz, 1974).

The struggle between these two competing views—that of a linear relationship between urbanisation and cultural degeneration and that of a reinvention of culture and social solidarities in a new urban context—is an old debate dating back at least to the deceptive decay of civic institution and family life in ancient megalopolitan Rome. As with the *new social worlds* of twentieth century Chicago, new institutions, such as the College, the Mithraic, the Manichean or the Christian Church, appeared to make for the decay of civic institutions and family life in an ever-growing Rome (Mumford, 1961).

The controversy on the effects of urbanisation is revisited by Kasarda and Janowitz (1974), though it is not social disorganisation they deal with but with place attachment. What they call the *linear development model*—represented by Tönnies (2002[1887]) and Wirth (1938)—hypothesises that population size and density are responsible for decreasing levels of place attachment, while the *systemic model*—embodied by Park, Burgess and Thomas—focuses on length of residence. Their results (table 2.1) show that neither population density nor population size seem to have a strong effect on a comprehensive concept of place attachment including sense of

community, interest in the community and being sorry to leave the community, rejecting old fears about social atomisation in urban contexts. The opposite seems to be true for length of residence, bearing out the concept of urban villages developed in studies of gangs (Whyte, 1943), ethnic communities (Gans, 1962) and neighbourhoods (Jacobs, 1961). Academics realised that as some neighbourhoods thrived and stabilised demographically—and others failed to do so—social disorganisation, cultural decadence and social atomisation was not an indissoluble element of the city but a steady characteristic of certain urban areas that deserved specific attention. Besides, as American society turned increasingly urban in nature and immigration to the US dropped in relative and absolute terms, public longing for the rural way of life faded away, and the interest in the rural-urban transformations decreased accordingly. This fall into obscurity led Osgood and Chambers (2000) to argue that “considering the origins of the concept of social disorganisation, the lack of attention to nonurban communities is a glaring omission”.

Figure 2.1. Kasarda and Janowitz’s (1974) empirical findings



It was not until Shaw and McKay’s (1969[1942]) work that the social disorganisation model developed by Thomas and Znaniecki (1927) was applied to crime



specifically, and not as one more in a series of urban problems. According to their perspective, the urban distribution of crime followed the pattern of neighbourhoods' social organisation, defined in terms of residents' ability to define "problems of common interest", to agree on how "a problem should be dealt with" and to implement the solution through "harmonious cooperation". Effectively organised communities, in turn, were more likely to emerge in urban areas with a low prevalence of poverty (i.e. a low percentage of families on relief and median rental), a low residential turnover (i.e. population increase and high levels of home ownership) and ethnic heterogeneity (i.e. a low percentage of foreign-born and Negro (sic) heads of families) (Shaw and McKay, 1969[1942]). As expected, the question soon emerged as to whether crime was a cause, a consequence, or just a sign of social disorganisation, a debate that remains subject to associated problems of circularity, multicollinearity and tautology (Kornhauser, 1978; Sampson, 2009). Bear in mind that even Shaw and McKay recognised the fact that the geographical distribution of juvenile delinquency was closely associated with a myriad of community problems, such as "truancy, adult crime, infant mortality, tuberculosis and mental disorder".

As for the crime-immigration nexus, in *Juvenile Delinquency and Urban Areas*, Shaw and McKay (1969[1942]) demonstrated that, regardless of their ethnic composition, crime was persistently high in transitional areas adjacent to the Central Business District and declined with distance from the city centre "until it almost vanishes in the better residential districts". In addition, "no racial, national, or nativity group" exhibited a uniform rate of delinquency across Chicago. Hence, crime was not the result of specific genetic configurations, of immigrants' taste for delinquency, or of peasants moving to an unknown and aggressive urban culture, but of individuals'

incorporation into areas with, or adjacent to, heavy industry and commerce and portraying signs of social instability and disorganisation.

Several shortcomings in their work need to be discussed. To begin with, embedded in the Chicago School's vibes, they failed to identify and develop relevant causal mechanisms. Urban stratification was, after all, "natural"; high delinquency rates were an "end-product of processes in American city life over which, as yet, man has been able to exercise little control" (Shaw and McKay, 1969[1942]). For the same "natural" reason, they failed to connect the disorganised areas with the privileged parts of the city, except to recognise the entire "complex of urban life" (Wirth, 1938), and argued that the causes for delinquency were to be found basically in internal conditions and processes within the socially disorganised areas (Snodgrass, 1976). Moreover, even though their work gave birth to what is known as the community-level systemic perspective, Shaw and McKay did not abandon the cultural elements of previous studies, such as Sutherland's (1924), leading to internal inconsistencies in their crime theory (Kornhauser, 1978). Indeed, Shaw and McKay argued that an unfortunate consequence of socially disorganised neighbourhoods was the appearance of divergent value systems competing for residents' allegiance and even went as far as supporting a culturalist/path dependence approach, according to which "the traditions of delinquency can be and are transmitted down through successive generations of boys, in much the same way that language and other social forms are transmitted" (Shaw and McKay, 1969[1942]). Thus, originally a dependent variable, the delinquent subculture is transformed into a semi-autonomous process owing to its stability over time (Kornhauser, 1978).

### *2.2.2. The revival*

Kornhauser's (1978) meticulous analysis of previous analytical models (e.g. social disorganisation, cultural deviance, strain, neutralisation, etc.) cleared the social disorganisation model from its cultural and strain elements, as reflected in Shaw and McKay's (1969[1942]) work. She rejected cultural deviance theory on the grounds of its inability to distinguish social structure from culture and because the erosion of primary ties, or "structures of kinship and community", constantly "dissolves existing cultural solutions", and discarded empirically the strain element of social disorganisation theory, as the discrepancy between expectations and achievement was not productive of the highest delinquency rates.

Alternatively, her perspective portrays structural factors of communities, such as poverty and residential turnover, and social characteristics of individuals as leading to higher delinquency rates as they hinder community members' ability to work together in socialising and supervising their children (Osgood and Chambers, 2000). Note that, in line with recent developments of the model (Carr, 2003), Kornhauser highlights the importance of secondary networks, such as voluntary networks, and macro institutions, such as political and economic institutions and the media, as the type of bonds that help to control, or foster, deviant behaviour. This is not to say that primary networks are considered ineffective, they just play a secondary role in a culture organised around technological progress, rationalisation, science and material well-being (Kornhauser, 1978).

In this context, social organisation is defined as the "ability of a community to realise the common values of its residents and maintain effective social controls" while social control, in turn, is described as "actual or potential rewards and punishments that accrue from conformity to or deviation from norms" (Kornhauser, 1978). These

mechanisms of social control include feelings of shame and guilt (direct internal controls or socialisation), supervision and surveillance (direct external controls), sentiments of attachment to rewarding social relationships (indirect internal controls), and rewards stemming from role networks (indirect external controls).

By the end of the seventies social disorganisation had become a widespread and accepted sociological concept. Not only there were clear and consistent definitions of it (Thomas and Znaniecki, 1927; Shaw and McKay, 1969[1942]; Kornhauser, 1978), but empirical tests of its determinants and implications were numerous. Nonetheless, it was still not clear how one was to observe and measure social organisation in the real world. If scholars wanted social disorganisation to be a distinct concept—independent from its causes and consequences—it would have to be not only definable but measurable.

It is at this point where the literature becomes more complex in its unpacking of the social disorganisation model, for scholars aiming to grasp the social disorganisation construct have focused on diverse dimensions such as the prevalence and type of social networks (Bursik and Grasmick, 1993; Kornhauser, 1978; Warren, 1971; Kasarda and Janowitz, 1974), organisational membership (Kasarda and Janowitz, 1974; Simcha-Fagan and Schwartz, 1986), guardianship, surveillance and informal social control (Kornhauser, 1978; Sampson and Groves, 1989), place attachment (Kasarda and Janowitz, 1974), social cohesion (Sampson, 1991), satisfaction with the neighbourhood (Sampson, 1991), collective efficacy (Sampson, Raudenbush and Earls, 1997), and attenuated culture (Warner, 2003; Kornhauser, 1978). Obviously, these dimensions are robustly interconnected,<sup>12</sup> but they are also tapping subtle and distinctive elements of communities' day-to-day functioning. Further, they noticeably overlap with other relevant sociological concepts, in particular with that of social capital (Bourdieu, 1985;

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<sup>12</sup> See, for instance, the concept of collective efficacy. It is constructed by combining measures of “informal social control” and “social cohesion and trust” (Sampson, Raudenbush, and Earls, 1997).

Coleman, 1988, Putnam, 1993; Kawachi, Kennedy and Wilkinson, 1999) to the point that its definition often includes the concept of social organisation itself.<sup>13</sup> In this “conceptual mess” nuances in meaning are difficult to comprehend by the scholar, let alone for survey respondents. As a result, mapping causal relationships and shedding light upon the black box of disorganisation becomes a problematic and controversial task. In a constructive effort to overcome such complexity, Bursik (2006) reduces recent conceptual reformulations of the social disorganisation model to the systemic (Bursik and Grasmick, 1993) and the collective efficacy/social capital (Sampson, Raudenbush, and Earls, 1997) frameworks but only by ignoring promising elements of the model, chief among which the role played by place attachment and the extensive debate on the socio-psychological mechanisms of crime control (Hirschi, 1969; Kornhauser, 1978). In practice, however, and with few exceptions (e.g. *Project on Human Development in Chicago*, German study on *Social Problems and Juvenile Delinquency in Ecological Perspective*), decisions about which dimension to focus on have been eased by the fact that available data on crime and community organisation are severely limited.

### 2.2.3. Local social networks: the dimensions of neighbourhood social order

Social disorganisation has been primarily associated with local social networks, though disagreement still persists as to which type—primary, secondary or links with external agencies—are relevant for an effectively organised community. Early sociologists, concerned about rural-urban transformations, associated the urban social disorganisation with the fading of primary ties, freeing residents “from much of the scrutiny and control” that existed in small towns and rural communities (Shaw and McKay, 1969[1942]), and leaving competition and formal control as mechanisms of control

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<sup>13</sup> Social capital is defined by Putnam (1993) as “those features of social organization, such as networks, norms of reciprocity and trust in others, that facilitate cooperation between citizens for mutual benefit”.

(Wirth, 1938). Kasarda and Janowitz's (1974) take into consideration secondary ties in their description of local communities "as a complex system of friendship and kinship networks and formal and informal associational ties rooted in family life and on-going socialisation processes". Acknowledging the dissolution of kin networks in modern societies, as well as city-wide inequalities and power struggles (Logan and Molotch, 2007[1987]), recent developments have focused less on the internal functioning of communities and more on their "connections" with external agencies (Bursik and Grasmick, 1993) and the interlocking of the parochial and public orders (Carr, 2003).

Hunter's (1985) classification of social control spheres, later reformulated by Bursik and Grasmick's (1993) systemic model, remains the key, and most comprehensive, reformulation of the model from a social networks perspective. Their framework is based on three levels of neighbourhood social order, each with a distinct and complementary role in the social control process: (1) strong ties or informal primary groups (private order) that specialise in the imposition of informal sanctions such as criticism, ridicule, and ostracism, (2) "Broader local interpersonal networks", extending beyond family and friends, and the "interlocking of local institutions" (parochial order) concentrating in surveillance and supervision, and (3) links with institutions located outside of the community (public order), focusing on securing the public goods and services that these external agencies allocate. Although deserving merit for proposing a clear, useful and complete classification of community networks, their model takes an agnostic stance about the relative effectiveness of the different types of networks, or the interconnections among them, and it is not debated or assessed. As Bursik (2006) notes: "the relative effectiveness of these networks is an open question" or again "the variability in the scope and effectiveness of these three dimensions of social control, as well as the distal and proximate sources of that variability, are key empirical questions".

Despite this agnostic view, the literature has indeed fluctuated substantially in relation to the importance attached to the three levels of social control. Whereas Thomas and Znaniecki (1927), and other early sociologists (Lind, 1930), prioritised primary ties as a source of social control, the acknowledgement of the cohesiveness within delinquent intimate groups (i.e. gangs) (Whyte, 1943, Gans, 1962) and the interest in the effectiveness of local associations and weak ties (Granovetter, 1973) tipped the scale towards secondary ties as a means of enhancing communities' social organisation (Kornhauser, 1978; Sampson, Raudenbush, and Earls, 1997; Wilson, 1996). More recently, the focus has shifted to distributive politics at the city-wide level and the ability of local communities to use their connections with external agencies to extract resources, and fend-off external threats, in more (Bursik, 1989; Gans, 1962; Harding, 1995; Logan and Molotch, 2007[1987]) or less (Carr, 2003; Zatz and Portillos, 2000) politicised contexts. The relationship between neighbourhoods and external agencies have been highlighted mainly by perspectives that are only indirectly related to social disorganisation, such as the growth machine literature (Logan and Molotch, 2007[1987]), partly because prioritising access to public resources and services tends to shift the focus from communities and social organisation to elites and city politics, unless one assumes an unrealistic scenario of fully responsive bureaucrats and representatives where residents' political mobilisation automatically yields benefits to the community.

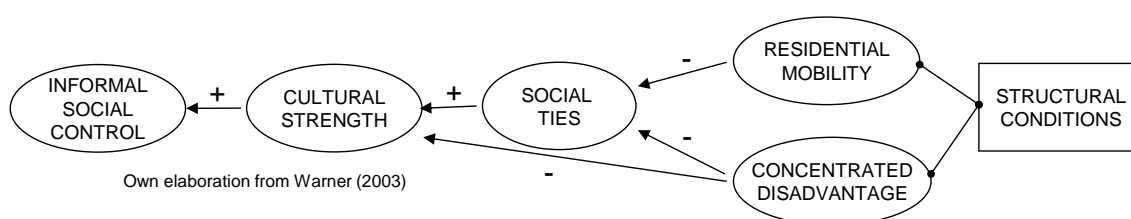
Local social networks, whether primary or secondary, enter the social disorganisation/deviant behaviour equation in very different ways. In Kornhauser's (1978) cultural—and universalist—attenuation hypothesis,<sup>14</sup> local social ties serve to

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<sup>14</sup> Kornhauser (1978) argues that a lack of informal social control results from attenuated, or weakened, conventional or societal values rather than from the emergence of competing value systems (i.e. cultural deviance). That is, there are only one sort of conventional values that when unattainable, they “fall into disuse” but are not rejected.

create a neighbourhood culture, articulate and verbally reinforce conventional values, and increase “the opportunities for those values to be lived out and reinforced through their physical presence within the community” (Warner, 2003). Three propositions—shown in figure 2.2—are derived from these theoretical statements. First, residential mobility and concentrated disadvantage decrease the level of social ties within the neighbourhood. Second, social ties help residents to perceive other neighbours to hold conventional values (*i.e.* cultural strength). Third, cultural strength is associated with higher levels of informal social control.

Figure 2.2. Warner’s (2003) model of attenuated culture



In Sampson and Groves (1989), the focus is on the private order (*i.e.* local friendship networks) and on a component of the parochial order (*i.e.* associational membership). Mechanisms linking these networks with lower crimes rates are related to guardianship and surveillance (Skogan, 1986) and the various ways in which residents react to deviant behaviour (Conklin, 1975; Krohn, 1986). In their analysis of 238 British local communities, they found local friendship networks to significantly reduce rates of total victimisation, including burglary and street robbery.

Although research on the relationship between social networks and urban crime is extensive, there is still room for improvement. In the first place, it is still unclear how local ties interact with available resources in the community, and in particular with material resources. Social organisation is unproblematic where neighbours have



financial resources, time and organisational skills but it may prove unfeasible where local associations have scarce resources to distribute and to rely on. Organising parties, sports clubs, nurseries, and other community activities requires *hard resources* as much as neighbours' enthusiasm and common interests.

Second, the debate has often centred around the relative effectiveness of the type of networks, but not so much on their interconnections. Do primary networks prevent the appearance and maintenance of secondary or external ties? This has been the traditional view (Gans, 1962; Wilson, 1996) but Zatz and Portillos (2000) show how a Phoenix Chicano community had strong primary and secondary ties but few connections with external agencies (Bursik, 2006). Finally, empirical (Whyte, 1943; Suttles, 1968; Warner and Rountree, 1997; Browning, Feinberg, and Dietz, 2004) and anecdotal evidence suggest that local social networks can spread conventional and deviant behaviour alike. In order to avoid tautological arguments, further research will need less emphasis on what local ties are mobilised, and more on which social groups are better organised.<sup>15</sup>

#### *2.2.4. Organisational membership*

Closely related to the parochial order of social control, organisational membership has also attracted substantial academic attention, both because it connects neighbours through the development of secondary or weak ties and because the sort of ties created through associational activities are directed precisely towards the reinforcement of common values and the achievement of community goals. What distinguishes Bursik and Grasmick's (1993) parochial order from organisational membership is precisely the intentionality inherent in the latter: secondary networks in

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<sup>15</sup> See, for instance, research on intergenerational closure (Coleman, 1988; Oberwittler, 2004).

the community may not be instrumental, even when the neighbourhood faces a critical external threat (Gans, 1962). By definition, associational life is instrumental; what remains an open question is the content of its values and objectives.

Kasarda and Janowitz (1974) provide evidence that social networks and organisational membership are indeed tapping distinct—though correlated—aspects of socially disorganised neighbourhoods. More precisely, the latter relates to a transferable, active and instrumental affection to places whereas the former refers to a fixed, passive and non-instrumental affection to a specific place. In their *American Sociological Review* article, participation in formal local associations is highly correlated with “interest in the community”, and hardly so with “sense of community” and the willingness to stay in the neighbourhood, the opposite being true for social networks. And this is an important distinction for we all think differently of a local political activist fully connected to local and broader networks than of a street corner boy or of a gang member, even though they may all be locally embedded and socially active. This distinction has resulted in a productive debate around the existence of densely connected but high-crime neighbourhoods (Browning, Feinberg, and Dietz, 2004) and *vice versa* (Carr, 2003). In this context, and in line with Kornhauser (1978), Carr suggests that a trade-off between social ties—or informal controls—and organisational memberships may actually be in place, for both are alternative, and effective, ways of controlling deviant behaviour. In fact, civic-minded residents with scarce social ties in the community may get involved in neighbourhood organisations as an alternative method of keeping crime at bay in their residential areas.

In spite of their goal-oriented nature, evidence with regard to the impact of residents’ associational membership on crime is mixed. In Simcha-Fagan and Schwartz’s (1986) study of juvenile delinquency, organisational participation, which is

loosely proxied by local organisational involvement and parental level of education, exerts a direct impact on self-reported and official delinquency rates, and an indirect effect through school attachment. The effect of organisational participation, however, remains unclear for it is theoretically questionable why parental education and organisational participation should contribute to the same latent variable (*i.e.* community organisational participation).

In Sampson and Groves (1989), local participation in formal and voluntary organisations is considered a central component of social disorganisation. Organisational membership is believed to enhance communities' social control over youth and their ability to defend its local interests more generally. However credible these theoretical claims are, their empirical models for organisational participation produce ambiguous findings. Even if its effect on five out of six offences is certainly negative, the fact that organisational participation was weakly correlated with social disorganisation determinants—except for socioeconomic status—casts doubt on its validity as a component of social disorganisation or, alternatively, on the exogenous sources of social disorganisation. Giving credit to the former, Sampson and his colleagues discarded, in subsequent work, social organisational membership as a component of either social cohesion (Sampson, 1991) or the all-encompassing concept of collective efficacy (Sampson, Raudenbush, and Earls, 1997).

More recently, incorporating organisational membership as an explanatory or mediating variable for crime has become more widespread amid the social capital approach on crime, as compared with the social disorganisation literature. For instance, Lederman, Loayza, and Menéndez (2002) assess, in a cross-national study of the *World Values Survey*, the impact of associational membership on rates of violent crime. In spite of carrying out a comprehensive modelling strategy, they show that the

involvement in secular and voluntary organisations has no effect on homicide rates. Opposite results are found in Rosenfeld and Baumer (2001), where the effect of social capital on homicide rates across 99 geographical areas in the US is examined. The civic engagement component of social capital, as measured by voting turnout and organisational membership, exerts a negative impact on the prevalence of homicides, though this effect may be confounded with that of other components of social capital, particularly trust and helpfulness.

To date, scholars have been unable to offer clear-cut evidence on the relationship between organisational membership and criminal activities, either because the focus has been on indirect effects, organisational membership being weakly correlated with the latent construct, or because the focus has been on direct effects, organisational membership presenting a negative but statistically not significant effect.

#### *2.2.5. Guardianship, Surveillance and Parochial Social Controls*

Although Sampson and Groves (1989) consider guardianship and surveillance the “first and most important intervening construct in Shaw and McKay’s disorganisation model”, it should be conceptualised as a mechanism through which primary and secondary community networks influence crime levels. Informal social controls, including guardianship and surveillance at the neighbourhood level, may unquestionably impinge on teenagers’ deviant behaviour but they are the result, rather than a dimension, of socially organised neighbourhoods. This sort of social control should be seen as a probable outcome of socially organised and cohesive local communities where purposive organisational participation, social networks and rooted individuals are prevalent. Being a mechanism rather than a dimension of social disorganisation, it is not surprising that its effect on crime is rather substantial. For

instance, in Sampson and Groves (1989), unsupervised peer groups increase all types of property victimisation and self-reported offending rates, as opposed to local networks and organisational membership which had a significant impact only on certain types. In a similar vein, respondents from a Chinese survey express the opinion that informal social controls, stemming from the family, the neighbourhood and peers are more important than formal social controls, such as the police, the courts and the prisons (Jiang and Lambert, 2009).

However, given recent changes towards a post-materialist society (Inglehart, 1977), where tightly knit communities and discipline have deteriorated, the relevance of guardianship and surveillance in crime-prevention needs to be profoundly reassessed. In this regard, Carr (2003) acknowledges that informal social controls might prevent deviant behaviour, but argues that in individualistic, dual-earner and ethnically diverse societies conventional forms of informal control are rare. For instance, the effective reinforcement of sanctions by different guardians—i.e. the “double trouble” effect—is today more unlikely to occur, as compared with the predominantly male breadwinner period. As a result, civic-minded residents have been spurred on to explore alternative ways of dealing with deviant behaviour that are not necessarily related to informal supervision and guardianship. This is especially the case with teenagers and young adult *deviants* since residents are either afraid or sluggish to supervise and intervene. After all, expected and unconscious supervision is “age graded: children up to the teenage years receive the vast majority of supervision” but “day-to-day supervision of teens is rarely a collective enterprise” (Carr, 2003). Instead, individuals willing to wipe out crime from their areas are more likely to turn directly to institutional controls such as police officers, problem-solving trainers, aldermen, the judiciary and city bureaucrats, or indirectly through local associations acting as brokers between neighbourhoods’

dwellers and public agencies. The crime-prevention strategy of combining the parochial—self-regulation through secondary ties and local associations—and the public—essentially the police—orders of social control is termed by the author as the *new parochialism*. An ideal context to test this hypothesis is China, where economic development is closely intertwined with traditional and collectivistic values. In this regard, Jiang and Lambert (2009) seem to support Carr's hypothesis for the Chinese case; namely, that informal social controls—including the family, the neighbourhood and peers—are related to less-educated respondents holding traditional or collectivistic values, whereas educated and notably individualistic interviewees—representing the vast majority of Western societies—preferred formal social controls—including the police, the courts and the prisons.

In conclusion, guardianship, surveillance and other informal social controls are effective mechanisms of preventing deviant behaviour but, given recent trends in values and the family structure, it is hazardous to assume that these mechanisms are used extensively, even in residentially stable non-deprived neighbourhoods. Probably the sole exception remains the intergenerational closure built around parents' interconnectedness (Coleman, 1988; Oberwittler, 2004). In addition, informal social control theorists have posited these mechanisms in terms of their influence on group and teenager's delinquent behaviour but remain mute as to how guardianship and surveillance may influence adults' deviant behaviour or the ever-growing number of isolated individuals.

#### *2.2.6. Collective efficacy: Social cohesion and informal social control*

An important milestone in the process of grasping the social disorganisation construct was the introduction, by Sampson, Raudenbush, and Earls (1997), of the collective

efficacy concept. Although this was just the combination of social cohesion—in particular social trust—and informal social control measures, in theoretical and primarily empirical terms it appeared to make perfect sense, even more so since the concept avoided the unfortunate connotations of chaos that involve the social disorganisation construct (Kornhauser, 1978).

Theoretically, the concept of collective efficacy includes a comprehensive dimension of social disorganisation theory—social cohesion which, in turn, is composed of residents' perceptions on neighbourhood conditions such as trust, social ties or helpfulness—and a mechanism by which it is linked to deviant behaviours (*i.e.* informal social control). Thus, it encapsulates the entire causal path from the parochial or neighbourhood level down to the private or individual level and, by mingling social ties and trust with helpfulness and informal social controls, it turns social cohesion into an instrumental construct. In slightly different terms, the authors state that “the willingness and intention to intervene on behalf of the neighbourhood would be enhanced under conditions of mutual trust and cohesion” and in a later work (Sampson, Morenoff, and Earls, 1999) it is argued that “collective efficacy is a task-specific construct”.

Empirically, the multilevel analysis of 343 Chicagoan neighbourhoods yielded extraordinarily robust outcomes in which the effect of the collective efficacy construct on perceived crime, personal victimisation and recorded violent crime was rather substantial, even when prior crime was controlled for. Besides, collective efficacy correlates were visibly related to Shaw and McKay's social disorganisation determinants; namely, residential mobility, deprivation and ethnic diversity (*i.e.* immigrant concentration).

However convincing their results are, some concerns need to be raised in relation both to their theoretical construct and to the ability to replicate their analysis in different contexts. First, by merging distinct dimensions of social disorganisation theory into the catch-all concept, the process of deviant behaviour does not necessarily become more comprehensible, let alone parsimonious. In fact, the creation of the concept seemed to be an *ad hoc* process (*i.e.* a summary measure) justified by its empirical power but not by its theoretical intrinsic value (Hayek, 1964). Even its empirical or predictive value should be questioned, for it is unlikely that a great number of studies will be able to construct a similar summary measure, making the development of a simplified version of the collective efficacy index a crucial requirement.

#### *2.2.7. Place of attachment and sense of community*

Place of attachment can be generally defined as an affected bond or link between people and specific places (Hidalgo and Hernández, 2001). It has been widely used as a component of social organisation theory (Kasarda and Janowitz, 1974) but has been recently replaced by other meaningful dimensions. To the authors' knowledge, however, few empirical findings support this glaring omission. True, place attachment is based at the individual or psychological level, as opposed to the community or sociological level, but recent theoretical claims and empirical evidence point to a strong linkage between individual place attachments and community-level phenomena (Brown, Perkins, and Brown, 2003, 2004). Thus, on the one hand, place attachment is explained by perceived and observed block-level incivilities (Brown, Perkins, and Brown, 2003), neighbourhood crime rates (Taylor, 1996), and by a sense of neighbourhood cohesion and control (Brown, Perkins, and Brown, 2003). On the other hand, place attachment is expected to influence crime rates at least in three ways (Brown, Perkins, and Brown,



2004). First, place attachment may foster behaviours and attitudes that protect directly against crime; more attached residents may be better territorial guardians (Bachrach and Zautra, 1985). Second, place attachment might discourage incivilities as pride and identity encourage locally embedded residents to maintain their neighbourhood. Not only proud residents “mend” past incivilities but by keeping appearances of places they discourage successive incivilities (*i.e.* “broken window effect”). Finally, home and neighbourhood maintenance can also engage and strengthen bonds between neighbours. In this regard, upkeep can be considered as an informal social activity that accidentally socialises residents. Bearing in mind these plausible causal links, it is not surprising that Brown, Perkins, and Brown (2004) observed, in a multilevel framework, a negative impact of home attachment on police and respondents’ reports of crime. More importantly, their work shows statistically significant correlations between place attachment and social disorganisation dimensions (*e.g.* collective efficacy, social ties and length of residence) that call for further exploration. The downside of place of attachment is that, as with local social networks or social capital, it is not always explained by positive experiences nor it is necessarily functional (Fried, 2000), yet it is important to adequately place the sense of community in the intricate schema of the social disorganisation theory.

#### *2.2.8. Exogenous sources of social disorganisation*

In the work of Shaw and McKay (1969[1942]), social disorganisation was associated with a series of neighbourhood characteristics that included residential instability, poverty, and ethnic diversity. Sampson’s (1987) account of urban black violence added family disruption as a source of social disorganisation, and urbanisation is inherent in the formation (Thomas and Znaniecki, 1927) and development of the theory (Sampson

and Groves, 1989) for it is association with the weakening of primary social ties; the most effective, and oppressive, source of social control.

These covariates have been proven to affect crime rates indirectly, through a set of mediating social disorganisation dimensions (*e.g.* regulatory capacity in Bursik and Grasmick, 1993; collective efficacy in Sampson, Raudenbush, and Earls, 1997) and also directly, acting as sources of social organisation such as in Osgood and Chambers (2000). In their study of US rural areas they found residential stability, ethnic diversity and family disruption to be robust predictors of crime disparities across counties. Even when the effects of such community characteristics are mediated by social disorganisation dimensions and related mechanisms, the direct effect on the regulatory capacity of communities, as represented for instance by the prevalence of common values (Warner, 2003), usually remains significant.

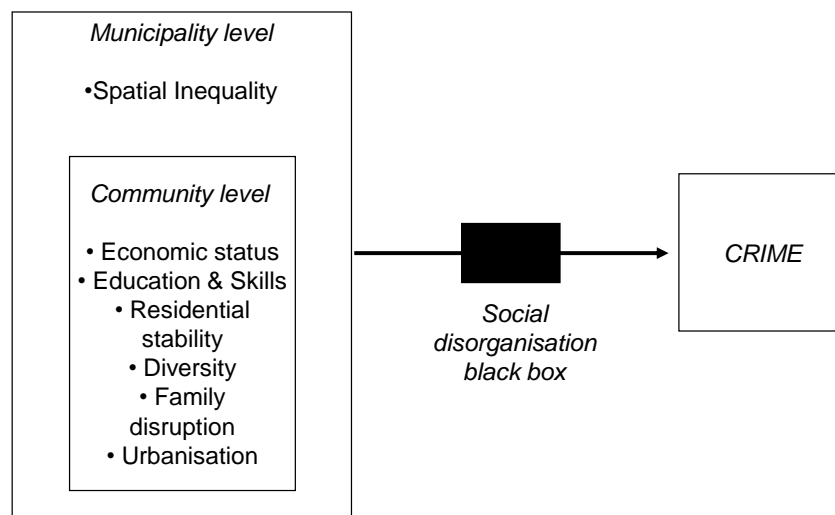
It bears mentioning that these structural factors are not necessarily exogenous to the social organisation of neighbourhoods, nor are they all equally valuable to social disorganisation theorists. It would be naïve to assume that no reverse causality and feedback loops are operating. That is, that the social organisation of communities bears no effect on areas' socioeconomic status, residential stability or ethnic composition. As for the value of specific local conditions, residential instability is generally considered as the core determinant of social disorganisation since it has proven to be robustly associated with its different dimensions, in particular with local primary ties (Sampson and Groves, 1989), and is most clearly conceived as a community-level variable. In contrast, the importance of ethnic diversity as an exogenous source of social disorganisation, and of crime, is more contentious. In their partial correlation analyses, Shaw and McKay (1969[1942]) already found ethnic diversity to play only a secondary role in the explanation of urban crime, once home ownership, population growth and

poverty variables were accounted for. As for socioeconomic variables (e.g. poverty, concentrated disadvantage, socioeconomic status), their impact on neighbourhoods' social disorganisation and crime has proven to be robust and independent of individual or household dynamics. As a matter of fact, the socioeconomic status of residential areas is associated with social order, effective organisation and lower crime rates, whereas the effect of individuals and households' socioeconomic status on urban crime remains unclear (Kornhauser, 1978). A final exogenous source which is worth considering is inequality (Blau and Blau, 1982; Kawachi, Kennedy and Wilkinson, 1999), though it is debatable whether it should be part of a meso-level explanation of crime. Inequalities do occur and can be measured at the community-level, yet academics should care about macro-structural inequality happening at the city-, country- or even global levels.

By labelling them correlates (Sampson, Raudenbush and Earls, 1997), and even suggesting they are proxies to social disorganisation, the literature has remained ambivalent about the nature—causal or correlational—of the link between areas' structural characteristics and delinquency. The problem, however, lies elsewhere: being at the very beginning of the process, the impact of communities' structural conditions hinges on numerous mediating constructs and mechanisms that render the identification of the causal paths difficult (figure 2.3). In other words, since their impact on crime is largely of an indirect nature, identifying the causal paths through which a specific exogenous source affects crime is virtually unfeasible. For instance, the purported ability of residentially stable communities to curb deviant behaviour can be explained via parents' intergenerational closure (Coleman 1988, Oberwittler, 2004), through the ability of organised groups to attract resources into the neighbourhood, or even as a result of an endogenous process (i.e. criminal activity as a cause of residential

instability). In fact, the existence of a black box may explain why, in some instances, these structural characteristics of communities are weakly correlated with social order and crime-related variables (Osgood and Chamber, 2000; Sampson and Groves, 1989; Sampson, Raudenbush and Earls, 1997). For this reason, the interpretation of results in this study proceeds cautiously, even if specific community-level interpretations are often highlighted.

Figure 2.3. Exogenous sources of social disorganisation and the black box



The study of structural factors, nonetheless, presents several advantages over more refined formulations of the theory. To start with, the structural characteristics of communities are thought to be external sources of social disorganisation (Sampson and Groves, 1989). As such, and unlike dimensions and social mechanisms, they are theoretically and empirically easy to discern from the concept of social disorganisation itself. Their causal relationships are less ambiguous and, for this reason, problems of endogeneity and multicollinearity, though far from absent, are less severe with structural features than they are with intervening variables.

In terms of causation, and despite being frequently referred to as correlates (see the concept of collective efficacy in Sampson, Raudenbush and Earls, 1997), the structural characteristics of communities are likely to be primary and direct causes of social disorganisation, as well as indirect causes of delinquency. In this regard, environmental determinants of social disorganisation (i.e., poverty, residential turnover, ethnic diversity, family disruption and urbanisation) could be explanatory factors for a wide range of social outcomes, including organisational membership and local friendships (Sampson and Groves, 1989), as well as child development (Sampson, 1992), legal cynicism (Sampson and Bartusch, 1998), truancy (Shaw and McKay, 1969[1942]) and health (Kawachi, Kennedy, and Wilkinson, 1999; Shaw and McKay, 1969[1942]). In fact, compared with fine-grained analyses of the theory—focusing on consistent but often trivial mechanisms (Gerber, 2008)—simple tests of structural determinants are more likely to yield unexpected results and provide policy-makers with ample space for intervention. Without altering these structural conditions, shaping residents' behaviour and attitudes could prove unfeasible and ethically problematic; for, as Portes (1972) notes, “The grave mistake of theories on the urban slum has been to transform sociological conditions into psychological traits”.

Finally, research on intervening variables generally requires the use of specific surveys; information on the structural features of communities, on the other hand, is collected on a regular basis from national censuses, municipal registers and general surveys, facilitating comparison and improving reliability. Although this is irrelevant from a theoretical point of view, the truth is that decisions about which dimension to focus on commonly hinges on available data. As Sampson and Groves (1989) observe: “(...) the lack of direct tests of the Shaw and McKay thesis does not stem from a lack of theoretical insight. On the contrary, the major problem has been a lack of relevant data.”

### **2.3. An alternative approach to social disorganisation: the three pillars of social disorganisation theory, the resource model of socio-political participation and the mechanisms of crime control**

The causal path implied by social disorganisation theory is typically composed of three pillars (figure 2.4): 1) neighbourhood structural characteristics, 2) dimensions of social organisation, and 3) social outcomes (crime), and a set of social mechanisms linking the dimensions to the social outcomes (mechanisms of crime/social control). Early studies typically concentrated on the structural factors that defined and distinguished high from low-crime areas in the American city (Shaw and McKay, 1969[1942]). Recent developments of the model have focused instead on the intermediate pillar which highlights the role of three levels of social order (Bursik and Grasmick, 1993)—private, parochial and public—or the three dimensions of social organisation (Sampson and Groves, 1989)—social networks, collective efficacy and organisational membership.

Scholars, nonetheless, have failed to provide a full map of the process at least in two important ways. First, there are no mechanisms linking the structural conditions of communities with the dimensions or levels of social organisation; they just happen to be correlated. Second, with few exceptions (Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997), the specific ways or mechanisms through which residents exploit their social organisation to rein in deviant behaviour have been largely ignored, both empirically and theoretically.

#### ***2.3.1. Incorporating the resource model of socio-political participation***

Although a rationale is provided as to why specific structural factors should matter in terms of social organisation and crime, there is no coherent and comprehensive theoretical framework linking such structural conditions to the dimensions and levels of

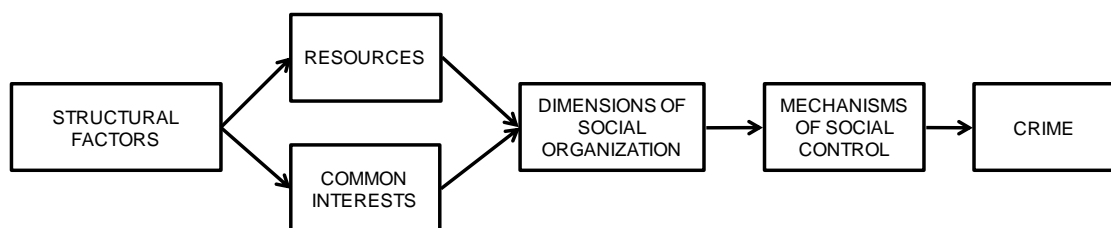
social organisation. Here, it is hypothesised that the resource model of socio-political participation (Putnam, 1995; Verba and Nie, 1972; Verba, Schlozman, and Brady, 1995) can indeed provide such link, even more so as goal-oriented social ties are believed to be particularly effective in solving problems within neighbourhoods.<sup>16</sup> Such model is based around the resources that individuals, and communities, need in order to participate in, form and develop local networks and generate effective organisations. Five types of resources are considered essential to the development of local social networks: communication and organisational skills, trust (in neighbours), time spent in the community and financial resources. Visibly, the relevance of these resources varies by type of social network or level of social control (i.e. private, parochial and public). For instance, for primary or strong ties time spent in the community is a necessary but not sufficient condition, whereas financial resources are neither necessary nor sufficient. In addition to these four types of resources, individuals also need to share some sort of common interests (Bursik and Grasmick, 1993). These can be related specifically to the neighbourhood (e.g., preservation of green areas) or be territorially neutral (e.g., promoting social justice); what is important is that, irrespective of whether the neighbourhood is the main focus of attention or just a container of events, these interests enhance social control and collective consumption within the community. Thus, the literature should not be constrained (i.e. “literature path dependency”) by what Shaw and McKay (1969[1942]), Kornhauser (1978) or Sampson (1987), defined as structural factors—these should not be discarded either—but rather the selection of structural determinants should be informed by the concept of social disorganisation itself and the resource model of socio-political participation. If social disorganisation is defined in

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<sup>16</sup> Social networks and organisations can be used to strengthen conventional and deviant values alike. In this regard, Sampson (1997) has argued that, instead of asking how socially organized a neighbourhood is we should ask the question: organized for what? Here we assume that the goals pursued by formal organisations are identified with conventional values and behaviour, whereas those pursued by local friendships and other primary networks need not be.

terms of social networks and organisational membership, any environmental variable likely to influence these, should be part of a community or meso-level explanation of crime. For instance, it is commonly accepted that the formation of social ties takes time (Sampson, Raudenbush, and Earls, 1997), which explains why residential turnover is included in empirical models of social disorganisation and crime. Exactly for the same reason, commuting time to work, or any other variable capturing the time that neighbours spend in their communities (e.g. availability of a secondary residence), should be part of social disorganisation models.

Figure 2.4. Incorporating neighbours' collective resources to the social disorganisation model



### 2.3.2. A “bottom-up” strategy: a general theory of crime through the mechanisms of social control

In spite of the interest of recent studies in unveiling the social disorganisation black box, efforts have largely concentrated on just one of its elements; namely, the dimensions (Sampson and Groves, 1989) or levels of social organisation (Bursik and Grasmick, 1993), leaving the specific mechanisms of social control that residents employ to ward off criminal threats understudied. One important exception is Sampson and Groves (1989) and Sampson, Raudenbush, and Earls (1997) focus on guardianship and surveillance, yet these variables that stem from the *Project on Human Development in*



*Chicago Neighborhoods* are treated as dimensions of social disorganisations rather than as mechanisms of social control.

My proposal for a general theory of social disorganisation incorporates not only the resource model of socio-political participation but also a series of social mechanisms that signal the level of social organisation in a community and serve its residents to keep deviant behaviour at bay. This “bottom-up” strategy, that is presented in figure 2.5., aims at evaluating the degree to which neighbours are able to: 1) set a normative framework capable of defining what constitutes a crime, 2) promote individuals’ voluntary compliance, both through socialisation and the satisfaction of needs, and 3) enforce individuals’ involuntary compliance, via crime prevention and deterrence.

Note that this model captures most sociological explanations of crime. Labelling theory relates to the definition of crime (Becker, 1968), strain theories are associated with the satisfaction of needs and socialisation (Merton, 1938) cultural deviance speaks mainly about socialisation patterns and cultural traits (Sutherland, 1924), social disorganisation focuses on the enforcement of involuntary compliance (Kornhauser, 1978; Shaw and McKay, 1969[1942]), and the emphasis of rational choice theory is on a combination of satisfaction of needs and law enforcement (Becker, 1968).

What constitutes a novelty here is not so much the aim—grasping the social disorganisation construct by studying the self-regulatory capacity of communities (Bursik, 1988)—but the social mechanisms or bottom-up approach. Although not pursued in this dissertation, the goal would be first, to determine which social mechanisms are undertaken directly, though not necessarily in exclusivity, by communities. For instance, modern communities rarely define what constitutes a crime, but are often involved in labelling deviant behaviour and reinterpreting conventional

values transmitted through the political sphere, the media, and other social institutions beyond the neighbourhood (Gans, 1962). However, communities are key players in enforcing residents' compliance to conventional values through informal social control, if only because law enforcement agencies lack the necessary resources to exert an effective and ubiquitous control.

### *Defining crime*

Although it is commonly argued that beliefs about what constitutes crime, and deviant behaviour more generally, are shared across different cultures, this is not necessarily true for all types of crimes and certainly not for those in which no second parties are involved—such as drug consumption—and for non-criminal deviant behaviour (*e.g.* alcohol consumption, gambling). Besides, moderate levels of crime have frequently been associated with positive outcomes such as social cohesion and social progress/innovation (Durkheim, 1934[1893]; Merton, 1938). As a result, any social grouping—whether this is the state, a community or a family—is in need of defining what constitutes a crime and deviant behaviour more generally prior to any attempt to pursue individuals' compliance.

Within the social disorganisation framework, it is generally argued that communities need to agree with respect to the definition of crime and deviant behaviour, regardless of where this definition stems from. That is, residents may borrow conventional values from the mainstream society, they can adapt these to the local conditions, or they may generate a new set of values; what is important is that members of the community, or the neighbourhood, mostly agree on defining common values, deviant behaviour, and crime. If such agreement is absent, a low incidence of crime may be the result of external agencies or individual characteristics, but may not be explained

by communities' conditions. As Bursik (1988) argues "it would be inappropriate to examine a community's ability to attain a mutual goal of minimising the incidence of such crime within its boundaries when such general agreement cannot be demonstrated".

## 2) *Voluntary compliance*

Even though social disorganisation theorists have regularly focused on deterrent element strategies, such as surveillance, identification and effective sanctions (see the emphasis of the literature on the term *control*), the majority of lawful behaviour is probably voluntary (Conklin, 1975; Merton, 1938). Two distinctive compliances, however, are included within the "conventional" behaviour: normative and instrumental.

As for the normative compliance, it includes those individuals or actions that are guided by moral or normative principles; they are law-abiders because they have been taught—through a socialisation process—that, whatever their goals are, these may only be pursued through legitimate means. Although some scholars argue that conventional values are accepted across the board (Sykes and Matza, 1957; Wilson, 1996; Sampson and Bartusch, 1998), theories on subcultures (Whyte, 1943) and differential association theory (Sutherland, 1945) state precisely the opposite. That is, certain individuals may be socialised in an environment where deviant behaviour is accepted or even encouraged. For its part, culture attenuation theorists (Kornhauser, 1978; Warner, 2003), drawing on Durkheim's (1951[1897]) concept of anomie, believe that some residents may experience an absence of socialisation leading to normlessness. So whereas in the cultural deviance perspective, deviants exhibit an active opposition to

conventional values, in the cultural attenuation approach deviants are expected to show indifference.

In the instrumental compliance scenario, individuals are guided by the satisfaction of needs; if their essential needs are satisfied they abide by the norms. However, complications arise as soon as we attempt to define what essential needs are since individuals may be concerned about absolute or relative deprivation and about different sort of deprivations (*e.g.* material, ideological, and emotional). For instance, conflict theory and Marxism typically focus on material needs but Hirschi (1969) stresses the importance of emotional needs, and the role of mainstream institutions in fostering feelings of attachment. Rational choice theory is agnostic about the nature of needs, though informative models are generally based on material and measurable needs. Social control theory and social disorganisation have ignored human needs on the basis of human constant frustration: individuals always encounter some degree of dissatisfaction/deprivation, and strain rarely explains deviant behaviour (Kornhauser, 1978).

But even if scholars agreed on the type of needs that inform human action, disagreement would still persist as regards the specific weight that demands and constraints are given in the explanation of human frustration. It is precisely along this preferences-opportunities continuum that most human sciences place themselves, for some focus on the constraints—and collective—elements (*e.g.* Marxism, Structuralism), or concentrate on the preferences—and individual—side (*e.g.* Rational choice, Cynicism, Buddhism). Unfortunately, there is no easy solution to this debate, though Merton (1938) suggests that it is the interplay between both that matters. According to Merton, society clearly defines what are the goals to be attained—represented by the so-called American Dream (*i.e.* wealth, respect, a decent job and house, a good family)—

and the legitimate means to achieve these goals (*i.e.* education and employment). Unfortunately, unequal opportunities prevent some individuals from achieving their goals, increasing the tension or “strain” in the social system.<sup>17</sup> Kornhauser (1978), for its part, disdains the debate, for crime is the result of a lack of control, rather than of social strain.

Although strain theory (*i.e.* the interplay between means and goals) is certainly not the preferred approach for social disorganisation theorists, they have rediscovered these mechanisms, and particularly its constraint/opportunities component, through the public level of social control (Bursik and Grasmick, 1993; Hunter, 1985) where external institutions are valued as agents of social control and as ancillary sources of valuable resources. This renewed interest is observable also in the work of Sampson, Raudenbush, and Earls (1997) and in the concept of new parochialism (Carr, 2003) though, in comparison with primary and secondary networks, the attention paid to the public level of social control is still inadequate (Bursik, 2006).

### *3) Enforcement of involuntary compliance*

Probably the mechanisms that have attracted most attention from social disorganisation theory are those related to deterrence and carrot-stick interventions. This enthrallment is partly due to its connection with social control theory which is based on a pessimistic view of human nature; namely, that without social control—which can take the form of a direct, indirect and internal intervention (Nye, 1958)—some individuals will indefectibly commit criminal offences. This, in turn, is based on the assumption that human strain is inevitable and essentially constant, and hence not conducive *per se* to criminal behaviour (Kornhauser, 1978).

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<sup>17</sup> See also Agnew (1992) for a psychological perspective of strain theory.

This enforcement of conventional behaviour is implemented through different mechanisms:

- 1) Surveillance of urban areas and crime-prone groups, such as teenagers and young adults (Sampson and Groves, 1989, Sampson, Raudenbush and Earls, 1997).
- 2) Identification of potential offenders and outsiders. Distinguishing residents from non-residents is likely to help in the location of offenders and render surveillance more effective (Skogan, 1986).
- 3) Location of local offenders. Once identified, a densely connected neighbourhood is in a good position to locate and apprehend offenders making use of the information that flows across local social networks.
- 4) Application of informal effective sanctions. Last, a socially organised neighbourhood is often capable of applying effective sanctions to offenders, for instance using criticism, ridicule, and ostracism (Bursik and Grasmick, 1993). For this to happen, the local community should be legitimised as a “behaviour” enforcement agency and its sanctions accepted by others. However, this is rarely the case, which explains why this responsibility is generally undertaken by public enforcement agencies, in some instances with the cooperation of local actors (Carr, 2003).

The majority of mechanisms introduced by the literature are encompassed within the three main regulatory actions (i.e. norm-setting, voluntary and involuntary compliance), as shown in figure 2.5. Indeed, social organisation may be directly identified by means of these mechanisms; the more socially organised and relevant a community is, the more mechanisms or tasks it actually or can potentially assume. In

this regard, future research should aim to assess whether neighbourhoods, or other relevant social groupings, are successful in establishing rules, socialising residents into common values, fulfilling essential needs, supervising communities, identifying and locating residents, and applying effective sanctions. By covering the full causal path, from the structural factors to the mechanisms of social control, and from the community to the micro level, the reliability of social disorganisation should be enhanced in such a way that it should overcome frequent and destructive criticisms; namely, that social disorganisation “is not even a necessary condition of criminality, let alone a sufficient one” (Arnold and Brungardt, 1983) or that it “should be seen as a descriptive convenience rather than a model of criminogenic behaviour” (Davidson, 1981). And this is done without relying on the social-psychological sphere or the macrostructure for these social mechanisms potentially pertain to local communities. On most instances, nevertheless, these mechanisms/responsibilities are shared between the micro, the meso and the macro levels. In this regard, Sampson (1987) states that for the case of local formal organisations, “they are in large part controlled by city, state and national networks of power”.

In brief, I contend that this regulatory process is a useful theoretical framework providing sound mechanisms linking community structure and individual behaviour. For instance, dense social networks have been repeatedly proven to slash crime rates; I argue that this is the result of them being effective tools for socialising, identifying and locating individuals; plus in certain circumstances they can be potentially employed for other purposes such as surveillance. Or also, dense organisational networks—another dimension of social disorganisation—provides residents with the connections that may increase municipal funding for police patrols (i.e. surveillance), public spending (i.e. satisfaction of needs) and faster legal proceedings (i.e. effective sanctions) (Carr, 2003).

Due to time and data availability constraints, this approach to the social disorganisation literature is not empirically tested throughout the dissertation. However, this “bottom-up” approach informs the theoretical framework and the model specification in the empirical chapters.

Figure 2.5. A mechanism approach to the regulation and control of crime

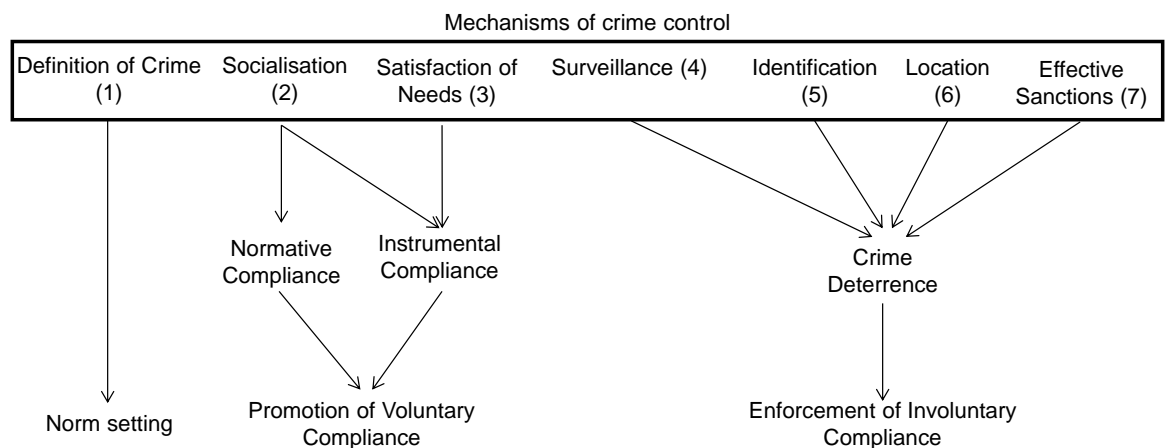
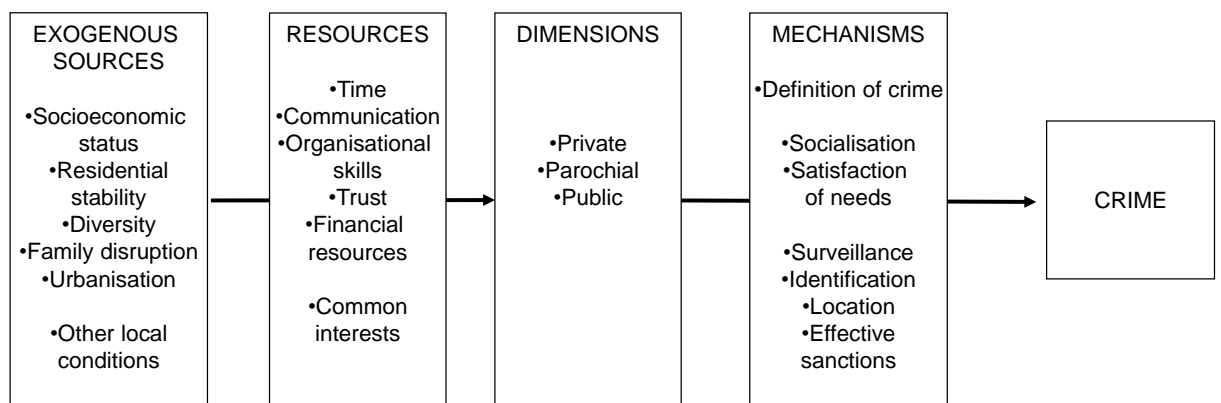


Figure 2.6. A detailed causal path of the social disorganisation model



## 2.4. The social disorganisation model and perceptions of neighbourhood crime

Proponents of the social disorganisation theory have mainly focused on the explanation of spatial variations of actual crime, essentially using data from law enforcement agencies and victimisation surveys. Employing the model to account for perceptions of



neighbourhood crime has been rare, even though these perceptions are typically associated with urban processes—mainly signs of social disorder and criminal activities—that are, in turn, outcomes or markers of communities’ social disorganisation.

Some exceptions are to be noted, most notably studies dealing with the incivility thesis (Taylor, 2001). In different formulations, advocates of this hypothesis claim that fear of crime is associated with social incivilities (e.g. noise, insults, filthy streets) and physical deterioration (e.g. vacant lots, abandoned housing, broken windows) as much as with neighbourhood crime itself (Biderman et al, 1967; Brunton-Smith and Sturgis, 2011; Garofalo and Laub, 1978; Hunter, 1978; Skogan, 1990; Wilson, 1975).<sup>18</sup> This general formulation does not refer specifically to communities’ social disorganisation, yet some of its proponents contend that these signs of incivility are caused by social disorder and neighbourhood conditions similar to those advanced by the social disorganisation literature. More precisely, Hunter (1978) argues that neighbourhood disorder causes both signs of incivility and crime which, in turn, explain fear of crime, whereas Skogan (1990) states that the social and physical deterioration of communities are direct consequences of their structural conditions, including their racial composition, socioeconomic status and residential stability, as well as from the inequality generated beyond the neighbourhood. Similarly, Brunton-Smith and Sturgis (2011) report that neighborhood structural characteristics have a direct and independent effect on individual-level fear of crime.

The “broken windows” hypothesis (Wilson and Kelling, 1982)—a type of incivility thesis—introduces the time component by suggesting that, in the long term, (unrepaired) signs of incivility, in addition to spreading disorder (Keizer, Linderberg

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<sup>18</sup> The incivility thesis generally focuses on fear of crime, as opposed to perceptions of crime, yet fear of crime is largely the result of residents’ perceived risk and perceived seriousness of particular types of crime (Warr, 2000, Wyant, 2008).

and Steg, 2008), may ease the way to potential offenders because such signs inspire fear among urban residents causing, in spite of Durkheim's claims to the contrary (1934[1893]), their withdrawal from community life (Conklin, 1975) and a reduction of guardianship and surveillance in the neighbourhood. Although this well-known thesis highlights the importance of residents' fear of, and reactions to, crime for causal models of crime, it says nothing about the structural conditions that determine the signs of incivility in the first place.

Other studies have directly introduced perceived neighbourhood crime into a social disorganisation framework. For instance, Sampson, Raudenbush and Earls (1997) tested the construct of collective efficacy, which is derived from that of social disorganisation, using three alternative measures of violence: perceived neighbourhood violence, violent victimisation and recorded homicides. In spite of much discussion about the "progressive unlinking" (Taylor, 2001) of crime, incivilities and residents' perceptions, results are of a similar nature for the three measures of violence, particularly with regard to the effect of the collective efficacy construct.

This study mirrors the incivility thesis in that perceptions of neighbourhood crime are believed to respond to social incivilities and neighbourhoods' physical decay as much as to official crime rates. More precisely, the relationship between noise, pollution, cleanliness and building deterioration, on the one hand, and residents' perceptions of local crime, on the other, is tested repeatedly throughout the dissertation. Unfortunately, the persistent absence of publicly available data on local crime rates and their "surprising" inaccuracy (Aebi and Linde, 2010) make impossible a full test of the incivility thesis in the Spanish context.<sup>19</sup> The dissertation also mirrors Hunter (1978), Skogan (1990) and the collective efficacy theses in that neighbourhood conditions,

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<sup>19</sup> See Quillian and Pager (2001) for a comprehensive test of the incivility thesis in three US cities.

particularly residential stability, socioeconomic status and ethnic diversity, are believed to be the primary causes of neighbourhood social disorder, physical deterioration, and perceived and observed crime.

Within the field of urban crime, perceived crime presents several advantages over actual crime. To start with, the ultimate cause of human action is more likely to be what they perceive, rather than reality in and of itself. Thus, it is hardly surprising that previous research has reported the importance of perceived crime, and its associated fear, with several social outcomes, such as the avoidance of night time activities (Mesch, 2000), physical activities (McGinn et al., 2008) and parks (Conklin, 1975), the acquisition of protective firearms (Lizotte, Bordua and White, 1981) or the opening a store (Conklin, 1975). This is even more important in low-crime societies, like Spain (Dijk, Kesteren and Smit, 2007), where direct victimisation will rarely be a problem, observed and perceived crime are likely to be more dissociated, but where citizens and politicians still care about violence and crime.

As a potential drawback, perceived crime remains a multifaceted and complex process where actual crime is only one of its determinants. Urban sociologists working with perceptions of crime need, where possible, to incorporate variables beyond the field of criminology (e.g. media effects, psychological traits), rendering the analyses and the interpretation of the findings more difficult.

## **2.5. Conclusions**

This chapter has introduced two strands of literature that, for different reasons, constitute the theoretical foundations of the dissertation. The incivility thesis (Taylor, 2001) stress the importance of social incivilities and neighbourhoods' physical decay in explaining residents' fear and perceptions of crime. The social disorganisation model,

heavily influenced by Durkheim (1934[1893]) and Tönnies' (2002[1887]) views on industrialisation and the rural-urban migrations and first proposed by Thomas and Znaniecki (1927), states that urban social ills are the result of socially disorganised neighbourhoods where solidarity and social controls are severely weakened. Its specific application to crime is attributable to Shaw and McKay (1969[1942]) who associated criminal activities with urban areas located amidst central business districts and industrial zones (i.e. ecological zone 2) and characterised by poverty, diversity and residential instability. Their findings showed that crime-ridden neighbourhoods rarely, if ever, changed their relative rank within the city, and demonstrated that delinquency was not caused by individual factors but by neighbourhoods and city structural conditions.

Whereas these theories/theses serve for many purposes, the main points to retain for this dissertation are the following:

- In addition to crime in the community, residents' fear and perceptions of crime respond to social incivilities and the physical deterioration of the environment.
- Since social disorganisation is a common cause of both social incivilities and actual crime, it remains a pertinent theoretical framework for understanding perceived neighbourhood crime.
- Through different types of resources (e.g. income, time, organisation skills, social trust), the exogenous sources of social disorganisation have a direct effect on residents' ability to realise their common values and solve community problems (i.e. social organisation), and an indirect effect on the prevalence of social incivilities, physical decay, crime and, as a result, on residents' perceptions of neighbourhood crime. Reverse causality, or simultaneous effects

from crime to neighbourhoods' resources or social organisation cannot be discarded, nor can feedback loops.

## **CHAPTER 3. CONCEPTUALISING AND MEASURING CRIME PERCEPTIONS**

### **3.1. Introduction**

This chapter provides the necessary link between the theoretical framework set out earlier in the dissertation and the empirical models carried out in subsequent chapters. The essential aim is to validate the conceptualisation of the outcome variable advocated in the theoretical framework. That is, understanding perceptions of crime as a combination of actual criminal activity and informational cues available to residents, in particular signs of social and physical disorder in the neighbourhood. A further goal is to set the object of analysis in context by reporting a series of descriptives related to Spanish crime perceptions. The chapter explores how measures of crime in Spain compare to other countries, the trends in concerns about public safety, how perceptions of neighbourhood crime vary across local communities in Spain and how these perceptions correlate with relevant characteristics of communities. An evaluation of available crime statistics in Spain is also presented in order to inform the reader about the “statistical” limitations of the present study, and more generally about the possibilities of doing criminological research in Spain.

### **3.2. Data sources**

Compared with other nations, particularly the United States and the United Kingdom, quantitative crime studies in the Spanish context are scarce and of a descriptive nature. This is largely the result of inadequate, and often a complete absence of, measures of crime levels at the individual, community or national level (table 3.1). Academics have been forced to rely almost exclusively on reported crime measures at the national or provincial level (García et al., 2010), such as number of detainees, persons incarcerated

or court appearances. However, some academic and public efforts have been devoted to gather data on victimisation rates (International Crime Victims Survey, Public Safety Survey of Catalonia), perceptions of neighbourhood crime (2001 Population and Housing Census) and self-reported deviant behaviour (Gómez-Fraguela et al., 2009).

The surveys conducted by the Centre for Sociological Research (CIS) deserve special attention. Since 1976, the CIS has conducted surveys on perceived crime,<sup>20</sup> victimisation,<sup>21</sup> and self-reported deviant behaviour<sup>22</sup> that are, in all probability, the most valuable resources available to quantitative criminologists in Spain. Although these surveys are properly geocoded for community studies—the census tract (*sección censal*)<sup>23</sup> of respondents is generally recorded—the geocodes are rarely accesible for reasons of data confidentiality. However, under exceptional circumstances access may be granted provided certain conditions are satisfied, starting with safeguarding confidentiality. This is the case for survey 2634 (2006), a large national survey exploited in chapter 5, to which the author gained unrestricted access. In general, CIS surveys use a complex multistage stratified survey where municipalities (primary unit) and census tracts (secondary unit) are randomly selected based on their population size, households selected through random routes and individuals within households selected randomly to fill age-group quotas. For survey 2634, 8,265 face-to-face interviews were conducted in respondents' households from the 13<sup>th</sup> of February to the 26<sup>th</sup> of March of 2006, in 560 different municipalities, with a booster sample for Andalusia. Both this regional overrepresentation and the non-response bias adjusted for using the design and population weights provided by the Centre for Sociological Research. Missing data for

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<sup>20</sup> CIS surveys 2634 (2006) and 2888 (2011).

<sup>21</sup> CIS surveys 2200(1995), 2284(1998), 2315(1999), 2702 (2007).

<sup>22</sup> CIS survey 2510 (2003).

<sup>23</sup> The US census tract and the Spanish *sección censal* do not coincide exactly in terms of size, the former being substantially larger. However, the fact that census tract is a familiar term among urban sociologists and that both administrative divisions serve for identical purposes, the term census tract is preferred to that of census section.

specific variables was dealt with using multiple imputation techniques, but only when exceeding ten per cent of the original sample size.<sup>24</sup> As regards this dissertation, the complete absence of official statistics on community crime is problematic in at least two ways. First, it complicates the effective identification of the causal path through which the community structure affects residents' perceptions of neighbourhood crime (Quillian and Pager, 2001). Second, and from a purely descriptive perspective, it precludes comparing observed and perceived crime in a way that would help validate the conceptualisation of the dependent variable.

However, Spanish crime data present one important advantage. To the author's knowledge, Spain is the only country where census respondents were asked their opinion about the level of crime and vandalism in their residential areas.<sup>26</sup> The main implications for community studies are that reliable data on crime perceptions—in principle based on all residents<sup>27</sup>—are available for all census tracts, and that this information can be conveniently aggregated at the district, municipal, provincial, regional and national levels.<sup>28</sup> The Population and Housing Census (*Censo de Población y Viviendas*) is coordinated by the Spanish National Statistics Institute (*Instituto Nacional de Estadística*, INE). The 2001 Census was conducted from November 2001 to January 2002 and did not use sampling techniques: all residents were contacted by census agents who, if necessary, assisted household members filling in the questionnaire. Since data are aggregated at the census tract or larger geographical levels, problems of missing data are largely absent. This does not mean that household

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<sup>24</sup> Further details are provided in chapter 5.

<sup>26</sup> *Are crime and vandalism a problem in your local area?*

<sup>27</sup> Although all buildings were visited by census agents and filling out the census questionnaire is mandatory, non-response in the 2001 Census represented at least 9 per cent of the existing housing stock, according to the National Statistics Institute. Unfortunately, since the Census is the most reliable data source, there is no obvious solution to solve the potential bias introduced by non-response.

<sup>28</sup> In 2001, Spain was divided into 17 regions (*Comunidades Autónomas*), 50 provinces (*provincias*), 8,108 municipalities (*municipios*), 10,529 districts (*distritos*), and 34,251 census tracts (*secciones censales*).



members replied to all census questions but rather that item missingness becomes undetectable in the aggregation process.

In addition, the 2001 Population and Housing Census is particularly comprehensive in that it includes not only common correlates of social disorganisation (e.g. socioeconomic status, residential stability, foreign-national and foreign-born groups, family disruption, and measures of urbanisation) and crime (e.g. age, gender, land uses), but also valuable information that could potentially influence, or act as mediators of, observed and perceived crime. This includes: commuting time, number of cars, the deterioration of buildings, working hours, home ownership and residents' perceptions of neighbourhood problems, such as noise, cleanliness and pollution.<sup>29</sup> The 2001 Population and Housing Census is exploited in chapters 3 and 5.

Although the dissertation makes use primarily of the 2001 Population and Housing Census and CIS survey 2634, other datasets are employed for specific issues. The following datasets are employed in the empirical chapters of the dissertation (see table 3.1):

- The International Crime Victims Survey: chapter 3.
- Victimization survey of Madrid city (*Encuesta de victimización de Madrid ciudad*): chapter 3.
- CIS survey 2634: chapter 5.
- Statistics yearbook of the Ministry of the Interior (*Anuario estadístico del Ministerio de Interior*): chapter 3.
- The Population and Housing Census of 2001 (*Censo de población y viviendas 2001*): chapters 3, 4, 5 and 6.

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<sup>29</sup> Would you consider that the level of noise/cleanliness/pollution is a problem in your local area?

Table 3.1. Accessible crime statistics in Spain (1989-2010).

| Name   | Study population         | Lower level of aggregation | Year  |
|--|--------------------------|----------------------------|---|
| Victimisation surveys                                |                          |                            |   |
| International Crime Victims Survey                   | Spain                    | National                   | 1989, 2005, 2009**                                |
| Public Safety Survey of Catalonia                    | Catalonia                | District                   | Yearly since 1999                                 |
| Victimisation Survey of Madrid City                  | Madrid city              | District                   | 2008  |
| Crime and Victimisation in Madrid Region             | Madrid region            | Municipality               | 2007  |
| Victimisation Survey of Malaga City                  | Malaga                   | Municipality               | 2004  |
| Victimisation Survey of Andalusia                    | Various cities           | Municipality               | 2007  |
| CIS surveys  | Spain and various cities | Census tract*              | 1991/1992, 1995, 1998/2000, 2003, 2005, 2007      |
| Reported crime: police records                       |                          |                            |   |
| Statistical Yearbook of the Ministry of the Interior | Spain                    | Province                   | Yearly  |
| Self-reported offences                               |                          |                            |   |
| The International self-report delinquency study      | Spain                    | National                   | 1992, 2005/2007                                   |
| CIS surveys  | Spain                    | Census tract*              | 2003  |
| Perceived crime in neighbourhood or municipality     |                          |                            |   |
| Population and Housing Census                        | Spain                    | Census tract               | 2001  |
| Victimisation Survey of Madrid City                  | Madrid city              | District                   | 2007  |
| CIS surveys  | Spain and various cities | Census tract*              | 1990/1991, 1995, 1998/2000, 2003, 2006/2007, 2011 |

\* Upon request: access not guaranteed.

\*\* Survey conducted by ODA (Observatorio de la Delincuencia de Andalucía) following the ICVS methodology.

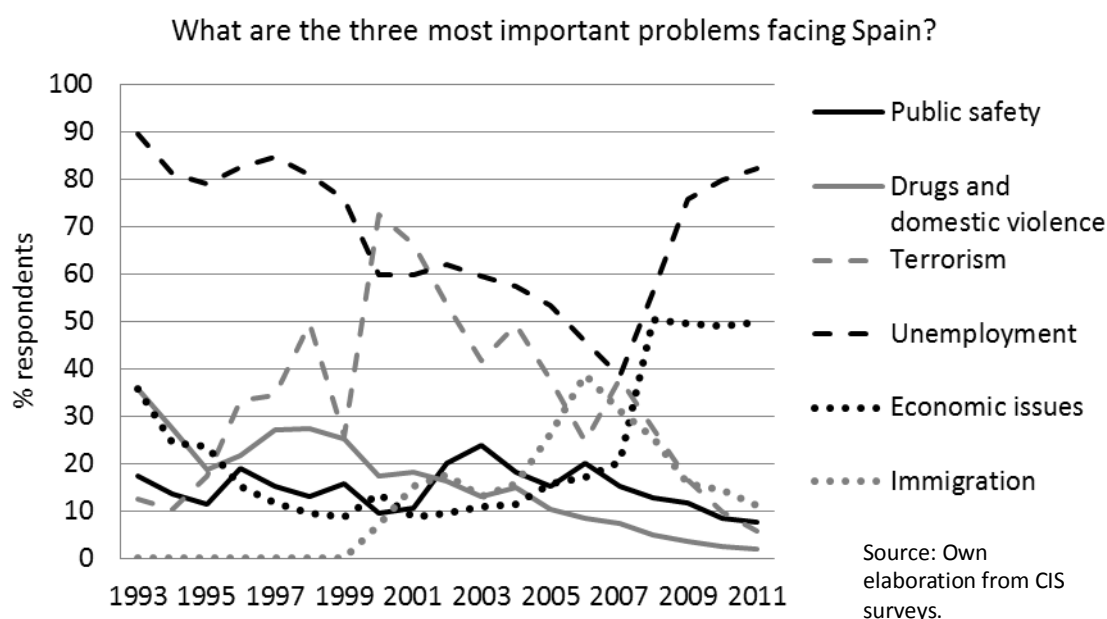
### 3.3. Evolution of the public concern with crime

Despite the numerous Spanish surveys that delve into crime perceptions, there is no consistent measure over time of these, since the wording, the study population, and the level of aggregation to which the questions refer (e.g. community, residential area, neighbourhood, municipality) vary considerably from survey to survey. The only exception is the CIS barometers which, on a regular basis and starting in 1985, ask respondents about the three most important problems facing Spain (figure 3.1). From these barometers we learn that Spaniards are not particularly troubled by public safety, drug problems or domestic violence, at least in relation to the more pressing and salient problems of terrorism, unemployment and the economy. Only in the late 1980s Spaniards placed public safety and drugs at the top of the national problems, probably as a result of the heroin epidemic that shook developed societies and that peaked

around 1986 in Spain (Gamella, 1997). After decoupling with drug problems circa 2000, concerns about public safety reached a second peak in the year 2003, but mainly because unemployment rates, and economic problems more generally, were at historic lows. Although this classic polling question suggests that, as a nation, Spain is “not obsessed with crime” (Adler, 1983) and that the concern has, if anything, declined in recent decades, it bears mentioning that it presents serious limitations. Since only three problems can be selected by each respondent, responses are mutually interdependent with the most cited problems driving, and even determining, the results of less salient issues.

Other than the CIS barometers, the International Crime Victim Surveys (ICVS) report a significant 13 percentage points reduction in those that consider the occurrence of a burglary “likely” or “very likely” in their houses in the 1989-2005 period, in line with a 50 per cent decline in the rates of burglary victimisation calculated from the same surveys. In sum, the empirical evidence points to a decline in the public concern about crime during the 1990s, and an ambiguous, or simply unknown, evolution thereafter.

Figure 3.1. Evolution of public opinion on Spain’s national problems



### **3.4. Spain in comparative perspective**

Due to a lack of comparable data, international comparisons of crime perceptions are difficult to establish. Using the ICVS, however, it is possible to compare associated concepts such as fear of crime and risk of victimisation,<sup>30</sup> and also their relationship with actual victimisation rates. Compared with citizens of other developed countries, Spaniards report moderate to high levels of fear (of walking alone at night) and of perceived risk (of being burgled). Yet such fears and perceptions seem, by international standards, unjustified, for victimisation rates in Spain are, according to the ICVS, extremely low (Dijk, Kesteren and Smit, 2007).<sup>31</sup> Similar discrepancies can be observed for Greece and Italy, hypothetically as a result of the “urban unease” (Wilson, 1968) that Southern European cities transmit to residents. According to the incivility thesis (Taylor, 2001), one would expect noisy, densely populated and apparently disorganised cities, such as Madrid, Barcelona, Istanbul, Athens or Rome, to produce increased levels of fear and perceptions of crime, regardless of the actual levels of crime. The opposite should be true of “neat” and well-organised northern countries and cities, as it seems to be the case for Denmark where, according to international comparisons based on the ICVS (Dijk, Kesteren and Smit, 2007), the perceived risk of burglary falls short of the actual risk of being burgled.

### **3.5. Perceptions of neighbourhood crime in Spanish local communities**

In the 2001 Population and Housing Census residents were asked if they considered crime and vandalism a problem in their residential areas. On average, just twenty-three

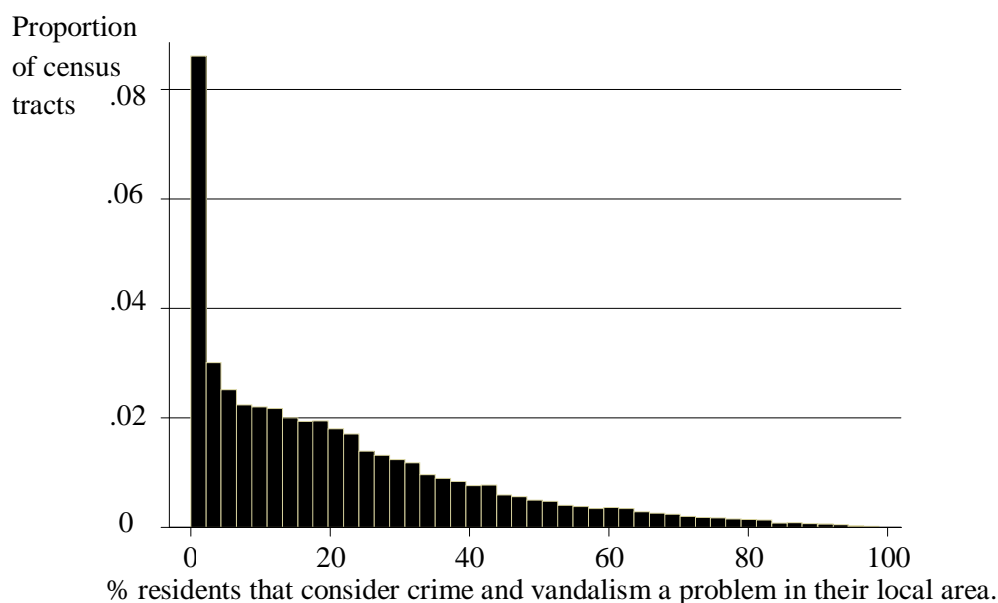
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<sup>30</sup> Although fear of crime, risk of victimisation and perceived crime are certainly similar notions, related somewhat to both actual crime levels and the concept of “urban unease” (Wilson, 1968), they should be treated as distinct concepts (Warr, 2000).

<sup>31</sup> In their comparison of one-year prevalence rates for burglary and respondents’ risk assessment of being burgled across the ICVS participating countries and cities, Dijk, Kesteren and Smit (2007) show that, although objective and perceived risk are highly correlated, respondents from particular countries (e.g. Greece) and cities (e.g. Istanbul) perceive higher risk than expected from their burglary rates.

per cent of respondents considered this to be the case.<sup>32</sup> In fact, as can be observed in figure 3.2, in most communities very few residents considered their areas unsafe, resulting in a highly positively skewed distribution. This is particularly true for census tracts in small municipalities (i.e. less than 5,000 inhabitants), where the proportion of residents considering crime and vandalism a problem in the typical or median community was just one per cent. By contrast, in the typical census tract in large cities this proportion was above thirty-five per cent. Moreover, in about a hundred census tracts, mainly located in large Southern cities (i.e. Malaga, Seville, Cordoba), more than ninety per cent of neighbours considered their residential areas unsafe. This spatial concentration of perceived crime in urban areas in the south, but also in other urban areas such as Madrid, Valencia or Barcelona, is clearly observable in figure 3.3 where perceived neighbourhood crime is represented using municipalities as the unit of analysis.

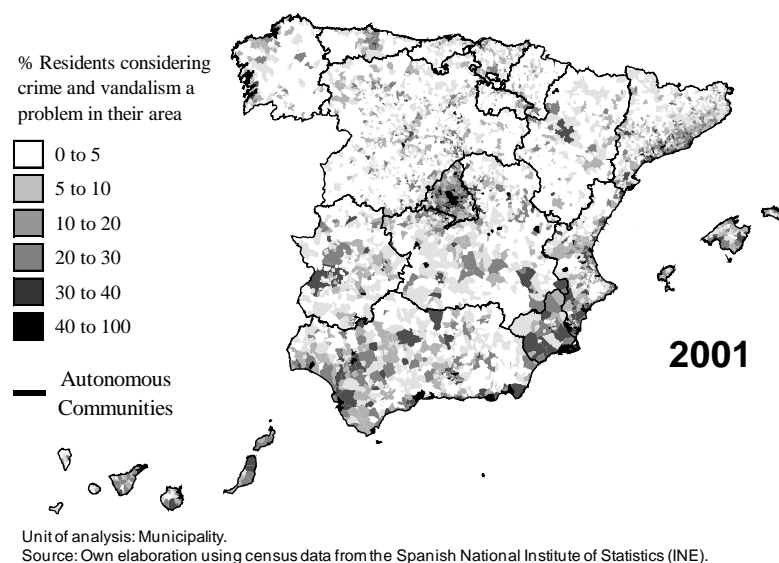
Figure 3.2. Histogram of perceived neighbourhood crime and vandalism in census tracts (N=34,251)



Source: Own elaboration from the 2001 Population and Housing Census

<sup>32</sup> Based on the one per cent sample of anonymised records of the 2001 Population and Housing Census.

Figure 3.3. Geographical distribution of perceived neighbourhood crime and vandalism by municipality (2001)



Which community characteristics are related to residents' perceptions of neighbourhood crime? Among the eleven community characteristics analysed (table 3.2), urbanisation clearly shows the strongest association. In census tracts above the median value of population size (i.e. those in municipalities with more than 36,000 inhabitants), almost thirty-three per cent of residents state that crime and vandalism are a problem in their residential areas. Particularly surprising is the finding that women are more likely to live in relatively unsafe communities, at least according to neighbours. This is in part the result of women disproportionately residing in highly urbanised communities with a high prevalence of family disruption, the opposite being true for the elderly who concentrate in rural and stable communities.<sup>33</sup> Finally, it is worth mentioning that the deterioration of buildings is barely associated with crime perceptions in bivariate analyses, and yet in multivariate models it becomes one of its most important predictors.

<sup>33</sup> It bears mentioning that women and men living in the same communities barely differ in their assessment of crime levels, at least in the Population and Housing Census (table 2.15).

Table 3.2. Perceptions of crime† and vandalism by characteristics of census tracts

|                             | Above median | Below median | Difference |
|-----------------------------|--------------|--------------|------------|
| Population of municipality  | 32.67        | 8.70         | 23.97      |
| % Divorced/Separated        | 29.56        | 11.87        | 17.68      |
| % Foreign-nationals         | 25.78        | 15.61        | 10.17      |
| Length of residence         | 15.94        | 25.44        | 9.50       |
| % Women                     | 25.38        | 16.03        | 9.34       |
| Unemployment rate           | 25.35        | 16.03        | 9.32       |
| % Elderly                   | 16.39        | 25.00        | 8.61       |
| % 10-29 years               | 24.90        | 16.49        | 8.41       |
| % Higher education          | 23.71        | 17.68        | 6.03       |
| Number retail shops/offices | 23.53        | 17.77        | 5.76       |
| Building deterioration      | 21.64        | 19.74        | 1.90       |

† "Are crime and vandalism a problem in your local area?" (% residents).

Source: Own elaboration from the 2001 Population Census.

### 3.6. Conceptualising crime perceptions: empirical evidence

In assessing the level of neighbourhood crime, residents react mainly to visual cues—such as signs of disorder (Perkins, Meeks, and Taylor, 1992; Skogan, 1992; Wilson and Kelling, 1982) and neighbours' sociodemographics (Quillian and Pager, 2001)—and to personal, or socially transmitted, experiences of crime (Graber, 1980; McPherson, 1978; Tyler, 1984; Warr, 1990). To these meso-level influences, it is necessary to add certain individual characteristics that, *ceteris paribus*, are robustly associated with fear of crime and crime perceptions (Conklin, 1975; Quillian and Pager, 2001; Warr, 2000). That crime perceptions may be construed identically in the Spanish context is an empirical question that deserves careful consideration.

In the present chapter, using official statistics, the 2001 Population and Housing Census, the International Crime Victim Survey (ICVS) and Madrid's Victimisation Survey (MVS), evidence is shown to elucidate how residents' perceptions of neighbourhood crime are related to a series of informational cues, crime-related measures and individual characteristics. The analyses focus on those components of perceived neighbourhood crime for which data is available—signs of social and

physical disorder, sociodemographics, official crime rates, personal and family victimisation. More elaborate models are presented in subsequent empirical chapters and, where data are lacking—for instance for social networks and media—the discussion draws upon extant literature, mainly based on the United States.

### *3.6.1. Informational cues about neighbourhood crime (I): signs of social and physical disorder*

The 2001 Census provides ample evidence that perceptions of neighbourhood crime are robustly associated with perceptions of civil disorder—mainly noise and cleanliness—and signs of physical decay, such as housing deterioration (table 3.3).<sup>34</sup> Reassuringly crime is not equally related to every neighbourhood problem. Perceptions of the level of pollution and lack of green areas, for instance, are relatively unimportant in explaining perceived neighbourhood crime, with quality of the transportation system virtually uncorrelated. This suggests not only that the literature is right about pointing specifically to social and physical signs as relevant informational shortcuts (Wilson and Kelling, 1982; Skogan, 1990; Sampson and Raudenbush, 1999; Quillian and Pager, 2001), but also that residents are meticulous in defining their residential areas and completing the census questionnaire (i.e. absence of or moderate *questionnaire effects*).<sup>35</sup> Further, these measures of disorder are of special interest in that, in contrast to neighbourhood crime, they can be assessed more directly by residents and so the causal effect, if any, is more likely to go from actual levels of social and physical disorder to perceptions of neighbourhood crime rather than from actual crime to perceived social

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<sup>34</sup> According to Skogan (1992), social disorder is a matter of behaviour involving more or less episodic events, whereas physical disorder refers to ongoing conditions involving signs of negligence and unchecked decay.

<sup>35</sup> By *questionnaire effects* I refer to the interdependence of survey questions by virtue of their placement in the same survey section or as a result of having identical or similar wording as is the case for the census questions on house/neighbourhood problems.



and physical disorder. Similar measures—noise, neighbourhood deterioration but also teenagers hanging out in the streets and insults—are employed by Quillian and Pager (2001) with similar results.

Nevertheless, the debate remains inconclusive as to whether neighbourhood disorder and crime are both the result of analogous structural conditions (e.g. poverty, residential instability, inequality), as implied by social disorganisation theory (Shaw and McKay, 1969[1942]), or are causally related, as suggested by Wilson and Kelling in their “broken window” hypothesis (1982).<sup>36</sup> Whatever the case may be, controlling for observed or perceived disorder is a necessary effort to properly account for residents’ perceptions of local crime and identify the various components that make up these perceptions.

Table 3.3. OLS linear regression of Spanish census tracts. Crime perceptions, † signs of civil disorder and neighbourhood decay.

|   |                |
|---|----------------|
| Constant  | 30.21 (-1.450) |
| % Residents stating problems of...in their neighbourhoods |                |
| Noise   | 0.508 (0.006)  |
| Cleanliness   | 0.335 (0.005)  |
| Pollution   | 0.061 (0.007)  |
| Transport accessibility                                   | 0.018 (0.005)  |
| Green areas   | -0.041 (0.004) |
| Signs of neighbourhood decay                              |                |
| Building deterioration                                    | 0.362 (0.015)  |
| Vacant businesses   | 0.014 (0.004)  |
| R-squared   | 0.510          |
| Observations  | 33,721         |

Standard errors in parentheses.

† DV: "Are crime and vandalism a problem in your local area?" (% residents)

Source: Own elaboration from 2001 Population and Housing Census.

<sup>36</sup> In their view, social and physical disorder spawns residents’ abandonment of neighbourhood life, leading to the disruption of local communities and eventually to an increase in crime levels. Also, such incivilities may give an indication to prospective offenders that residents are oblivious to neighbourhood problems, chief among which is crime.

### 3.6.2. *Informational cues of neighbourhood crime (II): sociodemographics*

A different aspect that may have an impact on the perception of crime is the sociodemographic composition of residents' immediate environment. These cues typically include the racial, age and sex composition of neighbourhoods (Chiricos, Hogan, and Gertz, 1997; Quillian and Pager, 2001), as well as their socioeconomic status. However, as Quillian and Pager (2001) note “economic class or poverty are more difficult to gauge [than race, age or sex] based only on physical appearance”. Qualitative work undertaken in Spanish neighbourhoods suggest that these cues are used extensively to generate and reinforce stereotypes of residential areas (i.e. geographical discrimination), with young males of foreign background as the most visible and powerful sign of intimidation and delinquency available to natives (González and Álvarez-Miranda, 2005; Cachón, 2008).

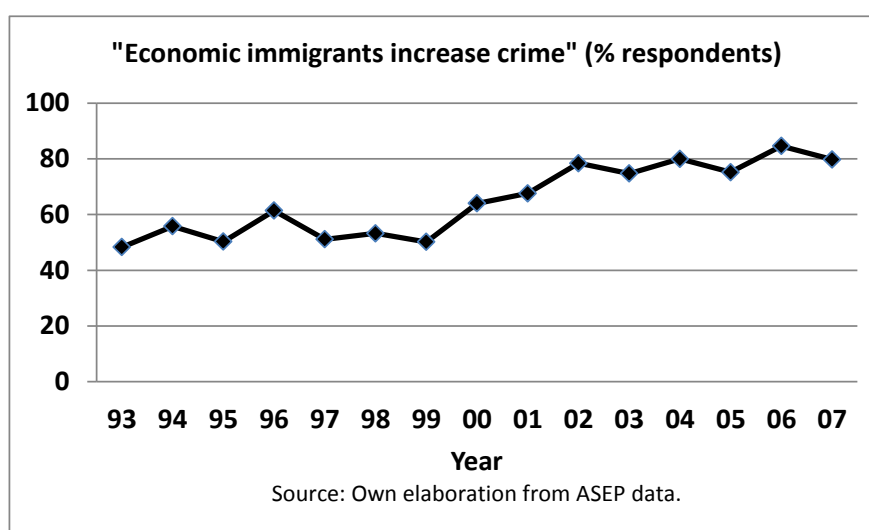
That foreign nationals, at least those originating from certain regions, evoke feelings of unsafety is also visible in national surveys. Asked in a survey conducted in 2006 by the *Centre for Sociological Research* (CIS), 73 of those respondents who stated that there was a lot of crime in their residential areas, also declared there were many foreigners too. When asked directly about the crime-immigration nexus in repeated cross-sectional surveys starting in 1993 (*Attitudes toward Immigrants*, ASEP), respondents increasingly agreed with the statement that “economic migrants increase crime” (figure 3.4). Besides, the fact that the ethnic/national composition of a neighbourhood is a relatively observable characteristic, at least in comparison with crime and vandalism (Quillian and Pager, 2001),<sup>37</sup> and that crime perceptions are so strongly associated with the perceived number of foreigners (table 3.4)—even more so than the actual proportion (table 3.5)—points toward a key informational cue used by

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<sup>37</sup> According to the ICVS (2005), less than 10 per cent of Spaniards are victimised every year, and even less in or near their residential areas (Dijk, Kesteren and Smit, 2007).

residents. Whether this shortcut is employed with accuracy is another thing entirely for it seems that, at least in 2006 (CIS survey 2634), residents were “double-counting” certain groups (e.g. Andean, Chinese, young males) and ignoring others (e.g. EU-25, elderly), when assessing the proportion of foreign nationals in their communities.<sup>38</sup>

Figure 3.4. Trends in the perceptions of a crime-immigration nexus in Spain, 1993-2007



Less discernible is the stereotyping of impoverished areas, at least as a conscious process. For one thing, residents’ assessment of neighbours’ income barely influences their perceptions of neighbourhood crime (table 3.4), at least in comparison with their evaluation of neighbours’ trustworthiness and local social disorder (i.e. area is well-cared for). For another, objective measures of the socio-economic status of the areas exert a stronger effect on residents’ crime perceptions than their view that “neighbours are affluent” (table 3.5).

Finally, crime perceptions are also explained by the share of of young males in the population, (though the lack of information on respondents’ perceptions of the local

<sup>38</sup> This finding is based on an OLS regression analysis predicting residents’ perceptions of foreign population using the observed proportions of specific national and demographic groups.

age profile or on actual neighbourhood crime levels, make it difficult to confirm whether residents are making a direct association.<sup>39</sup>

Table 3.4. Multilevel model. Perceived neighbourhood crime and perceptions of the sociodemographic composition of census tracts

|                            |                   |
|----------------------------|-------------------|
| Constant                   | 2.295*** (0.059)  |
| Perceptions of local area  |                   |
| A lot of foreigners        | 0.222*** (0.010)  |
| Neighbours are affluent    | 0.019 (0.011)     |
| Well-equipped              | 0.015 (0.013)     |
| Neighbours know each other | -0.017 (0.011)    |
| Well-cared for             | -0.072*** (0.013) |
| Neighbours are trustworthy | -0.232*** (0.013) |
| R-squared                  | 0,12              |
| Respondents                | 7.373             |
| Census tracts              | 945               |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

† DV: "There is a lot of crime in the area."

Source: Own elaboration from CIS survey 2634 (2006).

Table 3.5. Multilevel model. Perceived neighbourhood crime† and perceived and objective sociodemographic composition of census tracts.

|                                |                  |
|--------------------------------|------------------|
| Constant                       | 1.400*** (0.131) |
| Perceptions of local area      |                  |
| A lot of foreigners            | 0.242*** (0.011) |
| Neighbours are affluent        | -0.018* (0.011)  |
| Census section characteristics |                  |
| % Foreigners                   | 0.002 (0.002)    |
| Socioeconomic status           | -0.217** (0.096) |
| % Young men (15-29 years)      | 0.025*** (0.006) |
| R-squared                      | 0.11             |
| Respondents                    | 7,726            |
| Census tracts                  | 931              |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

† DV: "There is a lot of crime in the area."

Source: Own elaboration from CIS survey 2634 (2006).

<sup>39</sup> This is so because the presence of young males could affect crime perceptions indirectly via their impact on neighbourhood crime rates.

Irrespective of whether these cues contribute directly to subjective crime, or act as mediators of observed crime, these findings support the inclusion of the sociodemographic characteristics of the local areas in explanations of perceived neighbourhood crime, if only as control variables (Quillian and Pager, 2001).

### *3.6.3. Perceived neighbourhood crime and measures of actual crime rates*

Perceptions of crime are logically influenced by real crime, be that through direct personal experience (i.e. victimisation) or via second-hand sources (e.g. official statistics, social networks, the media). Yet, as is often the case with other social phenomena (Kasperson et al., 1988), information on neighbourhood crime is significantly distorted in the recording and diffusion process (Barnum and Perfetti, 2010; Biderman and Reiss; 1967; Goode and Ben-Yehuda, 1994; Tyler, 1984). This holds true for the information gathered through direct experience (e.g. telescoping and memory decay effects), law enforcement agencies (e.g. reporting and policing bias), and via social networks and the mass media (e.g. social amplification effects, moral panics). Visibly, reliability varies enormously across measures of crime, with recorded homicides on one end (Sampson, 1987; Sherman and Glick, 1984) and social networks and the media on the other (Cachón, 2008; Kasperson et al., 1988; Warr, 2000).

Determining how much perceptions reflect reality is vital to build appropriate models of perceived crime, for a robust correspondence would imply that determinants of neighbourhood crime indirectly shape respondents' perceptions, and a perfect match that studying variations of crime perceptions, as opposed to just observed crime, could be a futile exercise (McPherson, 1978). Bearing this in mind, the following sections compare perceived neighbourhood crime with a set of official statistics and

victimisation surveys.<sup>40</sup> The expectation is that crime perceptions are not a “reflection of reality” (Quillian and Pager, 2001) but rather an approximation of it (Bursik and Grasmick, 1993), providing a reasonable justification for treating classical determinants of neighbourhood crime as potential causes of perceived neighbourhood crime, yet leaving ample space for complementary explanatory factors.

### *Official statistics*

Prior research has established that perceptions of crime and official crime statistics are correlated, yet the strength of this relationship varies enormously from case to case. A general correspondence is reported by McPherson (1978) at the neighbourhood level between official crime rates and respondents’ perceptions of the seriousness of the crime problem and the fear of walking alone after dark. However, most studies report moderate levels of association (Garofalo, 1979; Skogan, 1986) that persist after individual and neighbourhood-level characteristics are controlled for (Quillian and Pager, 2001). Despite the fact that official crime statistics in Spain are scarce and largely inadequate for neighbourhood studies, analyses carried out at the provincial and district level point in the same direction: a robust, statistically significant, yet moderate correlation that weakens as the unit of analysis decreases in size (i.e. from provinces to individuals).

### *Provincial level: Police records*

Perceptions of crime are robustly correlated with different types of crimes at the provincial level (table 3.6), with economically disadvantaged and urbanised provinces

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<sup>40</sup> Due to a lack of data, any crime-relevant information transmitted via social networks or the mass media is left out of the analyses. However, these channels, and particularly the media, are expected to be the roughest approximation to actual crime (Burns and Crawford, 1999; Skogan and Maxfield, 1981; Soto, 2005; Warr, 2000).

showing the highest levels of both recorded and perceived crime. Consistent with previous research on fear of crime (Conklin, 1975; Garofalo and Laub, 1978), instrumental crimes—that are typically committed by strangers and are largely unpredictable (Conklin, 1975)—such as robberies, property crimes and car thefts, are more closely associated with residents’ assessment of neighbourhood delinquency and vandalism than expressive and violent crime (e.g. homicides). As for sex crimes,<sup>41</sup> there is no straightforward interpretation for it includes crimes often associated with public disorder and social disorganisation, such as prostitution, and others usually termed as expressive, such as rape and sexual harassment.

Table 3.6. Pearson correlations. Comparison of recorded crime rates (2002) and perceived neighbourhood crime (2001) in Spanish provinces (N = 50)

| Type of crime   | Perceived crime†<br>Census 2001 |
|-----------------|---------------------------------|
| Serious offence | 0.749**                         |
| Minor offence   | 0.752**                         |
| Homicide        | 0.541**                         |
| Robbery         | 0.728**                         |
| Car theft       | 0.826**                         |
| Property crimes | 0.706**                         |
| Sex crimes      | 0.571**                         |

\* Sig. at the 0.1 level; \*\* Sig. at the 0.05 level.

† "Are crime and vandalism a problem in your residential area?"

Own elaboration from mir.es and 2001 Census data.

In any case, given the size of provinces in Spain—median size of 650,000 inhabitants—any generalisation of these findings to the neighbourhood context should proceed with extreme caution. Not only the size of provinces guarantees the existence of social regularities in a way that smaller geographical units do not, but the move from provinces to neighbourhoods may alter the relevance of crime determinants in an important way. The effect of population density on observed and perceived crime, for

<sup>41</sup> Crimes against sexual inviolability and freedom (*Delitos contra la libertad y la indemnidad sexual*).

instance, is expected to play just a secondary role between or within large cities (Choldin, 1978), despite being the main predictor of provincial differences (Rodríguez-Andrés, 2003).

*District level: Police records, Madrid victimisation survey and other official data*

Additional evidence is provided for Madrid city, using its 21 districts as the unit of analysis (table 3.7). Perceptions of crime are moderately correlated with a series of official crime measures, including crime rates, arrests and police interventions. Nevertheless, these correlations weaken substantially—between ten and fifty per cent on average—with the exclusion of the Central District (*Distrito Centro*)—the most crime-ridden area in Madrid according to survey respondents and various official sources. A moderate and statistically significant association is also observable for emergency calls, a crime measure that is less affected by the “dark figure” of unreported crime (Biderman and Reiss, 1967). As compared to making formal complaints to the police, contacting emergency call centres is relatively costless—considerably reducing variation in citizens’ willingness to report—and the possibility to screen or filter information is limited (Warner and Pierce, 1993).

Although districts come closer to the community-level of interest, caution is still required in extrapolating the findings of Madrid’s 21 districts to its 128 neighbourhoods or, even more so, to Spain’s 34,000 census tracts. Madrid districts are, after all, too few and too large—median size of 140,000 inhabitants, as compared to 30,000 inhabitants for neighbourhoods and 1,200 inhabitants for census tracts.



Table 3.7. Pearson correlations. Comparison of recorded crime rates and perceived neighbourhood crime (2001) in Madrid districts (N=21)

| Source                                     | Type of crime                    | Perceived crime<br>Census 2001 <sup>†</sup> |
|--|----------------------------------|---|
| Crime rates (1999)                         | Serious offence                  | 0.474**                                     |
|  | Minor offence                    | 0.460**                                     |
|  | Contact crime                    | 0.453**                                     |
|  | Sex crime                        | 0.461**                                     |
|  | Robbery: Snatching               | 0.463**                                     |
|  | Other robberies                  | 0.406*                                      |
|  | Theft of personal property       | 0.210                                       |
|  | Property crime                   | 0.326                                       |
|  | Car theft                        | 0.135                                       |
|  | Other serious offences           | 0.320                                       |
| Other crime-<br>related measures<br>(2008) | Proportion of residents arrested | 0.473**                                     |
|  | Police interventions             | 0.518**                                     |
|  | Emergency calls                  | 0.453**                                     |

\* Sig. at the 0.1 level; \*\* Sig. at the 0.05 level.

<sup>†</sup> "Are crime and vandalism a problem in your residential area?"

Own elaboration using data from the 2001 Census and Huesca and Ortega (2007).

#### 3.6.4. Personal and socially transmitted crime experiences

The literature has shown that being victimised exerts a powerful influence on residents' perceptions of crime. For instance, Graber (1980) shows that personal experience constitutes an important source of information on crime, only second to conversations (i.e. social networks) and the mass media. In Quillian and Pager (2001), being victimised appears as a key predictor of perceived neighbourhood crime, together with indications of social disorder such as noise, insults or loitering. Block and Long (1973) found that subjective evaluations of potential victimisation were significantly related to crime levels, though they also reported that "there appears to be no systematic relationship between specific victimisation and specific subjective probability".

However, since only a small portion of the population is regularly victimised, at least in low-crime contexts (Skogan, 1986; Dijk, Kesteren and Smit, 2007), the overall effect is necessarily of a limited nature. In Spain, where victimisation rates are exceptionally low (Dijk, Kesteren and Smit, 2007; United Nations Office on Drugs and

Crime [UNODC], 2010) most survey respondents are forced to resort to informational cues, personal or friends' experiences with non-violent offenses and stories of violent crimes originating from remote and unreliable sources (Cachón, 2008). The mass media is a powerful amplifying mechanism when it comes to crime (Warr, 2000), yet it will only rarely provide useful information about crimes occurring in randomly selected neighbourhoods. This is so because reports typically concentrate on the most shocking, serious, and rare events—like homicides—that almost always take place elsewhere (Skogan and Maxfield, 1981; Warr, 2000). In this regard, Liska and Baccaglini (1990) show that residents' fear of neighbourhood crime is influenced by crime stories, but only if they refer specifically to the neighbourhood; crime stories happening elsewhere may even reduce neighbours' fear in a sort of “feeling safe by comparison”.

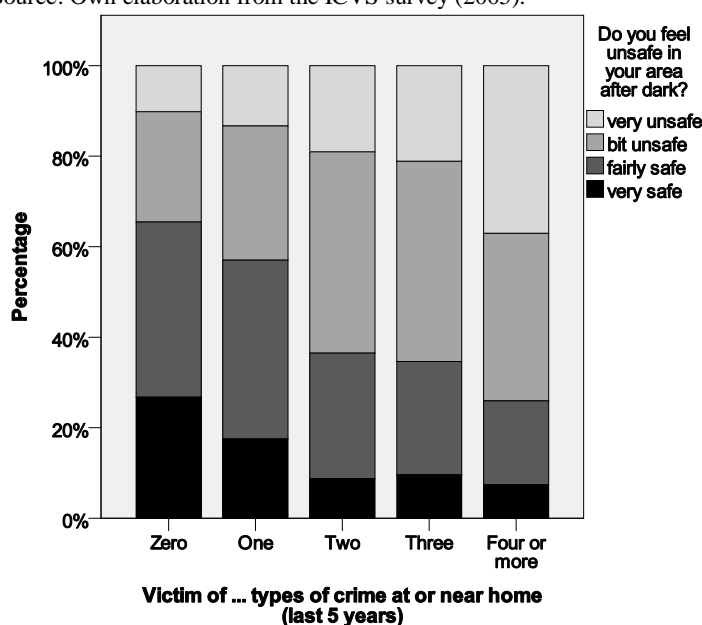
How much individual perceptions of neighbourhood crime are influenced by victimisation experiences and crime stories will largely depend on various aspects. These include their geographical relevance (local crime stories more than national events; Heath, 1984; Liska and Baccaglini, 1990), reliability (self-experience more than first-degree networks, and these in turn more than local rumours), and on the seriousness (violent crime more than petty delinquency; Warr, 2000), randomness (instrumental more than expressive crimes; Goode and Ben-Yehuda, 1994; Heath, 1984) and perceived risk (robberies more than homicides; Warr and Stafford, 1983; Rountree, Augustune and Bryan, 2005) of specific crimes. That residents' perceptions of neighbourhood crime are shaped primarily by personal, serious, prevalent and instrumental episodes of victimisation occurring at or near home will be demonstrated next.

*International Crime Victim Survey (2005): Evidence for Spain*

Not surprisingly, household members in Spain who had been victimised in or near home felt significantly more unsafe after dark in their areas (ICVS, 2005). In fact, as many as 70 per cent of those victimised two or more times felt a bit or very unsafe, whereas roughly the same proportion of non-victims felt fairly or very safe (figure 3.5). As shown in table 3.8, victims of instrumental crimes are more frightened of walking alone at nights, presumably because these strange crimes are typically “street crimes”. This seems to be the case in the comparison of robberies—the archetypal instrumental crime—with assaults and sexual offences, usually considered as expressive crimes and is consistent with previous research that shows how robbery assault has a direct effect on perceptions or risk, and an indirect inverse effect on informal surveillance (Bellair, 2000). As expected, the seriousness of a crime also matters, both in terms of value (car thefts have a larger impact than bicycle and motorcycle thefts) or the violence involved (robberies matter more than non-violent thefts).

Figure 3.5. Fear of crime and victimisation in the ICVS (2005)

Source: Own elaboration from the ICVS survey (2005).



However, it is surprising that burglaries in Spain do not provoke additional fear among respondents. True, burglaries rarely involve injuries or violent attacks (Miethe and McClorkle, 1998), yet research in United States has reported how burglary outranks every other crime in terms of fear, largely because “it is viewed as both relatively serious and rather likely” (Warr and Stafford, 1983).<sup>42</sup> It may be the case that the costs associated with burglaries in Spain are lower than elsewhere, at least in comparison to the American context, or that Spanish respondents, even those already victimised, perceive burglaries to be rather exceptional, for burglary rates in Spain are exceptionally low as compared with other nations and other types of crime (ICVS, 2005).

Table 3.8. Fear of crime in local area and victimisation rates in the previous year. N = 1,975.

| Chi Square: asymptotic significance |                | Additional information by type of crime |  |  |
|-------------------------------------|----------------|---|--|--|
| Respondent has been a victim of...  | Fear of crime† | Victimisation rate (% respondents)      | Victimised at or near home (% victims) | Consequences: very serious (% victims) |
| Robbery                             | 0.000001 **    | 1,3                                     | 51,4                                   | 37,2                                   |
| Theft personal property             | 0.000007 **    | 2,1                                     | 38,4                                   | 26,1                                   |
| Theft from car                      | 0.000011 **    | 2,7                                     | 63,1                                   | 16,0                                   |
| Burglary attempt                    | 0.000755 **    | 0,4                                     | 100                                    | 26,3                                   |
| Car theft                           | 0.001449 **    | 1,0                                     | 72,3                                   | 39,0                                   |
| Burglary                            | 0.001505 **    | 0,8                                     | 100                                    | 40,1                                   |
| Assault                             | 0.010756 *     | 1,6                                     | 40,7                                   | 33,9                                   |
| Bicycle theft                       | 0.096579       | 0,7                                     | 76,9                                   | 22,1                                   |
| Sexual offence                      | 0.259164       | 0,3                                     | 42,5                                   | 70,7                                   |
| Motorcycle theft                    | 0.403796       | 0,3                                     | 87,1                                   | 47,7                                   |

\* Significant at the 0.05 level; \*\* Significant at the 0.01 level.

† "Do you feel unsafe in your area after dark?"

Source: Own elaboration from ICVS (2005) data.

### *Madrid Victimisation Survey (2008)*

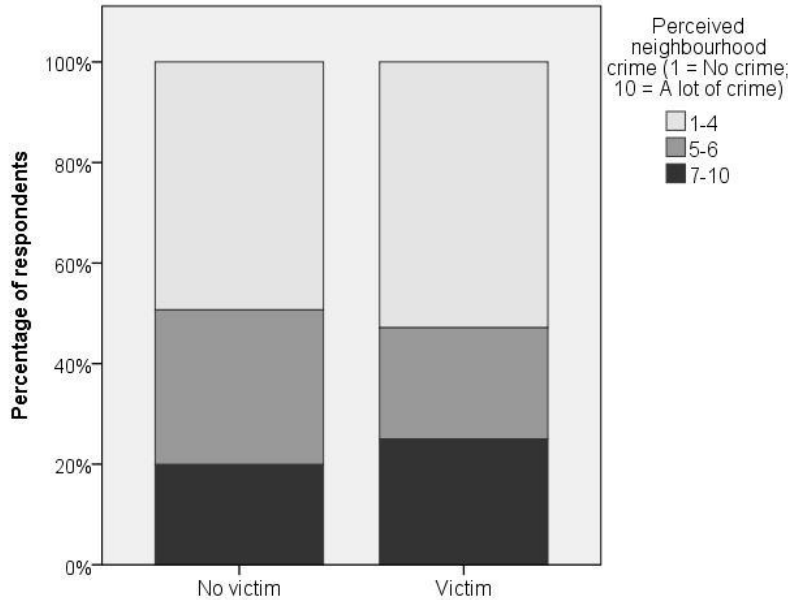
Analyses based on this survey show that crime victims are not only more concerned about walking alone at nights, they also perceive their neighbourhoods to be less safe (figure 3.6a). However, experiences of victimisation are especially relevant when they

<sup>42</sup> According to Warr (2000) the degree of fear attached to particular crimes is a multiplicative function of the perceived seriousness and perceived risk of the offenses.

take place within the respondents' own district (figure 3.6b), while they bear almost no effect when transmitted through the nuclear family (figure 3.6c).<sup>43</sup> The same set of findings are also observable at the district level (table 3.9), where personally experienced crimes by residents show the strongest association with perceptions of neighbourhood crime.

Figure 3.6. Perceived neighbourhood crime and victimisation in the MVS

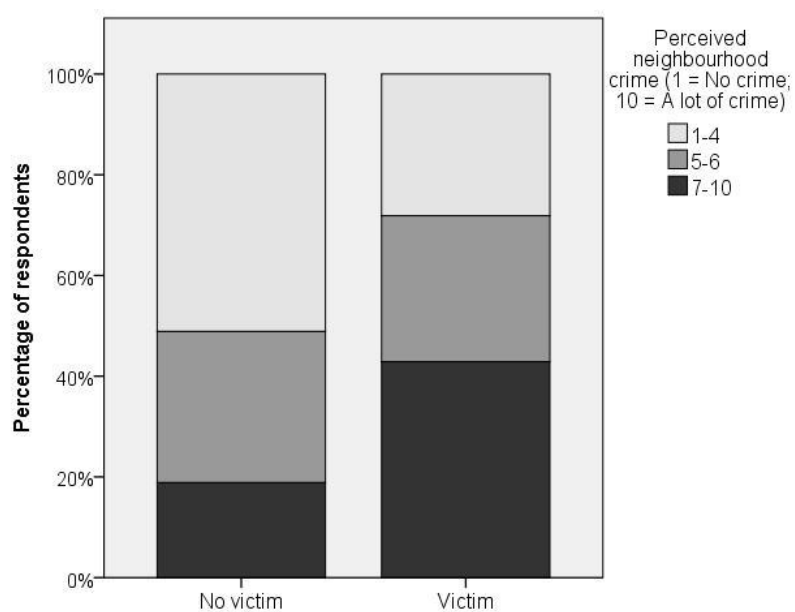
a. Respondent has been victimised anywhere



Source: Own elaboration from the Madrid Victimsation Survey

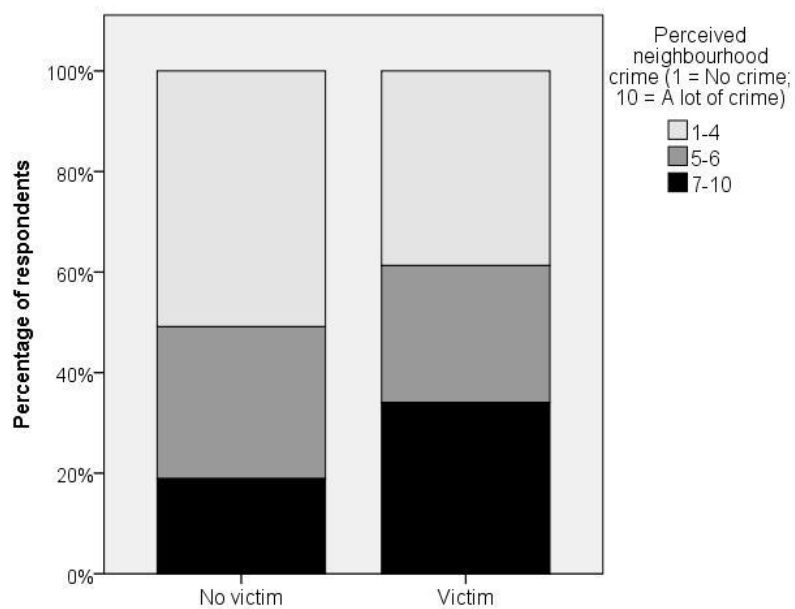
<sup>43</sup> Information is not available with regard to the location of crimes experienced by family members.

b. Respondent has been victimised in her district



Source: Own elaboration from the Madrid Victimsation Survey

c. Respondent's family members have been victimised anywhere



Source: Own elaboration from the Madrid Victimsation Survey

Table 3.9. Pearson correlations. Perceived neighbourhood crime and victimisation rates in Madrid districts (N= 21).

| Type of crime<br>Madrid Victimization Survey (2008) | Perceived<br>neighbourhood<br>crime†<br>Census (2001) | Perceived<br>neighbourhood<br>crime‡<br>MVS (2008) |
|---|---|--|
| <b>Residents</b>                                    |   |  |
| % Stating district is most dangerous in city        | 0.869**   | 0.530**  |
| Perceived neighbourhood crime (0-10 scale)          | 0.706**   | 1.000**  |
| % Victimized anywhere                               | 0.422*  | 0.401*   |
| % Victimized in district                            | 0.602**   | 0.661**  |
| % Household member victimised anywhere              | 0.082   | -0.015   |
| Number of crimes experienced anywhere               | 0.303   | 0.365  |
| Number of crimes experienced in district            | 0.483**   | 0.656**  |
| <b>Respondents</b>                                  |   |  |
| % Victimized in district                            | 0.488**   | 0.390*   |

\* Sig. at the 0.1 level; \*\* Sig. at the 0.05 level.

† "Are crime and vandalism a problem in your local area?"

‡ "How widespread is crime in your neighbourhood?" (0-10 scale)

Own elaboration using data from the Census (2001) and Madrid Victimization Survey (2008).

Evidence that being victimised affects perceptions of crime directly, and not through other neighbourhood problems, is given in table 3.10 where experiences of victimisation are related largely to perceived neighbourhood crime and vandalism, and only secondarily with perceptions of civil disorder (e.g. insults, prostitution, noise problems) and physical decay (e.g. street furniture in poor condition, abandoned cars, squatters).

In conclusion, perceptions of neighbourhood crime are consistently associated with measures of actual crime in the Spanish context, using both official statistics and self reported experiences of victimisation. Among these, it is instrumental, serious and local crimes, particularly those that are personally experienced, that residents' perceptions mainly respond most to. However, given the level of aggregation at which the relationship was observed—provincial, district, and individual—it is important to proceed with caution in extending these results to the neighbourhood or census tract

levels—which remain the geographical areas of interest throughout the dissertation. Given the strength of the relationship, one should be careful in equating crime perceptions with actual crime (Bursik and Grasmick, 1993).

Table 3.10. Pearson correlations. Local victimisation and perceptions of neighbourhood problems.

| Perceptions of neighbourhood problems (0-10 scale) | Victimisation: number of crimes† | Respondents |
|--|----------------------------------|-------------|
| Crime (robberies, threats & assaults)              | 0.145**                          | 8.240       |
| Vandalism  | 0.116**                          | 8.262       |
| Fights and Insults                                 | 0.088**                          | 8.251       |
| Pollution  | 0.069**                          | 8.280       |
| Noise  | 0.065**                          | 8.288       |
| Badly lit streets                                  | 0.065**                          | 8.277       |
| Street furniture in poor condition                 | 0.064**                          | 8.278       |
| Drug dealing                                       | 0.058**                          | 7.754       |
| Street drinking                                    | 0.048**                          | 8.194       |
| Vagrancy   | 0.041**                          | 8.234       |
| Illegal hawkers                                    | 0.040**                          | 8.183       |
| Racist behaviour                                   | 0.038**                          | 8.006       |
| Prostitution                                       | 0.025*                           | 8.084       |
| Loose dogs   | 0.022*                           | 8.216       |
| Domestic violence                                  | 0.021                            | 7.713       |
| Abandoned cars                                     | 0.017                            | 8.072       |
| Squatters  | 0.011                            | 7.963       |

\* Sig. at the 0.1 level; \*\* Sig. at the 0.05 level.

† Number of crimes that respondent has been victim of in his/her own neighbourhood.

Own elaboration using data from the Madrid Victimisation Survey (2008).

This robust, yet modest, association with a series of instrumental and “street” crimes has a series of implications that it is important to acknowledge. First, that an explanatory framework of actual crime can equally serve, adopting certain precautionary measures, to account for a dimension of perceived neighbourhood crime. Second, that a model of the determinants of crime perceptions should include, in addition to measures of actual crime, the conventional cues that residents draw upon in their evaluation of local crime. Moreover, these models should care mainly about instrumental crimes and their determinants, and leave aside expressive crimes for which



the rationale may be markedly different. Thus, this dissertation aims at explaining “street crimes” and residents’ reactions to them, rather than reactions to “indoor crimes”.

Finally, and in anticipation of the following sections, that the profile of offenders and victims is especially relevant, if only because offenders tend to commit crimes in or near their residential areas (Pyle, 1974), and being victimised has a significant impact on perceptions of neighbourhood crime (Quillian and Pager, 2001).

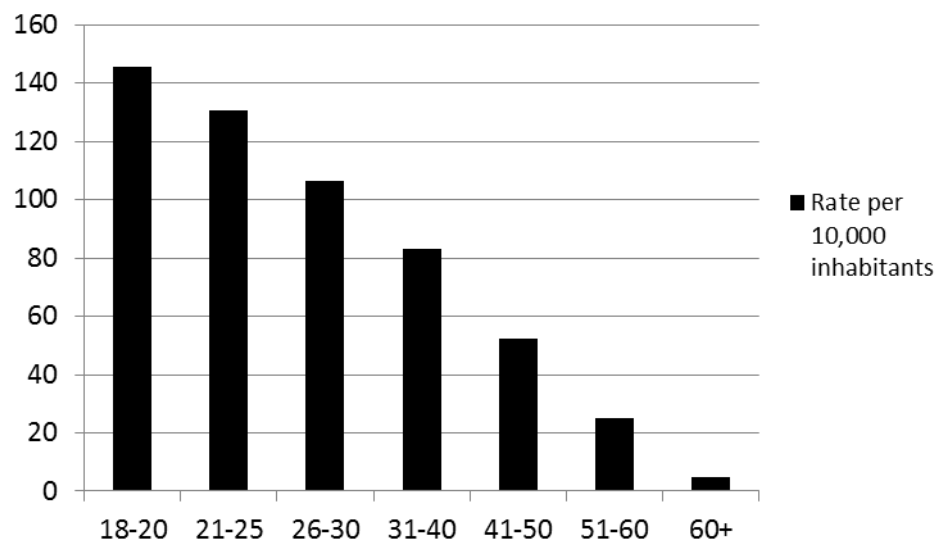
### **3.7. What we know about offenders**

Information on offenders is crucial to properly build and interpret empirical models of perceived neighbourhood crime, not only because offenders often live in, or close to, the neighbourhoods where they perpetrate criminal acts, but also because of residents’ interaction with groups that are popularly considered as crime-prone (e.g. young males, foreigners), irrespective of whether they are real offenders. In what follows, information on visual characteristics, such as gender, age and nationality, of those convicted or incarcerated is presented. Unfortunately, accessible statistics are limited to these variables, with information on detainees severely, and increasingly, restricted for political and technical reasons (Aebi and Linde, 2010).

In common with other developed countries, offenders in Spain are disproportionately men and young. Roughly 90 per cent of those convicted and incarcerated are men and conviction rates decrease monotonically with age (figure 3.7). In contrast to some countries, most notably the United States (Rumbaut, 2008), foreign-nationals are clearly overrepresented in crime statistics, including the number of detainees (García, 2000), the rate of convictions (figure 3.8), and the prison

population.<sup>44</sup> In 2009, for instance, for most types of crimes, around 30 per cent of those convicted were foreign nationals, whereas their proportion in the Spanish population was, according to the municipal register, 12 per cent. As expected, natives were overrepresented in white-collar crimes (i.e. corruption, corporate crime, bribery, embezzlement), whereas foreign nationals were noticeably overrepresented in drug offenses and theft of personal property. Whether these differences persist net of other factors, including the potential discrimination by law enforcement agencies, remains an open question.

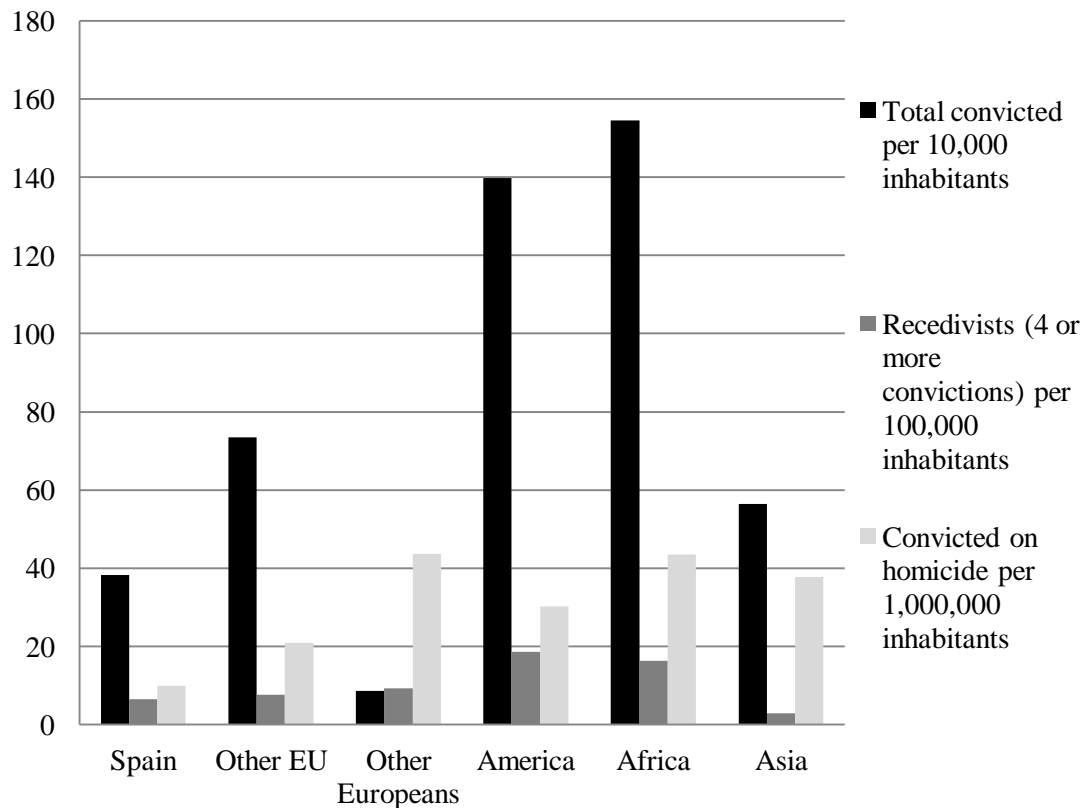
Figure 3.7. Conviction rates by age group (2009)



Source: Own elaboration from National Statistics Institute (*INE*) data.

<sup>44</sup> In 2009 the prison population rate per 10,000 inhabitants for the foreign nationals was 47.26. That is, four times higher than the rate for natives.

Figure 3.8. Conviction rates by nationality (2009)



Source: Own elaboration from National Statistics Institute (INE) data.

### 3.8. What we know about victims

Information on victims is equally vital to construct empirical models of perceptions of neighbourhood crime, even more so as the models in the empirical chapters are unable to control for real crime measures, be that from official statistics or survey based victimisation rates. In what follows, the profile of victims is presented, concentrating on the usual sociodemographics (i.e. sex, age, income, class, education, and immigrant status).

Information on victims' characteristics is available from various victimisation surveys. From the International Crime Victim Survey (ICVS-2005), we learn that the likelihood of being victimised correlates negatively with age and being female (table

3.11).<sup>45</sup> The ICVS also shows that well-off respondents are more likely to be victims of crimes where the potential reward is higher (i.e. car theft and burglary) and less affluent respondents of thefts where less valuable objects are at stake (i.e. theft from car, pickpocketing). Overall, these findings are consistent with the thesis that “people tend to victimise people like themselves” though it must be noted that age and gender differences are more acute, and hence are better predictors, on the offenders’ side.

Results from the Madrid victimisation survey (MVS-2008) are somehow at odds with the ICVS. Females are more likely to have been victimised, there is no significant difference by age or nationality, and the upper-middle classes and those with university degree are less likely to have been victimised (table 3.12). Nevertheless, as with the ICVS, differences by sociodemographics are relatively unimportant.

Table 3.11. Victims' characteristics in the International Crime Victim Survey (2008)

|                                 |   | Cases | Female<br>(in %) | Age<br>(mean) | Years of<br>education<br>(mean) | Income:<br>Upper 50%<br>(in %) | Immigrant<br>background<br>(in %) |
|---------------------------------|---|-------|------------------|---------------|---------------------------------|--------------------------------|-----------------------------------|
| Car theft*                      | N | 1,648 | 50               | 44.5          | 11.8                            | 69.2                           | 3.9                               |
|                                 | Y | 20    | 37               | 45.3          | 12.5                            | 76.3                           | 1.1                               |
| Theft from car*                 | N | 1,610 | 50               | 44.7          | 11.8                            | 69.3                           | 3.9                               |
|                                 | Y | 55    | 49               | 39.8          | 12.5                            | 67.3                           | 5.6                               |
| Burglary                        | N | 2,015 | 52               | 46.7          | 11.4                            | 62.6                           | 3.9                               |
|                                 | Y | 17    | 44               | 44.4          | 11.9                            | 86.7                           | 0.0                               |
| Robbery                         | N | 2,003 | 52               | 46.8          | 11.4                            | 62.8                           | 3.9                               |
|                                 | Y | 27    | 47               | 43.4          | 10.8                            | 63.8                           | 5.1                               |
| Theft of personal<br>belongings | N | 1,979 | 52               | 46.9          | 11.4                            | 63.2                           | 3.9                               |
|                                 | Y | 43    | 63               | 41.3          | 11.3                            | 46.3                           | 2.0                               |

N = No; Y = Yes.

\* Only car owners are included.

Source: Own elaboration from ICVS data (2005).

<sup>45</sup> It is important to note that, as a result of the limited number of victims in the ICVS, the results presented must be taken with caution.

Table 3.12. Victims' characteristics in the Madrid Victimisation Survey (2008)

|                           |     | Female<br>(in %) | Age<br>(mean) | University<br>degree<br>(in %) | Subjective<br>social class:<br>upper-middle<br>(in %) | Foreign<br>national<br>(in %) | Length of<br>residence:<br>> 5 years<br>(in %) |
|---------------------------|-----|------------------|---------------|--------------------------------|---|-------------------------------|--|
| Victimised in<br>district | No  | 52,8             | 46,1          | 22,1                           | 13,3  | 15,1                          | 8,1  |
|                           | Yes | 59,3             | 47,5          | 18,5                           | 9,5   | 14,7                          | 8,0  |
| Cases                     |     | 8.329            | 8.329         | 3.520                          | 7.871   | 8.329                         | 8.329  |

Source: Own elaboration from MVS data (2008).

A different aspect that is of special interest to urban criminologists relates to the location where respondents were victimised, the reason being that a series of studies assume that offenders, victims, or both live close to where offenses occur (Sampson, 1987). In the ICVS most offenses took place at or near the victims' own home. This was the case for seven out of ten car thefts, half of thefts from car, eight out of ten motorcycle thefts, three quarters of bicycle thefts, four out of ten robberies, and a third of personal thefts in the ICVS. Similarly, in the MVS two thirds of respondents were victimised within their neighbourhoods. Thus, the widespread assumption that crimes usually occur at or near the victims' homes can be reasonably extended to Spain, and Madrid in particular.

### 3.9. Individual determinants: socio-demographics and crime perceptions

A last aspect that merits consideration is the impact of the usual sociodemographics, such as sex, age, income, class and immigrant status, on perceptions and fear of neighbourhood crime, when victimisation experiences are held constant.

On the whole, results from both surveys are fairly similar. In the ICVS, it is females that feel particularly unsafe and this finding is reinforced when experiences of victimisation are introduced in the model (table 3.13). Older respondents and those with less formal education also feel less safe, yet the effect is modest by comparison. For its

part, in the MVS females, natives and those with less formal education perceive more neighbourhood crime, whereas age and social class play a minor role (table 3.14). As expected from prior research (Quillian and Pager, 2001, Rountree, Augustine and Bryan, 2005), the strongest effect in both surveys is observed for victimisation (i.e. number of crimes experienced in neighbourhood). These findings are consistent with previous studies in that many more women perceive greater risk than men (Chiricos, Hogan and Gertz, 1997; Garofalo, 1979), the elderly are slightly more fearful (Ferraro and LaGrange, 1992; Warr, 1984) and social class or income produce mixed results (Clemente and Kleiman, 1977; Chiricos, Hogan and Gertz, 1997; Rountree and Land, 1996). They are also congruent with Quillian and Pager (2001) where, net of victimisation experiences, women perceive significantly higher neighbourhood crime, but neither age, income nor education exert a significant impact.

A different set of results is produced by the Sample of Anonymised Records (SAR) from the 2001 Census (table 3.15). With no possibility of controlling for previous experiences of victimisation, perceptions of neighbourhood crime are barely associated with individual variables, be that sex, age, education, time of residence, civil status, or employment status. Instead, it is variables related to meso-level factors, such as building characteristics and other neighbourhood problems, that show the strongest effects, which suggests that perceived neighbourhood crime is better conceived as a community phenomenon, in accordance with Conklin's (1975) and Quillian and Pager's (2001) findings. Even individual effects, such as the negative effect of age, is probably the result of meso-level characteristics such as living in rural and residentially stable communities.

Table 3.13. OLS regression analysis. Fear of walking alone at nights in neighbourhood† and sociodemographics.

|   |                  |
|---|------------------|
| Constant  | 3.347 (0.193)**  |
| Age   | -0.004 (0.002)*  |
| Female  | -0.271 (0.055)** |
| Income group  | 0.023 (0.062)    |
| Years of formal education                                     | 0.015 (0.007)*   |
| Immigrant background  | 0.151 (0.139)    |
| Number of personal victimisation experiences in neighbourhood | -0.277 (0.035)** |
| R <sup>2</sup>  | 0.085            |
| N   | 1,108            |

Standard errors in parentheses. Significance: \* < 0.05; \*\* < 0.01.

† 1 = Very unsafe; 4 = Very safe.

Source: Own elaboration from ICVS data (2005).

Table 3.14. OLS regression analysis. Perceived neighbourhood crime† and sociodemographics.

|   |                  |
|---|------------------|
| Constant  | 1.607 (0.093)**  |
| Age   | 0.000 (0.001)    |
| Female  | 0.091 (0.037)*   |
| Social class  | 0.033 (0.020)    |
| Level of education  | -0.032 (0.008)** |
| Foreign national  | -0.124 (0.041)** |
| Number of personal victimisation experiences in neighbourhood | 0.385 (0.049)**  |
| R <sup>2</sup>  | 0.03             |
| N   | 3,280            |

Standard errors in parentheses. Significance: \* < 0.05; \*\* < 0.01.

† "How widespread is crime in your neighbourhood?" (0-10 scale).

Source: Own elaboration from Madrid Victimisation Survey (2008).

### 3.10. Summary of main findings

The main objective of this chapter has been to provide an empirical basis for the theoretical framework presented in the previous chapter. That is, that perceived neighbourhood crime reflect multiple influences beyond the actual crime rates (Quillian and Pager, 2001). These influences include signs of civil and physical disorder, neighbours' sociodemographics and individual characteristics, plus all the distortion introduced in the recording and diffusion process of crime information. The chapter has

also provided valuable information on available crime data in Spain, focusing specifically on the crime datasets employed throughout the dissertation, described trends in public concern with public safety, presented the geographical distribution of residents' perceptions of crime, and compared victimisation rates across the participating countries in the ICVS.

Table 3.15. Logit regressions of census respondents (>16 years). Crime perceptions,<sup>†</sup> individual sociodemographics and signs of social and physical disorder.

|  | I. Individual characteristics | II. Social and physical disorder | III. Fixed effects by provinces |
|--|-------------------------------|----------------------------------|---------------------------------|
| Female                                       | 1.000 (0.01)                  | 0.996 (-0.13)                    | 0.983 (-0.53)                   |
| Age  | 0.997 ** (-3.96)              | 0.998 * (-2.13)                  | 0.999 (-1.44)                   |
| Foreign-national                             | 0.823 * (-2.57)               | 1.011 (0.14)                     | 0.895 (-0.83)                   |
| University degree                            | 0.872 ** (-3.42)              | 0.876 ** (-3.11)                 | 0.877 ** (-2.74)                |
| Unemployed                                   | 1.152 ** (2.76)               | 1.122 * (2.09)                   | 1.146 * (2.27)                  |
| Time of residence                            | 0.996 ** (-3.60)              | 0.998 * (-2.07)                  | 0.998 (-1.70)                   |
| Homeowner                                    | 0.880 ** (-3.40)              | 0.888 ** (-2.98)                 | 0.872 ** (-3.06)                |
| Owens second residence                       | 1.033 (0.89)                  | 1.050 (1.29)                     | 0.999 (-0.01)                   |
| Building characteristics                     |                               |                                  |                                 |
| Number of floors                             | 1.123 ** (26.87)              | 1.115 ** (23.08)                 | 1.113 ** (19.68)                |
| Deterioration factor                         |                               | 0.847 ** (-5.04)                 | 0.847 ** (-4.59)                |
| R declares problems of...in residential area |                               |                                  |                                 |
| Noise  |                               | 1.988 ** (21.64)                 | 1.906 ** (18.61)                |
| Cleanliness                                  |                               | 2.463 ** (29.70)                 | 2.304 ** (25.20)                |
| Pollution                                    |                               | 1.555 ** (12.61)                 | 1.537 ** (11.26)                |
| Transport accessibility                      |                               | 1.455 ** (9.82)                  | 1.500 ** (9.52)                 |
| Green areas                                  |                               | 1.468 ** (12.80)                 | 1.443 ** (11.05)                |
| Log-likelihood                               | -16,669                       | -15,014                          | -12,722                         |
| N (Respondents)                              | 31,870                        | 31,870                           | 27,773                          |
| Provinces                                    | -                             | -                                | 52                              |

Coefficients are odds ratio. z values in parentheses. \*\* p<0.01, \* p<0.05.

<sup>†</sup> DV: "Are crime and vandalism a problem in your local area?" 0 = No; 1 = Yes.

Source: Own elaboration from the 2001 Population and Housing Census (Sample of Anonymised Records).

By means of simple analyses, mostly of a bivariate nature, the multidimensional nature of crime perceptions has been substantiated. Residents in Spain react to signs of social and physical disorder in the environment and to neighbours' sociodemographics



in the assessment of local crime and vandalism. Perceived neighbourhood crime is also robustly associated with a series of official crime statistics, yet due to insufficient data this relationship could only be established at the provincial and district levels. For its part, victimisation experiences provoke, among local residents, greater fear of walking alone at night. They also produce higher levels of perceived crime, though these effects are particularly visible with instrumental, serious and local crimes that have been directly experienced by respondents—as opposed to those experienced by relatives. Finally, with regard to individual factors, females and, to a lesser degree, the elderly are more likely to feel unsafe, when victimisation experiences are held constant. Analyses based on the Census, for its part, show that individual variables are relatively unimportant when explaining perceived neighbourhood crime, at least in comparison to the few meso-level characteristics such as building characteristics and perceptions of community problems.

The chapter has shown the significant and positively skewed distribution of residents' perceptions of neighbourhood crime—towards small municipalities with low prevalence of family disruption— and the moderate yet overblown—as compared with other developed countries—concern with crime among Spanish ICVS respondents. It has also revealed that crime is perceived to be higher in larger municipalities populated by women and foreign nationals and with significant levels of family disruption and unemployment.

In the next chapter, residents' perceptions of neighbourhood crime are investigated making use of the theoretical framework tested empirically in this chapter. The aim is to understand why these perceptions vary greatly across Spanish communities (figures 3.2 and 3.3), focusing on the structural characteristics of communities (table 3.2) and on the various signs of social disorder available to residents

in their environment (tables 3.3, 3.4 and 3.5), bearing in mind that these differences are scarcely related to the attributes of census respondents (table 3.15).

## **CHAPTER 4. EXOGENOUS SOURCES OF SOCIAL DISORGANISATION, SPATIAL HETEROGENEITY AND PERCEIVED CRIME IN LOCAL COMMUNITIES IN SPAIN**

### **4.1. Introduction**

Empirical studies on communities and crime have generally restricted their attention to a limited number of cities or rural areas, mainly located in the US, the best example of which is the abundance of criminological research on the city of Chicago. As a result, empirical findings are typically derived from samples of local areas which are modest in size, typically between 50 and 300 cases. For instance, Sampson and Groves' (1989) study—"one of the more important studies in the criminological literature over the last decade" (Veysey and Messner, 1999)—is based on 238 local communities across the United Kingdom. Small sample sizes, occasionally accompanied by a lack of representativeness, are also evident in studies by Bursik and Grasmick (1993),<sup>46</sup> Osgood and Chambers (2000),<sup>47</sup> Oberwittler (2004),<sup>48</sup> and Sampson, Raudenbush, and Earls (1997).<sup>49</sup> It seems that in the refinement-robustness trade-off, recent research on social disorganisation theory has primarily favoured the former. That is, testing ever more refined hypotheses in a specific context and analysing a limited number of units.

In sharp contrast, the main goal of this study will be to provide a robust test of the social disorganisation framework in a novel and understudied social environment, and will only be partially directed to "refine social-disorganisation theory" (Sampson and Groves, 1989). Whereas the analyses will remain largely descriptive and ecological—disregarding social mechanisms and relegating for subsequent chapters the analysis of neighbourhood effects—this will be the first study to assess, for all census

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<sup>46</sup> 77 communities in Chicago.

<sup>47</sup> 264 counties in four U.S. states.

<sup>48</sup> 61 neighbourhoods in two urban areas and one rural area in Germany.

<sup>49</sup> 343 neighbourhoods in Chicago. Same sample size applies for other studies employing the *Project on Human Development in Chicago Neighbourhoods*, such as Browning, Feinberg, and Dietz (2004).

tracts in a given country, the relationship of perceived crime to the neighbourhood characteristics that are typically associated with social disorder. These include structural features of local communities, such as their residential stability, as well as signs of social and physical disorder.

As regards the theoretical framework, this chapter draws primarily on two complementary strands of literature—social disorganisation (Bursik and Grasmick, 1993; Osgood and Chambers, 2000; Sampson and Groves, 1989; Shaw and McKay, 1969[1942]) and the resource model of socio-political participation (Verba and Nie, 1972; Verba, Schlozman, and Brady, 1995)—through which lens traditional and original external sources of social disorganisation are evaluated in the Spanish context. Further, the literature on informational cues—essentially those related to the incivility thesis (Biderman et al., 1967; Hunter, 1978; Skogan, 1986; Wilson and Kelling, 1982) and sociodemographics (Chiricos, Hogan and Hertz, 1997; Quillian and Pager, 2001)—is also incorporated in order to properly account for residents' perceptions of neighbourhood crime.

Besides the integration of complementary strands of the literature, other innovations of this chapter include the comparison of rural and urban environments, and the inclusion of four dimensions of spatial heterogeneity into a multilevel framework.

## **4.2. Structural factors and crime**

Recent criminological research has been preoccupied with the verification of sophisticated theoretical and empirical corollaries stemming from core statements of social disorganisation. This sophistication has taken three basic forms: the analysis of specific social mechanisms (Miguel and Guherty, 2005), the isolation of neighbourhood effects on criminal behaviour (Oberwittler, 2004; Sampson, Raudenbush, and Earls,

1997) and, more relevant for our purposes, general tests of the mediating effect of the dimensions of social disorganisation (Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997).

In an effort to grasp the social disorganisation construct, scholars have focused on diverse dimensions, such as the prevalence and types of social networks (Bursik and Grasmick, 1993; Kasarda and Janowitz, 1974; Kornhauser, 1978; Warren, 1971), organisational memberships (Kasarda and Janowitz, 1974; Simcha-Fagan and Schwartz, 1986), guardianship, surveillance and informal social controls (Kornhauser, 1978; Sampson and Groves, 1989), or attenuated culture (Kornhauser, 1978; Warner, 2003). While these efforts to unveil the ‘black box’ (figure 2.3) of the social disorganisation model—through the incorporation the three levels of social order (i.e. private, parochial and public) and a variety of social mechanisms—have certainly advanced our understanding of the influence of communities on crime, it is probably too early to dismiss the value of previous research on exogenous and macro-structural factors of social disorganisation.

As stated in chapter 2, the structural characteristics of communities—such as the level of poverty, ethnic diversity and residential turnover—present several advantages over more refined formulations of the theory. They are theoretically and empirically easy to discern from the concept of social disorganisation itself. Besides, through their influence on the resources available to residents, they are likely to be crucial and direct causes of social disorganisation, as well as indirect causes of the levels of neighbourhood decay, criminal behaviour, and social incivilities. Evaluating the impact of local conditions on perceived neighbourhood crime produces relevant information and provides policy-makers with ample space for intervention. Finally, information on the structural features of communities is broadly available, facilitating comparison and

improving the predictive power. However, it must be noted that analysing the exogenous sources of social disorganisation present problems of their own, such as identifying the specific causal path through these affect residents' perceptions of local crime. For this reason, the interpretation of results in this chapter proceeds with caution, even if specific community-level interpretations are highlighted.

It is thus acknowledged that advances in the literature are likely to stem from direct tests of social disorganisation theory. However, the main contention of this chapter is that the investigation of the exogenous sources of social disorganisation is still a legitimate and useful strategy for understanding spatial variations of crime measures, irrespective of their objective or subjective nature. What is more important, advancement along this path is still possible, improving both the generalisability and the comprehensiveness of the underlying theoretical propositions. This can be achieved, first, by testing the model in new social contexts (i.e. Spain); second, by introducing additional characteristics of residents' local environments (e.g. commuting time); and finally, by incorporating macro or municipal characteristics into the analyses (i.e. measures of spatial heterogeneity).

#### **4.3. Some considerations on the social disorganisation model: incorporating the resource model of socio-political participation**

Until very recently, scholars used to focus exclusively on Shaw and McKay's (1969[1942]) original variables accounting for variations in the social organisation of communities: residential turnover, ethnic diversity, and poverty. Sampson (1987) extended the model to family disruption, and Sampson and Groves (1989) introduced urbanisation, given that their analysis—unlike Shaw and McKay's— included non-metropolitan areas. The number of exogenous sources, however, can and should be

extended further: any environmental variable likely to affect the density of any of Bursik and Grasmick's (1993) three levels of social order—private, parochial and public—should be part of community or meso-level explanations of crime. This brings us back to the resource model of socio-political participation or to explanations of how people form stable friendships and why they get involved in voluntary associations. Five types of resources are identified as contributing factors to the development of local networks: communication and organisational skills, trust (in neighbours), time spent in the community and financial resources. Their importance will vary depending on the level of social order, time and communication skills being essential for all three. In addition to resources, individuals also need to share some sort of common interests. These can be related specifically to the neighbourhood (e.g., preservation of green areas) or be spatially neutral (e.g., promoting social justice); what is important is that, irrespective of whether the neighbourhood is the main focus of attention or just a container of events, these interests enhance social control and collective consumption within the community.

In short, the structural characteristics of communities, by influencing the resources available to households and shaping residents' interests, determine whether these communities are socially disorganised—or organised differently in Wacquant's (2007) terms (figure 4.1). In turn, in these socially disorganised communities, residents are less effective in the use of crime control mechanisms<sup>50</sup> which, together with the discomfort spawned by the prevalent social and physical disorder (Wilson, 1975), should intensify perceptions of neighbourhood crime.

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<sup>50</sup> Among these mechanisms, the establishment of informal rules, the surveillance of the neighbourhood, the identification of offenders, the socialization of younger residents into mainstream culture, the imposition of social sanctions, as well as the capacity to attract resources into the neighbourhood and ward off external threats.

Figure 4.1. Social disorganisation and perceived crime: a theoretical framework



A few caveats are in order. First, and in accordance with Granovetter (1973) and Carr (2003), non-intimate links or weak ties, especially those with external agencies, are generally more effective in dealing with criminal activities. This is not to say that bureaucracies and the third-sector are more effective in organising social life in the neighbourhood, rather that it is the interlocking of community-based institutions and public agencies that can be particularly successful in the organisation of communities (Carr, 2003). Needless to say, creating and maintaining these influential connections requires special resources—financial resources, communication and organisational skills—that are not necessarily available to the ordinary citizen. Second, this framework applies specifically to non-criminal adults; it is they who need to be socially organised to control and socialise their prospective (young) offenders, to protect their community from external threats and to attract resources into the neighbourhood. In contrast, it is in the community’s interest that potential offenders are weakly organised or, otherwise, effectively supervised by better organised adults, be it by means of private, parochial or public social control. Finally, while the focus is specifically on meso-level accounts of crime, alternative—micro and macro—explanations of crime are not discarded but considered complementary to the hypotheses developed here. Even at the meso-level, other “bases for managing daily life” (Logan and Molotch, 2007[1987]), such as



schools and sports clubs, should also be considered as relevant settings for the explanation of perceived neighbourhood crime.

Following the theoretical considerations presented in this section, the objective is to determine which structural conditions will increase the organisational resources available to families and which will bolster the emergence of common interests among neighbours.

#### **4.4. Classical and original exogenous sources of social disorganisation**

In Shaw and McKay's systemic model, crime was hypothesised to be higher in economically deprived areas. This relationship hinges on the deep-rooted idea that socioeconomic status and associational membership are strongly associated, both at the individual (Verba and Nie 1972; Verba, Schlozman and Brady, 1995) and the neighbourhood level (Cohen and Dawson, 1993; Wilson, 1987). Communities with a scarcity of financial, educational and other resources are unable to create effective and influential organisations which could, in turn, help control deviant behaviour in the neighbourhood. In sharp contrast, a dense network of voluntary associations, conveniently connected with external agencies, facilitate residents and leaders in well-off communities to "work within the system" protecting themselves from external threats and obtaining "their pick of the projects" (Logan and Molotch, 2007[1987]). Thus, communities with higher levels of socioeconomic status, measured by their levels of education, are hypothesised to exhibit lower levels of perceived crime and related measures of social disorder.

From a micro perspective, and eluding the concept of social control, several authors have focused instead on unemployment as an economic cause of criminal behaviour. The lack of employment opportunities, and other financial alternatives, leads

teenage peer groups to become involved in regular criminal activities from which most, however, “mature out” (Sullivan, 1989). As Wacquant (2008) puts it: “(...) violence and crime are often the only means that youth of proletarian background with no employment prospects have of acquiring the money and the consumer goods indispensable for acceding to socially recognized existence”. Both variables are here interpreted as different aspects of a same construct: the economic status of local communities.

Another structural feature commonly associated with crime patterns is residential stability. Length of residence in the neighbourhood provides residents with enough time and incentives to develop extensive friendship networks and organisational ties (Kasarda and Janowitz, 1974; Kornhauser, 1978; Shaw and McKay, 1969[1942]). Besides, long-established residents are more likely to share a strong place attachment or “we-feelings” (McKenzie, 1922) and, consequently, to come together for the “right” reasons: in essence, for neighbourhood improvement. Similar incentives exist in the case of home ownership: environmental factors exert such an influence on home values, and moving transaction costs are so important, that owners are encouraged to pursue any strategy in order to keep criminal activity and street disorder out of the community. Tied-down and attached to the community, residents who have “bought into the same neighbourhoods” (Logan and Molotch, 2007[1987]) will typically undertake individual actions as a mechanism of crime prevention and control (Carr, 2003), such as surveillance or police calls. If those strategies do not work they are likely to resort to all sorts of collective mechanisms, starting with soft actions (e.g. signing petitions) and occasionally ending with “hawkish” strategies (e.g. violent attacks, vigilante justice) in a Durkheimian (1934[1893]) fashion (Conklin, 1975; Logan and Molotch, 2007[1987]). The opposite will be true for those residents with a secondary residence at their

disposal. Abandoning their neighbourhoods on a regular basis, and especially at weekends when local social networks are more likely to form, their involvement in local matters and their capacity to protect their property will be hindered. Residents, however, could also be “escaping” from violent areas, even if temporarily; endogenous effects should therefore not be discarded.

Related to time in a different fashion, family disruption was introduced by Sampson (1987) as a probable cause for decreased informal social controls at the community level. Since upbringing efforts within the family become (even more) unequally distributed after a breakup, supervision and guardianship of their children, household property and general activities in the community are significantly obstructed (Cohen and Felson, 1979; Sampson and Groves, 1989). However, family disruption and the lack of “spare time” it brings about not only takes eyes off the streets (Jacobs, 1961), but it also constrains households’ participation in the kinds of collective action (Verba, Schlozman and Brady, 1995) which are crucial for effective community-building. Levels of perceived crime are therefore expected to be higher in communities with a high incidence of family disruption, reflected in the proportion of divorced and separated adults. Supervision will also be reduced in large families where parents’ attention is shared among a great number of children. Following a similar line of reasoning, overtime work and commuting time to work will limit the presence of neighbours at home and in the community, generating analogous consequences.

Social control theories, and by extension social disorganisation theory, are implicitly framed as a potential conflict between immoral teenagers and righteous adults: those who self-organise successfully are likely to “reign” in the area. In empirical models, however, the focus has been exclusively on the intergenerational closure of (adult) communities (Coleman, 1988) or, in terms of social mechanisms, on

their ability to supervise and intervene in leisure activities of local youth. The features of teenagers' friendships have been consistently ignored even though members of troublemaking cliques more often than not live in the same areas. Locally embedded teenage peer groups—sharing the same neighbourhood and school—regularly gather on street-corners and local parks; a habit that can result in boredom and an inflated sense of power that, when conflated with frustrations in conventional activities (Hirschi, 1969), can eventually lead to deviant behaviour and a resulting sense of urban unease by the adult population (Wilson, 1968). Given that information on social networks is unavailable, it is hypothesised that commuting time to school decreases adolescents' time in the community—reducing the need for social control—and diversifies adolescents' social networks. The fact that teenagers are unable or unwilling to “take control of the streets” will bring about a reduction in the prevalence of crime, vandalism and other social incivilities.

Heterogeneity, and in particular ethnic diversity, has been regularly associated with a series of urban ills, prominent among which is social disorganisation (Sampson and Groves, 1989; Shaw and McKay, 1969[1942]). The rationale behind this controversial relationship is that homogenous communities are more likely to draw on a reservoir of common cultural material (Habyarimana et al., 2007) and to share similar preferences, interests and (pre-existing) common social networks. As a result, in more diverse settings consensus is problematic (Miguel and Gugerty, 2005), social networks and social organisation weaker (McPherson, Smith-Lovin and Cook, 2001; Sampson and Groves, 1989), and trust and effective social controls deficient (Putnam, 2007; Sampson, Raudenbush, and Earls, 1997; but see Laurence and Heath, 2008). While ethnic diversity—as opposed to economic, linguistic, educational or religious heterogeneity—has regularly captivated scholars' attention, the same reasoning should

be extensible to other socio-demographic features. There are, however, compelling motives for focusing on ethnicity or, as in this study, on nationality: identification is readily observable (Quillian and Pager, 2001), information is widely available, they “neatly demarcate large numbers of people with a single term” (Logan and Molotch, 2007[1987]), and “create the strongest divides in our personal environments” (McPherson, Smith-Lovin and Cook, 2001). Focusing on national, as opposed to ethnic, diversity is the result of (continental) European unease with, and even suspicion of, ethnic labelling. In fact, in the European public mind “urban violence and collective unrest” (Wacquant, 2008) are more often than not linked with immigration and specific nationalities rather than with ethno-racial diversity. This implies that the presence of certain nationalities could be associated with criminal activities, irrespective of national diversity levels in the area and of their actual offending and victimisation rates. Thus, the impact of specific nationalities is also examined, even though problems of self-selection can be particularly problematic (see chapter 6 for a more detailed debate of problems of self-selection). At the very least, the introduction of nationalities will serve to disentangle the effects of national diversity from those of specific nationalities.

Urbanisation is almost certainly the most intriguing exogenous source of social disorganisation. Despite the original interest of the Chicago school on rural-urban transformations (Park, Burgess, and McKenzie, 1925; Sutherland, 1924; Thomas and Znaniecki, 1927) and empirical studies corroborating its impact on crime and delinquency (Sampson and Groves, 1989), it is dubious that the influence of urbanisation on crime perceptions is independent of other phenomena. Instead, the urban unease effect is more likely to originate from two distinctive urban processes: generalised inequality (Blau and Blau, 1982) and the concentration of social disorganisation determinants (Wilson, 1987, 1996). According to this view, urbanisation

would act both as a proxy for socioeconomic stratification and as a general interaction term of other exogenous sources of social disorganisation, such as ethnic diversity, family disruption and residential instability.

A different question refers to whether the model can be extended to rural communities, for scholars have “almost exclusively defined communities as neighbourhoods within large urban centres” (Osgood and Chambers, 2000). Responding to this question, Osgood and Chambers argue that, considering that “rural communities and smaller towns will surely vary in their ability to realise values and solve problems”, there should be nothing specifically urban in the theory. Yet, following the distinctive urban processes mentioned above—stratification and the concentration of deviant behaviour determinants—rural-urban differences in the performance of the model are to be expected. The absence of these processes in rural areas hinders residents’ ability to organise and also limits the variance of the dependent and the explanatory variables. Therefore, even though the model may be applicable to rural communities, it is hypothesised that variations in perceived neighbourhood crime are better accounted for in more densely populated municipalities.

The link between inequality and crime has become commonplace in criminology (Blau and Blau, 1982; Sampson and Wilson, 1995). Social stratification is a necessary condition for the existence of disadvantaged neighbourhoods, where social control at the parochial and public levels is usually hampered, and of affluent areas with attractive payoffs for criminals (Demombynes and Özler, 2005). In addition, acute spatial heterogeneity can lead to the social isolation of deprived households from individuals and institutions that represent mainstream society (Wilson, 1987). In European cities, however, the consequences of this social isolation are mediated by a ubiquitous welfare state (Wacquant, 2008), providing generous social services and affordable (i.e. heavily

subsidised) public transportation. Since the development of the Spanish welfare state lies in between the corporatist-continental and the Anglo-Saxon liberal models (Esping-Andersen, 1990; Moreno and Sarasa, 2000), spatial inequalities/heterogeneity is expected to retain a significant—though modest—role in explaining criminal behaviour.

Previous studies have stressed the importance of inequality but have focused largely on economic inequality and ethnic residential segregation, disregarding alternative and promising dimensions, such as educational inequality (Kelly, 2000). Reacting to this gap in the literature, four dimensions of spatial heterogeneity, or residential segregation, are investigated: formal education, national diversity, residential stability and family disruption. The selection of these four dimensions is not accidental; leaving aside urbanisation, they are the core exogenous sources of social disorganisation.

Finally, a set of control variables are particularly relevant to understand the spatial patterns of perceived neighbourhood crime. Age and sex are well-known explanatory factors of crime and social disorder (Hirschi and Gottfredson, 1983), as well as important visual cues for the assessment of neighbourhood crime (Quillian and Pager, 2001). However, the moderate crime rates of women and the elderly, their stereotypes as inoffensive groups and their important participation in community affairs may be offset by the fact that both groups are more likely to perceive higher crime rates (Chiricos, Hogan, & Gertz, 1997; Garofalo, 1979; Warr, 1984). A different set of visual cues are related to measures of social disorder and physical decay, known to be key factors of crime perceptions (Quillian and Pager, 2001; Skogan, 1990) and, according to the broken windows thesis, of actual crime rates (Wilson and Kelling, 1982; but see Sampson and Raudenbush, 1999). Finally, and in line with criminal opportunity theories, business areas are expected to increase perceived crime (Park, Burgess and

McKenzie, 1925); given that, as opposed to residential areas, they accommodate a large share of potentially disruptive activities (e.g. nightlife) and target groups on which criminal prey (e.g. tourists) that generate unease among their residents.

#### **4.5. Data and methodology**

The data analysed in this chapter is drawn from the 2001 Spanish Population and Housing Census already described in the previous chapter. Although the information was collected by household, the comprehensive census is only accessible in an aggregate form; by census tracts, districts, municipalities, provinces or Autonomous Communities. For confidentiality reasons, the sample of anonymised records only includes geocodes for geographical units larger than the district. With an average population of 1,200 individuals, the 34,251 census tracts constitute the preferred unit of analysis. While it is evident that census tracts in urban areas do not match fully with an individuals' lived environment, in the sense of a space that can satisfy "a complex set of needs" (Logan and Molotch, 2007[1987]);<sup>51</sup> they are, nonetheless, commonly used in this type of ecological analysis and are considerably more meaningful than alternative administrative divisions for which information is available.<sup>52</sup>

##### *4.5.1. Definition and spatial distribution of the dependent variable*

As in other censuses, information collected in the 2001 Spanish census was primarily concerned with objective measures such as the average floor area of houses, employment situation or the age of residents. Fortunately, in the 2001 census the National Statistics Institute decided to introduce a set of subjective dichotomous

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<sup>51</sup> Many small rural areas in Spain have one or just a few census tracts, therefore increasing the likelihood of being a close match to residents' lived environment.

<sup>52</sup> In ascending order, the next geographical unit for which information is available is the district which range of population size varies from less than a hundred to a quarter of a million inhabitants.



questions on housing problems. These included the outcome variable employed in this chapter: the percentage of residents in a given census tract considering that *crime and vandalism are a problem*, which will be denoted simply as *perceived crime*. As described in the previous chapter, its spatial distribution (figure 3.3) indicates that perceived crime is particularly high in urban, coastal and southern areas.

#### 4.5.2. Independent variables

The explanatory variables—aggregated by census tract and municipality—have been organised along with the key exogenous sources of social disorganisation, including education and multiple proxies for the time spent in the community. Also included are a set of control variables—age, gender, commercial activity and informational cues—which are likely to exert an effect on perceived levels of crime.

Whereas a full description of the variables is presented in appendix A, in what follows, information on selected explanatory variables, for which interpretation is not straightforward, is advanced. The main descriptives are provided in table 4.1.

*Herfindahl index.* The Herfindahl index is a general measure of heterogeneity or concentration widely employed in the social disorganisation literature with values that range from 0—maximum heterogeneity—to 1—maximum homogeneity.<sup>53</sup> Here, it is calculated using the percentage of each of 15 different nationality groups,<sup>54</sup> for which information is available in the census, over the total population. Since the correlation between the index and the percentage of foreign population is almost perfect,<sup>55</sup> the index can effectively be interpreted as the latter (with opposite sign). And since prior to

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<sup>53</sup>  $H = \sum_{i=1}^N s_i^2$ , where  $s_i$  is the proportion of ethnic/national group  $i$  over the total population in the census tract, and  $N$  is the number of census tracts.

<sup>54</sup> Argentina, Bulgaria, Colombia, Cuba, Dominican Republic, Ecuador, France, Germany, Italy, Morocco, Peru, Romania, Spain, United Kingdom and Venezuela.

<sup>55</sup> Using the 2001 census tracts, the Pearson correlation coefficient between the Herfindahl Index and the proportion of foreigners is 0.98.

the immigration waves that set off in the 1980s Spain was a very homogenous society in terms of racial/ethnic composition, bar the Roma minority, the index is an adequate approximation for the level of ethnic heterogeneity in Spanish local communities.

*Municipal spatial heterogeneity.* This is measured introducing the standard deviation—across census tracts within each municipality—of the four variables of interest: Herfindahl index, percentage of residents with higher education, percentage of divorced and separated and length of residence in the same dwelling. Mean values of these variables are also introduced at the municipal level in the multilevel models to control for the size dependency of variance statistics.<sup>56</sup>

The regression models are set in a multilevel framework where census tracts (level 1) are nested within municipalities (level 2).<sup>57</sup> Random coefficient models are estimated (i.e. random intercepts but not slopes at the higher level) using restricted maximum likelihood (REML) with an independent covariance structure.<sup>58</sup> Accounting for the hierarchical structure of the dataset is vital, given the significance of the intra-cluster correlation.<sup>59</sup> The statistical significance of coefficients is not shown since the analyses are based on a census, rather than on a sample, and therefore no statistical inferences need to be made. In order to avoid the ecological fallacy, the description of the results proceeds carefully in making inferences about relationships at the individual level.

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<sup>56</sup> The Pearson correlations coefficients between means and standard deviations for all four variables, at the municipal level, are statistically significant and range from 0.25 for length of residence to 0.81 for the Herfindahl Index and the proportion holding a university degree.

<sup>57</sup> Throughout the dissertation, variables are not centred on the group mean, implying that the estimates of the level-1 (census tract) coefficients are a complex weighted average of the between and within effects, except for variables that are included at both level-1 and level-2 (e.g. models III and IV in table 4.2). This approach was taken because the author is not interested specifically in level-1 effects, unless otherwise stated.

<sup>58</sup> The statistical software used for estimation is Stata.

<sup>59</sup> The intra-class correlation coefficient (ICC), using perceived crime as the dependent variable and municipalities as the cluster variable, is 0.24 in a multilevel model with no covariates (i.e. null model).

The first of the models tries to reproduce Shaw and McKay's (1969[1942]) original study where poverty, ethnic heterogeneity and residential turnover were associated with social disorganisation and crime. The second model adds original variables related to social disorganisation and socio-political participation determinants, together with a set of control variables. The effect of national diversity is tested against the effect of the largest foreign nationality groups in terms of population size: European Union (15), Morocco and Ecuador. The third model is designed to test the effect of the spatial heterogeneity within municipalities on crime perceptions. Controls related to signs of social disorder (i.e. noise and cleanliness) and physical decay (i.e. condition of buildings) are incorporated into the fourth model, isolating the causal paths that depart from neighbourhoods' social disorganisation (figure 4.1).

Table 4.1. Descriptive statistics of the variables employed in the regression models.

| Variables                        | Mean  | SD    | Min   | Max    | Mean        |              |
|----------------------------------|-------|-------|-------|--------|-------------|--------------|
|                                  |       |       |       |        | Rural areas | Large cities |
| % Perceived crime                | 20.69 | 20.03 | 0.00  | 98.76  | 3.77        | 38.54        |
| Socioeconomic condition          | 0.98  | 0.15  | 0.31  | 1.86   | 0.94        | 1.03         |
| Unemployment rate                | 14.12 | 8.23  | 0.00  | 86.67  | 12.68       | 14.62        |
| % Higher education               | 12.80 | 10.67 | 0.00  | 65.33  | 7.42        | 19.78        |
| Herfindahl index                 | 0.94  | 0.08  | 0.29  | 1.00   | 0.96        | 0.91         |
| % European Union (15)            | 0.71  | 2.36  | 0.00  | 71.56  | 0.60        | 0.61         |
| % Morocco                        | 0.54  | 1.51  | 0.00  | 45.76  | 0.34        | 0.40         |
| % Ecuador                        | 0.51  | 1.31  | 0.00  | 31.13  | 0.16        | 1.15         |
| % Other foreign nationalities    | 1.70  | 2.30  | 0.00  | 44.30  | 0.81        | 2.77         |
| Length of residence (years)      | 20.20 | 7.41  | 1.68  | 68.85  | 26.50       | 18.78        |
| % Renters                        | 10.74 | 10.79 | 0.00  | 98.45  | 5.07        | 17.04        |
| % Secondary residence            | 16.69 | 11.68 | 0.00  | 100.00 | 14.52       | 23.59        |
| % Divorced/Separated             | 2.71  | 1.53  | 0.00  | 14.29  | 1.50        | 3.80         |
| % Work overtime                  | 13.09 | 8.94  | 0.17  | 100.00 | 17.34       | 11.56        |
| Commuting time to work (minutes) | 20.47 | 7.07  | 5.00  | 87.50  | 17.50       | 25.43        |
| Number children per family       | 1.78  | 0.19  | 1.00  | 4.00   | 1.77        | 1.75         |
| Commuting time to school         | 24.77 | 8.14  | 5.00  | 100.00 | 26.46       | 25.83        |
| Population size (1=100.000 inh.) | 3.64  | 7.73  | 0.00  | 29.39  | 0.01        | 13.06        |
| % 10 to 29 years                 | 25.96 | 5.92  | 0.00  | 50.93  | 20.67       | 26.13        |
| % Elderly                        | 20.25 | 10.12 | 0.00  | 90.00  | 29.85       | 19.20        |
| % Women                          | 50.77 | 2.96  | 18.18 | 70.00  | 48.56       | 52.77        |
| Number retail shops/offices      | 44.22 | 81.31 | 0     | 8020   | 20.19       | 56.17        |

Source: Own elaboration from 2001 census data.

N = 34,251; N (Rural areas) = 8,559; N (Large cities) = 8,683.

A more parsimonious model, that avoids problems of multicollinearity, is then calculated for four subsets of census tracts based on the size of municipalities: up to 5,000 inhabitants, from 5,001 to 35,000, from 35,001 to 225,000, and more than 225,000. The main criterion for the division in these categories is that the subsets should be of a similar size (approximately 8,500 cases). These subsets correspond to the following labels: rural areas, small towns, medium-size towns and small cities and large cities.

#### **4.6. Results**

In line with Shaw and McKay's original theory, the first model (table 4.2) confirms the positive and significant association of economic status (*% higher education*), ethnic heterogeneity (*Herfindahl index*) and residential turnover (*length of residence*) with perceived crime, presumably through their impact on the social disorganisation of local communities. Surprisingly, the proportion of residents holding a bachelors' degree shows the strongest effect—higher proportions of university graduates implying less residents stating that crime and vandalism are a problem in their areas—even though low levels of perceived crime and education concur in rural areas.<sup>60</sup>

The predictive power and specification improve considerably in the second model where the reformulation of the theory proposed in previous sections is assessed through traditional determinants of social disorganisation, including family disruption and urbanisation, and original measures, such as commuting time and overtime work. As expected, neighbours' level of education is negatively related to perceived crime whereas the association with unemployment rates is positive. In fact, for every

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<sup>60</sup> Shaw and McKay's (1969[1942]) model, and most neighbourhood studies on crime or perceived crime, refer exclusively to urban communities.

additional percentage point in the number of university graduates, perceived levels of crime decrease by more than 0.3 percentage points. In a country where 20 per cent of its census tracts have less than five per cent of university graduates, and 10 per cent more than a third, the scope for variations in perceived crime due to education is considerable. These results confirm the expectation that, all else being equal, in economically deprived communities with fewer graduate residents perceive significantly higher crime in their area, possibly due to their inability to use their organisational skills to exercise control over their communities and interact with external agencies for their own benefit.

Explanations of perceived crime extend beyond economic status. Census tracts in which long-established residents own their properties and have no access to secondary ones show lower levels of perceived crime. Family disruption presents a remarkably strong impact on perceived crime which remains fairly constant across the models. Interestingly, this effect is unlikely to be the result of respondents' stereotyping, or use of informational cues, since the prevalence of family disruption is relatively invisible to residents. More likely, the relationship originates in the deviant behaviour that results from insufficient social controls at the household and community levels. In fact, the regression models suggest that a conflict between law-abiding adults and problematic teenagers might exist, in line with an implicit assumption of social control theories. In this regard, the more time adults spend in their households and communities (as measured by commuting time to work and overtime work), the larger the proportion of adults in relation to teenagers, and the less time teenagers spend in their communities (as measured by commuting time to school), the lower the levels of perceived crime are. Although specific effects might also be related to individual or other alternative explanations, the results are fairly consistent with the theoretical expectations.

Table 4.2. Models I to IV. Exogenous sources of social disorganisation, signs of social disorder and perceived neighbourhood crime.\*

| Variable                           | I              | II            | III           | IV            |
|------------------------------------|----------------|---------------|---------------|---------------|
| Intercept                          | 52.22 (47.8)   | -43.45 (-4.6) | -46.90 (-6.8) | -9.406 (-1.5) |
| Level 1 - Census tract             |                |               |               |               |
| Socioeconomic status               |                |               |               |               |
| % Higher education                 | -0.34 (-40.9)  | -0.35 (-32.4) | -0.39 (-35.3) | -0.31 (-30.2) |
| Unemployment rate                  |                | 0.13 (11.7)   | 0.14 (12.9)   | 0.08 (8.4)    |
| National diversity & nationalities |                |               |               |               |
| Herfindahl index                   | -32.73 (-28.2) | 37.89 (5.9)   | 37.43 (5.5)   | 30.82 (5.0)   |
| Reference: % Spain                 |                |               |               |               |
| % European Union (15)              |                | 0.18 (2.01)   | 0.11 (1.2)    | 0.27 (3.3)    |
| % Morocco                          |                | 1.18 (10.0)   | 1.13 (9.5)    | 0.91 (8.5)    |
| % Ecuador                          |                | 0.85 (6.6)    | 0.79 (6.0)    | 0.50 (4.1)    |
| % Other foreign nationalities      |                | 1.11 (9.4)    | 1.04 (8.6)    | 0.81 (7.4)    |
| Residential stability              |                |               |               |               |
| Length of residence                | -0.45 (-36.9)  | -0.28 (-17.7) | -0.41 (-19.1) | -0.35 (-18.1) |
| % Renters                          |                | 0.13 (14.6)   | 0.12 (14.1)   | 0.04 (4.9)    |
| % Secondary residence              |                | 0.03 (3.1)    | 0.03 (3.7)    | -0.01 (-1.8)  |
| Available time for social control  |                |               |               |               |
| % Divorced/Separated               |                | 2.23 (29.6)   | 2.45 (25.0)   | 1.61 (18.0)   |
| % Overtime work                    |                | 0.03 (3.6)    | 0.03 (2.8)    | 0.00 (0.5)    |
| Commuting time to work             |                | 0.28 (15.5)   | 0.25 (13.8)   | 0.22 (13.7)   |
| Number children per family         |                | 7.29 (15.1)   | 7.61 (15.7)   | 6.68 (15.3)   |
| Commuting time to school           |                | -0.08 (-6.9)  | -0.06 (-5.5)  | -0.05 (-5.0)  |
| Controls                           |                |               |               |               |
| % Elderly                          |                | -0.06 (-5.1)  | 0.00 (-0.1)   | 0.10 (8.3)    |
| % Women                            |                | -0.01 (-0.2)  | -0.05 (-1.5)  | -0.27 (-9.2)  |
| Number retail shops/offices        |                | 0.01 (7.1)    | 0.01 (7.3)    | 0.00 (0.9)    |
| Perceived noise                    |                |               |               | 0.29 (52.5)   |
| Perceived cleanliness              |                |               |               | 0.21 (47.2)   |
| Buildings' condition               |                |               |               | -0.26 (-20.5) |
| Level 2 - Municipality             |                |               |               |               |
| Urbanization                       |                |               |               |               |
| Population size                    |                | 8.27 (29.2)   | 5.43 (16.7)   | 3.94 (14.1)   |
| Population * Population            |                | -0.26 (-22.5) | -0.18 (-14.1) | -0.13 (-11.6) |
| Spatial heterogeneity†             |                |               |               |               |
| % Higher education (Sd)            |                |               | 0.56 (7.8)    | 0.23 (3.6)    |
| Herfindahl index (Sd)              |                |               | 30.15 (4.7)   | 17.86 (3.2)   |
| Length of residence (Sd)           |                |               | -0.23 (-3.6)  | -0.27 (-4.9)  |
| % Divorced/Separated (Sd)          |                |               | 3.29 (6.2)    | 0.83 (1.8)    |
| Census tracts                      | 34,251         | 34,251        | 34,251        | 34,251        |
| Municipalities                     | 8,108          | 8,108         | 8,108         | 8,108         |
| Log restricted - likelihood        | -137,399       | -135,505      | 135,243       | -131,732      |
| Intraclass correlation coefficient | 22%            | 13%           | 12%           | 11%           |
| Variance reduction: census tract   | 9%             | 15%           | 16%           | 32%           |
| Variance reduction: municipality   | 20%            | 59%           | 63%           | 73%           |

\* DV : "Are crime and vandalism a problem in your local area?" (% respondents)

t-values in brackets.

† The absolute values of these spatial heterogeneity measures are also included as separate control variables.

As expected, urbanisation is also positively related to residents' perceptions of neighbourhood crime. However, the effect is curvilinear, reaching its maximum when the population approaches 1.6 million. Although the curvilinear relationship does not fit the observed data perfectly, it is consistent with the two largest cities—Barcelona and Madrid—showing lower levels of observed and perceived crime than medium to large cities (e.g. Seville, Malaga and Santa Cruz de Tenerife).

Whereas in the initial model, national diversity appeared to be detrimental to public perceptions of crime, in subsequent models we discover that the negative association is unrelated to “diversity” in and of itself, but rather with the specific nationalities that account for the diversity of communities. Thus, while the presence of citizens from the European Union barely impact on residents' perceptions of crime, Moroccans, and to a lesser degree Ecuadorians, exert substantial effects. Whether these are related to natives' prejudices or with foreigners' input on neighbourhood life remains an open question.<sup>61</sup> As for diversity itself—multicollinearity issues aside—the effect on perceived neighbourhood crime is in fact positive, in sharp opposition to the social disorganisation framework developed by Shaw and McKay (1969[1942]). These results are proof that the effects of the Herfindahl Index and of specific nationalities are often confounded, often leading to interpretations related to diversity when it is specific nationalities that really matter.

To conclude, the coefficients of the control variables show the expected signs. Across the different models, no robust finding is observed for the proportion of women and elderly in the population, whereas commercial areas are associated with higher perceived neighbourhood crime. However, and anticipating the results from model IV, the latter effect is largely the result of the mediating effects of social disorder

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<sup>61</sup> See chapter five for further details on the explanation of national effects.

perceptions, and more specifically due to perceptions of noise levels. Thus, the comparison of models suggests that census tracts with abundant offices and retail shops are perceived as unsafe mainly because they are also perceived as noisy.<sup>62</sup>

#### *4.6.1. Spatial heterogeneity and perceived neighbourhood crime*

Model III in Table 4.2 gives support to the well-established idea that spatial heterogeneity, at the municipal level, has a positive effect on perceived crime. The effect extends beyond socioeconomic heterogeneity and national/ethnic residential segregation to family disruption—but not to residential turnover. These findings give support to the importance of urban stratification and segregation in understanding patterns of perceived crime and partially validate the literature's interest in socioeconomic and ethnic inequalities.

#### *4.6.2. Controlling for social disorder and physical decay*

Perceptions of noise and cleanliness, as well as the state of buildings are important predictors of crime perceptions, in line with findings in prior research (Quillian and Pager, 2001; Taylor, 2001). In fact, the reduction of residuals variance and the log-likelihood improve considerably with the introduction of these informational cues. Although not presented, perceptions of other neighbourhood problems—more precisely pollution, lack of green areas or inadequate transportation accessibility—bear no independent impact on crime perceptions.

Though specific variables may vary substantially with the introduction of social disorder measures, the overall model holds reasonably well. In fact, only the coefficient for the proportion of elderly population changes direction, and radical changes are

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<sup>62</sup> Perceptions of noise and crime are highly correlated, the assessments of noise levels being more accurate than those of crime levels.



observed just for the number of retail shops and offices (where the association with perceived crime is fully mediated by perceptions of noise level). Other interesting changes, largely related to the introduction of noise perceptions, are observable for the presence of Ecuadorians, the unemployment rate, or the prevalence of homeownership. The effect of children per family remains almost identical, yet as much as 70 per cent of the effect of teenagers and young adults (i.e. from 15 to 29 years) on crime perceptions, disappears once noise perceptions are included.<sup>63</sup>

#### *4.6.3. Rural-urban comparisons*

As can be inferred from table 4.3. social disorganisation theory has application beyond large cities: the exogenous sources of social disorganisation are reasonably good predictors of perceived crime in medium-size cities and small towns, and less so in rural settings. However, as population grows the performance of the regression models does improve. While the model explains two per cent of the intra-municipality variance in the rural subset—5,000 inhabitants or less—it accounts for a quarter of the variance in the larger cities. More importantly, core exogenous sources of social disorganisation grow in importance with the size of municipalities. This is especially true for unemployment and education; unimportant in rural settlements, they are major predictors of perceived crime in urban centres. In fact, only rural areas seem particularly successful in controlling their younger peers, given the insignificant impact of the number of children per family. In a similar vein, length of residence and commuting time to work show gradual increases in relevance as the population of the municipalities increases.

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<sup>63</sup> Results not shown but available upon request.

Table 4.3. Model III. Determinants of perceived neighbourhood crime\* by size of municipality.

| Variable                           | Rural areas   | Small towns   | Medium size cities | Large cities   |
|------------------------------------|---------------|---------------|--------------------|----------------|
| Intercept                          | 10.75 (6.2)   | -17.32 (-4.3) | -43.75 (-7.1)      | 57.91 (8.4)    |
| Level 1 - Census Section           |               |               |                    |                |
| Socioeconomic status               |               |               |                    |                |
| % Higher Education                 | 0.04 (2.1)    | -0.09 (-3.8)  | -0.23 (-0.3)       | -0.30 (-12.6)  |
| Unemployment rate                  | -0.04 (-4.9)  | 0.11 (5.8)    | 0.57 (15.2)        | 0.82 (16.9)    |
| National diversity                 |               |               |                    |                |
| Herfindahl index                   | -7.03 (-5.4)  | -1.81 (-0.9)  | 3.13 (1.1)         | -37.70 (-14.0) |
| Residential stability              |               |               |                    |                |
| Length of residence                | -0.15 (-15.0) | -0.28 (-9.0)  | -0.54 (-9.7)       | -0.70 (-11.7)  |
| Available time for social control  |               |               |                    |                |
| % Divorced/Separated               | 0.46 (7.5)    | 2.58 (19.5)   | 3.15 (17.2)        | 1.77 (9.1)     |
| % Overtime work                    | 0.02 (3.0)    | 0.04 (2.6)    | 0.15 (4.3)         | -0.12 (-2.2)   |
| Commuting time to work             | 0.09 (8.4)    | 0.11 (3.7)    | 0.28 (4.4)         | 0.55 (7.6)     |
| Number children per family         | 0.08 (0.3)    | 11.11 (11.2)  | 21.42 (15.4)       | 18.98 (12.3)   |
| Controls                           |               |               |                    |                |
| % Elderly                          | -0.02 (-1.8)  | -0.08 (-2.7)  | 0.06 (1.4)         | 0.37 (8.7)     |
| % Women                            | 0.02 (0.9)    | 0.07 (1.0)    | 0.18 (1.8)         | -0.80 (-7.6)   |
| Number retail shops/offices        | 0.01 (2.8)    | 0.01 (6.5)    | 0.00 (1.6)         | 0.02 (8.6)     |
| Level 2 - Municipality             |               |               |                    |                |
| Urbanization                       |               |               |                    |                |
| Population size                    | 65.72 (8.7)   | 33.64 (11.0)  | 4.30 (3.2)         | 0.25 (0.9)     |
| N (census tract level)             | 8,559         | 8,374         | 8,635              | 8,683          |
| N (municipal level)                | 6,948         | 994           | 148                | 18             |
| Log restricted - likelihood        | -27,399       | -30,755       | -34,886            | -36,298        |
| Intraclass correlation coefficient | 50%           | 33%           | 24%                | 18%            |
| Variance reduction: census section | 2%            | 12%           | 15%                | 23%            |
| Variance reduction: municipality   | 23%           | 40%           | 37%                | 51%            |

\* DV : "Are crime and vandalism a problem in your local area?" (% respondents)

t-values in brackets.

Other exogenous sources portray more irregular patterns. This is the case for national diversity, the impact of which varies dramatically depending on the size of municipality. In rural settlements and large cities, national heterogeneity is associated with higher levels of perceived crime but the opposite is true for medium-size cities. While the result of large cities is expected—European Union foreigners are outnumbered seven to one by citizens from countries typically associated with economic migration—the outcome in rural settlements—where the ratio is only two to

one—is unanticipated. It might be the case that the low spatial stratification of rural areas forces migrants and natives to interact regularly, affecting natives’ perceptions of crime—in line with conflict theory (Blalock, 1967)—or, alternatively, that the low pay and poor working conditions of agricultural occupations, where migrants tend to concentrate, lead to workers’ frustration and, in turn, to rises in social disorganisation, social disorder, and eventually to crime and vandalism (Arjona and Checa, 2005).

Two conclusions are to be drawn from these results. First, that the social disorganisation framework can be extended not only from observed to perceived crime, but also beyond large cities—especially to medium-size cities and small towns. Second, that residentially unstable communities, with above-average family disruption and commuting times, are likely to carry negative crime reputations, irrespective of the population size of their municipalities.

#### *4.6.4. Robustness tests*

While the results presented in tables 4.2 and 4.3. are remarkably robust to different model specifications and the basic assumptions of multilevel models are satisfied (e.g. residuals follow a normal distribution), a significant departure from normality of the dependent variable could be affecting some of the regression estimates (see appendix B). Despite the fact that the regression coefficients are estimated using the restricted maximum likelihood (REML) estimation—which may be assumed to display asymptotic normality for large samples—different transformations of the dependent variable have been tested to provide additional reassurance. Such transformations include the logarithmic function, removing the zero values, and the square root function.

With two significant exceptions, the replications of the multilevel models with the transformed outcome variables present similar results to those reported in tables 4.2

and 4.3. And in fact these exceptions refer to control variables (i.e. length of residence and family disruption at the municipal level) included in models III and IV that are of no special interest to the theoretical framework and hypotheses developed throughout the chapter.

#### **4.7. Conclusions**

Among developed countries, continental Europe and the United States are often regarded as being at opposite ends of a crime continuum. True, homicide prevalence and the size of the prison population are certainly divergent—homicide rates are typically three to five times higher in the US compared to any western EU member state (UNODC, 2010) and the United States has the highest prison population rate in the world (World Prison Population List, 2009). Yet, explanations developed almost a century ago designed to account for neighbourhood crime in America's largest cities perform extraordinarily well in the urban Spanish context. That is, social disorganisation—a successful theory developed by urban sociologists at the University of Chicago—remains a meaningful framework for understanding variations in perceived neighbourhood crime in Spain's urban census tracts and municipalities.

In fact, classical exogenous sources of social disorganisation—socioeconomic status, residential stability, family disruption, and urbanisation—perform acceptably in explaining patterns of residents' perceptions of neighbourhood crime in urban Spain. The only exception is (national) diversity for which the association with perceived crime hinges excessively upon the internal composition of the foreign population. Specifically, Moroccan citizens are consistently associated, in reality or in respondents' minds, with criminal activities; the opposite being true for citizens of the EU-15.

Yet, this analysis was not only aimed at testing the traditional exogenous sources of social disorganisation. Additional exogenous sources and measures were incorporated into the analyses, significantly improving the performance of the empirical models. Thus, variables closely related to the provision of guardianship and surveillance in the community, were also relevant predictors of crime. That is the case for commuting time to work, home ownership, number of children per family unit, and overtime work. Finally, municipalities with more spatial heterogeneity or residential segregation—particularly that related to socioeconomic and ethnic measures—portray higher levels of perceived crime, a result which holds for three of four dimensions analysed: levels of education, national diversity, and family disruption.

The empirical models also support the hypothesis that the application of social disorganisation theory can be extended beyond large cities and particularly into medium-size cities— from 35,000 to 225,000 people—and small towns—from 5,000 to 35,000 people. As regards specific factors, urbanisation, residential stability and family disruption showed a consistent effect across municipalities of different sizes, whereas the influence of national diversity, and less so of economic status, exhibited a more erratic pattern.

However, it is important to note that the simple, aggregate and indirect assessment of social disorganisation theory undertaken here presents its own shortcomings. For one thing, plausible stories linking the exogenous sources of social organisation with perceived crime are manifold; whether they follow, in the Spanish case, the community-level rationale hypothesised in this chapter is an issue that deserves further investigation. In fact, the two main assumptions or hypotheses in social disorganisation theory cannot be robustly sustained with the kind of data used in this chapter. First, that variations in crime perceptions are explained primarily at the

community-level; and second, that the effect of the characteristics of communities on perceived crime is mediated by their degree, or form, of social organisation, whether that implies local friendship and acquaintances, voluntary organisations or political bodies establishing advantageous links with the broader context. Despite these limitations the chapter has extended the study of the social disorganisation model to an understudied social environment and an understudied measure of social disorder (i.e. perceived neighbourhood crime; Taylor, 2001). Moreover, to the author's best knowledge, this is the first study to employ data for almost all households, and for all census tracts in a given country, allowing for valuable rural-urban comparisons.

## **CHAPTER 5. LATENT BELIEFS IN A CRIME-IMMIGRATION NEXUS: RIGHT-WING CONSERVATISM, MEDIA EFFECTS AND CONTEXTUAL PAROCHIALISM**

### **5.1. Introduction**

That immigrants are crime-prone is a deep-rooted belief, prevalent in both earlier civilizations (Ferris, 2000) and modern societies, and perfectly illustrated by the term “barbaric”, which originally referred to “foreigner” and today stands for “savagely cruel” (Oxford Dictionaries). However, evidence suggests that these beliefs rarely correspond to reality: the crime-immigration nexus is frequently absent (Rumbaut et al., 2006) and when a positive relationship exists, the public tends to magnify it to a considerable degree (Hagan and Palloni, 1998; Sutherland, 1924). In 1862 (1968), for instance, Mayhew asserted that 90 per cent of London’s habitual criminals were “Irish Cockneys, that is, persons born of Irish parents in the Metropolis” yet in official statistics Irish were overrepresented only in minor offences. More recently, in the General Social Survey (2000), about three quarters of Americans agreed that it was “very likely” or “somewhat likely” that higher crime rates would happen as a result of more immigrants coming to the United States, yet previous research has shown that incarceration rates are exceptionally low among first-generation immigrants (Rumbaut et al., 2006), and that is only (downward) assimilation and acculturation into mainstream society that bring their crime rates closer to those of the native population (Morenoff and Astor, 2006; Rumbaut et al., 2006). Even at the aggregate level, once the relevant variables are adjusted for, the purported impact of immigrant crime rates is often spurious or even negative, and this is true for US metropolitan areas (Reid et al., 2005), cities (Butcher and Piehl, 1998; Lee, Martinez and Rosenfeld, 2001), and neighbourhoods (Morenoff, Sampson and Raudenbush, 2001).

In Spain, public opinion is equally persuaded about the existence of a crime-immigration nexus. For instance, in a survey conducted in 2003 by the Centre for Sociological Research (CIS), six out of ten respondents agreed that a relationship existed between public safety and immigration. Similarly, in a series of surveys on attitudes towards immigrants conducted in the 1991-2007 period (*Actitud de los españoles hacia los inmigrantes*, ASEP/JDS), the proportion of respondents asserting that the influx of immigrants from less developed countries contributed to a rise of crime was 61 per cent in 1992, increasing to 64 per cent in 2000 and 80 per cent in 2007 (figure 5.1). The pattern arising from qualitative research points in the same direction, as illustrated in the following interview excerpt from Cea and Valles (2008):

“I personally associate immigration with crime. Who are the drug dealers? Moroccans. Who are responsible for the organised crime? Eastern Europeans. And for the drug smuggling? Colombians, Peruvians, Chileans.” (middle-income Spaniard, 57 years).

Qualitative and anecdotal evidence suggests that these stereotypes are deeply rooted in Spanish public opinion, both at the national (Cea and Valles, 2008; Solé et al., 2000) and community level (Cachón, 2008; González and Álvarez-Miranda, 2005).

Nonetheless, in contrast to the United States and Canada (Hagan, Levi and Dinovitzer, 2008), these stereotypes are partially supported by empirical evidence. Foreign nationals are clearly overrepresented in official crime statistics in Spain (see chapter 3), and in two longitudinal analyses of provincial data (Rodríguez-Andrés, 2003; Alonso-Borrego et al., 2008), the proportion of immigrants has been found to be positively related to recorded crime measures, even after sociodemographic factors were controlled for. However, several authors have pointed to the various measurement problems affecting official crime statistics (García et al., 2010), in particular when they



relate to foreign nationals (García, 2000). Also, the massive influx of immigrants that started off in the late 1990s has barely altered the countrywide crime rates (figure 5.2), which hints at the existence of a significant native-immigrant “substitution effect” that should be considered when assessing the overall “immigrant effect” on crime.<sup>64</sup> Finally, even in the plausible scenario that “economic migrants increased crime” in Spain, public perceptions of the crime-immigration nexus could still be seriously biased.

Figure 5.1. Evolution of the perception of a crime-immigration nexus

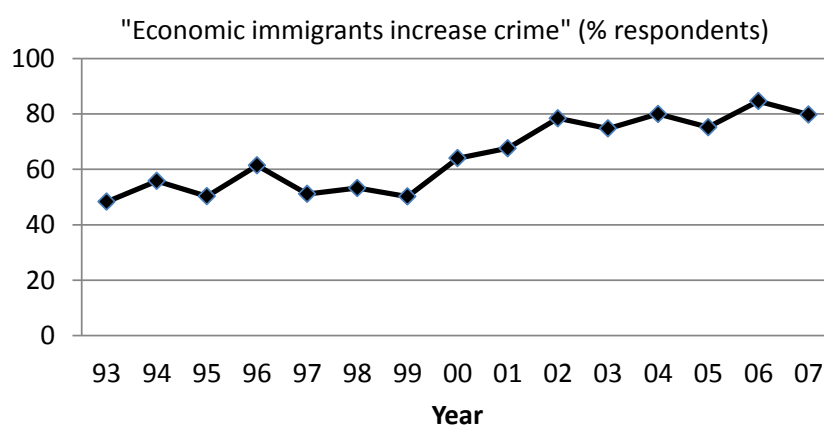
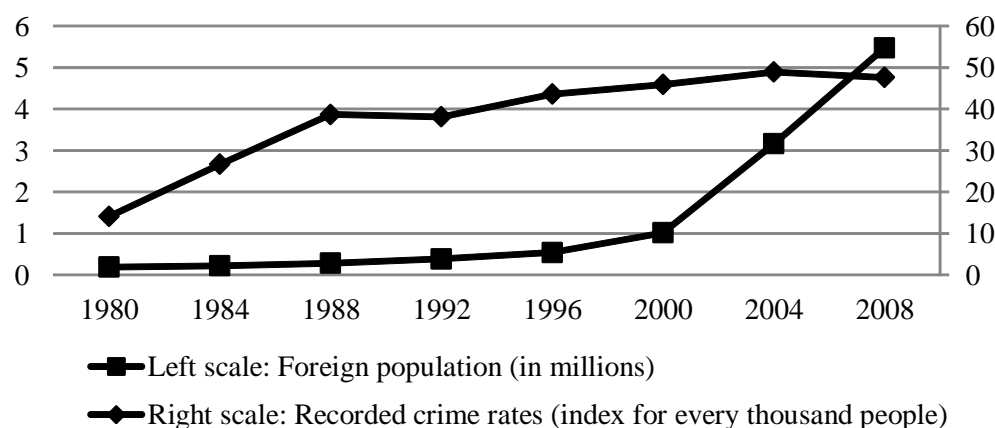


Figure 5.2. Trends in foreign population and recorded crime rates in Spain, 1980-2008

Source: García España et al. (2010) and National Institute of Statistics.



<sup>64</sup> If foreigners are truly more likely to commit crimes, and recorded crime rates have barely changed during the last decade, it has to be the case that natives’ crime rates have decreased with, or even because of, the massive influx of migrants to Spain.

Important as it is to discern if the public belief in a crime-immigration nexus is based on facts, this is not the main objective of this chapter, neither a necessary point of departure. The main purpose is to explain why some neighbours consistently, and unconsciously, associate immigration and crime when asked about their communities, while others do not necessarily make such connection, even though they may live in the same residential areas. Surprisingly, the literature has paid scant attention to this specific indicator of anti-immigrant sentiment, despite the interest of social scientists in explaining stereotypes (Devine and Elliot, 1995; Judd and Park, 1993), and the manifold consequences that holding negative views on immigrants—but especially those related to crime—may have on both immigrant groups and the mainstream society (Coffe, Heyndels and Vermeir, 2007; Dinas and Spanje, 2011; Martinez, 2006; Mears 2002; Stumpf, 2006). Studies interested in identifying the effect of neighbourhoods' racial composition on perceptions and fear of crime are more abundant, but not dramatically so (Chiricos, Hogan, and Gertz, 1997; Hurwitz and Peffley, 1997; Quillian and Pager, 2001; Stinchcombe et al., 1980).

The purported negative consequences of immigration are certainly not limited to criminal issues, yet the pervasiveness of the belief in a crime-immigration nexus seems rather unique, at least in the European context. As illustrated in table 5.1, above 70 per cent of respondents in the European Social Survey (2002) stated that crime was made worse by “people coming to live from other countries”, whereas roughly half believed that immigrants “take out more than they put in” and just a fifth that they undermine cultural life. This overwhelming majority—also reflected in the widespread belief that the typical offender is an immigrant (Solé et al., 2000)—is proof that something special is occurring vis-à-vis crime that merits further exploration. As Hagan, Levi and

Dinovitzer (2008) have stressed, “(...) it is in the area of crime and delinquency that we can discern most clearly this public distrust of immigrants”.

As regards its potential impact, the identification of immigrants with delinquency can be a driving force for the success of extreme-right populist parties (Coffe, Heyndels and Vermeir, 2007; Dinas and Spanje, 2011). It can also provide incentives for restricting immigration (Mears, 2002; Martinez, 2006) and accelerating the toughening of the criminal law (Stumpf, 2006), as well as nurturing the process of urban flight (Cullen and Levitt, 1999; Taylor, 1981), and even bolster migrants’ criminal activity in a self-fulfilling prophecy (Wacquant, 2005). It should be noted that the anti-immigrant stance is observed in other areas than crime, including the welfare state and the job market (Maslow, 1943; Simcox, 1997). However, as Dinas and Spanje (2011) stress in their study about the anti-immigrant vote, the importance of the criminalisation of immigrants cannot be overstated.

Table 5.1. Public views on immigration, by issue. European Social Survey 2002.

| Immigrants...  | View           |                 |
|--|----------------|-----------------|
|  | Negative (0-4) | Positive (6-10) |
| Make crime problems worse (0) or better (10)   | 72.0           | 8.4             |
| Take out more than they put in (0) or put in more than they take out (10) (taxes and services) | 48.5           | 21.5            |
| Make country worse (0) or better (10) in the long run  | 47.3           | 26.4            |
| Take away jobs (0) or create jobs (10) from natives  | 40.0           | 26.3            |
| Make country worse (0) or better (10) place to live  | 36.5           | 29.4            |
| Bad (0) or good (10) for the economy   | 34.8           | 37.6            |
| Cultural life undermined (0) or enriched (10)  | 19.1           | 52.9            |

Source: European Social Survey, Round 1 (2002).

This chapter advances the extant literature on anti-immigrant attitudes in four important ways. First, this study concentrates on anti-immigrant attitudes relating specifically to crime. Second, this chapter adopts a local perspective, in the same way

that previous studies have done with regard to race and crime (Chiricos, Hogan, and Gertz, 1997; Quillian and Pager, 2001). Taking a local perspective is relevant in that certain phenomena, such as residents' first-hand experience, decisions to move or local civic engagement, should carry more weight in explaining the local, as opposed to the national, perceptions of a crime-immigration nexus. Not only do the questions about immigration and crime refer to the local area but, in the tradition of the neighbourhood effects literature, a set of community characteristics are also included in the analyses. Third, the influence of the media and of various indicators of parochialism, for which scarce empirical evidence exists, are thoroughly investigated. Last but not least, the focus is on a latent, or indirect, measure of the belief in a crime-immigration nexus, rather than on a direct survey question, discarding the potential impact of political correctness on survey respondents.

Drawing on the debates around immigration and crime, this chapter will illustrate the pervasiveness of respondents' latent association of immigration and crime at the neighbourhood level, demonstrate that such belief is robust to different modelling strategies and, more importantly, help explain why individuals living in the same, and in different, areas associate crime and immigration to various degrees. More precisely, the chapter will test the effect of the media, right-wing conservatism and contextual parochialism on respondents' latent association of the level of crime and immigration in their local areas. In order to do so, multilevel regression models of individuals, census tracts and municipalities are carried out for a series of subsamples of survey respondents.

## **5.2. Accounting for a latent belief in a crime-immigration nexus: structural nativism, individual determinants and contextual factors**

Based on Sayad's (2004) statist approach, Pettigrew's (1998) emphasis on belongingness and citizenship, and Hagan, Levi and Dinovitzer's (2008) concept of "symbolic violence", it is hypothesised that anti-immigrant attitudes are ingrained in modern societies as a result of the confluence of social psychological processes, such as prejudice formation (Allport, 1954) and the "ideology of blame" (Crandall, 1994), and macro-structural dynamics, chief among which is the persistence of the nation-state as the key frame of reference (Anderson, 1983; Hobsbawm, 1996; Koopmans, 1999). However, whereas this micro-macro interaction remains largely invariant across societies—if anything it may vary according to different historical patterns of nation-state formation and modes of incorporation of the immigrant population (Castles, 1995; Koopmans, 1999)—mediators between the resulting structural nativism and anti-immigrant attitudes are more likely to fluctuate, and provide some degree of leeway for policy-makers. Precisely for this reason, the focus in this chapter is on mediators, rather than on the structural nativism, even if the latter is considered the crucial factor in explaining the appearance and pervasiveness of anti-immigrant and xenophobic attitudes.

Three hypotheses, or mediators, are of special interest to this research: the media, right-wing conservatism and parochialism.

### *5.2.1. The media*

First and foremost, the attention will be directed to the impact of the media. Scholars and pundits have blamed the media and their "tendency to turn any shocking crime into a news story" (Cea and Valles, 2008) as a crucial determinant of individuals'

misjudgements of both the crime-immigration nexus (Hagan and Palloni, 1998) and the trends in crime (Conklin, 1975; García et al. 2010; Pfeiffer, Windzio, and Kleimann, 2005). Rumbaut and Ewing (2007), for instance, argue that the pervasive view in the United States that crime and immigration are positively related “is sustained by media anecdote and popular myth”. Ultimately, the purpose of the media, and in particular that of the television, is to provide not only information but also excitement and entertainment (Schulze, 1992) through “newsworthiness” (Warr, 2000), and this may help explain the tendency to sensationalise the reporting of crime stories involving foreign suspects.

The impact of the media, however, should not be overstated. To start with, it is necessary to establish the direction of causality for it is unclear whether the exposure to the media brings about anti-immigrant sentiments or, if it is the media that respond to (mainstream) society’s views and preferences. While not denying that the media may reinforce public hysteria over immigrant crime—and occasionally generate it *ex novo*—it would be naïve to assume that individual perceptions are influenced at will.

In fact, individual attitudes may not only be resilient to messages in the media, but a crucial factor in determining the media sources from which individuals obtain information, a fact that is likely to minimise exposure to conflicting opinions (see Gans, 1962). The influence of the media is ultimately limited by the confluence of their financial constraints and the audience’s freedom to choose their ideal source of information. This situation provides the media, especially in a context of fierce competition, with compelling incentives to reproduce rather than produce societal values. In this way, the effect of the media would be partially endogenous, limiting its potential impact on users’ perceptions.

In this sense, the role of the media seems to have been less important in the past. For instance, television has been regularly accused of radicalising views on the immigrant “problem” yet at the height of the US crime-immigration debate, early in the 20th century (see the works of the Immigration or Dillingham Commission in 1907-1911), television and radio could hardly have had any bearing on the emergence and shaping of the heated discussions.<sup>65</sup> In a similar way, the absence of media, at least in its modern form, did not preclude the emergence of anti-foreign sentiments in earlier civilizations, as the Roman-Barbarian confrontations perfectly illustrate (Ladner, 1976). Thus, at least from a historical point of view, the existence of the media seems only incidental in explaining the emergence of xenophobic attitudes.

It could be argued that the effect of the media, far from inflaming public opinion on the issue could actually be neutralising prejudices as regards the crime-immigration nexus and immigrants more generally. The media is frequently constrained by “political-correctness” and the provision of impartial information in a way that the general public is not. According to this view, the information offered by the media would be more balanced—if still prejudiced—than the prevalent opinions transmitted through the family, friends and acquaintances (i.e. social networks) of individuals. And, with regard to opinions, beliefs and stereotypes, the media often lags behind the various social networks in which residents are embedded, as supported by qualitative research in three Madrid neighbourhoods (Eseverri and Ramos, 2008). As stressed in their study of Villaverde district, “(...) this perception of the lack of safety springs from petty delinquency and the emergence of occasional conflicts, but is nurtured, in addition, by the information exchanged by neighbours (...)”. Stories about fear turn too often into stories about crime, as depicted by one resident: a story started as “I’m afraid of walking

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<sup>65</sup> Nonetheless, newspapers and leaflets could have also played an important role.

around the train station area” and passed on, in response to the presence of foreign youth, as “if you go past the train station you will be mugged”. It is then, once the stereotypes are generated, transmitted, and reinforced through social networks, that the media often enters the picture.

### *5.2.2. Right-wing conservatism*

A second hypothesis put forward by the literature is related to xenophobia, nativism and racism. Mears (2001), for instance, argues that the concern about the immigration-crime nexus “appears to have been motivated in part by anti-immigrant, xenophobic sentiments”, O’Rourke and Sinnott (2006) argue that non-economic reasons why voters might not want immigration are “racism, xenophobia and milder forms of nationalist sentiment (...)”, and Raijman and Semyonov (2004) include “competitive threat, racism, symbolic racism, authoritarian personality, prejudice, and right-wing mobilization” when enumerating the theoretical propositions that have advanced explanations of xenophobic attitudes.

However, while not denying that xenophobia, nationalism and racism, and the “public anxiety about crime-prone immigrants and immigrant communities” (Martinez, 2006) are robustly linked (Citrin and Sides, 2007; Mayda, 2006; Raijman and Semyonov, 2004; but Timmer and Williamson, 1998), this relationship is not necessarily of a causal nature. Rather, the belief in a crime-immigration nexus may be a component, a dimension or simply a measure of xenophobic, anti-immigrant attitudes, in the same way that other negative, and often biased, opinions about the foreign population are. These include, beliefs that immigrants “deplete welfare resources, increase native-born unemployment and housing shortages, overwhelm school and



health systems, undermine the existing social order” (Mears, 2001), and disturb “the mythical purity or perfection of order” (Sayad, 2004).

Instead, conceptual clarity and advancement are more likely to stem from hypotheses related to right-wing ideology and conservatism since a clear-cut theoretical distinction exists with regard to anti-immigrant attitudes. Although the processes through which right-wing conservatism, nativism, xenophobia and anti-immigrant attitudes are, in all probability, correlated, it is still possible to conceive, both theoretically and empirically, right-wing conservatives holding positive views on immigrants, as is the case for many conservative immigrants (Echazarra, 2011). Even if the evaluation of the influence of right-wing conservatism on beliefs in the crime-immigration nexus were to yield no interesting results and little room for manoeuvre for policy-making, it will still serve as a credibility test of the results.

### *5.2.3. Parochialism*

The last hypothesis of anti-immigrant prejudice to be tested in this chapter—manifestly ignored by recent studies—relates to the work of early sociologists and their attention to the process of urbanisation and the rural-urban divide (Sutherland, 1924; Thomas and Znaniecki, 1927; Tönnies, 2002[1887]; Wirth, 1938). Influenced by the massive rural-urban migrations of the late 19th and early 20th century, some early sociologists believed that the disruption of the social fabric was an inevitable process associated with urbanisation and industrialisation. Neighbourhood residents were forced to live in an individualistic environment where they could no longer benefit from the social order stemming from primary contacts—or from “steady, uniform, harmonious and consistent” social networks (Sutherland, 1924)—and community attachments prevalent in smaller human agglomerations. However, the shift from rural “organisation” to urban

“disorder”—in part responsible for rural-urban differences in perceived crime (see chapter 4)—was neither a linear (Park, Burgess and McKenzie, 1925) nor an entirely negative process. In fact, as Thomas and Znaniecki (1927) stressed in their work about *The Polish peasant in Europe and America*, the urbanisation phenomenon was contradictory in nature. While it is undeniable that some degree of social organisation was lost in the process of human agglomerations, societies also benefited from a new sense of cosmopolitanism and an increased acceptance of social, cultural and ethnic diversity. There is no reason to suspect that rural-urban differences in parochialism<sup>66</sup>—reflected in residents’ unease with social change and diversity—are not operating today in Spain. Consequently, it is hypothesised that the concern about immigration-related diversity, and the overstatement of immigrants’ influence on local crime levels, are more of an issue in the stable countryside than they are in “unsettled” urban areas (Sutherland, 1924). It bears mentioning that the social organisation and parochialism constructs overlap considerably, the main distinction being the opposite role played by neighbours’ socioeconomic status in each of them. While social organisation is likely to be positively related to residents’ socioeconomic status, parochialism is typical of low-income, poorly educated communities.

In addition to these hypotheses, other factors have been shown to affect anti-immigrant attitudes. Among these, it is worth noting those related to economic factors, and in particular those related to job-related dynamics (Espenshade and Hempstead, 1996; Mayda, 2006; O’Rourke and Sinnott, 2006; Scheve and Slaughter, 2001). Although some of the economic and labour-related hypotheses are addressed in this chapter (including those relating to income and unemployment), no advancement of the economic literature on anti-immigrant attitudes is pursued.

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<sup>66</sup> Parochialism is defined as “a limited or narrow outlook, especially focused on a local area” (Oxford dictionaries) or, in the Spanish version (*provincianismo*), as “narrow-mindedness and excessive attachment to the mentality or traditions of a province or society, with the exclusion of others.”

Before describing the data and methods in detail, let me just review the main hypotheses in the chapter:

*H1: Exposure to the mass media contributes to residents' belief in a local crime-immigration nexus.*

*H2: The effect of the media is contingent on the type of information preferred by citizens.*

*H3: All else equal, right-wing conservatives are more likely to believe in a local crime-immigration nexus.*

*H4: Ceteris paribus, indicators of parochialism are positively related to the latent belief in a local crime-immigration nexus.*

### **5.3. Data and methodology**

Individual-level data from a public opinion survey and contextual data from the census and the municipal register are combined and analysed in a multilevel framework of individuals and census tracts. The CIS survey 2634 was conducted in early 2006 by the Centre for Sociological Research and designed to study in detail the Spanish social structure. Although the core of the survey focuses on topics related to the labour market and social mobility, the final section on values and social practices includes a series of questions pertaining to perceptions of the local area that are of special relevance to the stated hypotheses.

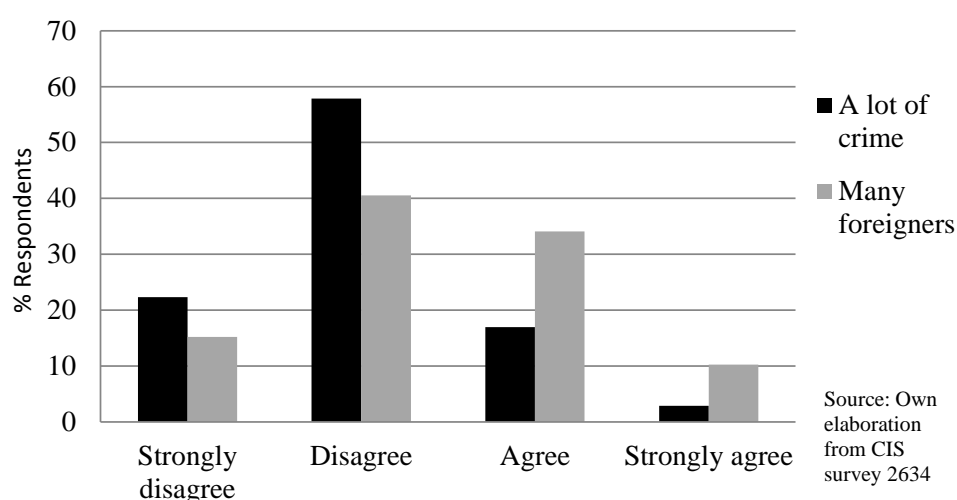
The final section includes the question used as the main outcome variable in the current study. This question asks respondents whether they agree with the following statement about neighbourhood crime: "There is a lot of crime" in the area.<sup>67</sup> Four possible answers are provided: "Strongly disagree" (1), "disagree" (2), "agree" (3), and "strongly agree" (4). Concerning the main explanatory variable for the study, in the same survey section and with identical answer categories, respondents are asked if they think that "there are many foreigners" in their residential area. Although both variables

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<sup>67</sup> Local area is defined in the survey as the area surrounding the dwelling that is within a fifteen minutes walking distance.

follow a similar distribution, on average residents report higher levels of foreign population than of crime (figure 5.3). Other perceptions of the local area, incorporated into the analyses include whether neighbours know and trust each other, whether they are affluent, and whether the area is cared for and well-equipped.

Figure 5.3. Respondents' perceptions of the local area (CIS, 2006)



The 2634 survey is particularly comprehensive in that it incorporates many socioeconomic, demographic and political questions, as well as information on respondents' use of time. In this chapter, the following individual variables are employed: gender, age, citizenship, household income, completed years of education, left-right ideological and conservatism scales,<sup>68</sup> time of residence in area, type of area, unemployment, reading/listening/watching news on the newspaper/radio/television, and favourite TV programmes.

Contextual data come from the municipal register (*Padrón municipal*), and the 2001 Population and Housing Census, both coordinated by the National Statistics Institute (INE). The municipal register contains yearly information by various levels of

<sup>68</sup> The scales go from "0" for left-wing respondents and liberals (*progresistas*) to "10" for right-wing respondents and conservatives (*conservadores*). The original conservatism scale has been reversed to increase coherence between both attitudinal measures. Both measures overlap only moderately for their Pearson correlation coefficient is just 0.45.

aggregation on age, gender, country of citizenship and place of birth. The 2001 Population and Housing Census includes abundant information on neighbours and residential areas.<sup>69</sup> The contextual information from these sources is used to reproduce, parsimoniously, the social disorganisation framework that constitutes the backbone of the dissertation. These variables are the proportion of residents holding a university degree (socioeconomic status), mean time of residence (residential turnover), the proportion of residents of foreign nationality (diversity), the proportion of residents divorced and separated (family disruption), and municipalities' population size (urbanisation). In addition, the proportion of young males and the proportion of residents aged 65 and over are also employed in the empirical analyses, the former for its association with various determinants of perceived neighbourhood crime, such as petty crime, vandalism, and loitering, the latter as an indicator of parochialism. The descriptive statistics of the individual and contextual variables are presented in tables 5.2 and 5.3.

The core statistical analyses in this chapter take the form of multilevel linear regression models, which make use of the *xtmixed* command in *Stata* statistical package. This modelling strategy is adopted in response to an ordinal dependent variable—with four categories—and three levels of interest—survey respondents, census tracts and municipalities. For the sake of simplicity, note that the ordinal variable is effectively treated as a continuous variable. As a robustness check, multilevel discrete choices models, using the *gllamm* command and assuming that the effect of the independent variables is constant across the outcome variable categories (i.e. proportional odds model), were also estimated yielding almost identical results. Due to missing data, and in order to guarantee equal sample size in all analyses, sample size

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<sup>69</sup> A detailed description is provided in chapter 3.

has been reduced from the original 8,265 respondents to 7,420—residing in 930 census tracts and 549 municipalities. For variables with missing data exceeding ten per cent of the original sample (i.e. income, years of education, time of residence and self-placement in the left-right and liberal-conservatism scales), missing data have been imputed using the command *impute* in *stata* using individual and contextual variables.<sup>70</sup>

Table 5.2. Main descriptives: individual variables

| Variable                          | Mean  | Standard deviation | Minimum | Maximum | Values      |
|-----------------------------------|-------|--------------------|---------|---------|-------------|
| Female                            | 0.51  | 0.50               | 0       | 1       |             |
| Spanish citizenship               | 0.95  | 0.23               | 0       | 1       | No/Yes      |
| Unemployed                        | 0.10  | 0.29               | 0       | 1       |             |
| Watch TV                          | 0.97  | 0.17               | 0       | 1       |             |
| Age                               | 44.72 | 18.27              | 16      | 98      |             |
| Education                         | 10.84 | 5.37               | 0       | 30      | Years       |
| Time of residence in area         | 23.24 | 18.76              | 0       | 93      |             |
| Household income                  | 4.88  | 1.62               | 1       | 10      | 1-10 scale  |
| Conservatism                      | 4.20  | 1.93               | 0       | 10      |             |
| Left-right ideology               | 4.39  | 1.95               | 0       | 10      | 0-10 scale  |
| Read political section newspapers | 2.33  | 1.14               | 1       | 4       | 1:Never;    |
| Watch/Listen news in TV/Radio     | 3.51  | 0.81               | 1       | 4       | 4:Often     |
| Perceptions of local area         |       |                    |         |         |             |
| A lot of crime                    | 2.00  | 0.71               | 1       | 4       | 1:Strongly  |
| A lot of foreigners               | 2.39  | 0.87               | 1       | 4       | disagree;   |
| Neighbours can be trusted         | 2.90  | 0.59               | 1       | 4       | 2:Disagree; |
| Neighbours know each other        | 2.72  | 0.78               | 1       | 4       | 3:Agree;    |
| Neighbours are affluent           | 2.32  | 0.75               | 1       | 4       | 4:Strongly  |
| Area is well-equipped             | 2.72  | 0.75               | 1       | 4       | agree       |
| Area is well cared for            | 2.65  | 0.72               | 1       | 4       |             |

Source: CIS survey 2634.

N = 7,420

<sup>70</sup> For household income: years of education, opinion on respondents' level of wealth, unemployment, homeownership, age, perceptions of neighbours' income, census tract unemployment rate, census tract level of education, population size of municipality. For years of education: opinion on respondents' level of wealth, years of education, household income, age, gender, census tract level of education, population size of municipality, read political news in newspaper, read/view political news in radio/TV, political discussion with family and friends. For time of residence: age, age squared, Spanish citizenship, census tract mean length of residence, proportion of census tract residents being born in same municipality, proportion of elderly population (65 and over) in census tract and proportion of Spanish nationals in census tract. For left-right and conservatism scales: age, age squared, gender, opinion about social inequalities, member of trade union, member of non-governmental organisation, member of church organisation, feminism scale. See the appendix C for further details.

Table 5.3. Main descriptives: contextual variables

| Variable                 | Mean    | Standard deviation | Minimum | Maximum   |
|--------------------------|---------|--------------------|---------|-----------|
| Census tract             |         |                    |         |           |
| Males 15-29 years (%)    | 10.38   | 2.14               | 2.17    | 17.13     |
| Elderly (%)              | 17.58   | 7.76               | 1.74    | 60.25     |
| University degree (%)    | 13.70   | 11.30              | 0.00    | 63.26     |
| Time of residence (mean) | 18.34   | 6.28               | 3.30    | 54.13     |
| Divorced/Separated (%)   | 2.83    | 1.42               | 0.00    | 9.50      |
| Foreign population (%)   | 8.41    | 8.63               | 0.00    | 60.07     |
| Municipality             |         |                    |         |           |
| Population size          | 385,698 | 809,654            | 111     | 3,128,600 |

Source: Population and Housing Census (2001) and municipal register (2006) data.

N = 7,420.

## 5.4. Results

### 5.4.1. *The crime-immigration nexus: a pervasive belief*

Scholars in the US and Spain have been profoundly troubled about the pervasive belief that crime and immigration are inherently linked (Cea and Valles, 2008; Hagan, Levi and Dinovitzer, 2008; Martinez, 2006; Rumbaut and Ewing, 2007; Sampson, 2006, Solé et al., 2000; Sutherland, 1924). In the Spanish case, this belief is also expressed indirectly when respondents are asked separately about crime and the presence of foreign population in their local areas. In bivariate terms, the Spearman correlation coefficient between the perceived number of foreigners and crime perceptions in the local area is 0.34, a coefficient that is statistically significant at the 0.01 level.

This correlation is calculated again for subsamples according to a series of relevant variables (table 5.4). For binary and nominal variables, the subsamples are constructed for all values. For ordinal and continuous variables, the median value is employed in order to split the sample. Interestingly, the association remains positive and statistically significant in every subsample, the subsample of foreign nationals presenting, unsurprisingly, the lowest coefficient (0.25). These bivariate analyses are a

visible indication not only of the pervasive belief in a crime-immigration nexus but also of the importance of parochialism in explaining such belief. In rural and residentially stable areas with low numbers of university graduates, the Spearman correlation coefficients are visibly higher and, in fact, when all these characteristics are combined, the Spearman coefficient escalates to 0.42. Speaking directly to the contact/conflict debate, the latent belief in a crime-immigration nexus is noticeably higher in areas with fewer immigrants. In fact, the belief fades continuously as the proportion of foreign nationals increases, almost with no exception (table 5.5), this weakening process is present also when only Spanish citizens are considered. Although further analyses are certainly needed—for instance, to determine if respondents in isolated communities are imagining or anticipating a conflict or are reacting to a real “immigrant effect” on crime—this finding provides strong support for the contact hypothesis. That is, in communities with fewer immigrants the respondents’ latent association of immigration and crime is stronger, not weaker as the conflict hypothesis would predict.

As regards the impact of the media, the results are in conflict with claims made by some scholars on the role played by the media in sustaining the crime-immigration link (Cea and Valles, 2008; Hagan and Palloni, 1998; Pfeiffer, Windzio, and Kleimann, 2005). If anything, the media seems to undermine respondents’ beliefs in such association. Survey respondents who listen/watch the news on the radio/TV or read the political sections in the newspapers are less prone to associate crime and immigration in their local areas. In fact, the subsample of those who “never” listen/watch news on radio/TV exhibit one of the highest correlation coefficient (0.48), and equally striking is the odds ratio (0.42) of those who claim never to watch TV. The impact of the media, in turn, is contingent on the type programmes preferred by respondents.



Table 5.4. Spearman correlations between the perceived number of foreigners and perceptions of neighbourhood crime for various subsamples (N = 7,420)

| Subsamples by...†                     | Spearman correlations |              |
|---------------------------------------|-----------------------|--------------|
|                                       | Below median          | Above median |
| <b>Individual variables</b>           |                       |              |
| Age (43 years)                        | 0.33                  | 0.36         |
| Ideology (5)                          | 0.34                  | 0.36         |
| Read news in newspapers (Rarely)      | 0.38                  | 0.31         |
| Listen/watch news in radio/TV (Often) | 0.38                  | 0.33         |
| <b>Contextual variables</b>           |                       |              |
| Higher degree (10.03 %)               | 0.41                  | 0.27         |
| Foreign population (5.69 %)           | 0.39                  | 0.31         |
| Time of residence (17.96 years)       | 0.29                  | 0.40         |
| Population size (62,702 inh.)         | 0.35                  | 0.31         |
| Subsamples by...‡                     | No                    | Yes          |
| Citizen (7,012)                       | 0.25                  | 0.36         |
| Female (3,803)                        | 0.34                  | 0.35         |
| Subsamples by...‡                     |                       |              |
| <b>Favourite TV programmes</b>        |                       |              |
| Documentaries (1,382)                 |                       | 0.29         |
| News (1,598)                          |                       | 0.34         |
| Films (2,789)                         |                       | 0.35         |
| Sports (746)                          |                       | 0.38         |
| Romance and gossip (214)              |                       | 0.44         |
| Don't watch TV (227)                  |                       | 0.42         |
| <b>Full sample</b>                    |                       | 0.34         |

† Median values in parentheses. ‡ Number of cases in parentheses.

All coefficients are significant at the 0.01 level.

Source: Own elaboration from CIS study 2634 and 2001 Population Census.

It is necessary, nonetheless, to bear in mind that these relationships are of a bivariate nature and, as a result, the correlation coefficients should be treated as associations rather than causal relationships. This seems to be the case for the question on the favourite TV programme; it is unlikely that documentaries, on the one side, and romance and gossip programmes, on the other, can influence the belief in a crime-immigration nexus so differently. Instead, a more plausible story is that these differences are in part explained by a series of unobserved characteristics—such as

gender, age or education levels—that cause both anti-immigrant attitudes and preferences for certain TV programmes.

Table 5.5. Spearman correlations between the perceived number of foreigners and perceptions of neighbourhood crime in the local area by observed proportion of foreign nationals (N = 7,420)

| Subsamples based on the observed proportion of foreign nationals, by percentile |     | Spearman correlations |
|---|-----|-----------------------|
| Lowest  | 5%  | 0.50                  |
|   | 10% | 0.48                  |
|   | 25% | 0.44                  |
|   | 50% | 0.39                  |
| Highest   | 50% | 0.30                  |
|   | 25% | 0.31                  |
|   | 10% | 0.29                  |
|   | 5%  | 0.27                  |

All Spearman correlation coefficients are significant at the 0.05 level.

Source: Own elaboration from CIS study 2634 and 2001 Population Census.

Before moving on to consider the reasons behind these widespread beliefs (in section 5.4.3), in the next section shows that the belief in a crime-immigration nexus persists once other relevant explanatory factors are controlled for—including perceptions of other characteristics of the local area—but that such beliefs are, almost certainly, overstated.

#### 5.4.2. *The latent belief in a crime-immigration nexus*

In this section, the respondents' belief in a crime-immigration nexus is estimated controlling for relevant individual and contextual characteristics, chief among which are other perceptions of the local area. The inclusion of these perceptions is crucial to guarantee that the association of crime and immigration by respondents is unique and genuine and not the result of a general stereotyping process of neighbourhoods, in

which crime and immigration would act as markers of deteriorated communities, or the result of a questionnaire effect.<sup>71</sup>

The multilevel models of survey respondents, census tracts and municipalities in table 5.6 clearly indicate that residents' assessment of the number of foreigners shape their perceptions of neighbourhood crime to a considerable degree. The effect is extremely robust to different model specifications, to the point that the addition of numerous variables barely reduces the coefficient estimated in a bivariate regression model (*i.e.* 0.25). This result is striking given that the assessment of the number of foreign nationals is the only question pertaining to the local area that is potentially neutral,<sup>72</sup> yet its association with perceived crime—a visibly negative feature—is the strongest.

A secondary goal in this section is related to the identification of a potential bias in the assessment of the crime-immigration nexus. Scholars attempting to counteract “a mythology of immigration and crime” (Hagan, Levi and Dinovitzer, 2008) have followed different strategies to demonstrate that public perceptions are biased and inflated. Nationally, the strategy consists simply of comparing the observed and perceived link between both processes. At the local level, however, such comparison becomes more problematic for information on observed/perceived immigration and crime are rarely at the researcher's disposal. In Quillian and Pager's (2001) analysis of the relationship between black neighbours and perceived neighbourhood crime, information is available for real and perceived crime, as well as for the proportion of black population. Yet, they have no information on perceived black population implying that the specific mechanism through which black neighbours cause perceptions of

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<sup>71</sup> Questions related to the local area are placed in the same survey section, potentially inducing respondents to provide identical answers.

<sup>72</sup> Note that, consciously or unconsciously, the question on the presence of foreign nationals—a priori a neutral characteristic—happens to be placed in the questionnaire among a series of negative/positive perceptions of the local area.

neighbourhood crime to be biased cannot be established. By contrast, the models here presented lack information on the real crime levels, and so can establish the mechanism but are unable to estimate the bias accurately; it can only be inferred indirectly comparing the relative strength of specific regression coefficients.

Table 5.6. Latent belief in a crime-immigration nexus. Multilevel linear regression models of individuals, census tracts and municipalities. DV: Perceived neighbourhood crime

| Variables                                  | I                | II               | III              |
|--|------------------|------------------|------------------|
| Constant                                   | 2.568 (19.5)**   | 2.033 (15.8)**   | 2.017 (15.6)**   |
| Level 1 - Individual                       |                  |                  |                  |
| Female                                     | 0.007 (0.5)      | -0.003 (-0.2)    | 0.014 (-0.3)     |
| Age  | -0.001 (-1.7)    | -0.001 (-1.1)    | -0.001 (-1.1)    |
| Spanish citizenship                        | 0.078 (2.4)*     | 0.103 (3.2)**    | 0.098 (3.0)**    |
| Household income                           | -0.008 (-1.5)    | -0.008 (-1.4)    | -0.008 (-1.4)    |
| Unemployment                               | 0.023 (0.9)      | 0.030 (1.3)      | 0.030 (1.3)      |
| Education (years)                          | -0.005 (-2.6)*   | -0.004 (-2.3)*   | -0.004 (-2.4)*   |
| Ideology (0-10 scale)                      | 0.010 (2.6)*     | 0.011 (-3.1)**   | 0.011 (3.1)**    |
| Time of residence in area                  | 0.001 (2.3)*     | 0.001 (1.9)      | 0.001 (1.9)      |
| Media effects                              |                  |                  |                  |
| Read newspapers                            | 0.003 (0.4)      | 0.005 (0.7)      | 0.005 (0.7)      |
| Watch/Listen news in TV/Radio              | -0.024 (-2.3)*   | -0.028 (-2.8)**  | -0.028 (-2.8)**  |
| Watch TV                                   | 0.014 (0.3)      | -0.008 (-0.2)    | -0.008 (-0.2)    |
| Perceptions of local area                  |                  |                  |                  |
| A lot of foreigners                        |                  | 0.213 (20.6)**   | 0.217 (20.4)**   |
| Neighbours can be trusted                  | -0.250 (-18.0)** | -0.225 (-16.6)** | -0.225 (-16.6)** |
| Neighbours know each other                 | 0.001 (0.1)      | 0.001 (0.1)      | 0.001 (-0.1)     |
| Neighbours are affluent                    | 0.021 (1.8)      | 0.028 (2.4)*     | 0.029 (2.5)*     |
| Area is well-equipped                      | 0.016 (1.2)      | 0.008 (0.7)      | 0.008 (0.7)      |
| Area is well cared for                     | -0.076 (-5.5)**  | -0.066 (-4.9)**  | -0.066 (-4.9)**  |
| Level 2 - Census section                   |                  |                  |                  |
| % Male 15-29                               | 0.029 (4.6)**    | 0.021 (3.6)**    | 0.023 (3.9)**    |
| % University degree                        | -0.006 (-4.0)*   | -0.004 (-2.8)**  | -0.004 (-2.8)**  |
| Time of residence (mean)                   | -0.008 (-3.5)**  | -0.004 (-2.1)*   | -0.005 (-2.1)*   |
| % Divorced/Separated                       | 0.044 (3.7)**    | 0.035 (3.55)**   | 0.044 (4.0)**    |
| % Foreign population                       | 0.005 (3.0)**    |                  | -0.003 (-1.7)    |
| Level 3 - Municipality                     |                  |                  |                  |
| Population size (million inh.)             | 0.166 (3.3)**    | 0.117 (2.5)*     | 0.112 (2.5)*     |
| N (individual level)                       | 7,420            | 7,420            | 7,420            |
| N (census section level)                   | 930              | 930              | 930              |
| N (municipal level)                        | 549              | 549              | 549              |
| Log-likelihood (null = -7,337)             | -7,105           | -6,903           | -6,907           |
| Intraclass corr. coefficient: census tract | 0.16             | 0.15             | 0.16             |
| Intraclass corr. coefficient: municipality | 0.07             | 0.06             | 0.06             |

z-values in brackets.

\* sig. 0.05 level; \*\* sig. 0.01 level

For instance, the fact that the actual proportion of foreign population is only mildly related to crime perceptions (table 5.6) and that the log-likelihood changes so dramatically when the observed proportion is replaced by residents' perceptions (comparison of models I and II), suggests that the crime-immigration nexus is, at least partially, fabricated in respondents' minds. This is not to say that crime and immigration are not truly associated, or causally related, it just implies that respondents' latent association of both phenomena does not seem to respond to empirical facts.

That the latent belief in a crime-immigration nexus may be overblown is also discernible in the comparison of the standardised coefficients for the socioeconomic and diversity measures.<sup>73</sup> Whereas survey respondents grant little importance to the socioeconomic status of neighbours ("neighbours are affluent") when assessing local crime, the actual socioeconomic status (*% university degree*) exerts an impact on residents' perceptions of neighbourhood crime which is roughly three times larger (and of opposite sign). In contrast, the comparison of the observed and perceived proportion of foreigners yields the opposite result; it is perceptions that really matter, the standardised coefficient being four times larger. Hence, even though the precise estimate of the bias is unknown—as, in order to estimate it the real crime figures are needed—the regression analyses suggest that the crime-immigration nexus is greatly overstated. Besides, when both the perceived and the observed proportion of foreigners are introduced in the models, the effect of the actual foreign population is completely mediated by respondents' perceptions. Thus, it is through respondents' evaluation of the number of foreign nationals that the actual proportion influences perceptions of neighbourhood crime. This finding complements previous research, and particularly that of Quillian and Pager (2001), in that it provides empirical evidence on the psychological

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<sup>73</sup> Note that in table 6 only non-standardized coefficients are shown. The standardized coefficients are available upon request.

mechanism through which the presence of certain social groups influence perceptions of neighbourhood crime.

In the context of the dissertation, these models also serve various purposes. First and foremost, the individual and contextual effects on perceived neighbourhood crime are neatly identified in a way that the ecological analyses in the previous chapter could not achieve. In this sense, it is reassuring that the inclusion of individual level variables—excluding respondents’ perceptions of their local area—scarcely vary the direction or magnitude of the contextual effects. Such models confirm the basic tenets of social disorganisation theory: urban areas with high residential turnover, few university graduates, high incidence of family disruption, and significant foreign population (i.e. ethnic diversity) are described by their residents as particularly unsafe.

Moreover, the social disorganisation framework already tested in the census year (2001), is tested again five years later (2006) when the Spanish social structure, and particularly its proportion of foreign population, had changed dramatically. Bear in mind that, during this period, the number of foreign nationals soared from one to four million, or from three to nine per cent of the total population (figure 5.2). Again, it is reassuring that the findings at both time points are of a similar nature, even though three of the contextual variables—proportion of university graduates, time of residence and proportion of divorced/separated—refer to the year 2001.

That the latent belief in a crime-immigration nexus is so prevalent across different social groups and communities, so robust to different modelling strategies, and remains virtually unaltered no matter which covariates are incorporated into the regression analyses, is an indication of the existence of the structural nativism advanced in section 5.2. Yet, some variation still exists in relation to the assessment of the local

crime-immigration nexus across individuals and communities that deserves further attention.

#### *5.4.3. Explaining the latent belief in a crime-immigration nexus: right-wing conservatism, media effects, and contextual parochialism*

Why do different residents and communities hold different views with regard to the crime-immigration nexus? To answer this question, a parsimonious strategy is followed whereby models I and II in table 5.6 are replicated for a series of subsamples—selected according to the hypothesised explanations of the latent belief in a crime-immigration nexus—and the effects of the observed and perceived proportion of foreign nationals (on crime perceptions) subsequently compared. In what follows, the findings for the three main hypotheses are advanced, followed by a section on other explanatory factors.

##### Media effects

As previously suggested by the bivariate analyses, the media seem neither to generate nor to reinforce the belief in a crime-immigration nexus. Quite the contrary, watching TV and reading the political sections in the newspaper act as moderators (table 5.7), and even the vituperated news on the TV and the radio are related to a more relaxed anti-immigration stance. The influence of the media, however, is likely to be conditional on the type of programmes preferred—and most viewed—by TV viewers. As expected, survey respondents who declare that documentaries and debates are their favourite programmes hold the most pro-immigration positions, followed by respondents who prefer the news. Surprisingly, the most prejudiced are respondents who claim never to watch TV, even more so than those who have a preference for gossip and romance programmes. One may suspect that a third common factor is affecting both TV viewing

and believing in a crime-immigration nexus but, at least for basic socio-demographics, TV viewers barely differ from those who claim never to watch TV (table 5.8). The only significant difference can be observed for the variable on citizenship—Spanish citizens watch TV in a greater proportion—yet this difference should, in any case, mitigate the observed, and neutralising, effect of TV viewing on respondents' anti-immigrant opinions.

Table 5.7. Replication of models I and II in table 5.6 for subsamples based on media variables. Standardised regression coefficients of the perceived and observed proportion of foreign nationals on perceived crime (N = 7,420)

| Subsamples by...              |                         | Regression coefficients     |          |
|-------------------------------|-------------------------|-----------------------------|----------|
|                               |                         | Number of foreign nationals |          |
|                               |                         | Perceived†                  | Observed |
| Read news in newspapers       | Never                   | 0.29                        | 0.05     |
|                               | Seldom                  | 0.27                        | 0.01     |
|                               | Sometimes               | 0.26                        | 0.06     |
|                               | Often                   | 0.20                        | 0.06     |
| Listen/watch news in radio/TV | Never                   | 0.38                        | -0.09    |
|                               | Seldom                  | 0.32                        | 0.16**   |
|                               | Sometimes               | 0.25                        | 0.05     |
|                               | Often                   | 0.24                        | 0.05     |
| Favourite TV programmes       | Debates & documentaries | 0.19                        | 0.02     |
|                               | News                    | 0.25                        | 0.07*    |
|                               | Films & series          | 0.28                        | 0.04     |
|                               | Sports                  | 0.27                        | 0.05     |
|                               | Romance & gossip        | 0.29                        | 0.10     |
|                               | Don't watch TV          | 0.31                        | -0.04    |

\* Significant at the 0.05 level; \*\* Sig. at the 0.01 level.

† All coefficients in the "Perceived" column are significant at the 0.01 level.

Source: Own elaboration from CIS study 2634 and 2001 Population Census.

These results go against a widespread belief—prevalent in the academic world in Spain and elsewhere—that the media generate and sustain the belief in a crime-immigration nexus. In fact, the reduction in bias brought about by the media suggests that the information transmitted in the media may be less prejudiced than the prevailing



beliefs in society. This is not to say, however, that the media in Spain are an independent and neutral source of information, or that they could not engage more actively in the neutralisation of anti-immigrant attitudes. Instead, it is hypothesised that the reliance on impartial sources of information and “political-correctness” may be more of an issue for the media than it is for ordinary citizens and the informal social networks of family, friends and acquaintances in which they are embedded in.

Table 5.8. Comparison of means: t-test

|                               | Mean                      |       | t test<br>(means) |
|-------------------------------|---------------------------|-------|-------------------|
|                               | <i>TV watching</i><br>Yes | No    |                   |
| Female (%)                    | 51                        | 50    | -0.56             |
| Age (yrs)                     | 44.97                     | 46.51 | 1.33              |
| Citizen (%)                   | 94.62                     | 90.75 | -3.57             |
| Household income (1-10 scale) | 4.87                      | 4.70  | -1.67             |
| Education (years)             | 10.77                     | 11.41 | 1.87              |
| Ideology (0-10 scale)         | 4.40                      | 4.45  | 0.40              |
| Time of residence (yrs)       | 23.04                     | 23.35 | 0.26              |
| N                             | 7,193                     | 227   |                   |

Source: CIS survey 2634

N = 7,420

### Right-wing conservatism

It is hardly surprising that right-wing conservatism is an important individual factor accounting for the belief in a crime-immigration nexus. Empirical (Cea and Valles, 2008; Semyonov, Raijman, and Gorodzeisky, 2006) and anecdotal evidence have already shown how political ideology can reinforce or mitigate the belief in a crime-immigration nexus, as well as other anti-immigrant attitudes. However, among the components that make up the construct of right-wing conservatism, it is only the left-right scale that portrays the expected positive association and carries important predictive power (table 5.9). Since the left-right and conservatism-liberal scales are

significantly correlated (i.e. Pearson correlation coefficient is 0.45), these results imply that it is the left-right scale variance, which is orthogonal to the conservatism scale, that really matters in explaining the belief in a crime-immigration nexus.

Table 5.9. Replication of models I and II in table 5.6 for subsamples based on ideology. Standardised regression coefficients of the perceived and observed proportion of foreign nationals on perceived crime (N = 7,420)

| Subsamples by...                             |              | Regression coefficients     |          |
|--|--------------|-----------------------------|----------|
|  |              | Number of foreign nationals |          |
|  |              | Perceived†                  | Observed |
| Self-placement in the 0-10 left-right scale  | From 0 to 4  | 0.23                        | 0.06*    |
|  | 5            | 0.29                        | 0.07*    |
|  | From 6 to 10 | 0.29                        | 0.04     |
| Conservatism: Self-placement in a 0-10 scale | From 0 to 4  | 0.25                        | 0.05*    |
|  | 5            | 0.28                        | 0.09**   |
|  | From 6 to 10 | 0.24                        | 0.04     |

\* Significant at the 0.05 level; \*\* Sig. at the 0.01 level.

† All coefficients in the "Perceived" column are significant at the 0.01 level.

Source: Own elaboration from CIS study 2634 and 2001 Population Census.

### Contextual parochialism

Differences in parochialism, as indicated by the type of area, census tracts' residential turnover and proportion of elderly population, and municipalities' population size, are sharply related to differences in the belief in the crime-immigration nexus. As communities become less stable residentially, "younger" and more urbanised, the belief weakens markedly, almost in a linear fashion. Interestingly, such "linearity" is blurry when it comes to analyse the effect of the observed, rather than the perceived, proportion of foreign nationals. It is also important to stress two additional facts. First, that these contextual effects are not mirrored at the individual level, where neither age nor time of residence are important predictors, conferring additional reassurance that what is here referred to as parochialism is indeed a contextual effect. Second, that what

really matters is the construct of parochialism, rather than that of social disorganisation, as the result for the education variable clearly demonstrates. If social organisation were to be the key construct, one would expect the education variable to exert an opposite effect, at the census tract level, of the one observed in table 5.10.

Table 5.10. Replication of models I and II in table 5.6 for subsamples based on parochialism indicators and education. Standardised regression coefficients of the perceived and observed proportion of foreign nationals on perceived crime (N = 7,420)

| Subsamples by...                                    |                 | Regression coefficients     |          |
|---|-----------------|-----------------------------|----------|
|   |                 | Number of foreign nationals |          |
|   |                 | Perceived†                  | Observed |
| Population size of municipality                     | 1st Quantile    | 0.29                        | 0.09*    |
|   | 2nd Q           | 0.25                        | 0.07     |
|   | 3rd Q           | 0.26                        | 0.09**   |
|   | 4th Q           | 0.20                        | 0.06     |
| Type of area according to respondent                | Neighbourhood   | 0.23                        | 0.05*    |
|   | Gated community | 0.19                        | 0.04     |
|   | Village         | 0.29                        | 0.09**   |
| Proportion of elderly                               | 1st Quantile    | 0.22                        | 0.03     |
|   | 2nd Q           | 0.21                        | 0.06     |
|   | 3rd Q           | 0.27                        | 0.02     |
|   | 4th Q           | 0.30                        | 0.08     |
| Mean time of residence                              | 1st Quantile    | 0.22                        | 0.01     |
|   | 2nd Q           | 0.24                        | 0.07     |
|   | 3rd Q           | 0.25                        | 0.10*    |
|   | 4th Q           | 0.32                        | 0.08     |
| Proportion of residents holding a University degree | 1st Quantile    | 0.28                        | -0.02    |
|   | 2nd Q           | 0.30                        | 0.13**   |
|   | 3rd Q           | 0.22                        | 0.07     |
|   | 4th Q           | 0.22                        | 0.01     |

\* Significant at the 0.05 level; \*\* Sig. at the 0.01 level.

† All coefficients in the "Perceived" column are significant at the 0.01 level.

Source: Own elaboration from CIS study 2634 and 2001 Population Census.

### Other explanatory factors

At the individual level, and other than right-wing conservatism and media-related variables, no variable exerts a clear and linear effect on the belief in a crime-immigration link. The finding that Spanish citizens and foreigners both equate

immigration and crime to the same extent is somewhat at odds with the literature (Judd and Park, 1993; O'Rourke and Sinnott, 2006), though there is some evidence that minorities themselves hold certain dominant stereotypical beliefs, even negative stereotypes about their own group (Sagar and Schofield, 1980; Nightingale, 1993). That household income is barely, or at least not linearly, related to the anti-immigrant stance is a finding shared by other studies (Citrin and Sides, 2005; Mayda, 2006). However, that education bears no linear influence on a given anti-immigrant attitude is unique to this study, though the result for the highly educated is fairly consistent with previous studies analysing views on granting social and economic rights to immigrants (Raijman and Semyonov, 2004), restricting migrant flows (Citrin and Sides, 2007; Mayda, 2006), or viewing foreign workers as a socioeconomic threat (Raijman and Semyonov, 2004). What lies behind this curvilinear effect of education (and income) is unclear, and may be related to the fact that working with latent beliefs, as opposed to reported preferences and opinions, avoids the influence of political correctness on the median respondent.

With regards to the contact/conflict hypothesis and the “immigrant effect” at the census tract level, it is worth noting that the relationship is not as clear-cut and smooth as in the bivariate analyses, yet those areas with little immigration (i.e. less than 2.5 per cent of the total population) are still the most likely to associate immigration and crime (figure 5.4). The main difference with the bivariate analyses is that residents are most relaxed about the crime-immigration nexus in the third quantile of the distribution, rather than in the fourth quantile, where foreign nationals represent more than 11.5 per cent of the census tract population.

Figure 5.4. Contact/Conflict hypotheses. Latent belief in a crime-immigration nexus according to census tracts' foreign population

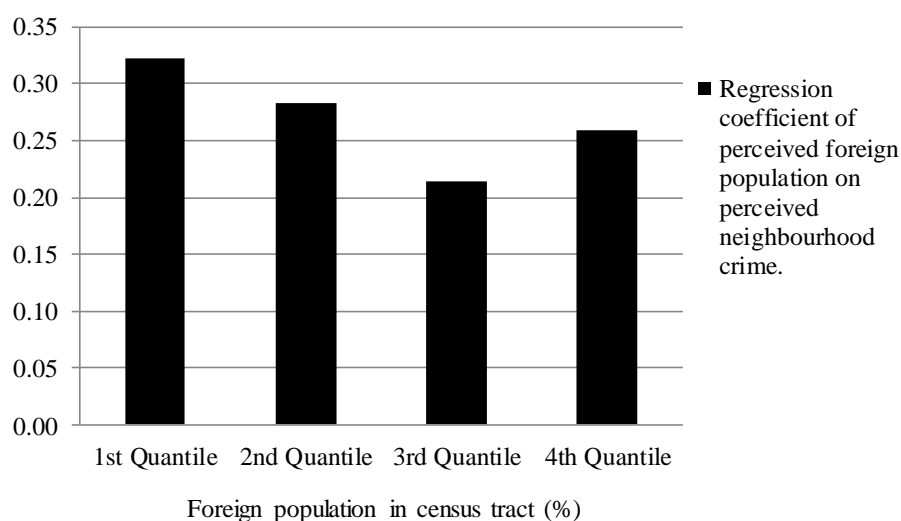


Table 5.11. Replication of models I and II in table 5.6 for subsamples based on individual variables. Standardised regression coefficients of the perceived and observed proportion of foreign nationals on perceived crime (N = 7,420)

| Subsamples by...  |              | Regression coefficients     |          |
|-------------------|--------------|-----------------------------|----------|
|                   |              | Number of foreign nationals |          |
|                   |              | Perceived†                  | Observed |
| Age               | 1st Quantile | 0.26                        | 0.09**   |
|                   | 2nd Q        | 0.27                        | 0.02     |
|                   | 3rd Q        | 0.24                        | 0.03     |
|                   | 4th Q        | 0.25                        | 0.06     |
| Time of residence | 1st Quantile | 0.24                        | 0.07*    |
|                   | 2nd Q        | 0.28                        | 0.04     |
|                   | 3rd Q        | 0.25                        | 0.07*    |
|                   | 4th Q        | 0.26                        | 0.05     |
| Education         | 1st Quantile | 0.25                        | 0.07*    |
|                   | 2nd Q        | 0.29                        | 0.03     |
|                   | 3rd Q        | 0.28                        | 0.05     |
|                   | 4th Q        | 0.22                        | 0.05     |
| Income            | 1st Quantile | 0.24                        | 0.04     |
|                   | 2nd Q        | 0.26                        | 0.06*    |
|                   | 3rd Q        | 0.29                        | 0.03     |
|                   | 4th Q        | 0.22                        | 0.10**   |
| Female            | No           | 0.26                        | 0.07**   |
|                   | Yes          | 0.26                        | 0.05     |
| Citizen           | No           | 0.27                        | 0.04     |
|                   | Yes          | 0.26                        | 0.06**   |

\* Significant at the 0.05 level; \*\* Sig. at the 0.01 level.

† All coefficients in the "Perceived" column are significant at the 0.01 level.

Source: Own elaboration from CIS study 2634 and 2001 Population Census.

## **5.5. Discussion and conclusions**

In Spain and elsewhere, academics and pundits alike have been increasingly interested in natives' reactions to immigration (Cea and Valles, 2008; Citrin and Sides, 2007; González and Álvarez-Miranda, 2005; Mayda, 2006). There are, nonetheless, numerous gaps in the literature that this chapter has only started to fill.

In spite of a long tradition in sociology, recent studies have largely ignored the role played by urbanisation and city life in the mitigation of anti-immigrant prejudices. Almost a century ago, Thomas and Znaniecki (1927) already pointed to the contradictory nature of the rural-urban divide: rural migrants not only moved into socially disorganised urban areas—where social control was significantly weakened or simply transformed—they also encountered a cosmopolitan environment where social, economic and cultural diversity were less likely to provoke narrow-minded reactions from residents. In this sense, this chapter has proved that the combination of small municipalities, residential stability and elderly population, is the ideal context for the production, and reproduction, of parochialism and, indirectly, of the beliefs in a crime-immigration nexus.

A second gap in the literature concerns the effects of the media. Despite the prevailing view that the radio, the print media and especially the television, generate and sustain anti-immigrant attitudes, the results in this research suggest that the media, if anything, counteracts the structural nativism assimilated through various social institutions and networks, including the family, the school, and the neighbourhood. The development of the media might be held responsible for a decline, or transformation, of citizens' civic engagement and social organisation (Putnam, 1995), as well as for other negative outcomes (Sartori, 1998). Yet, the analyses carried out in this chapter suggest that the media in Spain may have also served to mitigate the belief in a crime-

immigration nexus, if only by providing relatively neutral information. Whether these neutralising effects are present in other contexts needs yet to be assessed given the relatively “welcoming” views that the Spanish media have transmitted vis-à-vis immigrants. Moreover, the effect of the media is contingent on the type of programmes that respondents claim to watch, as this study has clearly illustrated. Respondents who prefer debates and documentaries are least likely to associate immigration and crime, whereas those who prefer gossip programmes, and especially those who claim never to watch TV, are more inclined to do so.

Other factors were also found to be important predictors of anti-immigrant prejudices. As expected, respondents who define themselves as right-wing show higher levels of anti-immigrant prejudice, but this is not true for the liberal-conservatism scale. Respondents’ education only matters when curvilinear effects are taken into account, with the least/most educated holding the most relaxed beliefs. Similarly, the effect of income can be observed only if non-linearity is considered. On the other hand, respondents’ age, gender, time of residence and (Spanish) citizenship are irrelevant predictors of the belief in a crime-immigration nexus. While some of these results may be counter-intuitive and contradict previous findings, it could be the case that this is the result of using a latent—rather than a direct—measure of the belief in a crime-immigration nexus. The findings here presented should prompt further studies to scrutinise not only what respondents’ would like to express in surveys, but also what respondents’ unconsciously disclose.

## **CHAPTER 6. PERCEIVED NEIGHBOURHOOD CRIME AND IMMIGRATION IN MADRID CITY: A SPATIAL ANALYSIS**

### **6.1. Introduction**

The public debate around crime and immigration is plagued with prejudices, beliefs, and hidden agendas, rarely attending to rigorous analyses. Objective debate in Spain, in particular, is hampered by the scarcity of rigorous studies on crime determinants, both at the individual and community level. As a result, the debate is often reduced to anti-immigration campaigners trumpeting the existence of a bivariate association at the individual level (see chapter 3) and immigrant supporters qualifying these oversimplistic associations or eschewing the question altogether.

The truth is that the debate has been firmly won by the anti-immigration stance; the belief in a crime-immigration nexus has intensified in the last two decades (figure 6.1) and, even if the current financial crisis has reduced the saliency of any non-economic issue (figure 3.1), it has acquired a prime importance in the public agenda (Pinyol, 2008). A very restrictive policy regarding the public release of sensitive data not only limits the accountability of public officials, but has given free rein to “ideological” stories on crime determinants—among which the pervasive belief in a crime-immigration nexus—that generally rely on blunt correlations. And whereas ideological citizens may be indifferent to refined and rigorous analyses (i.e. “the die is cast”), widespread stereotypes are frequently adjusted, even if mildly, in response to new evidence, for as Gans (1962) notes: “No group can long retain a conceptual system that does not stand up against experience”.

As emphasised in the previous chapter, tackling anti-immigrant prejudice is vital for the overstatement of immigrants’ criminal involvement not only improves the electoral chances of extremist parties (Coffe, Heyndels and Vermeir, 2007), and liberate



xenophobic politicians from embarrassment and ostracism but, more importantly, oblige mainstream parties, regardless of their views on immigration, to please citizens' anti-immigrant attitudes through further restrictions on immigration (Martínez, 2006; Mears, 2002) and toughening of the criminal law (Stumpf, 2006). Disdaining the subject, as liberal social scientists often do (Sampson, 1987), is no longer an option for mainstream society is largely convinced, albeit to different degrees, that although “not all immigrants are delinquents, most delinquents are immigrants” (Solé et al., 2000).

In response to this context of criminalisation of immigration (Wacquant, 2005; Welch, 2003), the key aim of the chapter is to offer a rigorous analysis of the relationship between residents' perceptions of neighbourhood crime and immigrant groups in Madrid's local communities. These analyses may also shed light on residents' potential fabrication of the crime-immigration nexus that was already observed in the preceding chapter. After all, if such resilient belief were minimally based on facts one would expect residents' assessment of neighbourhood crime to be influenced, at least, by the presence of immigrants in their communities. This chapter goes a step further in that the relationship is tested at the census-tract level controlling for the acute spatial interdependence of residents' perceptions of neighbourhood crime.

The secondary, and more technical, purpose will be to assess the adequacy and implications of a range of spatial models commonly applied in the social sciences. More precisely, this chapter will gauge the impact of six different immigrant groups—based on their region of origin—on the levels of perceived crime at the census tract level. To do so, the statistical analyses will not only adjust for area characteristics that are likely to impinge on crime perceptions—following a social disorganisation framework—but will acknowledge the spatial dependency inherent in urban research through a set of “spatial models”, including spatial lag, spatial error and hierarchical linear models.

In short, the chapter will answer three questions: 1) Are perceptions of neighbourhood crime higher in residential areas where immigrant groups live? 2) To what extent is this relationship mediated by classical crime determinants, as developed by social disorganisation theory? and 3) Do neighbours originating from different world regions have an independent influence on natives and immigrants' perceptions of neighbourhood crime?

## **6.2. The soaring saliency of the crime-immigration nexus**

From November 2001 to January 2002, the first Census of the 21<sup>st</sup> century was conducted in Spanish households, coinciding with the decisive entrance of the immigrant “problem”—and its implicit or explicit connection with crime—into the public agenda, as reflected in nativist attacks, public opinion surveys, the media and political discourses at the time.

The massive and sudden influx of migrants was certainly generating distress among the native population, particularly in ethnically mixed rural areas where a combination of contextual parochialism, immigrants' poor living and working conditions, and forced interactions proved on some occasions disastrous: Banyoles (1999) and Níjar (1999). The El Ejido riots (2000)<sup>74</sup> marked a turning point for the attack was not directed towards immigrant “representatives” and led by ideologically motivated gangs but, instead, it was a generalised native attack on the entire Maghrebi community. Not surprisingly, the events drew the attention of Eurocrats and the international media, reverberated until the general elections a month later, and were followed by similar actions in other municipalities (Lepe, 2000).

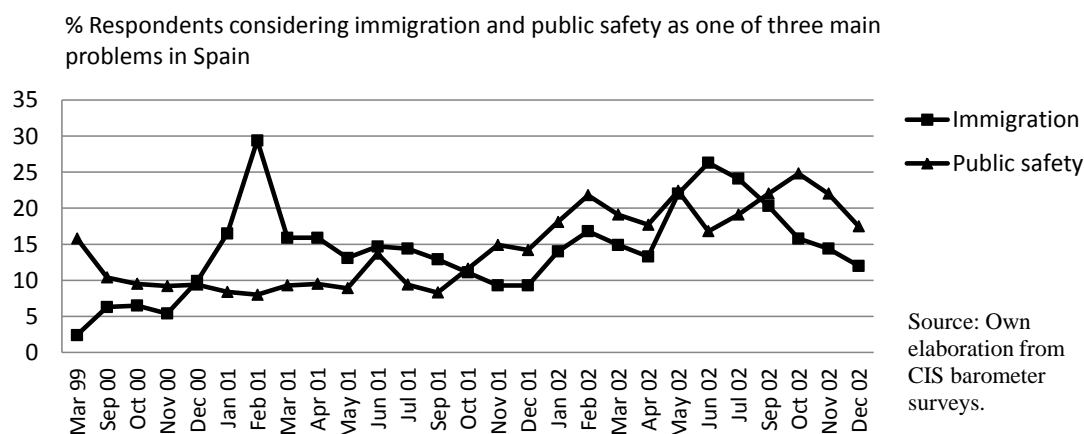
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<sup>74</sup> In February 2000, the death of a young Spaniard by a mentally disabled Moroccan triggered a rash of violent attacks directed to the Maghrebi population and their belongings, spreading to other municipalities in the southeast of Spain.

The immigrant phenomenon also entered the electoral ballot in an unprecedented fashion during the general elections of March 2000, partly because El Ejido unrest was still fresh in the electorate's mind, but also because the public was increasingly concerned about the stock of immigrants<sup>75</sup> and robustly convinced about the crime-immigration nexus (figure 5.1).<sup>76</sup>

The saliency of the immigration issue waned after the elections but revived a year later, when Marta Ferrusola, then wife of Catalunya's president Jordi Pujol, claimed that immigrants were "constantly trying to impose" their customs and religion or that her husband was "tired of giving [public housing] to Moroccans and Maghrebis". The unfortunate statements were immediately picked up by the media, temporarily intensifying the public anxiety about immigration (figure 6.1)

Figure 6.1. Evolution of public opinion on immigration and public safety in Spain



More relevant to this chapter was the debate around the crime-immigration link that arose in the National Parliament (*Congreso de los Diputados*) a month before the

<sup>75</sup> From 1997 through 1999, 27 per cent of survey respondents considered that there were *too many* foreigners in Spain, by 2000 the proportion had increased to 41 per cent (ASEP surveys).

<sup>76</sup> The debate centred around the reform of the "permissive" immigration law enacted in January 2000—Fundamental Law (*Ley Orgánica*) 4/2000—that had replaced the outdated and restrictive law from 1985. The immigration law was finally modified by the Fundamental Law 8/2000, enacted nine months after the People's Party electoral success.

Census, in response to an increase in homicides, and crime rates more generally, in Madrid city specifically. The Socialist Party (PSOE) accused the Government of failing to take any actions and of associating hard-working immigrants with criminals. The People's Party (PP), through its Interior Minister Mariano Rajoy, replied that although they agreed with the PSOE [on the spurious crime-immigration nexus], it was undeniable that "45 per cent of those under arrest in Madrid this year were foreigners" and that "we should avoid delays in dealing with deportation orders".<sup>77</sup> The debate persisted in the National Parliament, for at least six months, and was echoed in newspaper editorials (Abella, 2006). The conservative *ABC*, in a similar combination of seemingly political correctness and anti-immigration sentiment, argued that "if it is false and unfair to blame immigrants for this situation [the increase in homicides], it would also be demagogic to ignore that there is a proven relationship between both factors [sic]" (*ABC*, 10/12/2001). *El Mundo*, somewhat more constrained by political correctness, and heavily influenced by the case of a Moldovan recidivist—allegedly detained 107 times—stated that "is necessary to avoid demonising the immigrant population, but (..) we must accelerate prosecutions and find ways to deport foreigners that have been charged several times" (*El Mundo*, 05/11/2001). Interestingly, public concern about both public safety and immigration increased concomitantly in response to this debate (figure 6.1).

That the perception of an immigrant "problem" has gained momentum in Spain is evident in public opinion polls and media coverage. For instance, op-eds in the three main newspapers, referring specifically to immigration, soared dramatically from merely 6 in 1997 to 77 four years later (Abella, 2006), of which at least 10 were dedicated to the crime-immigration nexus. Moreover, whereas in 1999 only two per

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<sup>77</sup> Spanish Congress (*Congreso de los Diputados*), 03/10/2001.

cent of survey respondents claimed that immigration was a problem in Spain (CIS barometer indicators), and roughly 50 per cent that crime and immigration were interrelated (figure 5.1), by 2000 the proportions had risen to 7 and 64 per cent respectively, only to increase thereafter.

So by the time the census was conducted in the last months of 2001, the crime-immigration nexus was an important issue in the political agenda and even if its relevance waxed and waned, it never abandoned the public debate thereafter. This is not to say that they were not previously associated, or that it became the most prominent issue in Spanish politics.<sup>78</sup> It is to argue that the turn of the century is an ideal moment to evaluate the influence of immigration on residents' perceptions of neighbourhood crime, if only because neighbourhoods in Madrid city were experiencing a concomitant rise in both crime rates and immigration.

### **6.3. Evidence on the crime-immigration nexus in Spain and elsewhere**

Compared with other contexts, empirical evidence in Spain on the crime-immigration nexus, and crime determinants more generally, is scarce and methodologically wanting. As previously mentioned this is largely the result of inadequate, and often a complete absence of, measures of crime levels at the individual, community or national level. Academics have been forced to rely almost exclusively on reported crime measures (García-España et al., 2010), such as number of detainees, incarcerated and court appearances, though some academic and public efforts have been devoted to gather data on victimisation rates (International Crime Victims Survey, *Enquesta de Seguretat Pública de Catalunya*, etc.), and self-reported deviant behaviour (Gómez-Fraguela et al., 2009). In spite of these efforts, the study of crime determinants in Spain is lacking for

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<sup>78</sup> Public safety and immigration have invariably lagged behind unemployment and terrorism as a public concern in the CIS barometers (see figure 3.1).

individual characteristics of delinquents are rarely known, reported crime is only publicly available at the national and provincial levels, and when victimisation surveys are geographically referenced, they correspond to levels of aggregation (i.e. city districts instead of neighbourhoods or census tracts) unsuitable to community studies or the geographical references are poorly recorded. Abundant and properly geocoded data exist with regard to crime perceptions (CIS surveys and Population and Housing Census 2001), yet scholars have largely disregarded this source of information, even though politicians and policy-makers are often more responsive to citizens' assessments of crime rates than to actual crime levels. Hence, academic efforts in Spain have been devoted mainly to describe, understand and explain "real" crime.

For instance, at the individual level there is robust evidence that immigrants are overrepresented in crime statistics (see chapter 3)—though the "nativity gap" decreases substantially when errors of measurement are adjusted for (García, 2000)—and mixed evidence when deviant behaviour among adolescents is analysed (Gómez-Fraguela et al., 2009). These studies, however, focus mainly on bivariate associations and fail to provide any causal evidence.

At the provincial level, two longitudinal studies have shown how immigrant concentration exert a positive impact on minor, serious and total offenses (Alonso-Borrego et al., 2008; Rodríguez-Andrés, 2003) and how the "Latino" contribution to crime growth has actually been negative in the 2000-2006 period (Alonso-Borrego et al., 2008). Although the first of their kind in the Spanish context, these studies fail to incorporate vital controls (e.g. residential turnover, commercial activity, etc.), focus on a unit of analysis—Spanish provinces—that is inconsequential to the community perspective used here, and base their results exclusively on reported crime, which can

prove highly unreliable as its comparison with victimisation surveys have shown (García et al., 2010).

To the author's knowledge, there is no quantitative study analysing immigrant concentration effects, or crime determinants for that matter, at the community level. Nonetheless, a qualitative project dealing with conflict and immigration in three Madrid districts (Cachón, 2008) proved extremely useful in the development of this chapter, both as a source of hypotheses and as a confirmation of the results here presented. From their detailed study of neighbourhood leaders and "brokers", three findings are of interest here. First, how perceptions of crime diffuse within and beyond neighbourhoods, and often with considerable distortion in a "Chinese whispers" fashion. Second, how these perceptions are influenced by a series of residents' attributes and, more importantly, contextual characteristics of neighbourhoods. Furthermore, how the effect of ethnic diversity on communities' social organisation is mediated by, and frequently multiplied by, demographic factors such as age diversity.

Evidence on immigration and crime elsewhere, and particularly in the United States, is more extensive and rigorous for studies have focused on different geographical settings, levels of aggregation and immigrant groups, and are based on both descriptive and multivariate analyses. To the best of the author's knowledge, research on the relationship between immigration and perceptions of neighbourhood crime is non-existent, yet the relationship between race and perceived neighbourhood crime has attracted considerable more attention (Chiricos, Hogan, and Gertz, 1997; Hurwitz and Peffley, 1997; Quillian and Pager, 2001; Stinchcombe et al., 1980).

Although findings stemming from the research on the crime-immigration nexus portrays considerable variation across time and place, several common patterns are clearly identifiable. First and foremost, previous studies have found that immigrants

hold either no effect or a negative effect on levels of crime and violence. This finding is observable in the response to the first wave of “public anxiety” about immigrant delinquency (Shaw and McKay, 1969[1942], Stofflet, 1941; Vechten, 1941) and in the more recent wave (Hagan and Palloni, 1998; Martínez, 2002). It is also discernible in ecological analyses (Butcher and Piehl, 1998; Lee, Martínez and Rosenfeld, 2001; Reid et al., 2005), studies using individual survey data (Hagan, Levi and Dinovitzer, 2008; Morenoff and Astor, 2006) and those based on official statistics (Rumbaut et al., 2006). Second, assimilation and acculturation into the host society bring about a rapid rise in crime involvement, which is reflected in comparisons between the first, one-and-a-half, second and third generations (Hagan, Levi and Dinovitzer, 2008; Morenoff and Astor, 2006; Rumbaut et al., 2006; Vazsonyi and Killias, 2001). Third, the neighbourhood appears as a key context in shaping crime involvement of both natives and immigrants (Martinez, 2006; Morenoff and Astor, 2006; Shaw and McKay, 1969[1942]) and is precisely the inability of *some* (Tonry, 1997) second generation immigrants to withstand the “crime-facilitating conditions” (Martinez, 2002) that abound in their local communities—in essence, blocked economic opportunities—that determines their segmented assimilation to the criminal propensities of a portion of the native born population (Rumbaut et al., 2006). Further, Asians, with their emphasis on “harmony, interconnectedness, and community and family obligations”, portray the lowest rates of homicide (Lee and Martínez, 2006), youth delinquency (Hagan, Levi and Dinovitzer, 2008), and incarceration (Rumbaut et al., 2006), although internal heterogeneity remains substantial. For its part, crime involvement of Latinos is significantly lower than that of African Americans, with whom they share similar levels of segregation, housing discrimination, concentrated poverty and residential turnover, but still higher than that of the affluent non-Hispanic Whites.



However, some scholars have criticised the “bad habit of lumping individuals into a handful of one-size-fits-all racialised categories” (Rumbaut et al., 2006)—such as Asians, Latinos, Europeans or blacks—since it “confounds the cultural, structural, and political differences” that affect the adaptation of specific nationalities and ethnic groups to the host society, and their local communities (Bursik, 2006). These critics notwithstanding, Martinez (2002) argues that the use of “Latino” is justifiable on several grounds, including a shared language, similar socioeconomic conditions—poor but working—and a common cultural experience among Latinos residing in the United States. In this chapter, ethnic groups categorised by broad regional or national origins constitute the core of the analysis though the rationale lies not so much on their internal homogeneity but rather on the external “amalgamation” produced by natives’ stereotyping.<sup>79</sup>

#### **6.4. The immigrant population in Madrid**

In what follows, information on the characteristics of the immigrant population in Madrid city is provided, focusing on those aspects that are relevant to the measurement of immigrant concentration effects on perceived neighbourhood crime. This includes the stage of the migration process (i.e. size and rate of growth of the immigrant population), the national composition of the foreign-born population and the characteristics of their residential areas (i.e. geographical distribution).

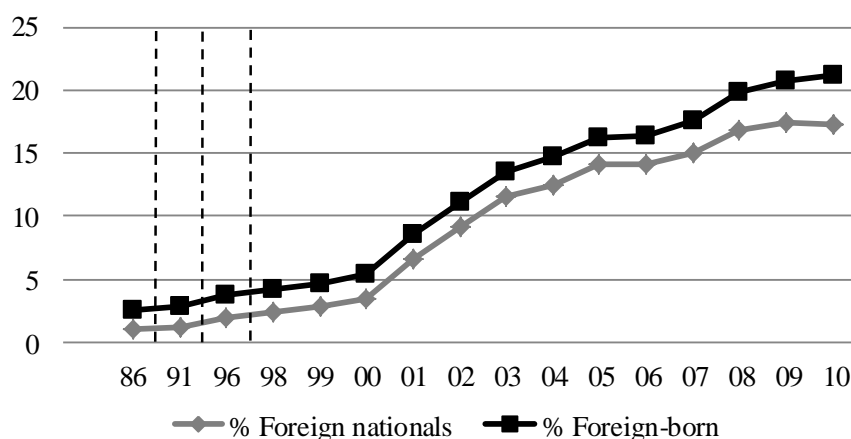
Using data from the municipal register, it is obvious that when the census was conducted toward the end of 2001, the immigrant phenomenon was at a very early stage in Spain, but less so in Madrid where a sizeable immigrant community—roughly eleven per cent of the population—was bringing about important changes to its

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<sup>79</sup> Results for specific nationalities are shown in appendix E.

neighbourhoods. Yet, despite becoming a major immigration hub, Madrid's native residents were still unaccustomed to the recent demographic trends, if only because the lion's share arrived in the three previous years (see figure 6.2).

Figure 6.2. Evolution of the foreign and foreign-born population in Madrid city, 1986-2010



Source: Own elaboration from National Statistics Institute (INE) data.

The implications of a fledgling immigration process are manifold. Firstly, that counts of foreign nationals, the foreign-born, and their year-to-year changes, are similarly effective proxies of immigration, yielding similar results when crime perceptions are analysed. To a lesser degree, this logic extends to ethnic minorities and ethnic diversity since, with the sole exception of the Roma population, Madrid society was ethnically homogeneous prior to the arrival of immigrant communities.<sup>80</sup> Secondly, that the debate around the crime-immigration nexus relates primarily to the first generation of immigrants, and if anything with the 1.5 generation.<sup>81</sup> This is relevant since numerous studies (Hagan, Levi and Dinovitzer, 2008; Rumbaut and Ewing, 2007;

<sup>80</sup> Although no official figures exist for the size of the Roma population, the *Fundación Secretariado Gitano* states that forty-five thousand, or 1.5 per cent of the total population, live currently in Madrid city.

<sup>81</sup> The 1.5 generation refers to foreign-born youths who migrated before their adolescence (Rumbaut and Ima, 1988).

Morenoff and Astor, 2006; Vazsonyi and Killias, 2001) have shown how first generations are less involved in criminal activities than natives, a difference that progressively disappears in successive generations. Finally, that this research deals with a unique historical context, one in which immigrants transform a quasi-homogeneous society. In fact, if it were not for the Roma population—established since the middle-ages and associated with petty crime and drug dealing by the mainstream society—discourses around ethnicity, immigration and crime would probably have been created *ex novo*. In these early stages, the crime-immigration nexus drew heavily on the extant discourse around the Roma population with subtle changes, such that the “new” delinquency was organised, or that it was more likely to employ firearms. However, even after the massive influx of immigrants, the Roma firmly maintained its adverse reputation (see figure 6.3), and only Moroccans, and very recently Eastern Europeans, have “caught up”—the latter partly because they are consistently associated with the Roma community. Since this chapter deals with perceptions of crime, rather than with “real” crime patterns, this exceptional and sudden transformation of a quasi-homogeneous society also implies that reactions, of both natives and immigrants, towards unfamiliar traditions, cultures and practices are expected to play an important role in evaluating the crime-immigration nexus.

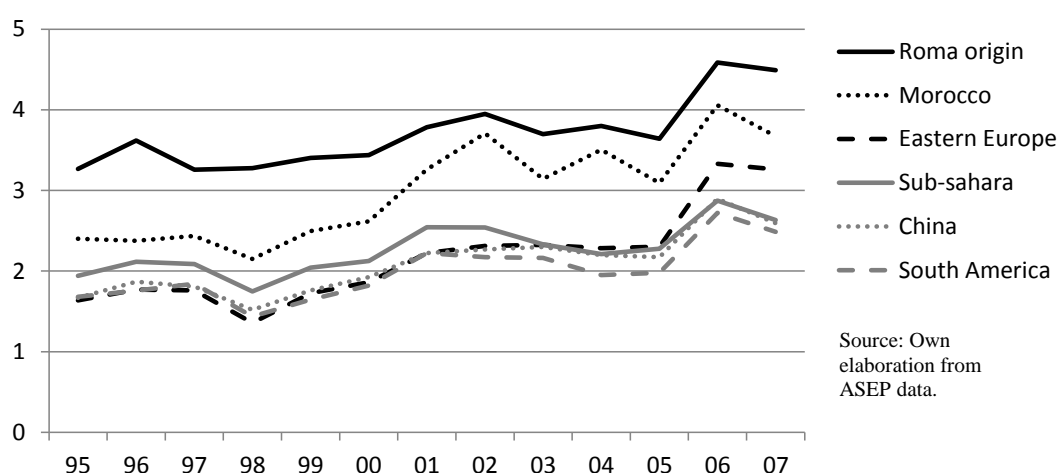
As regards their geographical distribution (figure 6.4), immigrants initially settled in the city centre, where networks started to develop, and in affluent areas working as live-in domestic workers.<sup>82</sup> In later stages (i.e. in the last decade), affluent neighbourhoods became less important relative to deprived areas across Madrid, as immigrants moved out from live-in domestic work and into affordable housing, and

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<sup>82</sup> It is precisely in the latter context where the first inter-ethnic tensions emerged in the early 1990s as Dominicans increasingly gathered in public spaces on their days-off, while native residents continually showed their disapproval. The conflict escalated from discomfort into a fight between Dominicans and the Police on the 1<sup>st</sup> of November 1992 and died away as a result of Lucrecia Pérez murder two weeks later by a Civil Guard (*Guardia Civil*).

wealthy foreigners dwindled in relative terms. Consistent with the concentric zone theory (Park, Burgess and McKenzie, 1925), and in spite of elevated housing prices, the central district maintained its role as an area for first settlement, especially for the Asian communities, whereas disadvantaged areas in the outer rings and the suburbs attracted long-standing communities (e.g. Dominicans, Moroccans) and some recent migrants (e.g. Ecuadorians, Rumanians) drawn in by more affordable housing.

Figure 6.3. Evolution of the uneasiness (0-10 scale) with the possibility of having selected groups as neighbours



By the time the census was conducted, this process of structured spatial dispersion was under way and hence differences between native and immigrant neighbourhoods were widening but still not remarkable (table 6.1). Interestingly, significant differences between the typical census tract<sup>83</sup> of natives and that of the foreign-born were only observable for some variables, such as commercial activity, number of cars or the proportion of foreign-born and, even for these, the differences were not particularly stark. From a statistical perspective, these similarities ease some of the problems that

<sup>83</sup> The typical census tracts can be interpreted as the residential area in which the average (or typical) member of a particular group resides.

beset most ecological analyses of the crime-immigration nexus—self-selection and multicollinearity in particular—as immigrants, in this initial stage, did not self-select into radically different census tracts to natives,<sup>84</sup> nor was the proportion of foreign-born highly correlated with the usual correlates of crime (e.g. economic status, residential turnover, family disruption). For specific groups, however, important differences are to be noted, since they settled in different areas of the city (figure 6.4): Western Europeans lived in relatively affluent residential areas with abundant commercial activity, Latin Americans in deprived communities with a high proportion of elderly natives, Asians in commercially active urban settings, and Africans and Eastern Europeans in deprived areas with comparatively fewer women.

As in other contexts, the immigrant population in Madrid city settled in successive waves. Simplifying, Moroccans and Philipinos in the 80's, Dominicans and Peruvians in the 90's, Ecuadorians and Argentinians at the turn of century—following their respective financial crises—and Bolivians, Chinese and Rumanians during the last decade. These waves are apparent in figure 6.6 where the largest immigrant groups in the census are shown. The analysis of the ethnic composition and their time of residence provides useful information to understand what an immigrant effect then entailed. Foreign-born by the end of 2001 referred largely to economic migrants, since nine out of ten originated from countries with significantly lower GDP per capita than Spain. It referred mainly to first generation Latin Americans<sup>85</sup> and, to a lesser extent, first and 1.5 generations Moroccans. It is also worth mentioning that immigrant groups that are identified with current immigration to Madrid, such as Rumanians or Bolivians, were by and large irrelevant back in 2001, both in figures and in the public mind.

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<sup>84</sup> Morenoff and Astor (2006), for instance, note that “criminologists (...) must address the challenges presented by the various selection issues, including immigrant self-selection and selection into neighborhoods, with innovative research designs.”

<sup>85</sup> For obvious reasons, the term Latino is rarely used in the Spanish context.

Figure 6.4. Geographical distribution of natives and immigrant groups in Madrid's 128 neighbourhoods (2002)

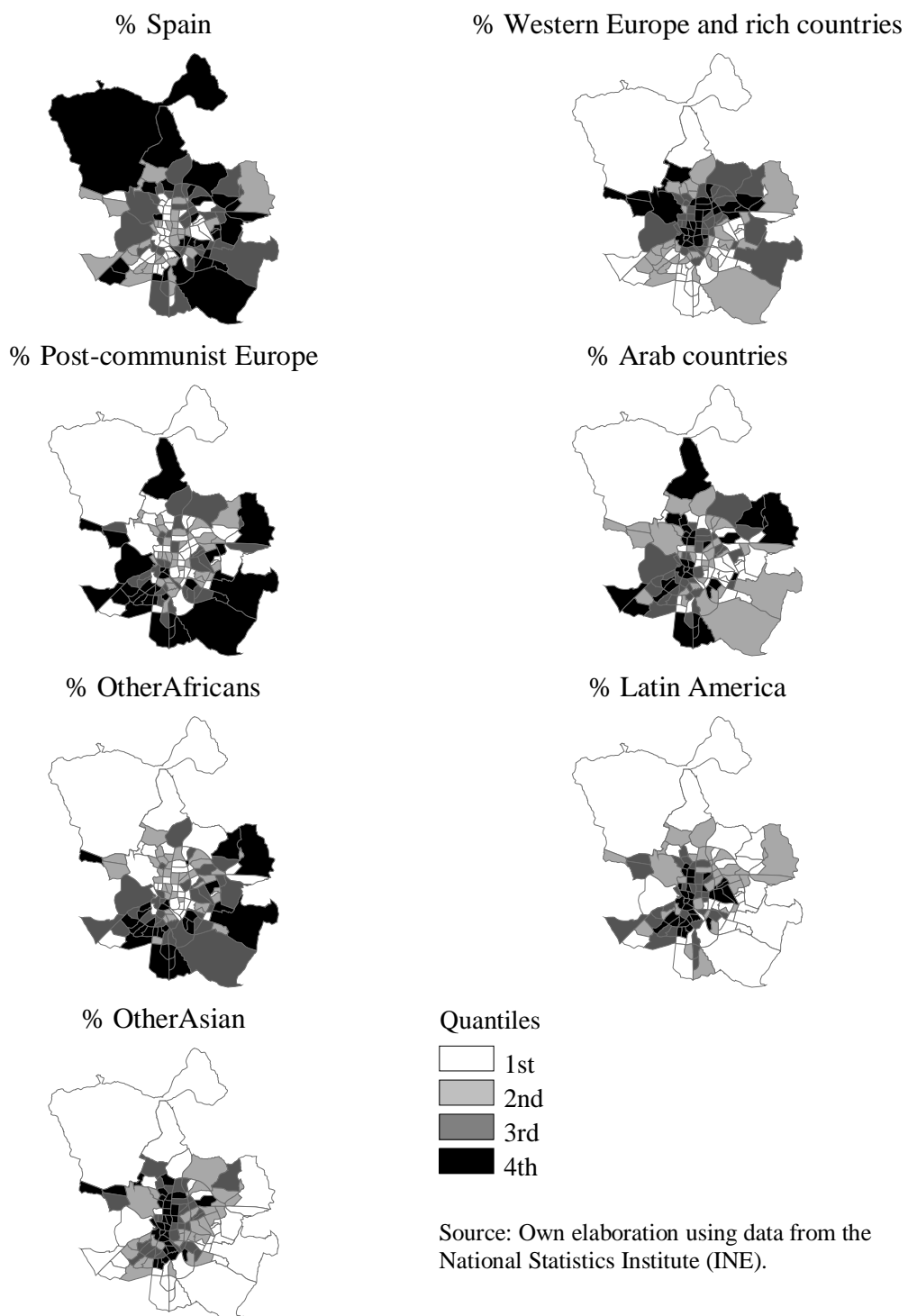


Table 6.1. Characteristics of the typical census tract by nativity\*

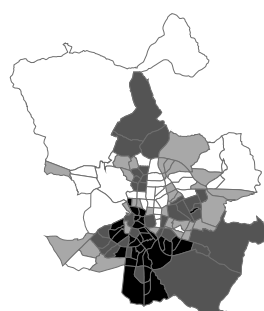
| Area characteristics                             | Native | Foreign-born |
|--|--------|--------------|
| Perceived crime (% residents)                    | 41.57  | 43.96        |
| % Foreign-born                                   | 9.35   | 13.07        |
| % Higher degree                                  | 24.52  | 24.14        |
| % Unemployment                                   | 12.49  | 12.63        |
| Buildings' condition (0 -100)                    | 96.13  | 95.19        |
| House prices (€)                                 | 2139   | 2185         |
| No. of cars per household (mean)                 | 0.97   | 0.88         |
| Home size (m <sup>2</sup> )                      | 79.66  | 76.22        |
| Commuting time (work)                            | 32.40  | 32.21        |
| Time of residence (years)                        | 18.26  | 18.54        |
| % Children in lone parent households             | 15.21  | 15.23        |
| Population density (1,000 inh./km <sup>2</sup> ) | 33.39  | 36.68        |
| Electoral turnout (%)                            | 72.84  | 72.16        |
| % 15-24 years                                    | 16.31  | 15.64        |
| % Women  | 53.22  | 53.62        |
| No. of shops and offices                         | 55     | 71           |

\*  $X = \sum_{i=1}^n x_i (y_i/Y)$ , where  $x_i$  and  $y_i$  are the value of characteristic X and the number of Y members in census tract i, and Y is the number of members citywide. This index is identical to the exposure index used in the residential segregation literature.

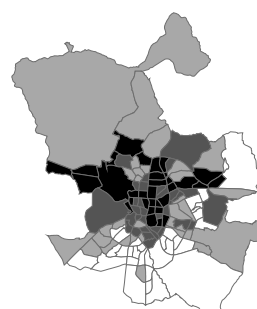
Source: Own elaboration from the 2001 Census, National Institute for Statistics (INE).

Figure 6.5. Geographical distribution of residents' perception of neighbourhood crime and proportion of residents holding a University degree in Madrid's 128 neighbourhoods (2002)

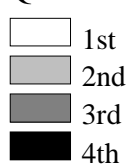
% Residents considering area affected by crime and vandalism



% Higher degree

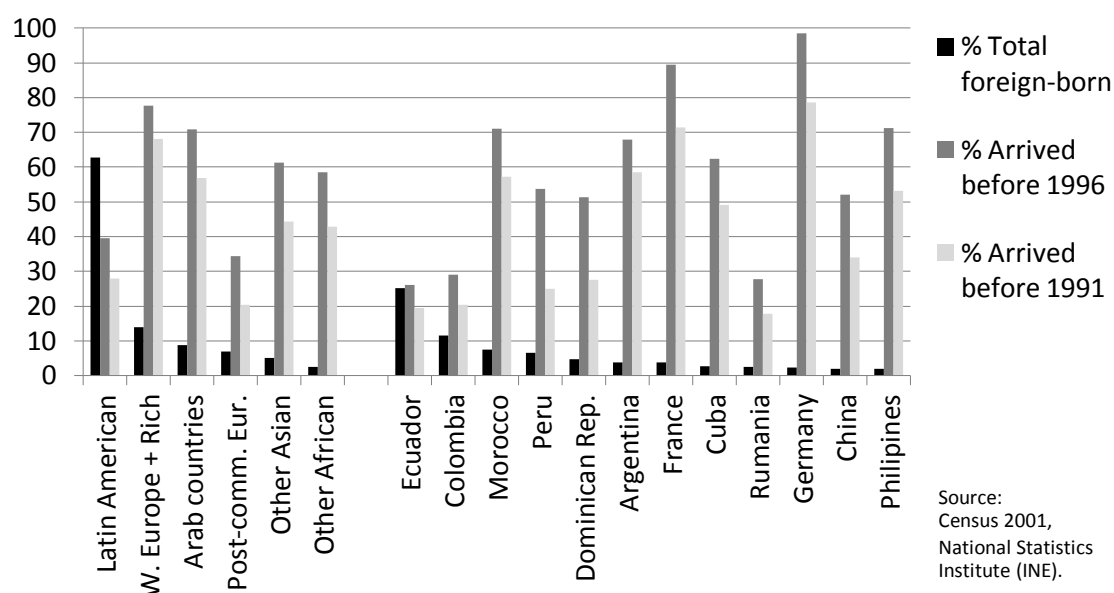


Quantiles



Source: Own elaboration using data from the National Statistics Institute (INE).

Figure 6.6. Country of origin of the foreign-born population and time of residence in Spain, 2001 Census



## 6.5. Data, model specification and statistical modelling

Except for the data on electoral turnout (provided by Madrid City Council) and house prices (*idealista.com*), the data come from the *Population and Housing Census 2001* and the municipal register,<sup>86</sup> provided by the National Statistics Institute, as described earlier (chapter 3). Merging these different data sources was eased by the fact that they are based on identical administrative divisions,<sup>87</sup> and refer to a similar period (*i.e.* from November 2001 to January 2002)—save for electoral data.<sup>88</sup> To solve this temporal discrepancy, information on the national elections of 2000 and the municipal elections of 2003 were combined, carrying out imputation techniques for missing values.<sup>89</sup>

<sup>86</sup> Data on country of birth were obtained from the Municipal Register whereas data on continent of birth come from the 2001 Population and Housing Census (*i.e.* further disaggregation was infeasible for confidentiality reasons).

<sup>87</sup> The 2,358 census tracts—median size of 1,200—are the primary units of analyses throughout this study. The 128 neighbourhoods—median size of 30,000—and the 21 districts—median size of 140,000—are only included as a control in the multilevel models.

<sup>88</sup> Data from *idealista.com* on house prices refer to December 2001.

<sup>89</sup> Modifications of census tracts occur frequently (*i.e.* once a year), especially with increasing population size.



### 6.5.1. Model specification

As in chapter 4, the outcome variable is the proportion of residents that consider *crime and vandalism to be a problem* in their residential area. The core analyses are based on natives' crime perceptions but additional regression models analyse crime assessments by Europeans, Africans, Americans and Asians. Since residents from different continents of birth evaluate crime levels (table 6.2) and the crime-immigration nexus (figure 6.8) rather differently, the estimation of these additional models was deemed convenient, if only to provide a benchmark for the analysis of natives' perceptions of neighbourhood crime.

Further disaggregation into specific nationalities was unfeasible due to issues of confidentiality and missing data, though this would have been highly desirable since heterogeneity within continent groups remains significant.<sup>90</sup> Moreover, disaggregation by age, gender or education was deemed unnecessary as their perceptions of crime were consistent within census tracts (table 6.2).

With regards to the right-hand side of the equation, the general framework is informed by the exogenous sources of the social disorganisation model, as conceptualised and operationalised by Shaw and McKay (1969), Kornhauser (1972), Sampson (1987), Sampson and Groves (1989), and Bursik and Grasmick (1993). Namely, communities' crime patterns rest on the ability of their members to achieve shared values and solve jointly experienced problems (Bursik, 1988); abilities which, in turn, are explained by a set of communities' characteristics or exogenous sources of social disorganisation, including areas' socioeconomic status, (ethnic) diversity, residential turnover, family disruption and population density.

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<sup>90</sup> For instance, Argentinians' perceptions of crime may be influenced by Ecuadorian neighbours, and vice versa, regardless of their involvement in criminal activities. Whether these prejudices increase Arab, Sub-Saharan or African effects on perceived crime depends on how heterogeneity and prejudices play out within other continents.

Ethnic diversity or, more accurately, immigrant concentration effects are operationalised as the percentage of residents born in any of the following subcategories of countries: 1) Western Europe<sup>91</sup> plus countries with higher GDP per capita than Spain, regardless of the world region,<sup>92</sup> 2) Post-communist Europe,<sup>93</sup> 3) Arab countries,<sup>94</sup> 4) Other African, 5) Latin American, and 6) Other Asian. These world regions are of course heterogeneous (Bursik, 2006; Rumbaut et al., 2006), but they are consistent with natives' stereotypes of immigrant groups, as reflected in derogatory and unfortunately extended labels for economic migrants, such as “*sudaca*” (Latin American) and “*moro*” (Maghrebi) (Monnet, 2001), and for western residential tourists (e.g. “*guiris*”).

Since only ethnic diversity/immigrant concentration are of interest here, a parsimonious modelling strategy—which successfully avoids problems of multicollinearity—was pursued whereby the remaining exogenous sources of social disorganisation were represented by a unique measure.<sup>95</sup> Some loss of information logically ensues, but only for the economic variables does this seem to be problematic. The data reduction approach carried out to construct a latent variable for the socioeconomic status of census tracts<sup>96</sup> entailed a loss of predictive power, particularly in the case of unemployment—its residual variance holds additional explanatory power on the levels of perceived crime. However, including unemployment separately did not alter the immigrant concentration effects substantially and, therefore, it was decided to stick to the logic of one variable per exogenous source..

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<sup>91</sup> Includes Cyprus, Greece and Israel.

<sup>92</sup> Based on World Bank data; Spanish GDP per capita was estimated at 26,070\$ (PPP) in 2002. (<http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD?page=1>); last accessed 30/03/2011). Within this group, and other than North American and European countries, only Japan (757 residents) and Australia (467 residents) had sizeable communities in Madrid.

<sup>93</sup> Includes Caucasian countries, but not Kazakhstan.

<sup>94</sup> Based on membership to the Arab League.

<sup>95</sup> See table 6.1 for details on the operationalisation.

<sup>96</sup> First component of a principal components analysis of five measures: proportion of unemployed, number of cars per household, proportion of residents holding a university degree, home size and house prices by neighbourhood. Further details can be found in the appendix D.

As for specific social disorganisation correlates, it bears mentioning that the effect of population density within urban areas is *a priori* uncertain for Sampson and Groves (1989) included it with the rural-urban comparison in mind. In fact, to find a rationale for a population density effect within urban settings, the researcher should look into the fertile debate that Jacobs' work (1961) spurred, rather than into the literature on the rural-urban transformations (Park, Burgess and McKenzie, 1925; Thomas and Znaniecki, 1927). Jacobs defended the "abundance of life in the ostensibly disordered street" (Merrifield, 2000), commonly associated with densely populated areas, as a way of getting more "eyes on the street" for, as she noted: "a well-used street is apt to be a safe street" (Jacobs, 1961). Critics, deeply influenced by the insalubrious conditions of the 19<sup>th</sup> century industrial centres, thought of congestion and insensate disorder, prevalent in densely populated areas, as conducive to violence, delinquency and other urban ills. Solutions, nevertheless, differed between those who looked within the city, through the construction of apartment blocks within large-scale park-like landscapes, such as Le Corbusier and policymakers like Robert Moses (Helleman and Wassenberg, 2004), and those who looked beyond by breaking "the city into a series of smaller manageable units" (Merrifield, 2000), notably Garden City supporters like Mumford (1961). In short, if Jacobs was right, population density within cities should help control deviant behaviour or, at least, be unrelated to residents' perceptions of neighbourhood crime.

Moreover, as a proxy for civic engagement (Almond and Verba, 1963), public-mindedness and social capital (Putnam, 1993) in local communities, electoral turnout was included as a mediating, and attitudinal, process between the structural characteristics of communities and their levels of perceived crime (Sampson and Groves, 1989). The underlying assumption being that participation in city-wide or

national politics is an indication of residents' predisposition to participate in community affairs, particularly through their active and effective membership in neighbourhood associations and their interaction with external agencies, such as the police and other public officials.

In accordance with the incivility thesis (Conklin, 1975; Quillian and Pager, 2001; Wilson and Kelling, 1982, Skogan, 1990), and similarly to chapter 4, measures of civil disorder and physical deterioration are incorporated into the analyses. The condition of buildings is included as a measure of the physical deterioration of local communities, whereas a composite measure of social incivilities (the first principal component of residents' perceptions of noise, cleanliness and pollution) is added to the regression models.<sup>97</sup>

Further controls included in the regression models include the proportion of youth and women, and the commercial activity of residential areas. As indicated in chapter 3, age and especially gender are well-known explanatory factors of delinquency, vandalism and other social incivilities, with young males responsible for the lion's share of criminal offences (Hirschi and Gottfredson, 1983). For its part, business districts concentrate a large share of unsafe activities and delinquents' target groups, including nightlife and tourists, making these areas particularly vulnerable to deviant behaviour and their residents prone to feelings of urban unease.

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<sup>97</sup> See appendix D for further details.

Table 6.2. Perceived neighbourhood crime, within census tracts, by selected groups

| By...                   | Percentage considering area affected<br>by crime and vandalism* |     |
|-------------------------|---|-----|
|                         | All   | 42% |
| Gender                  | Male  | 42% |
|                         | Female  | 42% |
|                         | Europe  | 43% |
| Continent of<br>birth** | Africa  | 32% |
|                         | America   | 29% |
|                         | Asia  | 33% |
|                         | 16 or less  | 41% |
| Age                     | 16 to 65  | 42% |
|                         | 65 or more  | 41% |
| Education               | > Higher degree   | 43% |
|                         | Higher degree   | 41% |

\* Proportions represent means of census tracts (N = 2,358).

\*\* Data by country of birth not publicly available for confidentiality reasons.

Data source: National Statistics Institute (INE).

#### 6.5.2. Statistical modelling: accounting for spatial dependency and the appraisal of micro-meso variation

The selection of the modelling strategy was guided by the acute spatial autocorrelation encountered in the outcome variable, the conception of the urban space as a continuous/discontinuous landscape, and the focus on micro or meso processes.

Spatially interdependent residuals violate the independence assumption in the standard Ordinary Least Squares (OLS) regression which implies that, at best, standard errors are underestimated—the number of independent observations are overestimated—and, at worst, regression parameters are biased and inconsistent (Voss et al., 2006). The presence of spatial correlation in the dependent variable requires the use of a modelling strategy that explicitly recognises this fact, such as hierarchical linear models (HLM) and spatial regression models (i.e. spatial lag and spatial error). As expected, spatial interdependence is a major issue in the ecological study of crime patterns in Madrid city, both at the census tract (figure 6.7) and the neighbourhood levels. Since the sources of this spatial interdependence can be numerous, and are

observationally equivalent (Anselin, 2002), a pragmatic modelling strategy was pursued whereby a set of alternative spatial models are estimated and immigrant concentration effects subsequently compared. In what follows, the three spatial modelling strategies are presented, followed by a detailed discussion on the complexities of selecting an appropriate model.

The basic hierarchical linear model is given as follows (Rasbash and Goldstein, 1994):

$$y_{ij} = X_{ij}\beta + u_j + e_{ij} \quad (1)$$

$$\text{var}(y_{ij}) = \quad +$$

$$\text{cov}(y_{ij}y_{i'j}) =$$

$$\text{var}(e_{ij}) = \quad , \quad \text{var}(u_j) =$$

$$i = 1, \dots, n_j; \quad j = 1, \dots, J$$

for the  $i$ th Level 1 unit within the  $j$ th Level 2 unit.  $y_{ij}$  is an  $n$  by 1 vector of observations on the outcome variable,  $X_{ij}$  is the  $ij$ th  $p$  element row vector of the total design matrix  $X$ ,  $\beta$  is a  $(p * 1)$  vector of coefficients for the fixed part of the model,  $e_{ij}$  and  $u_j$  the individual and group error terms, and  $\sigma^2_{e_{ij}}$  and  $\sigma^2_{u_j}$  the 1-level and 2-level variances. This model can be easily extended to additional levels of aggregation, as in the 3-level models of census tracts, neighbourhoods and districts estimated in this chapter.

The spatial error model commonly is specified as follows:

$$y = X\beta + u \quad (2)$$

$$u = \rho Wu + \varepsilon$$

where  $y$ ,  $X$ , and  $\beta$  are similar to (1),  $\rho$  is the spatial autoregressive parameter,  $W$  is an  $n$  by  $n$  spatial weight matrix that specifies the neighbour structure, and  $\varepsilon$  is a random error term satisfying the standard assumptions.

For its part, the spatial lag model can be written as:

$$y = \lambda Wy + X\beta + u \quad (3)$$

where the terms are identical to (2), with  $Wy$  being a vector of spatial lags of the outcome variable, and  $\lambda$  the spatial autoregressive parameter.

Using different modelling strategies, however, does not imply that the author remains entirely agnostic about the data generating process, the sources of the spatial autocorrelation, or the ideal statistical model. The model diagnostics (i.e. Robust Lagrange Multiplier and the Akaike Information Criterion) suggest that both the spatial lag and spatial error are the adequate models, whereas the significant neighbourhood clustering in the spatial distribution of crime, and the importance of architectural and social barriers in their historical development, point to multilevel models.

Potential factors accounting for the spatial interdependence encountered in residents' perceptions of neighbourhood crime include the mismatch between the spatial unit of analysis and the relevant environment vis-à-vis crime, the spatial interdependence affecting the explanatory variables and the diffusion of crime-related activities, rumours and stereotypes (i.e. "real contagion"). However, whereas the importance of these sources is subject to debate, the spatial dependency built in the wording of the dependent variable is not. Respondents were asked to evaluate crime and vandalism in their residential areas, when these invariably imply several census tracts (i.e. census tracts' demarcations are unknown to residents). Anselin (2002) would

recommend that a spatial error model be employed since this dependency responds to a data-driven specification/problem. The model diagnostics do favour this model though, as compared with the spatial lag, the support is only marginal.

Urban geographies are, socially and administratively, both structured and continuous landscapes. Madrid city can be conceived both as a unified, continuous and smooth geography, where sheer distance acts as the main spatial dynamic, and as a structured space where architectural, social and even psychological “cut-off points”, which frequently correspond to administrative divisions, inform the spatial patterns of both perceptions of crime and its determinants. Here, both interpretations are believed to be complementary and somewhat accurate, for, even if most crime-related variables present a smooth spatial distribution across the urban space, important barrier effects exist, prominent among which those related to public parks (e.g. *El Retiro*, *Casa de Campo*), railways,<sup>98</sup> ringroads (e.g. *M-30* and *M-40*) and other main arteries (e.g. *A-3*, *N-402*, *Paseo de La Castellana*). Further, even if the administrative partitioning of the space—into districts and neighbourhoods—rarely produces distinctive policies or citizens’ identification with sublocal entities, associations, political parties and social services are often organised according to the same spatial pattern, and certain neighbourhoods and districts have truly mustered strong citizen attachment.<sup>99</sup> Since absolute distance and administrative divisions are sensible criteria for capturing spatial effects, both spatial regression models, based on Tobler’s first law of geography, and multilevel models, based on the idea of membership, are deemed to be valuable modelling strategies.

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<sup>98</sup> It is important to note that, in contrast to road arteries, railways have been largely ignored when administrative divisions, particularly districts, were modified in 1902, 1955 and 1988. Thus, they represent urban barriers within districts and neighbourhoods (e.g. *Fuencarral*) that are only partially captured in the multilevel models of census tracts, neighbourhoods and districts here estimated.

<sup>99</sup> For instance, *Vallecas* is a working-class district known for its strong associational base and residents’ attachment (Lorenzi, 2007; Quintana, 2011).



A second concern relates to the emphasis on micro, meso or pool effects. Essentially, OLS models focus on global or pool effects, HLM models analyse variation within selected levels of aggregation, and spatial regressions increasingly concentrate on micro processes as the degree of spatial autocorrelation increases, the definition of neighbours narrows geographically, and the spatial simultaneity (i.e. neighbours influencing and being influenced by neighbours) is ignored.<sup>100</sup> Since the spatial interdependence affecting the outcome variable looms large, and a very localised definition of neighbours has been used (i.e. queen contiguity rule),<sup>101</sup> the spatial lag and error regressions focus largely on differences within a very limited geographical area (i.e. less than a kilometre). This is certainly true for the spatial error model, but less so for the spatial lag for it includes a “global range of spillovers” spreading throughout the urban space (Anselin, 2002). The area of study is similarly local in the census tract level in the hierarchical models—differences within neighbourhoods—and progressively expands in the OLS or global model (i.e. differences within Madrid city).

To the extent that OLS, HLM and spatial regression models have different theoretical and empirical implications, findings based on all modelling strategies are presented, providing both different interpretations of immigrant concentration effects and additional checks of robustness.<sup>102</sup> That is, four regressions, using the census tracts as the primary unit of analysis, have been estimated: 1) a standard OLS, 2) a 3-level

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<sup>100</sup> The spatial error model, being effectively a first differencing model mediated by a spatial autoregressive parameter or spatial filter, ignores simultaneity, whereas the spatial lag model is explicitly designed as a spatially simultaneous equation (Anselin, 2002).

<sup>101</sup> A drawback of spatial regression models, whether spatial lag or spatial error, is that a specific criterion needs to be selected to create the spatial weight matrix (i.e. neighbouring areas) which will, to some extent, be arbitrary. In this case, the selection was empirically-driven using the Akaike Information Criterion (AIC). The queen contiguity rule provided the lowest values in AIC, ahead of the rook contiguity, K neighbours (from 1 to 500 closest neighbours), the inverse distance and the squared inverse distance criteria. The queen contiguity rule selects as neighbours those with common borders and vertices, as opposed to just borders in the rook contiguity case. Here, the average number of neighbours was 6.5, which corresponds approximately with 400 metres. In addition, and for computational reasons, the spatial weight matrix was row-standardized which, by definition, overvalues neighbours of census tracts with fewer neighbours.

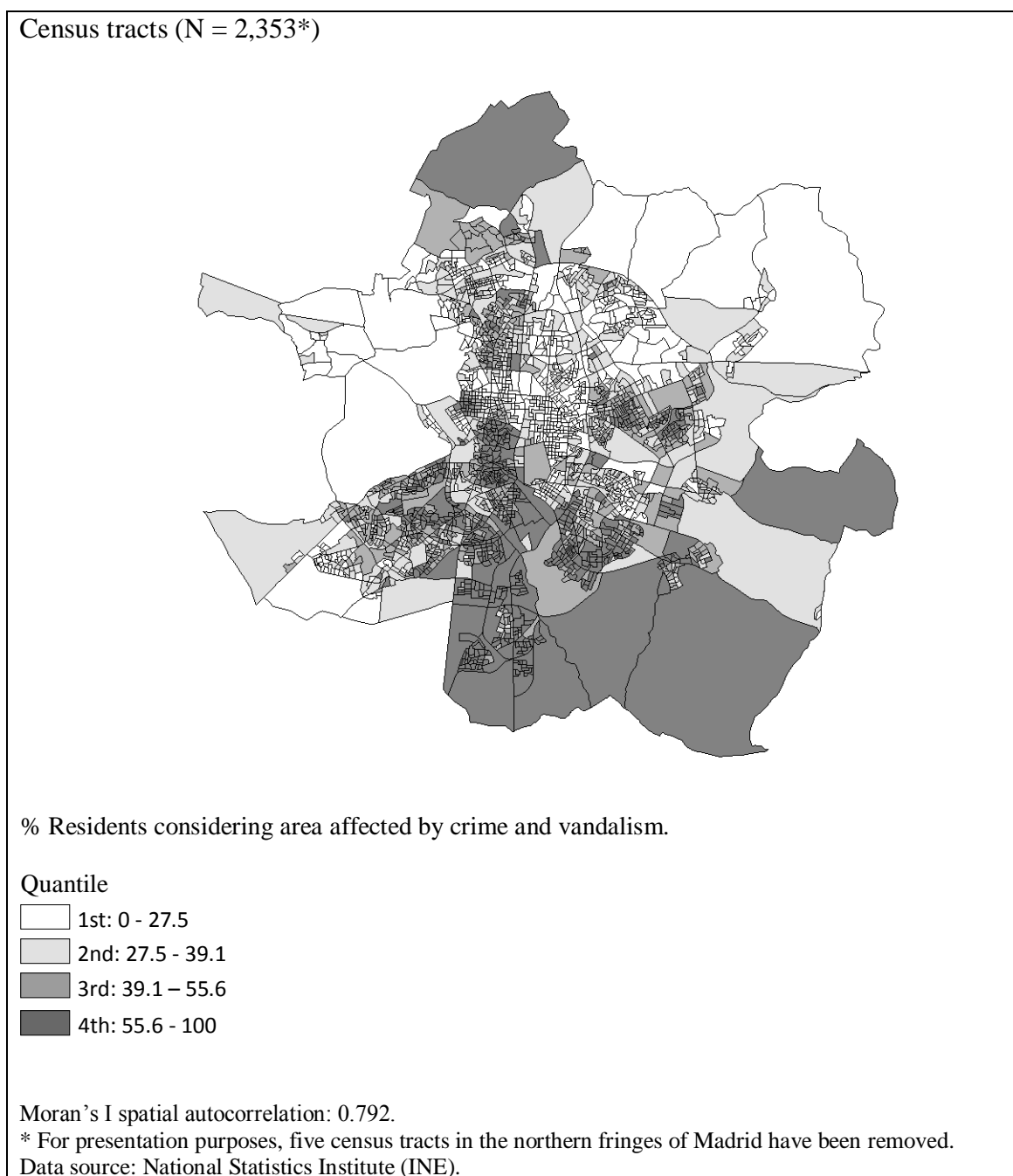
<sup>102</sup> All models in this chapter have been computed using R software except for those based on mediation techniques (see footnote 101). The syntax and the dataset are available upon request.

HLM where neighbourhoods and districts are the second and highest level respectively, 3) a spatial lag model, and 4) a spatial error model. Additional HLM models, with the same 3-level structure, are subsequently estimated for perceptions by Europeans, Africans, Americans and Asians.

The OLS regression coefficients can be effectively interpreted as the mean effect that the independent variables have on residents' perceived crime across the entire area of study (i.e. Madrid City). Census tract level coefficients in the HLM model are a complex weighted average of the within (i.e. census tracts) and between (i.e. neighbourhoods and districts) effects, though in practice they are used to estimate the relationship between a level-1 predictor and the level-1 outcome when variance at upper levels are removed, as in a fixed effects model (i.e. average of the within neighbourhood/district effects across Madrid City). For its part, coefficients in the spatial error and lag models can be interpreted in the same way as in the OLS framework. The difference is that in the spatial error model, the dependent and independent variables are transformed using the values of the neighbouring census tracts. The dependent variable is transformed subtracting the value of its neighbouring census tracts weighted by a spatial autoregressive parameter ( $y = y - pWy$ ), and similarly for the independent variables ( $X = X - pWX$ ). As the spatial autoregressive parameter approaches 1, the model resembles a "pure" first difference. When it takes the value of 0 (i.e. no spatial interdependence), it can be equated with a standard OLS model. In contrast, the spatial lag model incorporates the perceived crime of the neighbouring census tracts as an additional independent variable, allowing for the census tract and its neighbours to influence each other (i.e. simultaneous effects), generating a diffusion model. Therefore, the effects spread out, weighted by a spatial

autoregressive parameter, to the entire system so that closer census tracts bear a stronger impact than further census tracts.

Figure 6.7. Perceived crime in Madrid census tracts



## 6.6. Findings

For the sake of clarity, and in line with the chapter's aims, this section is divided into subsections dealing with the substantial and the technical/statistical aspects of the results.

### 6.6.1. Substantive findings

With the exception of the foreign-born population, the social disorganisation correlates show the expected sign across the different modelling strategies and levels of aggregation (table 6.3). That is, economically deprived areas with high levels of family disruption and residential turnover are robustly associated with higher levels of perceived crime. Consistent with Jacobs' (1961) theoretical propositions, population density helps, albeit moderately, to control residents' perceptions of local crime. This result is unanticipated, given the fact that densely populated areas, and tenement housing,<sup>103</sup> have traditionally been associated with chaos and a number of social ills (Mumford, 1961).<sup>104</sup> However, not only densely populated areas provide "eyes on the street" or informal surveillance (Jacobs, 1961), but also a context where encounters with other neighbours are inevitable, potentially increasing interpersonal trust and decreasing residents' urban unease (Wilson, 1968).

The models also include classic controls of social disorder and crime that, in line with previous studies, present the expected signs. Since adolescents and young adults are overrepresented in the criminal population, and especially in the type of delinquent acts that residents are more likely to observe (e.g. petty crime, vandalism), it is not

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<sup>103</sup> By visual inspection, high-density areas in Madrid match significantly with what would be considered low-income and tenement housing areas by the literature, either in its traditional (e.g. *Embajadores*) or modern form (e.g. *Entrevías*, *La Elipa*, *Quintana*, *San Blas*). Nevertheless, densely populated areas exist as well in tower blocks neighbourhoods (e.g. *El Pilar*), and in certain affluent areas (e.g. *Chamberí*, *Salamanca*).

<sup>104</sup> Related with the "city architecture" debate, the height of buildings has a positive, albeit moderate, effect on perceptions of crime (result not presented in this study but available upon request).

surprising that the presence of youth generate anxiety among residents and higher levels of perceived neighbourhood crime. The opposite is true for the proportion of females who are clearly underrepresented in crime statistics, contribute substantially to local communities, through their involvement in social networks and their active role in social control routines, and whose presence rarely inspires fear among neighbours. Finally, commercial activity not only affects crime levels, it also accounts, together with the socioeconomic status of residential areas, for the significant bivariate association between perceived crime and the presence of foreign-born population. Controlling for other area characteristics, 37 per cent of the association between foreign-born and perceived crime vanishes when SES is included, 34 in the case of commercial activity, and 17 per cent with the introduction of residential turnover.<sup>105</sup>

As regards electoral turnout, it exerts a negative effect on crime perceptions, though this effect is only large in the HLM model. Being an imperfect measure of civic engagement and social capital, and even more so of local involvement, which is more likely to affect residents' collective efficacy (Sampson, Raudenbush, and Earls, 1997), it is understandable that its direct effect is only moderate. However, it bears mentioning that its indirect effect, running through both social disorder measures (social incivilities and buildings' condition), is rather substantial being in fact twice as large as its direct effect. That is, electoral turnout is related to crime perceptions mainly through its impact on perceived social incivilities and the observed physical deterioration of neighbourhoods.

The main result as regards the foreign-born population is that, in spite of natives' consistent association of immigration and crime, and all the fuss about immigrants' responsibility in Madrid's soaring crime rates at the time, no immigrant concentration

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<sup>105</sup> These results are based on mediation techniques in an OLS framework. See *sgmediation* command in *Stata* for further details.

effect on crime can be observed, save for the OLS model and once the relevant factors are adjusted for.

However, bivariate relationships exist and match closely with mainstream stereotypes. Namely, natives and Western Europeans are associated with safe areas, and immigrants proper with insecure communities. Further, these correlations were consistent regardless of which continent's perceptions were analysed, although Europeans, Africans and Asians were less "self-critical" (figure 6.8).

When measuring immigrant concentration effects in multivariate regressions, with the spatial interdependence and the socioeconomic status of areas accounted for, these correlations change dramatically, to the point that coefficients for Western Europe and the Arab countries group change signs. Further controls alter these effects only slightly, and mostly by the commercial activity of residential areas. As regards specific groups, three results stand out. First, that perceptions of crime decrease as the proportion of residents from Post-communist Europe increases, and this effect is consistent across different modelling strategies and regardless of whose perceptions are analysed. Nevertheless, the overall effect in Madrid city was trivial for few census tracts had sizeable Eastern European residents, and the size of the effect was modest. Further, it is likely that recent developments in Romanian migration to Spain, mainly related to its enormous growth and to changes in its demographic, socioeconomic and ethnic composition, could alter significantly the findings observed for 2001-2002 if the study were to be replicated with recent data.

Second, that Asians are robustly associated with perceived crime, and this is true regardless of the statistical method, the level of "saturation" of the model, and even when Asians perceptions are examined. Interestingly, this result is in sharp opposition to the recorded crime rates of Asians in Spain (chapter 3), and to previous studies

conducted in the United States (Rumbaut et al., 2006), which suggests that Asians' negative impact on residents' perceptions of crime follows a community-level causal path. Although the consistent positive effect of Asians on residents' perceptions of neighbourhood crime may be related to pre-existing characteristics of areas where Asians settled (i.e. self-selection not accounted for in the models), it is also true that in terms of social disorganisation and other crime theories this result is hardly surprising. Owing partly to their lack of (native) language proficiency, Asians' low involvement in community affairs, and politics more generally, has been widely documented in different host societies (Lien, 2004; Bueker, 2005). As a result of their low civic engagement, the parochial and public levels of social control (Bursik and Grasmick, 1993) are expected to weaken considerably. For the same reason, their participation in natives or ethnically mixed social networks will be hindered, decreasing local communities' prospects for informal social control and rendering less likely the possibility of receiving sympathetic assessments by other groups. In addition, Asian neighbourhoods that have traditionally been identified as protective environments (Park, Burgess and McKenzie, 1925; Shaw and McKay, 1969; Lee and Martinez, 2006), were absent in Madrid. Their sheer numbers, particularly in 2001, and the moderate levels of ethnic residential segregation in Madrid, forced them to live in predominantly native and ethnically mixed neighbourhoods. Alternative explanations, nevertheless, should not be disregarded, particularly those related to supply side theories, such as the situational crime prevention theory (Clarke, 1995) for Asians could be an attractive target for delinquents.

Finally, there is a hint of evidence supporting a negative contextual "Latino" effect, similar to what several studies across the US have found (Martinez, 2002; Sampson, 2006; Morenoff and Astor, 2006), though this effect is only observable when

non-Europeans perceptions are analysed. When it comes to crime, natives feel less safe in census tracts where Latin Americans, but not Colombians or Peruvians (appendix E), reside. The opposite being true as well: the presence of western Europeans increase increase the number of residents' perceiving crime especially among Latin Americans.

How much of this purportedly negative effect of Latin Americans owes to their proficiency in Spanish and their ability to participate in mainstream social networks and activities is difficult to know. What is striking is the fact that immigration from extremely violent societies, at least in terms of homicide rates (UNODC, 2010), is uncorrelated, or even negatively related, to unsafe communities. This suggests that individuals alter their behaviour radically in response to changes in their circumstances—favouring rational accounts of deviant behaviour and dismantling cultural and “path dependence” explanations—or that a major self-selection process is taking place in Latin American immigration to Spain or in the sort of neighbourhoods in which they settle. The latter seems to be the case for Peruvians and Colombians arriving prior to 2000, but not necessarily for Ecuadorians and other Latin Americans.

As for other regions, their effects are generally ambiguous—normally changing across different modelling strategies and levels of aggregation—and unimportant. If anything the presence of Africans and particularly Europeans is positively related to residents' perceptions of neighbourhood crime. Particularly interesting is the minor concentration effect of Arab residents, given the fact that Moroccan adolescents were “imagined”, at the time, as drug dealers and petty delinquents, that these activities regularly took place in the vicinity—including parks, buildings and private homes—and that the Moroccan group was a relatively long-established community in Madrid. The presence of actual, as opposed to “imagined”, Moroccans was in fact unrelated to crime perceptions.



Figure 6.8. Correlations between the proportion of residents originating in selected countries/regions and perceived neighbourhood crime by continent of birth

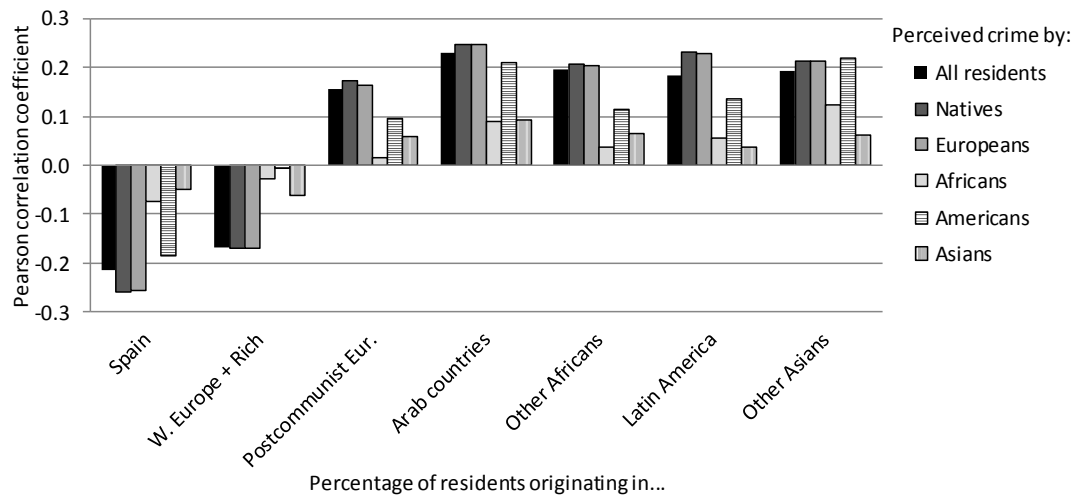


Figure 6.9. Spatial lag regressions. Coefficients for different regions of origin on residents' perceptions of neighbourhood crime

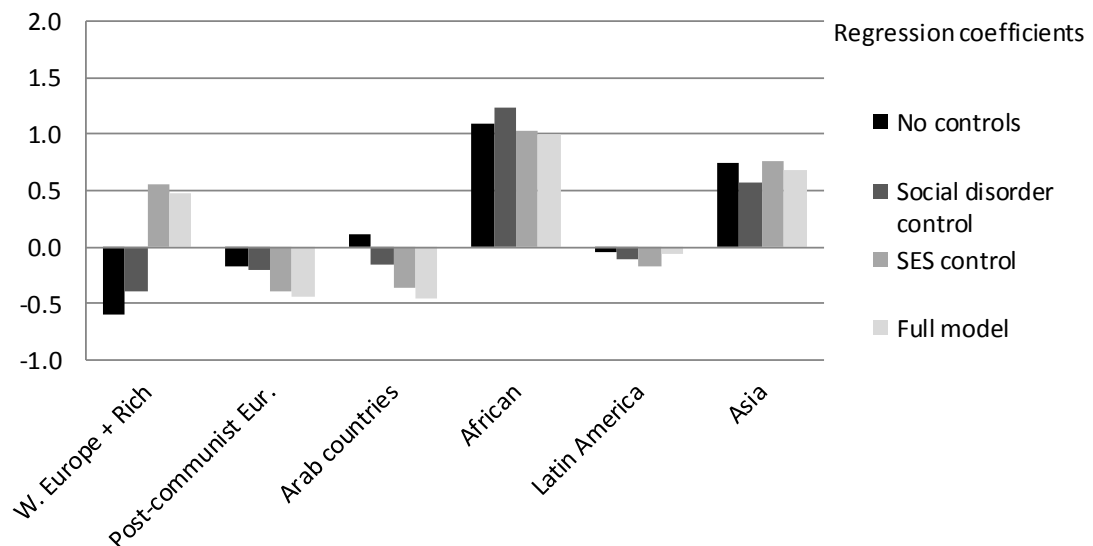


Table 6.3. Regression models. Explaining residents' perceptions of neighbourhood crime in Madrid city

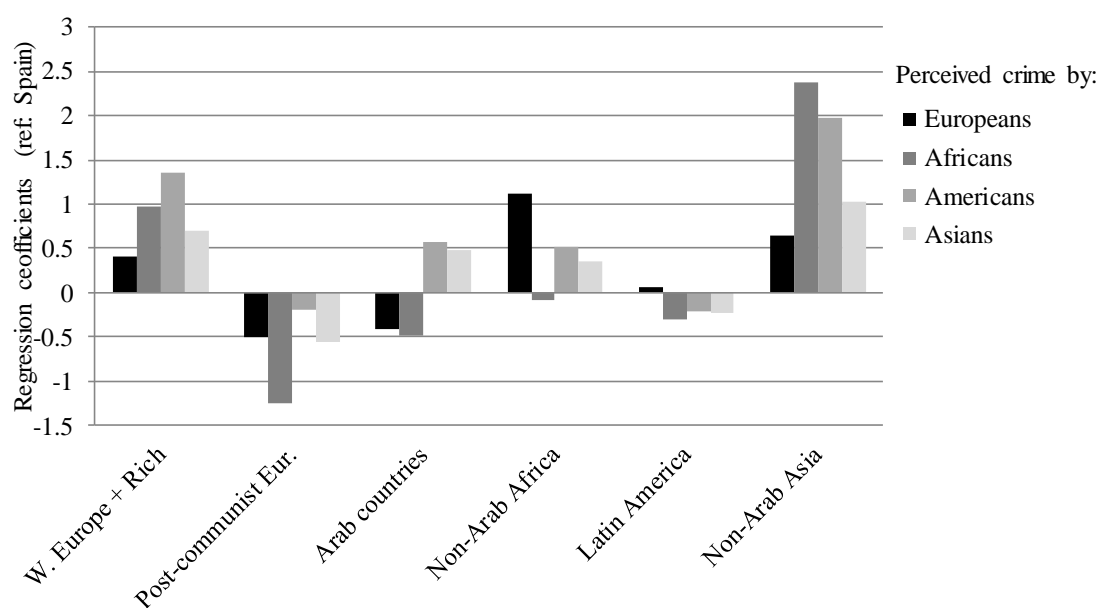
|                                       | I               | II             | III             | IV               |
|---------------------------------------|-----------------|----------------|-----------------|------------------|
| VARIABLES                             | OLS Robust*     | Spatial lag**  | Spatial error** | HLM              |
| Constant                              | 118.56 (12.5)   | 26.382 (4.63)  | 56.114 (8.46)   | 78.724 (10.02)   |
| Census tract                          |                 |                |                 |                  |
| % Foreign-born                        | 0.251 (4.49)    | -0.010 (-0.33) | -0.168 (-3.89)  | -0.015 (-0.31)   |
| Socioeconomic condition (PCA)         | -4.020 (-18.54) | -0.949 (-7.08) | -1.277 (-5.62)  | -1.317 (-5.08)   |
| Time of residence                     | -0.229 (-3.15)  | -0.029 (-0.72) | -0.014 (-0.29)  | -0.113 (-2.08)   |
| % Children single-parent households   | 0.279 (3.65)    | 0.199 (4.41)   | 0.103 (2.34)    | 0.283 (5.07)     |
| Population density                    | -0.047 (-3.24)  | -0.019 (-2.08) | -0.010 (-0.91)  | -0.011 (-0.91)   |
| Electoral turnout                     | -0.082 (-1.39)  | -0.036 (-1.18) | -0.019 (-0.55)  | -0.150 (-3.51)   |
| Social incivilities (PCA)             | 5.369 (24.03)   | 2.431 (17.4)   | 3.645 (20.34)   | 3.327 (17.15)    |
| Buildings condition                   | -0.158 (-3.22)  | -0.057 (-2.11) | -0.041 (-1.41)  | -0.105 (-2.99)   |
| % 15-24 years                         | 0.267 (3.17)    | 0.255 (5.17)   | 0.308 (5.7)     | 0.337 (5.39)     |
| % Women                               | -1.135 (-8.3)   | -0.282 (-3.35) | -0.210 (-2.15)  | -0.452 (-3.85)   |
| Commercial activity                   | 0.569 (1.57)    | 0.206 (0.96)   | 0.035 (0.13)    | 0.080 (0.26)     |
| Spatial dependence: perceived crime   |                 | 0.783 (62.77)  | 0.895 (86.16)   |                  |
| Census Tracts / Neighb' / Districts   | 2,358           | 2,358          | 2,358           | 2,358 / 128 / 21 |
| ICC coefficient (Neighb' / Districts) | -               | -              | -               | 0.22 / 0.43      |
| Akaike info criterion (AIC)           | 18,627          | 16,672         | 16,655          | 17,382           |

t or z-statistics in parentheses

\* Robust standarad errors computed.

\*\* Spatial weight matrix is based on the queen contiguity rule.

Figure 6.10. Crime perceptions and foreign-born groups: a cross-evaluation  
(model specification is identical to model IV in table 6.3)



### *6.6.2. Statistical findings*

There are, at least, three relevant findings to be noted:

1. The Robust Lagrange Multiplier (RLM) diagnostics yield almost identical values for both the spatial lag and error models. Therefore, caution is needed in interpreting the results from any of the regression models presented in table 6.3.
2. Consistent with the RLM diagnostics, The Akaike Information Criterion (AIC) indicates that, for identical model specification, the spatial error and spatial lag models perform similarly but are preferred to the HLM and OLS models. It should be noted that the AIC changes significantly only when the spatial interdependency is ignored altogether, as in the OLS model.
3. In order to construct the spatial weight matrix, the queen contiguity rule was preferred over the rook contiguity rule, the K neighbours, the inverse distance and the squared inverse distance, according to the AIC. Within the K neighbours rule, the lowest AIC values were found in the 6 to 10 neighbours range.

In what sense are these statistical findings relevant? First, they suggest that perceptions of neighbourhood crime across census tracts are significantly correlated as a result of both data-driven processes, such as an inadequate unit of analysis (Anselin, 2002), and cross-border effects, such as the diffusion of crime and rumours. For its part, the findings of the spatial weight matrix diagnostics indicate that, whatever the source of the spatial interdependence, the most efficient strategy is to consider only the influence (spatial lag) or correlated error structure (spatial error) of a limited number of neighbouring census tracts.

### **6.7. Discussion: Qualifying immigrant concentration effects on perceptions of crime**

In the previous section, it was demonstrated that immigrant concentration effects on residents' perceptions of neighbourhood crime exist, albeit these are modest and vary significantly across groups. In what follows, a brief discussion will tap on the alternative explanations for the observed impact of immigrant concentration, those that refer specifically to residents' perceptions of neighbourhood crime, and those that are common to the immigration literature. This will be followed by a discussion on the problems of self-selection and the implications of focusing on different levels of aggregation.

Too often, the public is tempted by straightforward interpretations of immigrant concentration effects whereby these groups are related to particular social outcomes as a result of a given set of cultural practices and tastes "imported" from their country of origin that would explain their distinctive offending rates. However, this interpretation is only one of a long list of plausible sources.

Neighbourhoods populated by immigrants may be also identified with crime because they are more likely to be victimised, provided that the crime occurs in or close to their residential areas (Sampson, 1987; Morenoff, Sampson, and Raudenbusch, 2001; Madrid Victimization survey, 2008). From an ecological perspective, immigrants may cause the breakdown of communities' social organisation, at least in the short term (Putnam, 2007), indirectly shaping crime perceptions through higher levels of crime, social incivilities and physical deterioration. Both interpretations should be further qualified as they could be related to immigrants' "intrinsic" or cultural inclination to "deviate" or (in)ability to enhance neighbourhoods' social capital (the blame "on

them”), with immigrants’ status as uprooted citizens (the blame on integration)<sup>106</sup> or with the diversity—socioeconomic, linguistic, religious, cultural—associated with the settlement of ethnically distinct groups in particular neighbourhoods (the blame on diversity).<sup>107</sup> Further complications arise when the context of reception (Portes and Borocz, 1989; Fenemma and Tillie, 1999) is incorporated as a mediating factor since societies, and neighbourhoods, are not equally succesful in managing the incoportation of immigrant and ethnically diverse communities (the blame on “us”).<sup>108</sup> Unfortunately, available information or an inadequate unit of analysis does not allow the relevance of each of these alternative sources to be properly assessed.<sup>109</sup>

Interpretations related to perceptions have been partly controlled for by analysing perceptions of neighbourhood crime by differents continents of origin. That is certainly true for the “nativity gap” in assessing crime levels, in the sense that immigrant concentration effects are not the result of their relaxed views on neighbourhood unsafety (see table 6.2). It is only partially true with regard to ingroup/outgroup bias in assessing neighbourhood crime levels in the presence of neighbours from same/different countries of origin. Although the bias can be somewhat inferred from cross-evaluations (figures 6.8 and 6.10), significant internal heterogeneity remains within these groups which can increase their effect on crime perceptions, if only because of ingroup/outgroup bias. It seems an “unfair” test to compare regression coefficients of the African group, in which Arabs and sub-Saharanans differ in many respects, with those of the European group, in which differences across national groups are probably less accute and where Spaniards clearly dominate and drive the results. This could have been solved using perceptions

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<sup>106</sup> This is the immigrant effect *par excellence* in that the focus is on the process of immigration in and of itself. See second generation and acculturation studies for more details.

<sup>107</sup> See social disorganisation theory.

<sup>108</sup> See theories on discrimination, segmented assimilation and context of reception.

<sup>109</sup> For instance, the context of reception hypothesis is ideally tested at geographical levels where market and public policies’ dynamics vary significantly, such as municipalities, metropolitan areas, regions or countries.

by country of origin, yet unfortunately this data are not available for issues of confidentiality.

Self-selection and reverse causality are a pervasive concern in urban studies for the simple reason that settlement patterns are “structured”, with dominant groups “deciding” where to live, and deprived groups forced into, *a priori*, less desirable neighbourhoods. In this study, self-selection would be observed if, *ceteris paribus*, immigrants self-selected, or were forced into, crime-ridden areas, as in Hipp (2011). Though endogeneity and self-selection may be guiding some findings, there are reasons to suspect that they are playing a minor role. For one thing, the typical census tract barely differs between natives and immigrants (table 6.1), and conventional constraints to housing decisions, prominent among which are housing prices, are actually included in the analyses.

Although the full set of results are not shown, immigrant concentration effects differ substantially depending on the level of aggregation. In contrast to other structural characteristics of residential areas, the presence of immigrants is increasingly associated with crime perceptions as the level of aggregation broadens. Interestingly, in Hipp’s (2007) study of a nonrural subsample, the opposite is true: among local conditions, only the effects of racial/ethnic heterogeneity are fairly robust to the geographical level of aggregation. The implications of these differences are manifold though here the focus is on the relevance of each social context in relation to the determinants of crime perceptions.

*A priori*, neighbourhoods seem a more adequate environment to understand crime patterns than census tracts; they are self-contained in the sense that most activities that residents undertake on a daily basis, save for work, exist in neighbourhoods but rarely concur in census tracts. However, some crime dynamics do occur at the very micro-

level. For instance, “pub effects” may extend to very short distances, social networks often develop within buildings—for instance in homeowners’ associations and random encounters—adolescents typically gather in or close to their homes. Only for the odd day, and at weekends, do “neighbourhood friends” explore distant residential areas, within their neighbourhoods and elsewhere.<sup>110</sup> Further, as the study area shrinks, the researcher is increasingly faced with a “controlled” environment or one in which the *ceteris paribus* condition becomes less illusory helping, among other things, to solve problems of self-selection and neighbourhood stereotyping—since these processes are less likely to occur within small areas of aggregation, such as the census tract. In sum, although neighbourhoods can be safely equated with residents’ lived environment in the Spanish context, it is the “micro” comparison of census tracts within neighbourhoods that properly controls for spatial independence, providing both meaningful and statistically robust findings.

## **6.8. Final remarks**

Public opinion is frequently guided by bivariate and visible relationships, the debate on the crime-immigration nexus being the most obvious example. Since immigrants live in relatively unsafe residential areas, it comes as no surprise that negative stereotypes about “immigrant neighbourhoods” have developed in Madrid, and elsewhere. Although there may be a “kernel of truth” (Gans, 1962) in these stereotypes, their causal assumption is probably flawed.

In the analysis of census tracts in Madrid city, the observed correlation between the presence of immigrants and residents’ perceptions of neighbourhood crime is mainly explained by differences in the socioeconomic status, commercial activity and

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<sup>110</sup> Key to understanding the spatial dynamics of juvenile delinquency is the appraisal of the importance of neighbourhood friends (i.e. *amigos del barrio*), school friends (i.e. *amigos del cole*) and others friendships in adolescents’ social networks for each portrays different spatial dynamics.

residential instability of the areas in which natives/immigrants live. What is left, once these and other area characteristics are adjusted for, is either a moderate immigrant concentration effect—positive for Asian residents and negative for Eastern Europeans—or an ambiguous effect—for Latin Americans, Arabs and non-Arab Africans.

At the community level, other “justifications” typically advanced by the pro-immigrant supporters, such as the age structure, were not supported by this study. This presumably reflects the fact that (despite being over-represented among young adults) immigrants, and especially Latin Americans, tended to settle in neighbourhoods with a high share of elderly natives. Neither are some of the causal explanations proposed by “nativists”, such that lone-parent households are prevalent in immigrant communities, responsible for the stereotyping of immigrant neighbourhoods as unsafe areas. In conclusion, this study plays down ethnic accounts of crime perceptions, and highlights the importance of economic factors, and other structural characteristics, in explaining communities’ perceived crime patterns, just as Shaw and McKay(1969[1942]) did seventy years ago with actual crime.

However, in dialoguing with public officials, this “materialistic” and demand-side message that stresses the importance of socioeconomic inequalities across the urban space is likely to fall on deaf ears. Not necessarily because public officials are keen on unequal societies, or indifferent about residents’ fear of neighbourhood crime, but because limiting urban inequalities is a complex process on which short-term politicians in a globalised economy have limited leverage, and for which they are rarely held accountable. Public officials, in contrast, are more likely to focus on determinants of crime perceptions that are subject to short-term policy changes, such as “pub effects” and the municipal licenses on which their existence depends, urban design and architecture, size and type of police forces and other supply-side or situational crime



prevention determinants (Becker, 1968; Clarke, 1995). However, as illustrated in chapter 4, policy-makers should be aware that pubs, shops and other type of commercial activity seem to be related to perceived neighbourhood crime largely because they generate noise and dirtiness and these, in turn, shape residents' perceptions of crime.

In a relative safe environment, such as Madrid City (Dijk, Kesteren and Smit, 2007), tackling perceptions of neighbourhood crime should be equally, if not more, important than dealing with criminal behaviour *per se*. In this regard, the fact that the presence of immigrants hardly explains residents' perceptions of crime, at least if compared with the effect of other local conditions such as residents' socioeconomic status, could serve to qualify the widespread belief that has inspired Spanish relatively welcoming attitudes in the last decade (European Social Survey, 2002). Namely, that immigration is economically beneficial, but detrimental for local crime rates.

Moreover, this study emphasises the importance of structural determinants, to the detriment of cultural and psychological factors, on various theoretical and empirical grounds. For one thing, structural explanations avoid circular interpretations (Gans, 1962) and trivial, albeit consistent, mechanisms (Gerber, 2008). For another, the "structural" variables included in the empirical models, even if through several causal paths, account for as much as fifty per cent of variations of perceived crime in Madrid's census tracts.<sup>111</sup> These results support the popular line of argument according to which "there are good and bad people in every culture" with a minor addition. Namely, that the proportion of "good" and "bad" ultimately depends on the structural conditions that different communities face at different spatio-temporal contexts.

As regards specific groups, there are no signs of a positive "Latino" effect on crime, even though their "culture" is allegedly violent and is thought of as not having

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<sup>111</sup> In a saturated model, and using as outcome variable perceived crime by all residents.

“the ethics that we have here” (President of the Catalan Business Association, PIMEC 2010). Nor is there a consistent effect for Arabs, Africans or nationals of affluent countries. In contrast, Asian concentration is positively and robustly associated with perceptions of neighbourhood crime, and this result remains even when Asian perceptions of crime are analysed. Although this finding may be the result of Asians’ self-selection into unsafe census tracts, an alternative community-level explanation, related to their lack of ethnically mixed social ties and with their low levels of socio-political participation, is believed to be the most probable cause.

As for the evolution of crime patterns in Madrid city, and their (bivariate) connection with immigration, the results of this analysis point to the importance of two factors. On the one hand, further integration of immigrant communities, reflected not so much in their socioeconomic status but in the residential stability of their neighbourhoods, should contribute to strengthen local social ties, improve social organisation, control deviant behaviour and reduce the belief in a crime-immigration nexus. On the other hand, in 2002 there were reasons to anticipate that, in the short-term, immigrants, and especially those from Latin America, would be increasingly associated with crime and social disorder as their number of adolescents increased and the elderly population in their communities were replaced by immigrant families. That is precisely what occurred in recent years, as Latin gangs (*bandas latinas*) emerged in Madrid’s working-class neighbourhoods.<sup>112</sup> However, in the long-term the ageing of the immigrant population should reduce the stereotyping of immigrant neighbourhoods as socially disorganised and crime-ridden, for at least three reasons: (1) through a reduction of crime rates, and the proclivity to deviate, (2) through the increased involvement of middle-aged residents in the social organisation of their

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<sup>112</sup> Composed mainly of Dominicans, Ecuadorians and Colombians, these gangs include *Dominicans Don’t Play*, *Latin Kings*, *Ñetas*, *Forty Two*, *Trinitarios*, etc (Report of the General Public Prosecutor’s Office, 2009).

neighbourhoods, and because (3) regardless of their actual crime rates, older people are rarely imagined as criminals.

## CHAPTER 7. CONCLUSIONS

This dissertation has adopted a quantitative approach to investigate the determinants of residents' perceptions of neighbourhood crime, focusing specifically on structural factors at the community level, in accordance with a social disorganisation framework. Using different statistical models, including linear regression, multilevel models and spatial regression analyses, and several data sources, in particular the 2001 Population and Housing Census and CIS survey 2634, the research has confirmed the urban nature of the social disorganisation theory, the relevance of its exogenous sources in explaining perceived neighbourhood crime, and the potential for exporting the Social Disorganisation Theory to Southern European Countries. These include classical variables, such as local communities' socioeconomic status, residential stability, ethnic diversity, family disruption and urbanisation, but also other features related to the time, skills and resources deployed by residents in their residential areas such as commuting time to work, working hours and the availability of a second home.

Among these, special attention has been devoted to measures of diversity and immigration demonstrating that their effect on residents' crime perceptions is not necessarily robust to different model specifications and statistical methods, even if the belief in a crime-immigration nexus is so prevalent among Spaniards. Precisely on this point, the dissertation has investigated why the belief in a crime-immigration nexus varies significantly across individuals and communities. Three variables have been identified as determining factors: contextual parochialism, right-wing ideology and the media. In rural areas with high residential stability, a significant presence of elderly population and low socioeconomic status, residents are more likely to unconsciously associate immigration and crime, even when individual attributes are adjusted for. Not

surprisingly, right-wing residents are more likely to associate both phenomena yet, in contrast to many statements by scholars and pundits, the media in Spain seems to exert a moderator effect.

Some of these results may be expected, some are likely to be irrelevant, while others are both unexpected and important in terms of their policy-implications. The following section summarises and discusses the core findings of the dissertation.

### **7.1. Perceived neighbourhood crime: an independent and consequential outcome variable**

In the transition from an exclusive emphasis on crime determinants to other aspects of the crime problem that came about in the 1960s (Conklin, 1971; 1975), criminologists increasingly focused on the consequences of crime, for victims and non-victims alike (Warr, 2000). The discovery that fear of crime was more widespread than victimisation (Garofalo and Laub, 1978; Wilson, 1975), and that psychological measures of crime were heavily influenced by signs of incivilities in the neighbourhood (Hunter, 1978; Lewis and Salem, 1986; Skogan, 1990; Wilson and Kelling, 1982), led to the recognition among scholars that fear of crime and perceptions of risk were not directly proportional to actual crime. Had earlier criminologists paid more attention to the Thomas theorem,<sup>113</sup> they would have been bolder in acknowledging that reactions to crime could, in and of themselves, be a debilitating ingredient of community life.

One of key contributions of the current work has been to confirm the status of perceived neighbourhood crime as an independent criminological construct that merits specific attention from the academic community. Crime perceptions have here been conceptualised as a combination of visual cues—such as signs of disorder and

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<sup>113</sup> “If men define situations as real, they are real in their consequences” (Thomas and Thomas, 1928).

neighbours' sociodemographics—personal, or socially transmitted, experiences of crime, along with certain individual characteristics (e.g. age, gender, citizenship) that, everything else constant, mediate between communities' characteristics and individual reactions to crime. Unfortunately, the lack of crime data in Spain has been an impediment for carrying out a comprehensive assessment of the components that make up perceived neighbourhood crime. However, available data have allowed us to bear out the importance of perceived social incivilities and the physical decay of neighbourhoods in explaining crime perceptions, findings that are inferred from the analysis of the 2001 census and CIS surveys. Among the various signs available to residents in the community, the models presented here suggest it is perceptions of noise, cleanliness and the proportion of foreign nationals and the observed building deterioration that most strongly influence residents' perceptions of neighbourhood crime, whereas perceptions of communities' pollution, transport accessibility and existence of green areas and the number of vacant businesses exert minor or no effect at all.

Existing data in Spain also confirm the significant, albeit moderate, association between subjective (i.e. perceived neighbourhood crime) and objective measures of crime (e.g. crime rates, personal victimisation experiences) that has been so widely documented in previous studies (Garofalo, 1979; McPherson, 1978; Quillian and Pager, 2001; Skogan, 1986, Warr, 1982). These types of measures are sufficiently correlated so as to consider personal, or socially transmitted, experiences of crime a relevant component of crime perceptions. Yet the correlation is moderate enough to discard the general correspondence between subjective and objective measures of crime reported by McPherson (1978) and Warr (1982). The policy implications are that controlling crime may only be a partially effective strategy to reduce reactions to crime, while directly

altering residents' beliefs about neighbourhood crime may only fully succeed if criminal activities are also addressed.

What types of crime have shown to be more robustly associated with crime perceptions and fear of crime? Analysing victimisation experiences, it is the instrumental, unpredictable, serious and "street" crimes, particularly those that are personally experienced, that appear most clearly to affect victims' perceptions. At the district and provincial levels, perceived and observed measures of crime are robustly correlated yet no discernible patterns arise when comparing different types of crimes.

## **7.2. Ecological in its genesis**

Since the dissertation is about the relevance of urban social processes in explaining individual perceptions of neighbourhood crime, it is vital to demonstrate that the outcome variable hinges on community dynamics. By establishing that both signs of social disorder and crime rates contribute to fear and perceptions of neighbourhood crime, previous studies have indirectly confirmed the importance of environmental factors for understanding variations of perceived crime across local communities (Conklin, 1975; Quillian and Pager, 2001).

However, it is only through multilevel regression models that the researcher can successfully assign the variance of the dependent variable to different levels of aggregation. In a multilevel model of respondents and census tracts (chapter 5), using the CIS survey 2634, around 30 per cent of the variance occurs at the census tract level. More importantly, if additional levels of aggregation are added (i.e. districts, municipalities and provinces), it is at the census tract level where most of the contextual variance occurs (39 per cent), followed by provinces (25 per cent), districts (21 per cent)

and municipalities (15 per cent).<sup>114</sup> Not only do perceptions of neighbourhood crime vary enormously across local communities, they also respond, directly or indirectly, to known community dynamics, which include the numerous cues of social disorder available to residents. Moreover, these are effects that hardly vary when respondents' characteristic are incorporated into the analyses. It is true that a large portion of variance still happens at the individual level, yet the source of this variation is largely unknown (i.e. unobservables, randomness). In addition to certain perceptions of the local area—that were included in the same survey section as perceptions of neighbourhood crime—only country of citizenship, ideology and, to some extent, education are important individual factors of perceived crime in the hierarchical linear models.

A second strategy to identify individual determinants of crime perceptions has been to compare crime assessments of the same census tracts across different socio-demographic groups in Madrid City using the 2001 Population and Housing Census. Albeit the findings are of a descriptive nature, no consistent relationship has been found between gender, age or education level and perceptions of neighbourhood crime. Regardless of residents' sex, age, or educational levels, between 41 and 43 per cent of Madrid citizens stated that crime and vandalism were a problem in their local areas. However, this was observed to vary considerably for residents born in different continents. Whereas 43 per cent of Europeans considered crime and vandalism a problem, only 29 per cent of Americans, 32 per cent of Africans and 33 per cent of Asians did so when evaluating identical census tracts.

The implications of these findings are that ecological models of perceived neighbourhood crime that overlook respondents' characteristics can be estimated with the guarantee that a substantial proportion of the variance occurs at the community level

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<sup>114</sup> In contrast, in the analysis of Madrid City using the 2001 Population and Housing Census (chapter 6), most of the contextual variance happens at the district level (51 per cent), followed by the census tract (27 per cent) and the neighbourhood (22 per cent).



and that this variance appears to be largely independent of variance at the individual level.

### **7.3. A social disorganisation framework**

Criminological research on social disorganisation, collective efficacy and related constructs is as extensive in the United States as it is lacking in Spain. This unfortunate imbalance (one that is even more accentuated than in other criminological or sociological theories) emerges from a combination of a shortage of criminologists, an overrepresentation of the legal perspective and, more importantly, an alarming lack of crime data that has been widely criticised by experts (Aebi and Linde, 2010).<sup>115</sup> In this challenging context, the dissertation's aim has been to test the performance of the social disorganisation framework in Spanish local communities. Despite the fact that social disorganisation theory was developed almost a century ago to account for variations of neighbourhood crime in America's largest cities, the findings in this dissertation suggest that it remains a valuable and exportable model to predict and explain spatial variations of crime-related measures. Classical exogenous sources of social disorganisation, including the socioeconomic status of the communities, residential stability, ethnic diversity, family disruption and urbanisation, perform almost impeccably in explaining patterns of neighbourhood crime in Spain. However, there are a few exceptions and observations that the reader needs to be aware of. First, the performance of the various exogenous sources needs to be differentiated. Family disruption, residential turnover and urbanisation are the most robust determinants, in that they increase the levels or perceived neighbourhood crime in almost any setting and employing different

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<sup>115</sup> To know more about the topic please read the following piece of news "Official statistics are not classified information" that appeared in the Spanish newspaper *EL PAÍS* (23/07/2011). [http://elpais.com/diario/2011/06/23/sociedad/1308780001\\_850215.html#despiece1](http://elpais.com/diario/2011/06/23/sociedad/1308780001_850215.html#despiece1). Last accessed on the 04<sup>th</sup> July 2012.

modelling strategies. The socioeconomic status of communities—whether measured through unemployment, level of education or a principal components analysis—is unique for it is the key factor in accounting for urban-rural differences and neighbourhood variation within large cities, yet its performance in the analysis of variance across small municipalities (less than 35,000 inhabitants) is relatively poor. For its part, the link between immigration and perceptions of neighbourhood crime will be dealt with in the next section but it is evident that its effect exhibits a more erratic pattern. As for spatial or municipal heterogeneity/inequalities, the effect on crime perceptions is positive and significant for most of its dimensions (i.e. socioeconomic status, national diversity and family stability), these effects being largely mediated by indicators of social disorder.

Important as these absolute effects are, it is important to assess how much of their effect is mediated by social disorder measures, such as noise, cleanliness and building deterioration. As suggested in the theoretical model presented in chapter 2, the causal path that links the exogenous sources of social disorganisation to crime perceptions is in fact mediated by indicators of social disorder, but only partly. Once the “urban unease” (Wilson, 1968) is adjusted for, the exogenous sources of social disorganisation still exert a significant impact on residents’ perceptions. Determining whether these “residual” effects are mediated by actual criminal activities or by other social processes or are in fact direct effects is beyond the scope of the available data. However, for some variables their effect on crime perceptions is fully mediated by measures of social disorder. For instance, the observed association between commercial activity and crime perceptions disappears once the perceived social incivilities and the physical decay of neighbourhoods is taken into account. That is, shops and offices seem to affect residents’ perceptions of cleanliness and noise which, in turn, explain the levels

of perceived neighbourhood crime. Similarly, the proportion of elderly residents is associated with perceptions of less crime, but only because they tend to live in relatively clean and, especially, quiet residential areas. Once these measures of social disorder are included in the models, the proportion of elderly people is actually positively related to crime perceptions, the opposite being true for the presence of women.

Another important finding in the dissertation is that any environmental factor likely to affect the density (i.e. quantity) of local friendships and voluntary associations and their effectiveness (i.e. quality) in controlling crime should be considered as a potential cause of social disorder. Or, in terms of the resource model of socio-political participation (Putnam, 1995; Verba and Nie, 1972; Verba, Schlozman, and Brady, 1995), in socially organised communities residents need to spend time in the community and acquire the necessary resources (including communication and organisational skills, and financial resources) to create effective, purposeful and well-connected associations. This strategy was followed in chapter 4 where commuting time to work, commuting time to school and, to a lesser extent, overtime work and having access to a secondary house were shown to affect residents' perceptions of neighbourhood crime, hypothetically through a reduction/increase in the time adults/youth spent in their communities. These results should encourage researchers to avoid focussing exclusively on those exogenous sources employed by classical studies but rather to concentrate on a more general framework where any factor influencing non-delinquents' effective engagement in community life and activities is considered.

Speaking directly to the literature on social disorganisation and crime in rural communities (Lee, Maume and Ousey, 2003; Osgood and Chambers, 2000), this dissertation has examined the social disorganisation framework in four subsets of municipalities based on population size. While the model works best in large cities,

confirming the urban nature of the theory, it can also be extended to other municipalities, and particularly to medium-sized cities (i.e. from 35,000 to 225,000 inhabitants) and small towns (i.e. from 5,000 to 35,000 inhabitants). These models also illustrate how perceptions of neighbourhood crime increase with population size but in a curvilinear fashion. In fact, population size hardly has an impact when differences across and within medium-sized and the largest cities are studied. The typical neighbourhood in the largest cities (Madrid and Barcelona) is in fact perceived as safer than those in smaller but still large cities like Seville and Valencia.

Considering that the exogenous sources of social disorganisation correlates are at the origin of the two proposed causal paths (i.e. (1) exogenous sources → social disorder → perceived crime and (2) exogenous sources → social disorder → actual crime → perceived crime),<sup>116</sup> the excellent goodness of fit of the models should come as no surprise, explaining as much as 50 per cent of the variance across Spanish and Madrid's census tracts respectively.

On the question of the mediating role played by the three orders of social control (i.e. private, parochial and public) in the exogenous sources/perceived neighbourhood crime relationship, the research presents no direct evidence. Instead, it draws on previous research (Sampson and Groves, 1989; Sampson, Raudenbush and Earls, 1997) and on an imperfect proxy of residents' willingness to participate in local affairs (i.e. electoral turnout) which was found to exert a substantial indirect effect through the social disorder variables.

The question of how important it is to unveil the "black box" connecting the exogenous sources of social disorganisation and residents' perceptions of crime was discussed extensively in chapter 2. Since previous research has demonstrated that what

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<sup>116</sup> See chapter 2 for further details.

ultimately drives the levels of social organisation, deviant behaviour, crime and residents' perceptions of local crime are the structural characteristics of communities—also termed exogenous sources of social disorganisation—and broader processes that correlate with the levels of social inequality, it seems justifiable to overlook the content of the “black box” that lies in between the exogenous sources and residents' perceptions of neighbourhood crime. After all, if reducing residential turnover helps to control residents' fear and perceived crime in, for instance, 95 per cent of the cases, there is no reason why urban sociologists should not recommend policy-makers to take action towards this end, even if the specific causal paths and mechanisms through which this policy has an effect are ambiguous.

#### **7.4. Ethnic diversity, immigration and perceived neighbourhood crime**

Although Shaw and McKay (1969[1942]) reported that juvenile delinquency was correlated with the proportion of foreign-born and Negro heads of families, they were careful in attaching causal significance to these associations based on basic descriptives,<sup>117</sup> partial correlation analyses,<sup>118</sup> and the existence of multicollinearity.<sup>119</sup> In a similar vein, the bivariate association between immigration-related diversity and perceived neighbourhood crime that is observable across Spanish local communities, is not necessarily robust to different model specifications and estimation methods, nor replicated using different subsets of municipalities. For instance, a Herfindahl index based on national groups proved to be irrelevant to the explanation of perceived crime

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<sup>117</sup> “No racial, national, or nativity group exhibits a uniform, characteristic rates of delinquents in all parts of Chicago.” and “(...) within the same type of social area, the foreign born and the natives, recent immigrants nationalities, and older immigrants produce very similar rate of delinquents.” (ibid.)

<sup>118</sup> “It is clear from these [partial correlation] coefficients, therefore, that the percentage of families on relief is related to rates of delinquents in a more significant way than is the percentage of foreign-born and Negro heads of families.”

<sup>119</sup> “(...) it is the Negroes and the foreign born, at least the newest immigrants, who have least access to the necessities of life and who are therefore least prepared for the competitive struggle, it is they who are forced to live in the worst slum areas and who are least able to organize against the effects of such living” (Shaw and McKay, 1969 [1942]).

in small towns and medium-sized cities (chapter 4). It also proved trivial or even negative in the analysis of Madrid City when the spatial interdependence is adjusted for by means of multilevel, spatial lag or spatial error models (chapter 6). As comparisons of census tracts becomes more localised—such as census tracts within neighbourhoods (multilevel models) or census tracts that are close or adjacent (spatial error models using queen contiguity rule)—the influence of immigration measures not only decreases, it actually turns negative, thus increasing residents’ feelings of safety. Vis-à-vis perceptions of neighbourhood crime, these findings suggest that living with immigrants—meaning in the same census tract—is better than living near them—meaning in different census tract but in the same neighbourhood, district or municipality.

In fact, diversity in and of itself may reduce crime perceptions, as suggested by the finding in chapter 4 where the Herfindahl index had a negative impact once the proportions of foreign national groups were included. While there are serious problems of multicollinearity between diversity and immigration concentration measures, there is some evidence suggesting that, in those contexts where ethnic diversity measures exert a negative impact on residents’ perceptions of neighbourhood crime, it is the “ethnic” part that carries most of the weight. This finding goes against previous studies that have explicitly focussed on the diversity component, testing the impact of diversity measures directly (e.g. Herfindahl index) and overlooking the internal composition of the immigrant population.

The presence of certain groups defined by nationality or country of birth has been shown to be highly associated with perceptions of local crime. This is the case for Moroccans at the national level (chapter 4), and Asians in the study of Madrid City (chapter 6). Interestingly, when the crime perceptions of those of different continents of

origin are analysed, one can identify a significant yet moderate ingroup-outgroup bias (Rabbie and Horwitz, 1969). For instance, in Madrid City Asians were identified with unsafe census tracts in multivariate analyses, regardless of the continent of birth of census respondents.

It is a striking finding of the research that against the background of a widespread belief in a crime-immigration nexus the actual presence of foreigners in a local area has been shown to exert an uneven and very moderate independent effect on the perceptions of neighbourhood crime. More importantly, this result holds for a sample in which half of respondents perceive identical levels of neighbourhood crime and presence of foreign nationals if given four possible answers (chapter 5).

### **7.5. The belief in a crime-immigration nexus**

The belief that foreigners are crime-prone is deeply rooted in modern societies, as data from the European Social Survey, the General Social Survey in the United States or CIS and ASEP surveys in Spain clearly indicate (chapter 5). Here, instead of focusing on a survey question that explicitly asks respondents if immigration and delinquency are related—as in Citrin and Sides (2005)—the aim has been to delve into residents' latent belief in a crime-immigration nexus. Making the most of the CIS survey 2634, and specifically of a set of questions related to residents' local areas, chapter 5 has tried to illustrate the pervasiveness and robustness of the latent belief in a crime-immigration nexus, as well as identify why the belief in a crime-immigration nexus varies substantially across individuals and census tracts.

The first important finding is that respondents who say there are “many immigrants” in their local areas, are also more likely to state that there is “a lot of crime”. Albeit certain social groups are less likely to associate both phenomena, such as

foreign nationals and university graduates, the belief is pervasive. More importantly, among the series of community characteristics, it is the perceived number of foreigners and respondents' trust in neighbours that are most strongly associated with crime perceptions. Other community characteristics, such as the "area is well cared for", the "area is well-equipped", "neighbours are affluent" or "neighbours know each other", are only secondary determinants of respondents' perceptions of crime.

Although this latent belief in a crime-immigration nexus may bear resemblance to the real relationship, it is argued that such belief is not necessarily based on facts. For one thing, in the various analyses conducted the proportion of immigrants in the neighbourhood has an erratic effect on the level of crime perceived by residents, ranging from positive to moderately negative. Yet, residents' perceptions of the number of immigrants remain, together with their trust in neighbours, as the main predictor of their perceptions of crime levels. Among the various neighbourhood conditions that are associated with perceived crime, it seems that neighbours make use of the presence of, real or imagined, immigrants as a marker of social disorder and neighbourhood decay.

A different question relates to the examination of the individual determinants and contextual factors that help account for the differences in the latent belief in a local crime-immigration nexus. In chapter 5, three factors were identified as relevant. As expected, respondents who consider themselves as right-wing are more likely to associate immigration and crime, though this is not true for those who consider themselves conservatives. In contrast to statements by a number of scholars and pundits, the media does not reinforce the belief in a crime-immigration nexus. Rather the opposite, reading/listening/watching the news in the newspapers, on the radio and on television is associated with a more relaxed view on the crime-immigration nexus. In a similar vein, such a view is particularly mild among those who claim that debates and



documentaries are their favourite TV programmes, whereas it is strongest among those who claim never to watch TV, followed by those who prefer romance and gossip programmes, films and series and sports. Closely related to the origins and core of the social disorganisation theory, the belief in a crime-immigration nexus is also associated with what is here labelled as contextual parochialism. That is, the combination of elderly population, stable communities and rural areas, the main difference with the social disorganisation construct being that parochial areas are rarely affluent. Thus, in census tracts classified as parochial, the unconscious association of crime and immigration was particularly strong even though these residents minimally or rarely shared the space with ethnically diverse groups. This latter finding certainly supports the contact hypothesis, for it is in highly diverse settings where the belief in a crime-immigration is weaker.

#### **7.6. An avenue for further research**

Although the extension of this research may take several paths—for instance, by extending the research to other Southern European countries, including actual crime rates in the analyses or analysing self-reported deviant behaviour—the author would like to investigate the role played by homeowners' associations in the social organisation of residential areas and their ability to react efficaciously to episodes of crime. These associations, which regulatory framework and functioning vary considerably from country to country, are highly developed in Spain as a result of the importance of commonhold as a system of property ownership (*comunidad de propietarios / comunidad de vecinos*). What makes this research agenda so valuable is the fact that these homeowners' associations are widespread, active and consequential. They are widespread in that a high proportion of urban dwellers live in owner-occupied

houses that are governed by a homeowners' association. They are active because a high proportion of dwellings are owner-occupied (Eurostat, 2009) and because compulsory meetings of all members take place at least once a year.<sup>120</sup> Finally, they are consequential in that these associations regulate important aspects of how members can use their property and conduct themselves in the common areas, and in that members contribute financially and through other means to the day-day running of the association.

The study of these meso-level associations will hopefully contribute to advance our knowledge of the various ways in which residents try to control the criminal behaviour in their local communities and could help policy-makers to consider these associations when dealing with both perceived and observed crime.

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<sup>120</sup> In accordance with law 49/60, 23th July, of horizontal property (*Ley 49/60 de Propiedad Horizontal*).

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## Appendix

### A. Description of variables

Variables refer to census sections (S), municipalities (M) or both (S/M).

*Perceived crime* (S): Proportion of adult respondents—16 or over—replying “yes” to the following question: “Are crime and vandalism a problem in your area?”

*Socioeconomic condition* (S/M): Average socioeconomic condition, which is constructed combining data on economic activity, employment status and occupation. Values range from 0 to 3 and have no substantive meaning.

*Unemployment rate* (S): Number of unemployed as a per cent of the active population.

*% Higher education* (S/M): Number of graduates as a per cent of the adult population.

*Herfindahl index* (S/M): Sum of the squared proportion of 15 different nationalities, or group of nationalities, over the total population. Nationalities included are: Argentina, Bulgaria, Cuba, the Dominican Republic, Ecuador, France, Germany, Italy, Morocco, Peru, Rumania, Spain, UK, Venezuela, and “other nationalities”. Values range from 0 to 1 and can be interpreted as the probability that two individuals selected at random belong to the same group (i.e. nationality).

*% Nationality* (S): Number of residents from a given nationality as a per cent of the total population.

*Length of residence* (S/M): Average length of residence in current dwelling. Unit of measurement: years.

*% Renters* (S): Number of renters as a proportion of the total population.

*% Secondary residence* (S): Number of residents with access to a secondary residence—used at least 15 days a year—as a per cent of the total population.

*% Divorced/Separated* (S/M): Number of divorced and separated persons as a per cent of the total population.

*% Overtime work* (S): Number of persons working over 45 hours a week as a per cent of the employed population.

*Commuting time to work* (S): Average commuting time to work of the employed population. Unit of measurement: minutes.

*Number children per family* (S): Average number of children per family unit with children.

*Commuting time to school (S)*: Average commuting time to educational institutions of the student population. Unit of measurement: minutes.

*% Elderly (S)*: Number of people older than 64 as a per cent of the total population.

*% Women (S)*: Number of females as a per cent of the total population.

*Number retail shops/offices (S)*: Number of retail shops and offices.

*Perceived noise*: Is noise a problem in your area?

*Perceived cleanliness*: Is cleanliness a problem in your area?

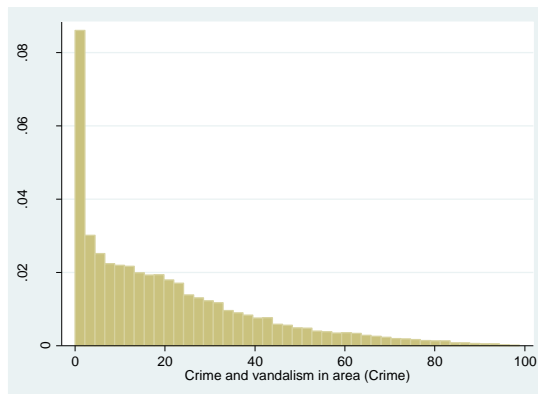
*Building conditions*: A 0-100 index measuring the state of buildings in a particular area.

The maximum value (i.e. 100) indicates that all buildings are in a good condition.

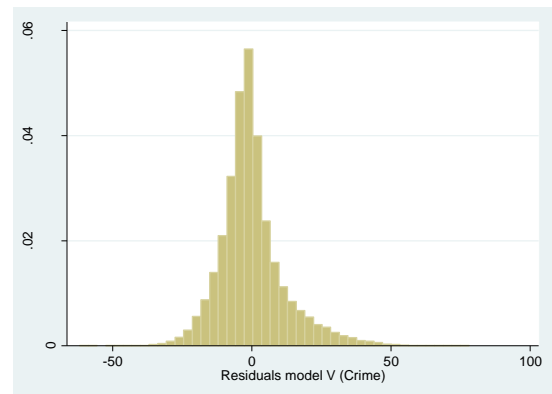
*Population (M)*: Total population. Unit of measurement: 100,000 inhabitants.

B. Histograms and residuals of Perceived crime: *Crime*, *Crime (Ln)* and *Crime (Sqrt)*.

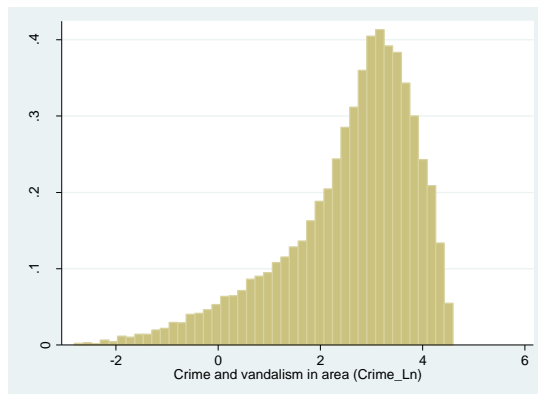
B1. Histogram of Perceived *crime*.



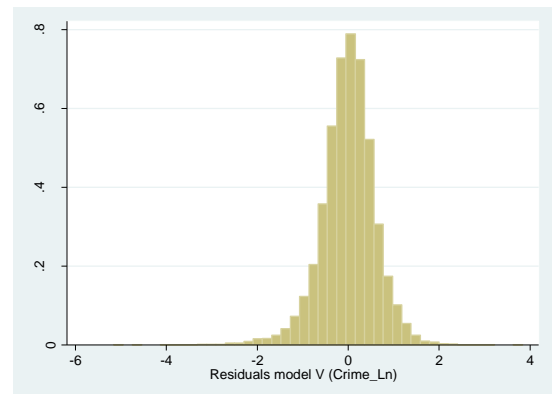
B2. Residuals of *Crime* (model III)



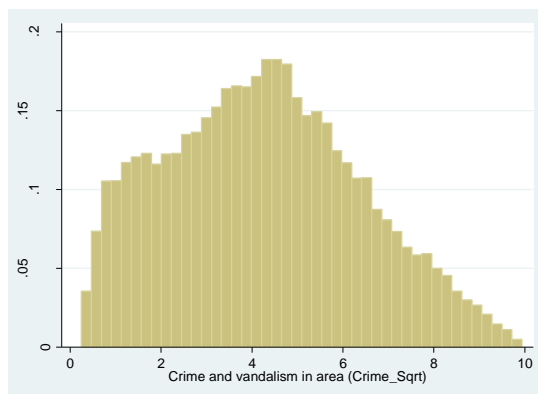
B3. Histogram of *Crime (Ln)*



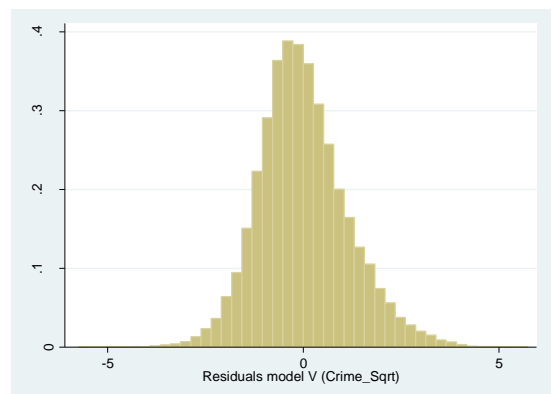
B4. Residuals of *Crime (Ln)* (model III)



B5. Histogram of *Crime (Sqrt)*



B6. Residuals of *Crime (Sqrt)* (model III)



C. Socioeconomic status: Principal component analysis (First component)\*

|                                  | Eigenvectors | Unexplained<br>variance |
|----------------------------------|--------------|-------------------------|
| % Higher degree                  | 0.52         | 0.13                    |
| % Unemployment                   | -0.39        | 0.51                    |
| House prices (€)                 | 0.41         | 0.47                    |
| No. of cars per household (mean) | 0.42         | 0.42                    |
| Home size (m <sup>2</sup> )      | 0.48         | 0.24                    |

\* Variance explained by first component: 65 percent. Eigenvalue: 3.22.

D. disorder: Principal component analysis (First component)\*

|                                       | Eigenvectors | Unexplained<br>variance |
|---------------------------------------|--------------|-------------------------|
| % residents considering ... a problem |              |                         |
| Noise                                 | 0.62         | 0.28                    |
| Cleanliness                           | 0.44         | 0.64                    |
| Pollution                             | 0.65         | 0.20                    |

\* Variance explained by first component: 63 percent. Eigenvalue: 1.88.

# E. Regression analyses: Country of origin and natives' perceptions of crime.

